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REPORT OF 2013 GROUNDWATER REMEDIATION ACTIVITIES
FORMER SURFACE IMPOUNDMENTS
TRANSWESTERN COMPRESSOR STATION NO. 9
(ROSWELL COMPRESSOR STATION)
6381 NORTH MAIN STREET
ROSWELL, CHAVES COUNTY, NEW MEXICO
NMOCD GW-052
NMED 1656; EPA ID NMD986676955

PREPARED FOR:

TRANSWESTERN PIPELINE COMPANY, LLC 5051 WESTHEIMER RD. HOUSTON, TX 77056

PREPARED BY:

EARTHCON CONSULTANTS, INC. 14405 WALTERS ROAD, SUITE 700 HOUSTON, TEXAS 77014 281.240.5200

EarthCon Project No. 02.20120037.00

March 11, 2014

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Transwestern Pipeline Company, LLC 5051 Westheimer Rd. Houston, TX 77056

March 11, 2014

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EarthCon Consultants, Inc. is submitting to Transwestern Pipeline Company, LLC (Transwestern) this *Report of 2013 Groundwater Remediation Activities* for the Roswell Compressor Station in Chaves County, New Mexico. This report has been prepared for the exclusive use of and reliance by Transwestern, and may not be relied upon by any other person or entity without the express written authorization of EarthCon.

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Signed:

Gabriela Floreslovo Senior Project Engineer EarthCon Consultants, Inc.

J.D. Haines, LPG (Indiana) Principal Geologist

EarthCon Consultants, Inc.

Date: 03.11.2014

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Certification Statement 40 CFR 270.11(d)(1)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Richard A Spell

Waste, Water, & Remediation Manager

Transwestern Pipeline, LLC

3-10-2014Date

EXECUTIVE SUMMARY

This Report of 2013 Groundwater Remediation Activities was prepared by EarthCon

Consultants, Inc. (EarthCon) on behalf of Transwestern Pipeline Company, LLC

(Transwestern) for the Former Surface Impoundments at the Transwestern Compressor

Station No. 9 (also known as the Roswell Compressor Station) property located at 6381 North

Main Street in Roswell, New Mexico. On March 13, 2013, the New Mexico Environment

Department (NMED) issued a Stipulated Order (SO) that governs activities associated with the

Former Surface Impoundments. Therefore, this annual groundwater report was developed in

general accordance with Section IX – Reporting Requirements of the SO.

The remediation system in operation at the Roswell Compressor Station consists of soil vapor

extraction (SVE) and treatment, and groundwater/phase separated hydrocarbon (PSH)

recovery and treatment. The recovery system well network currently consists of nine SVE-

only wells and 35 MPE wells. In August 2013, six of the original MPE wells were plugged and

abandoned (P&A) and four new MPE wells were installed. Currently, a network of 29

monitoring wells (28 installed in the Uppermost Aquifer and one installed in the deeper regional

San Andres Formation Aquifer) is used to assess groundwater conditions within the Project

Area. In August 2013 nine shallow monitoring wells and two deep monitoring wells were

P&A, and four new monitoring wells were installed.

During 2013, the SVE portion of the recovery system operated continuously, and the

groundwater/PSH recovery portion operated from mid-April to late-July, as

groundwater/PSH recovery operations were suspended to allow for the acquisition of

additional water rights.

As part of remediation system operation monthly air samples were collected from the

influent stream to the Baker Furnaces to estimate hydrocarbon removal rates; monthly

recovered water samples were collected at different stages of the treatment train to assess

treatment efficiency and compliance with discharge requirements; and semiannual

groundwater sampling was conducted in April and November to assess groundwater

conditions.

The remediation system recovered, approximately 26,000 pounds of hydrocarbons in 2013

through the SVE system operation. The groundwater/PSH recovery system recovered,

treated and discharged 100,370 gallons of groundwater and recovered approximately 723

gallons of PSH. Groundwater was treated and dispersed on-site via a permitted irrigation

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March 2014 Roswell Compressor Station Roswell, New Mexico system; analytical data indicated that the Discharge Permit NMOCD GW-052 requirements

were met. PSH accumulated in 2012 and 2013 was removed and sent off-site for recycling,

at a permitted facility.

Consistent with previous year's observations the November 2013 gauging data identified a

Northern and a Southeastern component of groundwater flow in the Uppermost Aquifer

beneath the Project Area.

Analytical data from the semiannual groundwater monitoring events indicated that only

Benzene and 1,1-Dichloroethene (1,1-DCE) were detected at concentrations exceeding the

applicable cleanup levels, and that delineation to applicable New Mexico Water Quality

Control Commission's (NMWQCC) standards and the EPA Maximum Contaminant Levels

(MCLs) is maintained within the existing monitoring network.

The findings from the 2013 groundwater remediation system operation and monitoring

activities indicate that changes to the current remediation actions as described in the May

2013 RWP are not required. Transwestern will continue negotiations to obtain water rights

in order to resume groundwater/PSH recovery system operation.

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1.0 INTRODUCTION

This Report of 2013 Groundwater Remediation Activities was prepared by EarthCon Consultants, Inc. (EarthCon) on behalf of Transwestern Pipeline Company, LLC (Transwestern) to document on-going corrective actions associated with the Former Surface Impoundments at the Transwestern Compressor Station No. 9 (also known as the Roswell Compressor Station) property, located at 6381 North Main Street in Roswell, New Mexico (see **Figure 1-1**, Site Location Map). For the purposes of this report, the term "Facility" will be used to denote the entire compressor station and "Project Area" will be used to refer to the remediation area including the northeastern corner of the compressor station and the adjacent land leased from the State of New Mexico Trust (see **Figure 1-2**).

On March 13, 2013, the New Mexico Environment Department (NMED) issued a Stipulated Order (SO) that governs activities conducted within the Project Area. Therefore, this document was developed in general accordance with *Section IX – Reporting Requirements* of the SO.

The Facility is an active natural gas compression station, owned and operated by Transwestern, located approximately 8 miles north of the city center of Roswell, New Mexico along the eastern side of U.S. Highway 285. The Facility occupies approximately 77 acres of land in Section 21 (SW¼ of the SW¼) and Section 28 (NW¼ of the NW¼) of Township 9S and Range 24E, Chaves County, New Mexico (see **Figure 1-1**). Access is via U.S. Highway 285, and the entire Facility is secured by a chain-link fence with locked gates.

The Project Area encompasses a portion of the northwest corner of the Facility, and extends offsite to the northeast and east of the Facility on a portion of a 40-acre easement leased from the New Mexico State Land Office (SLO) State Trust Land for remediation and monitoring purposes (see **Figure 1-2**). A majority of the off-site extraction and monitoring wells are located within a fenced perimeter.

The Facility is located along the Transwestern natural gas pipeline that extends from Texas to the Arizona/California border, and serves as the district offices for Transwestern's New Mexico operations. The compressor station services two 30-inch Mainlines and two 24-inch Lateral pipelines. The primary function of the compressor station is to boost the pressure of the natural gas stream by means of compressors powered by natural gas-fueled internal combustion engines. Additionally, the Facility conducts gas transmission line maintenance operations that generate waste hydrocarbons, including condensate, pigging and other wastes, which were historically

discharged to the Former Surface Impoundments (historically referred to as Pits 1 and 2). Wastes generated by current pipeline maintenance activities are temporarily stored in aboveground storage tanks at the Facility for off-site recycling.

Following removal of waste from the Former Surface Impoundments and backfilling with clean soil in 2001, a soil and groundwater remediation system was designed and installed.

The remediation system consists of soil vapor extraction (SVE) and treatment, and groundwater/phase separated hydrocarbon (PSH) recovery and treatment (see remediation system layout and components in **Figures 1-3** and **1-4**). Soil vapor is extracted via SVE-only wells and Multi-Phase Extraction (MPE) wells; with the extracted vapors routed to two Baker Furnace thermal oxidizer units for treatment. Groundwater and PSH are recovered via 10 pneumatic pumps installed in MPE wells; the recovered fluids are conveyed to a 90-barrel aboveground storage tank that serves as surge tank and separation unit. Separated groundwater is conveyed to a treatment train consisting of an air stripper followed by two granulated activated carbon (GAC) units in series. The treated water is then conveyed to an irrigation water tank for dispersal via a permitted irrigation system (Discharge Permit GW-052). PSH separated in the surge tank is removed and sent off-site to a permitted facility for recycling. The SVE portion of the system started operation in March 2003, while operation of the groundwater/PSH recovery portion of the system started in April 2004.

Typically, the SVE portion of the system operates continuously, and groundwater/PSH recovery occurs from spring to fall, with brief shutdowns for repair and maintenance. In addition, the system is shutdown for 48 to 72 hours in preparation for semiannual monitoring. During 2013 the groundwater/PSH recovery portion of the system has halted in late July when Transwestern was made aware by the State Engineers Office that additional water rights were needed in order to continue with the current extraction rates. Transwestern has since been actively working towards acquiring new water rights in order to resume recovery system operation.

The recovery system well network currently consists of nine SVE-only wells and 35 MPE wells. In August 2013, six of the original MPE wells (MPE-1 through MPE-6) were plugged and abandoned (P&A) and four new MPE wells (MPE-38 through MPE-41) were installed (see **Figure 1-5**). P&A activities were documented in a December 2013 *Investigation Report*. Installation of the new MPE wells is documented in this report.

Currently, a network of 29 monitoring wells (28 installed in the Uppermost Aquifer and one installed in the deeper regional San Andres Formation Aquifer) is used to assess groundwater conditions

within the Project Area. In August 2013 nine shallow monitoring wells (MW-5, MW-6, MW-8, MW-9, MW-18, MW -19, MW-31, MW-36 and MW-38) and two deep monitoring wells (MW-23D and MW-25D) were P&A, and four new monitoring wells (MW-39 through MW-42) were installed (see **Figure 1-5**). Monitoring well P&A and installation activities were documented in the December 2013 *Investigation Report*.

This report documents groundwater remediation and monitoring activities conducted at the Project Area during year 2013. Field activities were conducted by Cypress Engineering Services, Inc. Document organization is as follows: **Section 1** (this section) contains introductory information; **Section 2** lists the scope of activities documented; **Section 3** identifies the regulatory criteria used in the data evaluations; **Section 4** describes semiannual groundwater monitoring results; **Section 5** summarizes recovery system monitoring results; and **Section 6** provides summary and conclusions for the reporting period. Tables, figures, and appendices follow the text of the report.

2.0 SCOPE OF ACTIVITIES

The remediation system is monitored 5 to 7 days a week to asses for continued operation of

components, identify maintenance needs, and for early detection of potential leaks. As part of

remediation system operation the following sampling activities were conducted in 2013:

Monthly air samples were collected from the influent stream to the Baker Furnaces to

estimate hydrocarbon removal rates;

• Monthly recovered water samples were collected at different stages of the treatment

train to assess treatment efficiency and compliance with discharge requirements;

Semiannual groundwater sampling was conducted in April and November, per the

existing Groundwater Monitoring and Sampling Plan to assess groundwater conditions.

3.0 REGULATORY CRITERIA

Groundwater Cleanup Levels were identified for the purpose of evaluating analytical data for

groundwater samples collected during the semiannual sampling events, in accordance with

Section VI.A. of the March 2013 SO for the Facility. The groundwater cleanup levels shown in

Table 4-4 were identified as follows:

Cleanup Levels were identified for the target constituents of concern (COCs) using the New

Mexico Water Quality Control Commission's (NMWQCC) standards and the EPA Maximum

Contaminant Levels (MCLs); where standards exist in both regulations, the lower of the two

values was used. If neither a WQCC standard nor an MCL has been established for a COC, then

the cleanup level should was identified as the screening level for tap water in Table A-1 of the

February 2012 NMED Risk Assessment Guidance for Site Investigation and Remediation, or the

EPA Region 6 Screening Levels for tap water.

In accordance with the January 2012 Discharge Permit (GW-052) for the Facility, the analytical

data for effluent samples from the groundwater treatment system were evaluated by comparison

against the NMWQCC standards of 10 ug/L for Benzene, 750 ug/L for Ethylbenze and Toluene,

and of 620 ug/L for Xylenes.

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4.0 GROUNDWATER MONITORING & CHEMICAL ANATLYICAL DATA RESULTS

A network of 29 monitoring wells, 28 installed in the Uppermost Aquifer and one installed in the deeper regional San Andres Formation Aquifer, is used to assess groundwater conditions within the Project Area. Well locations are shown in **Figure 1-5** and a summary of well construction information is provided in **Table 4-1**.

In April and November 2013, groundwater gauging and sampling activities were conducted. In order to allow for the groundwater levels to stabilize, the remediation system was shutdown for a period of 48 to 72 hours, prior to gauging and sampling. Copies of the field documentation for these monitoring events are included in **Appendix A**.

Groundwater elevations shown in **Table 4-2** were calculated using the November 2013 gauging data and top-of-casing data from a survey conducted by PR Patton & Associates in October 2013. The groundwater elevation map for the Uppermost Aquifer presented in **Figure 4-1** shows that groundwater beneath the Project Area flows in two directions, indicating the presence of a complex water-bearing matrix with areas of preferential flow. This pattern is consistent with previous years' observations.

Based on the November 2013 gauging data, a groundwater gradient of 0.014 ft/ft was calculated for the Northern component of groundwater flow, between monitoring wells MW-12 and MW-40, while a gradient of 0.006 ft/ft was calculated for the Southeastern component of groundwater flow, between monitoring wells MW-16 and MW-35. A review of historical gauging data for the current monitoring wells in **Table 4-2** indicates that between 2009 and 2013 the Uppermost Aquifer has experienced an overall drop in water level ranging from 0.11 ft in MW-21 to 5.47 ft in MW-7, with a general average drop of 1.48 ft. The water levels in MW-24D, installed in the regional aquifer have experienced an average drop of 6.14 ft between 2009 and 2013.

A review of gauging data in **Table 4-2** indicates that for the November 2013 event, the average PSH thickness was 1.75 ft, with a maximum of 6.14 ft measured in the recently installed MPE-41. Data in in **Table 4-2** also indicates that only one (SVE-23) of the nine SVE wells installed in the Perched Zone continues to exhibit PSH. The areal distribution of PSH in the Uppermost Aquifer, as measured during the April and November 2013 monitoring events is depicted in **Figures 4-2** and **4-3**. As illustrated in Figure 6-4 of the May 2013 *RWP* (included in

Appendix B for ease of reference), between 2003 and 2012 the areal extent of the PSH extent had reduced by almost 50%.

Groundwater samples were collected from selected monitoring wells in accordance with the schedule included the in *Sampling and Analysis Plan (SAP)* for the Facility, and shown in **Table 4-3**. Groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) via EPA method 8021B or for volatile organic compounds (VOCs) via EPA method 8260B in accordance with the *SAP*. Analytical results for are summarized in **Table 4-4** and laboratory data packages are included in **Appendix C**. Purged groundwater and equipment decontamination water were collected in a clean 55-gallon drum during_sampling_and then transferred to the surge tank for on-site treatment and disposal as described above.

Quality control samples including sample duplicates, field blanks, equipment blanks, rinsate blanks and trip blanks were collected during the semiannual sampling events. Analytical results for the blanks are included in the laboratory data packages in **Appendix C**, and indicate that there were no target analyte detections. The relative percent difference (RPD) of the reported concentrations between the original samples and the duplicates were calculated and found to be below 20%. These RPD calculations are also included in **Appendix C**.

Analytical data indicates that only Benzene and 1,1-Dichloroethene (1,1-DCE) were detected at concentrations exceeding the applicable cleanup levels, and that delineation is maintained within the existing monitoring network. The areal distribution of Benzene, BTEX and 1,1-DCE as measured during the April and November 2013 monitoring events is depicted in **Figures 4-4** through **4-9**.

Available analytical data for Benzene, BTEX and 1,1-DCE for the 1997-2013 period was evaluated to assess overall plume area difference and stability. Figures 4 and 10 in **Appendix B** illustrate that the Benzene plume's footprint has experienced a significant decrease during the period (from 8.7 to 1.7 acres; an 80% reduction), and that plume stability analyses resulted in the identification of a decreasing trend for the Benzene plume. Similarly, evaluation of the BTEX plume in Figures 3 and 9 in **Appendix B** also illustrate a footprint reduction of 79% and a decreasing trend. Figures 2 and 8 in **Appendix B** show that the 1,1-DCE plume has remained localized within the northern portion of the Project Area. The plume calculations indicate an initial increase from the 1997 values to the observed maximum area and average concentration in 2001 and 2005, respectively, followed by decreasing values. Between 2001 and 2013 the plume footprint experienced a 46% decrease. Plume stability

analyses using data for the 2001-2013 period resulted in the identification of a decreasing trend

for the 1,1-DCE plume.

The addition of the new extraction wells (especially in the vicinity of MW-12) and the planned re-

distribution of the recovery pumps discussed in Section 6.0 are expected to have a positive

impact in further reducing the PSH, Benzene/BTEX and 1,1-DCE plumes in the northern and

central portions portion of the Project Area.

5.0 RECOVERY SYSTEM MONITORING

During 2013, the SVE portion of the recovery system operated continuously, and the

groundwater/PSH recovery portion operated from mid-April to late-July. As discussed before,

groundwater/PSH recovery operations were suspended earlier than typically expected, to allow

for the acquisition of additional water rights to operate the groundwater extraction portion of the

remediation system. In addition to brief shutdowns for repair and maintenance, the SVE system

was shutdown in April and November 2013 for 48 to 72 hours to allow for water level stabilization

prior to semiannual monitoring. The average run time for the Baker Furnaces was 7588 hours in

2013 (or 87%).

Monthly air samples collected from the influent stream to the Baker Furnaces were analyzed for

total petroleum hydrocarbons (TPH) in the gasoline range organics (GRO) via EPA method

8015D. Analytical data summarized in **Tables 5-1** and **5-2** indicate that while running, the SVE

system recovered approximately 22,500 pounds (or about 3,500 gallon-equivalents) of total

non-methane hydrocarbons in 2013. Laboratory data packages are included in **Appendix D**.

Operation records for the irrigation system presented in **Table 5-3** indicate that the volume of

groundwater recovered, treated and discharged in 2013 was 100,370 gallons. In addition,

approximately 723 gallons of PSH accumulated in the surge tank in 2013. On August 23, 2013,

approximately 1679 gallons (40 barrels) of PSH, accumulated during system operation in 2012

and 2013, were removed from the surge tank and transported to Gandy Corporation's plant in

Lovington, New Mexico, for recycling via fuel blending (see removal documentation in

Appendix E).

Monthly samples were collected in April, May and July from the groundwater treatment system

at four locations or stages in the train: at the inlet of the air-stripper (or pre-treatment); at the

outlet of the air stripper; at the outlet of the first GAC unit; and at the outlet of the irrigation water

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holding tank (or post-treatment). Samples from the first three treatment stages were analyzed

for BTEX via method 8021B, and the post-treatment sample was analyzed for anions via EPA

method 300.0, dissolved metals via EPA method 200.7, and VOCs via EPA method 8260B.

Analytical data is summarized in Table 5-4 and laboratory data packages are included in

Appendix D. The analytical data for these samples demonstrates that the treatment system is

effectively removing the hydrocarbon constituents present in the recovered groundwater.

Further, analytical data for the post-treatment sample indicate that Benzene, Ethylbenzene,

Toluene and Xylenes were reported as not detected above the laboratory reporting limits (RLs).

Since the RLs for Benzene, Ethylbenzene, Toluene and Xylenes are lower than the NMWQCC

standards, the remediation system met the groundwater Discharge Permit requirements.

6.0 RECOVERY SYSTEM MODIFICATIONS

Recovery system modifications described in the March 2013 Amended Investigation Work Plan

(IWP) and the May 2013 Amended Remediation Work Plan (RWP) are underway. In August

2013, six MPE wells (MPE-1 through MPE-6, formerly located in Circuit A) that were outside of

the current remediation area were plugged and abandoned, and four new MPE wells were

installed in areas of recoverable PSH. MPE P&A activities were documented in a December

2013 Investigation Report. Installation of the new MPEs is documented in Appendix F of this

report.

Transwestern has initiated procurement and will soon commence construction activities

associated with piping modifications to dismantle the plugged portion of Circuit A and

incorporate the new MPEs to the extraction/recovery system. Piping modifications will also

include adding valves at locations that will allow independent operation and monitoring of wells

or groups of wells. Proposed changes in recovery pump location will be implemented when

system operation resumes.

Transwestern plans to implement additional groundwater sampling in wells that accumulate

PSH with the purpose of assessing actual loading of the existing dissolved plume. Several

options for well preparation and sampling are being considered for this task including:

Conducting PSH baildown prior to sampling;

Using a conduit to create a temporary PSH barrier;

Using top-loading bailers for sample collection;

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Using depth-specific sampling tubes (Kemmerer or similar);

Using ice-covered conduits and/or samplers.

These techniques will be tested, independently or combined, to identify the best match for the Project Area.

7.0 SUMMARY OF FINDINGS AND CONCLUSIONS

Based on the information presented in the previous sections regarding the operation of the remediation system installed at the Project Area, the following findings and conclusions are offered:

• The November 2013 gauging data identified a Northern component of groundwater flow with a gradient of 0.014 ft/ft, and a Southeastern component of groundwater flow with a gradient of 0.006 ft/ft. This pattern is consistent with previous years' observations.

 Historical gauging data indicates that between 2009 and 2013, monitoring wells in the Uppermost Aquifer have experienced an average drop of 1.48 ft in water level, while the average water level drop in the deep well is 6.14 ft.

 Analytical data from the semiannual groundwater monitoring events indicates that only Benzene and 1,1-Dichloroethene (1,1-DCE) were detected at concentrations exceeding the applicable cleanup levels, and that delineation is maintained within the existing monitoring network.

 During 2013, the SVE portion of the recovery system operated continuously, and the groundwater/PSH recovery portion operated from mid-April to late-July, as groundwater/PSH recovery operations were suspended to allow for the acquisition of additional water rights to continue operation.

• The SVE system recovered approximately 22,500 pounds (or about 3,500 gallon-equivalents) of hydrocarbons in 2013.

• The groundwater/PSH recovery system recovered, treated and discharged 100,370 gallons of groundwater in 2013.

• The groundwater/PSH recovery system recovered approximately 723 gallons of PSH in 2013.

Samples collected in April, May and July 2013 from the groundwater treatment system
demonstrate that the treatment system is effectively removing the hydrocarbon
constituents present in the recovered groundwater.

- Further, the post-treatment sample indicates that the Discharge Permit's requirements for Benzene, Ethylbenzene, Toluene and Xylenes were met.
- The addition of the new extraction wells and the planned re-distribution of recovery pumps are expected to have a positive impact in further reducing the Benzene/BTEX and 1,1-DCE plumes in the northern and central portions portion of the Project Area.
- Transwestern plans to implement additional groundwater sampling in wells that accumulate PSH with the purpose of assessing actual loading of the existing dissolved plume.

Transwestern will continue negotiations to obtain water rights in order to resume groundwater/PSH recovery system operation in the spring. The findings summarized above indicate that changes to the current remediation actions as described in the May 2013 *RWP* are not required.

TABLES

Table 4-1. Summary of Well Completion Details Transwestern Compressor Station No. 9 - Roswell, NM

	1	1		1			1
		Total Depth	Measured	Surface	Casing	Screen	Top of
	Date of	of Boring	Depth of Well	Completion	Diameter	Interval	Sand Pack
Well	Completion	(ft bgs)	(ft from TOC)	Type	(in.)	(ft bgs)	(ft bgs)
MM 4 D	04/24/02	GE E	64.65	Fluch Mount	2	EE GE	5 2
MW-1B	04/21/93	65.5	64.65	Flush Mount	2	55-65 55-65	53 53
MW-2	04/21/93	65	61.61	Flush Mount	2	55-65	53
MW-3	04/26/93	72.5	na	Flush Mount	2	60-70	58
MW-5	04/28/93	70	69.35	Flush Mount	2	60-70	58
MW-6	12/01/94	79 70 -	na	Flush Mount	2	59.9-74.9	57.1
MW-7	08/22/95	70.5	na	Flush Mount	2	50-70	48.1
MW-8	08/16/95	76.8	73.80	Flush Mount	2	59-74	57.2
MW-9	08/18/95	70	69.75	Flush Mount	2	50-70	47.9
MW-10	09/10/96	74.5	72.15	Flush Mount	2	57-72	55.3
MW-11	09/16/96	72	68.30	Flush Mount	2	54-69	51.5
MW-12	09/11/96	64	na	Flush Mount	2	44-64	42
MW-13	09/13/96	72	na	Flush Mount	2	57-72	55
MW-14	09/10/96	64.5	na	Flush Mount	2	49.5-64.5	48
MW-15	09/20/96	68.5	na	Flush Mount	2	38.5-68.5	37
MW-16	09/19/96	71.4	71.46	Flush Mount	2	46.4-71.4	45.5
MW-17	09/21/96	70	na	Flush Mount	2	53-68	50.9
MW-18	09/25/96	71	na	Flush Mount	2	54-69	51.6
MW-19	09/26/96	69.5	na	Flush Mount	2	54.5-69.5	51
MW-20	08/04/97	64	na	Flush Mount	2	46.8-61.8	43.9
MW-21	08/06/97	75	na	Flush Mount	2	54-74	51.7
MW-22	08/04/97	68	na	Flush Mount	2	50-65	49
MW-26	09/01/98	65	na	Flush Mount	2	43-63	41
MW-27	09/02/98	75	na	Flush Mount	2	55-75	53
MW-28	11/14/00	75	74.81	Flush Mount	2	60-75	58
MW-29	11/18/00	75	74.45	Flush Mount	2	60-75	58
MW-30	11/16/00	75	74.70	Flush Mount	2	60-75	58
MW-31	09/21/01	<i>7</i> 5	74.55	Flush Mount	2	60-75	58
MW-32	09/23/01	75	74.20	Flush Mount	2	60-75	58
MW-33	09/22/01	75	74.60	Flush Mount	2	60-75	58
MW-34	01/06/03	79	75.75	Flush Mount	2	49-79	46
MW-35	01/07/03	79	76.71	Flush Mount	2	49-79	46

Table 4-1. Summary of Well Completion Details
Transwestern Compressor Station No. 9 - Roswell, NM

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		Total Depth	Measured	Surface	Casing	Screen	Top of
	Date of	of Boring	Depth of Well	Completion	Diameter	Interval	Sand Pack
Well	Completion	(ft bgs)	(ft from TOC)	Type	(in.)	(ft bgs)	(ft bgs)
MW-36	09/29/03	75	74.35	Flush Mount	2	55-75	53
MW-37	09/29/03	75 70	69.61	Flush Mount	2	50-75 50-70	48
MW-38	09/29/03	70 68	69.61	Flush Mount	2	50-70 48-68	46 46
MW-39	08/06/13	70 70	70.00	Flush Mount	2	50-70	48
MW-40	08/05/13	70	70.25	Flush Mount	2	50-70	48
MW-41	08/05/13	70	70.20	Flush Mount	2	50-70	48
MW-42	08/06/13	75	75.93	Flush Mount	2	55-75	51
MW-23D	07/29/97	194	na	Flush Mount	4	167-187	164
MW-24D	09/10/98	180	na	Flush Mount	4	146-176	143
MW-25D	09/09/98	150	na	Flush Mount	4	119-149	117
SVE-1A	09/21/96	30	29.65	Flush Mount	2	20-30	19
SVE-2A	09/20/96	30	29.83	Flush Mount	2	20-30	17.5
SVE-3	09/16/96	62.3	61.90	Flush Mount	2	32.0-62.3	29.5
SVE-22	11/07/02	35	33.20	Flush Mount	2	25-35	23
SVE-23	11/07/02	39	36.70	Flush Mount	2	25-35	22
SVE-24	11/13/02	30	28.85	Flush Mount	2	20-30	18
SVE-25	11/04/02	34	53.30	Flush Mount	2	24-34	21.6
SVE-26	11/05/02	35	32.45	Flush Mount	2	24-34	22
SVE-27	11/01/02	35	33.90	Flush Mount	2	20-35	18
SVE-28	10/29/02	35	36.00	Flush Mount	2	25-35	23
SVE-30	10/25/02	45	44.00	Flush Mount	2	20-45	18
SVE-31	10/28/02	35	33.95	Flush Mount	2	25-35	23
MPE-1	12/06/02	79	75.60	Flush Mount	4	54-74	49
MPE-2	12/24/02	79	71.75	Flush Mount	4	54-79	51
MPE-3	12/21/02	79	75.95	Flush Mount	4	54-79	51
MPE-4	12/19/12	79	78.30	Flush Mount	4	54-79	51
MPE-5	12/16/02	79	77.70	Flush Mount	4	59-79	56
MPE-6	12/17/02	79	75.00	Flush Mount	4	54-79	51
MPE-7	12/13/02	79	78.41	Flush Mount	4	54-74	51
MPE-8	12/14/02	79	77.55	Flush Mount	4	59-79	50
MPE-9	12/18/02	79	73.60	Flush Mount	4	54-74	51
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Table 4-1. Summary of Well Completion Details Transwestern Compressor Station No. 9 - Roswell, NM

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		Total Depth	Measured	Surface	Casing	Screen	Top of
	Date of	of Boring	Depth of Well	Completion	Diameter	Interval	Sand Pack
Well	Completion	(ft bgs)	(ft from TOC)	Type	(in.)	(ft bgs)	(ft bgs)
MPE-10	12/09/02	79	75.30	Flush Mount	4	54-74	50
MPE-11	12/07/02	79	79.05	Flush Mount	4	54-74	50
MPE-12	12/06/02	79	75.40	Flush Mount	4	54-74	51
MPE-13	12/03/02	79	77.60	Flush Mount	4	54-74	50.7
MPE-14	11/25/02	79	76.80	Flush Mount	4	54-74	51
MPE-15	11/22/02	79	79.25	Flush Mount	4	59-74	54
MPE-16	11/27/02	79	78.20	Flush Mount	4	54-74	49
MPE-17	11/20/02	75	76.10	Flush Mount	4	55-70	49
MPE-18	11/21/02	79	78.68	Flush Mount	4	58-73	55
MPE-19	11/26/02	79	74.12	Flush Mount	4	49-74	46
MPE-20	11/20/02	78	77.60	Flush Mount	4	48-73	42
MPE-21	11/19/02	69	68.90	Flush Mount	4	44-64	41.9
MPE-22	11/07/02	80	77.52	Flush Mount	4	55-80	52
MPE-23	11/06/02	80	78.41	Flush Mount	4	55-80	52
MPE-24	11/13/02	74	73.77	Flush Mount	4	49-74	46
MPE-25	11/04/02	80	77.45	Flush Mount	4	54-79	51
MPE-26	11/06/02	84	77.35	Flush Mount	4	54-84	49
MPE-27	10/31/02	79	79.40	Flush Mount	4	54-79	48
MPE-28	10/31/02	82	77.67	Flush Mount	4	46-76	43
MPE-29	11/02/02	79	78.35	Flush Mount	4	54-79	51
MPE-30	10/25/02	80	77.96	Flush Mount	4	59-79	56
MPE-31	10/28/02	80	78.80	Flush Mount	4	59-79	58
MPE-32	11/19/02	79	78.30	Flush Mount	4	44-74	39.2
MPE-33	11/18/02	79	78.00	Flush Mount	4	44-79	41.6
MPE-34	10/24/02	80	77.52	Flush Mount	4	59-79	56
MPE-35	11/15/02	79	79.21	Flush Mount	4	54-74	51
MPE-36	11/14/02	74	71.31	Flush Mount	4	44-74	41
MPE-37	11/15/02	74	73.60	Flush Mount	4	44-74	41
MPE-38	08/07/13	75	75.00	Flush Mount (pending)	4	55-75	53
MPE-39	08/08/13	75	74.30	Flush Mount (pending)	4	55-75	53

Table 4-1. Summary of Well Completion Details Transwestern Compressor Station No. 9 - Roswell, NM

Well	Date of Completion	Total Depth of Boring (ft bgs)	Measured Depth of Well (ft from TOC)	Surface Completion Type	Casing Diameter (in.)	Screen Interval (ft bgs)	Top of Sand Pack (ft bgs)
MPE-40	08/08/13	75	72.60	Flush Mount (pending)	4	55-75	53
MPE-41	08/07/13	75	74.95	Flush Mount (pending)	4	55-75	53

Note:

Italics denote well plugged and abandoned (P&A) in August 2013

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-1 B	03/10/09	3609.96	60.46	62.20	1.74	3549.08
WW 1 B	10/08/09	0000.00	sheen	64.18	sheen	3545.78
	01/26/10		60.32	60.60	0.28	3549.57
	03/22/10		59.82	61.86	2.04	3549.65
	04/17/11		60.18	62.05	1.87	3549.33
	12/22/11		61.01	63.24	2.23	3548.41
	04/17/12		60.65	62.45	1.80	3548.88
	10/18/12		61.88	64.21	2.33	3547.52
	01/22/13		61.38	63.55	2.17	3548.06
	04/15/13		61.24	63.10	1.86	3548.27
	11/03/13	3610.74 (h)	62.19	63.35	1.16	3548.27
MW-2	03/10/09	3611.76	(a)	59.10	(a)	3552.66
	10/08/09		(a)	60.39	(a)	3551.37
	03/22/10		(a)	59.66	(a)	3552.10
	04/17/11		(a)	59.77	(a)	3551.99
	12/22/11		(a)	59.79	(a)	3551.97
	04/17/12		(a)	60.30	(a)	3551.46
	10/18/12		(a)	61.30	(a)	3550.46
	01/22/13		(a)	61.07	(a)	3550.69
	04/15/13		(a)	61.30	(a)	3550.46
	11/03/13	3612.62 (h)	(a)	60.77	(a)	3551.85
MW-3	03/10/09	3614.87	(a)	66.23	(a)	3548.64
	10/08/09		(a)	66.77	(a)	3548.10
	03/22/10		(a)	66.37	(a)	3548.50
	04/17/11 12/22/11		(a)	66.39 66.86	(a)	3548.48 3548.01
	04/17/12		(a) (a)	66.67	(a) (a)	3548.20
	10/18/12		(a)	67.28	(a)	3547.59
	01/22/13		(a)	67.22	(a)	3547.65
	04/15/13		(a)	67.11	(a)	3547.76
	11/03/13	3615.75 (h)	(a)	67.47	(a)	3548.28
MW-5	03/10/09	3612.77	(a)	62.93	(a)	3549.84
	10/08/09		(a)	63.15	(a)	3549.62
	03/22/10		(a)	63.31	(a)	3549.46
	04/17/11		(a)	63.56	(a)	3549.21
	12/22/11		(a)	63.93	(a)	3548.84
	04/17/12		(a)	64.06	(a)	3548.71
	10/18/12		(a)	64.38	(a)	3548.39
	01/22/13		(a)	64.51	(a)	3548.26
	04/15/13 *Well Plugged 08/2013		(a)	64.56	(a)	3548.21
MM 6		2610 62	(0)	62.24	(0)	2555 44
MW-6	03/10/09 10/08/09	3618.62	(a)	63.21 63.32	(a)	3555.41 3555.30
	03/22/10		(a)	63.46	(a) (a)	3555.30 3555.16
	12/22/11		(a) (a)	64.17	(a) (a)	3554.45
	04/17/12		(a) (a)	64.25	(a) (a)	3554.37
	10/18/12		(a) (a)	64.58	(a)	3554.04
	04/15/13		(a) (a)	64.88	(a)	3553.74
	*Well Plugged 08/2013		(4)	3 1100	(ω)	0000.7 1

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

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Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	•			•		•
MW-7	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/18/12 01/22/13	3599.20	(a) (a) (a) (a) (a) (a) (a) (a)	58.24 62.12 58.68 59.42 63.09 62.30 66.14 64.40	(a) (a) (a) (a) (a) (a) (a)	3540.96 3537.08 3540.52 3539.78 3536.11 3536.90 3533.06 3534.80
	04/15/13	3500 06 (h)	(a)	63.71 66.07	(a)	3535.49 3533.80
MW-8	11/03/13 03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 01/22/13 04/15/13 *Well Plugged 08/201:	3599.96 (h) 3595.80	(a)	66.07 55.36 59.04 55.56 56.48 60.00 59.28 62.32 61.55 60.65	(a)(a)(a)(a)(a)(a)(a)(a)(a)(a)	3533.89 3540.44 3536.76 3540.24 3539.32 3535.80 3536.52 3533.48 3534.25 3535.15
MW-9	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 01/22/13 04/15/13 *Well Plugged 08/201	3599.35 3	(a) (a) (a) (a) (a) (a) (a) (a) (a)	51.78 51.93 51.86 51.96 52.26 52.27 52.53 52.67 52.73	(a) (a) (a) (a) (a) (a) (a) (a) (a)	3547.57 3547.42 3547.49 3547.39 3547.09 3547.08 3546.82 3546.68 3546.62
MW-10	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/18/12 01/22/13 04/15/13 11/03/13	3617.85 3618.81 (h)	(a)	68.49 69.18 68.85 68.85 69.32 69.19 69.78 69.79 69.70 70.04	(a)	3549.36 3548.67 3549.00 3548.53 3548.66 3548.07 3548.06 3548.15 3548.77
MW-11	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/18/12 01/22/13 04/15/13	3613.31	(a)	64.30 65.39 64.69 64.55 65.36 64.97 66.03 65.69 65.45	(a)	3549.01 3547.92 3548.62 3548.76 3547.95 3548.34 3547.28 3547.62 3547.86

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	11/03/13	3614.08 (h)	(a)	65.95	(a)	3548.13
MW-12	03/10/09	3606.38	56.16	56.57	0.41	3550.12
	10/08/09		57.17	57.18	0.01	3549.21
	01/26/10		(a)	56.95	(a)	3549.43
	03/22/10		56.34	58.23	1.89	3549.59
	04/17/11		56.00	57.47	1.47	3550.03
	12/22/11		57.01	57.18	0.17	3549.33
	04/17/12		56.75	59.72	2.97	3548.92
	10/15/12		57.33	58.28	0.95	3548.82
	01/22/13		54.93	57.30	2.37	3550.88
	04/15/13		57.28	60.74	3.46	3548.27
	11/03/13	3606.98 (h)	57.71	60.15	2.44	3548.68
MW-13	03/10/09	3612.46	(a)	63.76	(a)	3548.70
	10/08/09		(a)	64.35	(a)	3548.11
	01/26/10		(a)	64.05	(a)	3548.41
	03/22/10		(a)	63.78	(a)	3548.68
	04/17/11		(a)	63.65	(a)	3548.81
	12/22/11		(a)	64.64	(a)	3547.82
	04/17/12		(a)	64.31	(a)	3548.15
	10/18/12		(a)	64.99	(a)	3547.47
	01/22/13		(a)	64.70	(a)	3547.76
	04/15/13		(a)	64.59	(a)	3547.87
	11/03/13	3613.19 (h)	(a)	64.70	(a)	3548.49
MW-14	03/10/09	3604.83	(a)	54.43	(a)	3550.40
	10/08/09		(a)	54.57	(a)	3550.26
	03/22/10		(a)	54.23	(a)	3550.60
	04/17/11		(a)	54.72	(a)	3550.11
	12/22/11		(a)	55.43	(a)	3549.40
	04/17/12		(a)	55.27	(a)	3549.56
	10/15/12		(a)	55.52	(a)	3549.31
	01/22/13		(a)	55.63	(a)	3549.20
	04/15/13	0005 55 (1)	(a)	55.61	(a)	3549.22
	11/03/13	3605.55 (h)	(a)	55.89	(a)	3549.66
MW-15	03/10/09	3610.43	(a)	59.30	(a)	3551.13
	10/08/09		(a)	58.82	(a)	3551.61
	03/22/10		(a)	58.43	(a)	3552.00
	04/17/11		(a)	58.94	(a)	3551.49
	12/22/11		(a)	59.26	(a)	3551.17
	04/17/12		(a)	59.45	(a)	3550.98
	10/15/12		(a)	59.65	(a)	3550.78
	01/22/13		(a)	59.88	(a)	3550.55
	04/15/13	2611 24 (b)	(a)	59.99	(a)	3550.44
	11/03/13	3611.24 (h)	(a)	60.10	(a)	3551.14
MW-16	03/10/09	3612.41	65.25	65.26	0.01	3547.16
	10/08/09		65.91	65.92	0.01	3546.50
	01/26/10		(a)	65.57	(a)	3546.84
	03/22/10		(a)	65.19	sheen	3547.22
	04/17/11		(a)	65.36	(a)	3547.05
	12/22/11		(a)	65.99	sheen	3546.42

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	04/17/12		65.58	65.59	0.01	3546.83
	10/15/12		(a)	66.55	(a)	3545.86
	01/22/13		(a) (a)	66.32	(a)	3546.09
	04/15/13		(a) (a)	66.17	(a)	3546.24
	11/03/13	3613.16 (h)	(a) (a)	66.48	(a)	3546.68
MW-17	03/10/09	3608.43 (d)	(a)	61.20	(a)	3547.23
	10/08/09		(a)	61.64	(a)	3546.79
	03/22/10		(a)	60.95	(a)	3547.48
	04/17/11		(a)	61.11	(a)	3547.32
	12/22/11		(a)	61.42	(a)	3547.01
	04/17/12		(a)	61.43	(a)	3547.00
	10/15/12		(a)	61.95	(a)	3546.48
	01/22/13		(a)	62.17	(a)	3546.26
	04/15/13		(a)	61.97	(a)	3546.46
	11/03/13	3609.20 (h)	(a)	62.23	(a)	3546.97
MW-18	03/10/09	3609.73	(a)	59.37	(a)	3550.36
	10/08/09	0000.70	(a)	59.15	(a)	3550.58
	03/22/10		(a)	58.95	(a)	3550.78
	04/17/11		(a) (a)	59.09	(a)	3550.64
	12/22/11		(a) (a)	59.36	(a)	3550.37
	04/17/12		(a) (a)	59.43	(a)	3550.30
	10/15/12			59.58		3550.15
			(a)		(a)	
	01/22/13		(a)	59.71	(a)	3550.02
	04/15/13 *Well Plugged 08/2013	3	(a)	59.73	(a)	3550.00
MW-19	03/10/09	3608.17	(a)	56.03	(a)	3552.14
	10/08/09		(a)	54.63	(a)	3553.54
	03/22/10		(a)	54.60	(a)	3553.57
	04/17/11		(a)	55.55	(a)	3552.62
	12/22/11		(a)	56.12	(a)	3552.05
	04/17/12		(a)	56.38	(a)	3551.79
	10/15/12		(a)	56.50	(a)	3551.67
	01/22/13		(a)	56.72	(a)	3551.45
	04/15/13		(a)	56.78	(a)	3551.39
	*Well Plugged 08/2013	3				
MW-20	03/10/09	3600.65	(a)	52.08	(a)	3548.57
14144 20	10/08/09	5000.00	(a) (a)	58.30	(a)	3542.35
	10/09/09		(a)	55.57	(a)	3545.08
	03/22/10		(a) (a)	52.62	(a)	3548.03
	04/17/11		(a) (a)	52.43	(a)	3548.22
	12/22/11		(a)	58.35 53.50	(a)	3542.30 3547.15
	04/17/12		(a)	53.50	(a)	3547.15
	10/15/12		(a)	54.92	(a)	3545.73
	01/22/13		(a)	54.13	(a)	3546.52
	04/15/13	0004.04.03	(a)	53.90	(a)	3546.75
	11/03/13	3601.34 (h)	(a)	54.35	(a)	3546.99
MW-21	03/10/09	3611.99 (d)	(a)	65.43	(a)	3546.56
	10/08/09		(a)	66.30	(a)	3545.69
	01/26/10		(a)	65.79	(a)	3546.20
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Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

	1	T	T			T
Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
•	03/22/10	•	(a)	65.31	(a)	3546.68
	04/17/11		(a)	65.02	(a)	3546.97
	12/22/11		(a)	65.28	(a)	3546.71
	04/17/12		(a)	65.44	(a)	3546.55
	10/15/12		(a)	65.57	(a)	3546.42
	01/22/13		(a)	65.51	(a)	3546.48
	04/15/13		(a)	65.54	(a)	3546.45
	11/03/13	3612.71 (h)	(a)	66.08	(a)	3546.63
MW-22	03/10/09	3606.04	(a)	57.14	(a)	3548.90
	10/08/09		(a)	58.25	(a)	3547.79
	03/22/10		(a)	57.33	(a)	3548.71
	04/17/11		(a)	57.38	(a)	3548.66
	12/22/11		(a)	58.65	(a)	3547.39
	04/17/12		(a)	57.88	(a)	3548.16
	10/15/12		(a)	58.93	(a)	3547.11
	01/22/13		(a)	58.60	(a)	3547.44
	04/15/13	(1)	(a)	58.36	(a)	3547.68
	11/03/13	3606.62 (h)	(a)	58.94	(a)	3547.68
MW-26	03/10/09	3597.75 (c)	(a)	50.11	(a)	3547.64
	10/08/09		(a)	52.35	(a)	3545.40
	03/22/10		(a)	50.52	(a)	3547.23
	04/17/11		(a)	50.45	(a)	3547.30
	12/22/11		(a)	51.70	(a)	3546.05
	04/17/12		(a)	51.24	(a)	3546.51
	10/15/12		(a)	52.55	(a)	3545.20
	01/22/13		(a)	51.95	(a)	3545.80
	04/15/13 11/03/13	3598.43 (h)	(a) (a)	51.70 52.22	(a) (a)	3546.05 3546.21
NAVA 07						
MW-27	03/10/09 10/08/09	3615.11 (d)	67.85 68.38	68.18	0.33	3547.18
	01/26/10		68.48	68.89 68.88	0.51 0.40	3546.61 3546.53
	03/22/10		68.31	68.73	0.40	3546.70
	04/17/11		68.10	68.26	0.42	3546.97
	12/22/11		68.21	68.35	0.14	3546.87
	04/17/12		67.38	67.52	0.14	3547.70
	10/15/12		68.31	68.54	0.23	3546.74
	01/22/13		68.45	68.67	0.22	3546.61
	04/15/13		65.92	67.07	1.15	3548.91
	05/16/13		68.47	69.77	1.30	3546.33
	11/03/13	3615.76 (h)	(a)	68.19	(a)	3547.57
	11/13/13		68.29	68.30	0.01	3547.47
MW-28	03/10/09	3615.90 (d)	(a)	68.70	(a)	3547.20
	10/08/09	. ,	(a)	68.94	(a)	3546.96
	03/22/10		(a)	68.71	(a)	3547.19
	04/17/11		(a)	68.95	(a)	3546.95
	12/22/11		(a)	69.01	(a)	3546.89
	04/17/12		(a)	69.20	(a)	3546.70
	10/15/12		(a)	69.30	(a)	3546.60
	01/22/13		(a)	69.48	(a)	3546.42
	04/15/13		(a)	69.57	(a)	3546.33

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	11/03/13	3616.62 (h)	(a)	69.61	(a)	3547.01
MW-29	03/10/09	3613.54 (d)	(a)	67.86	(a)	3545.68
	10/08/09	(3)	(a)	68.82	(a)	3544.72
	03/22/10		(a)	68.04	(a)	3545.50
	04/17/11		(a)	67.78	(a)	3545.76
	12/22/11		(a)	68.15	(a)	3545.39
	04/17/12		(a)	68.41	(a)	3545.13
	10/15/12		(a)	68.10	(a)	3545.44
	01/22/13		(a)	68.33	(a)	3545.21
	04/15/13		(a)	68.34	(a)	3545.20
	11/03/13	3614.22 (h)	(a)	69.47	(a)	3544.75
MW-30	03/10/09	3612.63 (d)	(a)	65.83	(a)	3546.80
	10/08/09		(a)	65.97	(a)	3546.66
	03/22/10		(a)	65.81	(a)	3546.82
	04/17/11		(a)	66.13	(a)	3546.50
	12/22/11		(a)	66.20	(a)	3546.43
	04/17/12		(a)	66.30	(a)	3546.33
	10/15/12		(a)	66.48	(a)	3546.15
	01/22/13		(a)	66.61	(a)	3546.02
	04/15/13	2042.20 (5)	(a)	66.57	(a)	3546.06
	11/03/13	3613.33 (h)	(a)	66.84	(a)	3546.49
MW-31	03/10/09	3611.59 (e)	(a)	64.08	(a)	3547.51
	10/08/09		(a)	64.27	(a)	3547.32
	03/22/10		(a)	64.04	(a)	3547.55
	04/17/11		(a)	64.32	(a)	3547.27
	12/22/11		(a)	64.37	(a)	3547.22
	04/17/12		(a)	64.73	(a)	3546.86
	01/22/13		(a)	64.77	(a)	3546.82
	04/15/13		(a)	64.88	(a)	3546.71
	*Well Plugged 08/2013					
MW-32	03/10/09	3608.73 (e)	(a)	65.01	(a)	3543.72
	10/08/09		(a)	66.29	(a)	3542.44
	03/22/10		(a)	65.44	(a)	3543.29
	04/17/11		(a)	65.15	(a)	3543.58
	12/22/11		(a)	65.42	(a)	3543.31
	04/17/12 10/15/12		(a)	66.03 65.59	(a)	3542.70 3543.14
	01/22/13		(a) (a)	65.94	(a) (a)	3542.79
	04/15/13		(a) (a)	66.33	(a) (a)	3542.40
	11/03/13	3609.49 (h)	(a)	66.95	(a)	3542.54
MW-33	03/10/09	3610.55 (e)	(a)	63.81	(a)	3546.74
00	10/08/09		(a)	63.95	(a)	3546.60
	03/22/10		(a)	63.94	(a)	3546.61
	04/17/11		(a)	64.28	(a)	3546.27
	12/22/11		(a)	64.42	(a)	3546.13
	04/17/12		(a)	64.57	(a)	3545.98
	10/15/12		(a)	64.63	(a)	3545.92
	01/22/13		(a)	64.76	(a)	3545.79
	04/15/13		(a)	64.82	(a)	3545.73

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	11/03/13	3611.37 (h)	(a)	64.86	(a)	3546.51
MW-34	03/10/09	3605.05 (f)	(a)	61.57	(a)	3543.48
	10/08/09	0000.00 (1)	(a)	62.61	(a)	3542.44
	03/22/10		(a)	61.93	(a)	3543.12
	04/17/11		(a)	61.98	(a)	3543.07
	12/22/11		(a)	62.49	(a)	3542.56
	04/17/12		(a)	62.77	(a)	3542.28
	10/15/12		(a)	62.80	(a)	3542.25
	01/22/13		(a)	63.14	(a)	3541.91
	04/15/13		(a)	63.25	(a)	3541.80
	11/03/13	3605.76 (h)	(a)	63.81	(a)	3541.95
MW-35	03/10/09	3601.87 (f)	(a)	58.40	(a)	3543.47
	10/08/09		(a)	59.42	(a)	3542.45
	03/22/10		(a)	58.85	(a)	3543.02
	04/17/11		(a)	58.89	(a)	3542.98
	12/22/11		(a)	59.60	(a)	3542.27
	04/17/12		(a)	59.76	(a)	3542.11
	10/15/12		(a)	59.91	(a)	3541.96
	01/22/13		(a)	60.14	(a)	3541.73
	04/15/13		(a)	60.28	(a)	3541.59
	11/03/13	3602.61 (h)	(a)	60.81	(a)	3541.80
MW-36	03/10/09	3601.97 (g)	(a)	57.51	(a)	3544.46
	10/08/09		(a)	58.05	(a)	3543.92
	03/22/10		(a)	57.99	(a)	3543.98
	04/17/11		(a)	58.21	(a)	3543.76
	12/22/11		(a)	58.58	(a)	3543.39
	04/17/12		(a)	58.79	(a)	3543.18
	10/15/12		(a)	59.00	(a)	3542.97
	01/22/13		(a)	59.21	(a)	3542.76
	04/15/13	•	(a)	59.33	(a)	3542.64
	*Well Plugged 08/2013	3				
MW-37	03/10/09	3599.86 (g)	(a)	56.53	(a)	3543.33
	10/08/09		(a)	57.46	(a)	3542.40
	03/22/10		(a)	56.98	(a)	3542.88
	04/17/11		(a)	57.06	(a)	3542.80
	12/22/11		(a)	57.58	(a)	3542.28
	04/17/12		(a)	57.88	(a)	3541.98
	10/15/12		(a)	58.18	(a)	3541.68
	01/22/13		(a)	58.43	(a)	3541.43
	04/15/13		(a)	58.47	(a)	3541.39
	11/03/13	3600.58 (h)	(a)	58.99	(a)	3541.59
	11/13/13		(a)	58.96	(a)	3541.62
MW-38	03/10/09	3598.11 (g)	(a)	45.91	(a)	3552.20
	10/08/09		(a)	46.07	(a)	3552.04
	03/22/10		(a)	47.01	(a)	3551.10
	04/17/11		(a)	46.37	(a)	3551.74
	12/22/11		(a)	48.05	(a)	3550.06
	04/17/12		(a)	48.40	(a)	3549.71
	10/15/12		(a)	49.22	(a)	3548.89

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	01/22/13 04/15/13 *Well Plugged 08/2013	3	(a) (a)	49.58 49.79	(a) (a)	3548.53 3548.32
MW-39	08/16/13 11/03/13	3597.38 (h)	(a) (a)	51.64 51.08	(a) (a)	3545.74 3546.30
MW-40	08/16/13 11/03/13	3596.48 (h)	(a) (a)	54.25 54.21	(a) (a)	3542.23 3542.27
MW-41	08/16/13 11/03/13	3601.73 (h)	(a) (a)	56.57 56.63	(a) (a)	3545.16 3545.10
MW-42	08/16/13 11/03/13	3595.21 (h)	(a) (a)	56.42 56.28	(a) (a)	3538.79 3538.93
MW-23 D	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 01/22/13 04/15/13 *Well Plugged 08/2013	3605.00 (c)	(a) (a) (a) (a) (a) (a) (a) (a) (a)	65.10 70.13 65.02 67.84 69.16 70.45 74.06 69.92 71.53	(a) (a) (a) (a) (a) (a) (a) (a) (a)	3539.90 3534.87 3539.98 3537.16 3535.84 3534.55 3530.94 3535.08 3533.47
MW-24 D	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 01/22/13 04/15/13 11/03/13	3595.95 (c) 3596.80 (h)	(a)	56.62 61.13 56.22 58.73 60.28 61.39 65.33 61.26 62.76 64.42	(a)	3539.33 3534.82 3539.73 3537.22 3535.67 3534.56 3530.62 3534.69 3533.19 3532.38
MW-25 D	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 01/22/13 04/15/13 *Well Plugged 08/2013	3592.99 (c)	(a)	52.59 56.59 52.89 53.83 52.55 56.55 60.29 58.68 58.06	(a) (a) (a) (a) (a) (a) (a) (a) (a)	3540.40 3536.40 3540.10 3539.16 3540.44 3536.44 3532.70 3534.31 3534.93
MPE-1	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11	NA	(a) (a) (a) (a) (a)	64.40 65.90 64.85 64.35 64.60	(a) (a) (a) (a) (a)	NA NA NA NA

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	04/17/12 10/15/12 04/15/13 *Well Plugged 08/2013	3	(a) (a) (a)	65.28 64.70 65.44	(a) (a) (a)	NA NA NA
MPE-2	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 *Well Plugged 08/2013	NA	(a) (a) (a) (a) (a) (a) (a) (a) (a)	63.39 64.51 63.73 63.68 63.95 64.46 64.31 64.88	(a) (a) (a) (a) (a) (a) (a) (a)	NA NA NA NA NA NA
MPE-3	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 *Well Plugged 08/2013	NA	(a) (a) (a) (a) (a) (a) (a)	66.50 67.85 66.94 66.53 66.75 62.46 66.90 67.68	(a) (a) (a) (a) (a) (a) (a)	NA NA NA NA NA NA
MPE-4	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 *Well Plugged 08/2013	NA	(a) (a) (a) (a) (a) (a) (a) (a) (a)	66.25 67.94 66.87 66.20 66.34 66.96 66.41 66.94	(a) (a) (a) (a) (a) (a) (a) (a)	NA NA NA NA NA NA
MPE-5	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 *Well Plugged 08/2013	NA	(a) (a) (a) (a) (a) (a) (a) (a)	66.88 67.95 67.08 66.79 66.89 67.33 67.14	(a) (a) (a) (a) (a) (a) (a) (a)	NA NA NA NA NA NA
MPE-6	03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 *Well Plugged 08/2013	NA	(a) (a) (a) (a) (a) (a) (a) (a) (a)	68.74 70.16 69.19 68.76 68.98 69.71 69.10 69.84	(a) (a) (a) (a) (a) (a) (a) (a) (a)	NA NA NA NA NA NA

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

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Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-7	03/10/09	NA	(a)	67.79	(a)	NA
= .	10/08/09		(a)	69.75	(a)	NA
	03/22/10		(a)	67.62	(a)	NA
	04/17/11		(a)	67.15	(a)	NA
	12/22/11		(a)	67.07	(a)	NA
	04/17/12		(a)	67.50	(a)	NA
	10/15/12		(a)	67.44	(a)	NA
	04/15/13		(a)	67.63	(a)	NA
	11/03/13	3614.16 (h)	(a)	67.93	(a)	3546.23
MDE	00/40/00	N 10	()	05.00	()	NIA.
MPE-8	03/10/09	NA	(a)	65.06	(a)	NA
	10/08/09		(a)	65.79	(a)	NA
	03/22/10		(a)	65.53	(a)	NA
	04/17/11		(a)	65.30	(a)	NA
	12/22/11		(a)	65.58	(a)	NA
	04/17/12		(a)	65.71	(a)	NA NA
	10/15/12		(a)	65.62	(a)	NA
	04/15/13	0040.05 (5)	(a)	65.41	(a)	NA
	11/03/13	3612.35 (h)	(a)	66.55	(a)	3545.80
MPE-9	03/10/09	NA	(a)	67.24	(a)	NA
	10/08/09		(a)	67.79	(a)	NA
	01/26/10		67.92	67.93	0.01	NA
	03/22/10		(a)	67.82	(a)	NA
	04/17/11		(a)	67.49	(a)	NA
	12/22/11		(a)	67.61	(a)	NA
	04/17/12		(a)	67.87	(a)	NA
	10/15/12		(a)	67.70	(a)	NA
	04/15/13		(a)	67.92	(a)	NA
	11/03/13	3615.40 (h)	(a)	67.32	(a)	3548.08
MPE-10	03/10/09	NA	65.58	66.45	0.87	NA
	03/22/10		(a)	66.20	(a)	NA
	04/17/11		65.41	66.85	1.44	NA
	12/22/11		65.74	66.48	0.74	NA
	04/17/12		66.05	66.22	0.17	NA
	10/15/12		66.03	66.88	0.85	NA
	04/15/13		65.96	66.95	0.99	NA
	11/03/13	3613.85 (h)	65.71	67.08	1.37	3547.81
MPE-11	03/10/09	NA	(a)	63.02	(a)	NA
	10/08/09		(a)	63.81	(a)	NA
	04/17/11		(a)	62.92	(a)	NA
	12/22/11		(a)	63.21	(a)	NA
	04/17/12		(a)	63.44	(a)	NA
	10/15/12		(a)	63.73	(a)	NA
	04/15/13		(a)	63.63	(a)	NA
	11/03/13	3610.37 (h)	(a)	64.11	(a)	3546.26
MPE-12	03/10/09	NA	64.30	64.60	0.30	NA
	10/08/09		65.24	65.45	0.21	NA
	01/26/10		64.75	65.12	0.37	NA
	03/22/10		64.55	64.60	0.05	NA

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwate Surface Elevation (ft
	04/17/11		64.32	64.47	0.15	NA
	12/22/11		(a)	64.61	(a)	NA
	04/17/12		(a)	64.78	(a)	NA
	10/15/12		(a)	65.11	(a)	NA
	04/15/13		6 4 .81	64.83	0.02	NA
	11/03/13	3612.51 (h)	(a)	64.81	(a)	3547.70
MPE-13	03/10/09	NA	62.93	63.90	0.97	NA
	10/08/09		63.65	64.00	0.35	NA
	01/26/10		63.44	63.75	0.31	NA
	03/22/10		62.93	63.15	0.22	NA
	04/17/11		63.08	63.27	0.19	NA
	12/22/11		(a)	63.32	(a)	NA
	04/17/12		63.51	63.93	0.42	NA
	10/15/12		63.91	64.27	0.36	NA
	04/15/13		63.93	64.19	0.26	NA
	11/03/13	3610.91 (h)	64.07	64.21	0.14	3546.81
MPE-14	03/10/09	NA	63.70	63.83	0.13	NA
	10/08/09		(a)	64.27	(a)	NA
	01/26/10		(a)	64.08	(a)	NA
	03/22/10		(a)	63.57	(a)	NA
	04/17/11		(a)	63.70	(a)	NA
	12/22/11		(a)	64.05	(a)	NA
	04/17/12		(a)	64.12	(a)	NA
	10/15/12		(a)	64.75	(a)	NA
	04/15/13	0044.04.(1.)	64.40	64.94	0.54	NA 0510.50
	11/03/13	3611.31 (h)	64.40	65.87	1.47	3546.56
MPE-15	03/10/09	NA	(a)	62.40	(a)	NA
	10/08/09		(a)	62.59	(a)	NA
	03/22/10		(a)	62.36	(a)	NA
	04/17/11		(a)	62.20	(a)	NA
	12/22/11		(a)	62.75	(a)	NA
	04/17/12		(a)	63.05	(a)	NA
	10/15/12		(a)	63.05	(a)	NA
	04/15/13		(a)	63.19	(a)	NA
	11/03/13	3612.40 (h)	(a)	63.45	(a)	3548.95
MPE-16	03/10/09	NA	64.32	65.75	1.43	NA
	10/08/09		65.63	Tagged pump	NA 1.66	NA NA
	01/26/10		64.64	66.30	1.66	NA NA
	03/22/10		64.27 64.25	66.21 65.18	1.94	NA NA
			04.20	65.18	0.93	
	04/17/11			65.70		
	04/17/11 12/22/11		64.61	65.79 67.17	1.18	NA NA
	04/17/11 12/22/11 04/17/12		64.61 64.74	67.17	2.43	NA
	04/17/11 12/22/11 04/17/12 10/15/12		64.61 64.74 64.89	67.17 67.41	2.43 2.52	NA NA
	04/17/11 12/22/11 04/17/12	3613.14 (h)	64.61 64.74	67.17	2.43	NA
MPE-17	04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 11/03/13		64.61 64.74 64.89 64.80 64.65	67.17 67.41 66.55 67.06	2.43 2.52 1.75 2.41	NA NA NA 3547.91
MPE-17	04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 11/03/13	3613.14 (h) NA	64.61 64.74 64.89 64.80 64.65	67.17 67.41 66.55 67.06	2.43 2.52 1.75 2.41	NA NA NA 3547.91
MPE-17	04/17/11 12/22/11 04/17/12 10/15/12 04/15/13 11/03/13		64.61 64.74 64.89 64.80 64.65	67.17 67.41 66.55 67.06	2.43 2.52 1.75 2.41	NA NA NA 3547.91

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	04/17/11		(a)	64.93	(a)	(a)
	12/22/11		(a)	65.37	(a)	(a)
	04/17/12		65.22	65.37	0.15	(a)
	10/15/12		65.95	66.81	0.86	(a)
	04/15/13		65.62	66.06	0.44	(a)
	11/03/13	3612.75 (h)	65.63	67.49	1.86	3546.67
MPE-18	03/10/09	NA	(a)	61.65	(a)	NA
	10/08/09		(a)	61.93	(a)	NA
	03/22/10		(a)	61.44	(a)	NA
	04/17/11		(a)	61.70	(a)	NA
	12/22/11		(a)	62.19	(a)	NA
	04/17/12		(a)	62.39	(a)	NA
	10/15/12		(a)	62.78	(a)	NA
	04/15/13		(a)	62.64	(a)	NA
	11/03/13	3611.12 (h)	(a)	62.93	(a)	3548.19
MPE-19	03/10/09	NA	(a)	65.02	(a)	NA
	10/08/09		(a)	65.54	(a)	NA
	03/22/10		(a)	65.14	(a)	NA
	04/17/11		(a)	65.11	(a)	NA
	12/22/11		(a)	65.54	(a)	NA
	04/17/12		(a)	65.53	(a)	NA
	10/15/12		(a)	65.91	(a)	NA
	04/15/13	004440(1)	(a)	66.03	(a)	NA 0540.44
	11/03/13	3614.46 (h)	(a)	66.05	(a)	3548.41
MPE-20	03/10/09	NA	62.58	64.52	1.94	NA
	10/08/09		62.45	65.34	2.89	NA
	01/26/10		62.28	65.10	2.82	NA
	03/22/10		61.58	64.81	3.23	NA
	04/17/11		62.10	64.45	2.35	NA
	12/22/11		62.70	64.58	1.88	NA
	04/17/12		63.09	64.86	1.77	NA
	10/15/12		64.41	65.23	0.82	NA
	04/15/13	0044 40 (5)	63.52	64.98	1.46	NA
	11/03/13	3611.40 (h)	63.37	64.28	0.91	3547.81
MPE-21	03/10/09	NA	(a)	56.57	(a)	NA
	10/08/09		(a)	57.13	(a)	NA
	01/26/10		(a)	57.71	(a)	NA
	03/22/10		(a)	57.68	(a)	NA
	04/17/11		(a)	57.30	(a)	NA
	12/22/11		(a)	57.82	(a)	NA
	04/17/12		58.20	58.31	0.11	NA
	10/15/12		58.02	58.07	0.05	NA NA
	04/15/13 11/03/13	3607.52 (h)	57.73 56.94	59.11 57.82	1.38 0.88	NA 3550.37
MDE 00						
MPE-22	03/10/09	NA	(a)	67.17	(a)	NA
	10/08/09		(a)	67.68	(a)	NA
	01/26/10		(a)	67.33	(a)	NA NA
	03/22/10		(a)	66.99	(a)	NA NA
	04/17/11		(a)	67.25	(a)	NA

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	12/22/11		(a)	67.61	(a)	NA
	04/17/12		(a)	67.44	(a)	NA
	10/18/12		(a)	68.20	(a)	NA
	04/15/13		(a)	67.87	(a)	NA
	11/03/13	3616.80 (h)	(a)	68.28	(a)	3548.52
MPE-23	03/10/09	NA	62.85	64.00	1.15	NA
	10/08/09		62.58	64.90	2.32	NA
	01/26/10		62.84	63.98	1.14	NA
	03/22/10		61.94	62.58	0.64	NA
	04/17/11		62.31	62.78	0.47	NA
	12/22/11		62.45	64.70	2.25	NA
	04/17/12		62.57	64.58	2.01	NA
	10/18/12		63.35	65.36	2.01	NA
	04/15/13		62.78	65.30	2.52	NA
	11/03/13	3612.44 (h)	63.45	65.52	2.07	3548.49
MPE-24	03/10/09	NA	57.55	58.93	1.38	NA
	10/08/09		57.20	59.52	2.32	NA
	01/26/10		57.65	59.92	2.27	NA
	03/22/10		57.41	59.75	2.34	NA
	04/17/11		57.57	59.57	2.00	NA
	12/22/11		58.27	60.95	2.68	NA
	04/17/12		58.43	61.11	2.68	NA
	10/15/12		58.10	64.85	6.75	NA
	04/15/13		58.08	63.22	5.14	NA
	11/03/13	3608.45 (h)	58.33	62.96	4.63	3549.01
MPE-25	03/10/09	NA	(a)	67.13	(a)	NA
	10/08/09		(a)	67.79	(a)	NA
	01/26/10		(a)	67.40	(a)	NA
	03/22/10		(a)	67.07	(a)	NA
	04/17/11		(a)	67.32	(a)	NA
	12/22/11		(a)	67.79	(a)	NA
	04/17/12		(a)	67.50	(a)	NA
	10/18/12		(a)	68.32	(a)	NA
	04/15/13		(a)	68.03	(a)	NA
	11/03/13	3616.99 (h)	(a)	68.46	(a)	3548.53
MPE-26	03/10/09	NA	64.54	64.86	0.32	NA
	10/08/09		65.30	65.70	0.40	NA
	01/26/10		64.84	65.32	0.48	NA
	03/22/10		64.46	65.04	0.58	NA
	04/17/11		(a)	64.70	(a)	NA
	12/22/11		65.19	65.63	0.44	NA
	04/17/12		64.92	65.48	0.56	NA
	10/15/12		65.60	66.10	0.50	NA
	04/15/13		65.54	66.05	0.51	NA
	11/03/13	3614.30 (h)	65.78	65.82	0.04	3548.51
MPE-27	03/10/09	NA	62.65	64.96	2.31	NA
	10/08/09		63.05	69.05	6.00	NA
	01/26/10		(a)	62.92	(a)	NA
	03/22/10		62.60	64.38	1.78	NA

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

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Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	04/17/11		62.54	tag top of pump	NA	NA
	12/22/11		(a)	62.81	(a)	NA
	04/17/12		63.34	63.63	0.29	NA
	10/15/12		64.62	65.38	0.76	NA
	04/15/13		(a)	tag top of pump	NA	NA
	11/03/13	3612.96 (h)	62.92	65.70	2.78	3549.37
MPE-28	03/10/09	NA	55.01	59.20	4.19	NA
	10/08/09		56.72	60.21	3.49	NA
	01/26/10		56.12	59.78	3.66	NA
	03/22/10		55.50	59.20	3.70	NA
	04/17/11		(a)	56.78	(a)	NA
	12/22/11		(a)	58.61	(a)	NA
	04/17/12		(a)	57.45	(a)	NA
	10/15/12		(a)	58.30	(a)	NA
	04/15/13		57.85	57.88	0.03	NA
	11/03/13	3607.49 (h)	(a)	58.39	(a)	3549.10
MPE-29	03/10/09	NA	(a)	67.35	(a)	NA
	10/08/09		(a)	68.38	(a)	NA
	03/22/10		(a)	67.58	(a)	NA
	04/17/11		(a)	67.73	(a)	NA
	12/22/11		(a)	68.38	(a)	NA
	04/17/12		(a)	67.98	(a)	NA
	10/18/12		(a)	68.95	(a)	NA
	04/15/13		(a)	68.44	(a)	NA
	11/03/13	3617.10 (h)	(a)	69.00	(a)	3548.10
MPE-30	03/10/09	NA	(a)	64.92	(a)	NA
	10/08/09		(a)	66.20	(a)	NA
	03/22/10		(a)	65.41	(a)	NA
	04/17/11		(a)	65.25	(a)	NA
	12/22/11		(a)	65.91	(a)	NA
	04/17/12		(a)	65.78	(a)	NA
	10/18/12		(a)	66.46	(a)	NA
	04/15/13		(a)	66.35	(a)	NA
	11/03/13	3616.01 (h)	(a)	66.93	(a)	3549.08
MPE-31	03/10/09	NA	63.22	63.24	0.02	NA
	10/08/09		(a)	65.28	(a)	NA
	01/26/10		(a)	63.99	(a)	NA
	03/22/10		63.46	63.47	0.01	NA
	04/17/11		(a)	63.41	(a)	NA NA
	12/22/11		64.22	64.69	0.47	NA NA
	04/17/12		64.04	64.45	0.41	NA NA
	10/18/12		65.28	65.82	0.54	NA NA
	04/15/13		64.16	65.16	1.00	NA NA
	11/03/13	3613.18 (h)	64.64	65.11	0.47	3548.43
	03/10/09	NA	57.01	59.81	2.80	NA
MPE-32				62.21	(a)	NA
MPE-32	10/08/09		(a)	0/./ 1		
MPE-32	10/08/09 01/26/10		(a) 57.90			
MPE-32	10/08/09 01/26/10 03/22/10		(a) 57.90 (a)	61.23 57.30	3.33 (a)	NA NA

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Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	12/22/11		(a)	56.62	(a)	NA
	04/17/12		58.55	61.08	2.53	NA
	10/15/12		NA	Tag top of pump	NA	NA
	04/15/13		59.16	59.35	0.19	NA
	11/03/13	3607.41 (h)	(a)	60.03	(a)	3547.38
MPE-33	03/10/09	NA	(a)	53.82	(a)	NA
	10/08/09		(a)	56.63	(a)	NA
	03/22/10		(a)	54.56	(a)	NA
	04/17/11		(a)	54.73	(a)	NA
	12/22/11		(a)	56.65	(a)	NA
	04/17/12		(a)	55.85	(a)	NA
	10/15/12		(a)	58.43	(a)	NA
	04/15/13		(a)	56.43	(a)	NA
	11/03/13	3603.22 (h)	(a)	57.14	(a)	3546.08
MPE-34	03/10/09	NA	(a)	65.24	(a)	NA
	10/08/09		(a)	65.78	(a)	NA
	03/22/10		(a)	65.56	(a)	NA
	04/17/11		(a)	65.40	(a)	NA
	12/22/11		(a)	65.76	(a)	NA
	04/17/12		(a)	65.79	(a)	NA
	10/18/12		(a)	66.15	(a)	NA
	04/15/13		(a)	66.20	(a)	NA
	11/03/13	3616.24 (h)	(a)	66.28	(a)	3549.96
MPE-35	03/10/09	NA	(a)	59.29	(a)	NA
	10/08/09		(a)	59.96	(a)	NA
	03/22/10		(a)	59.36	(a)	NA
	04/17/11		(a)	59.16	(a)	NA
	12/22/11		(a)	59.67	(a)	NA
	04/17/12		(a)	59.80	(a)	NA
	10/15/12		(a)	60.00	(a)	NA
	04/15/13		(a)	60.08	(a)	NA
	11/03/13	3609.95 (h)	59.96	60.32	0.36	3549.90
	11/13/13		60.04	60.35	0.31	3549.84
MPE-36	03/10/09	NA	(a)	54.45	(a)	NA
	10/08/09		(a)	57.35	(a)	NA
	03/22/10		(a)	55.09	(a)	NA
	04/17/11		(a)	54.78	(a)	NA
	12/22/11		(a)	56.05	(a)	NA
	04/17/12		(a)	55.99	(a)	NA
	10/15/12		(a)	57.20	(a)	NA
	04/15/13		(a)	56.35	(a)	NA
	11/03/13	3604.60 (h)	(a)	56.58	(a)	3548.02
MPE-37	03/10/09	NA	(a)	51.90	(a)	NA
	10/08/09		(a)	56.51	(a)	NA
	03/22/10		(a)	52.40	(a)	NA
	04/17/11		(a)	52.22	(a)	NA
	12/22/11		(a)	53.48	(a)	NA
	04/17/12		(a)	53.26	(a)	NA
	10/15/12		(a)	54.68	(a)	NA

Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	04/15/13		(a)	53.63	(a)	NA
	11/03/13	3601.20 (h)	(a)	54.05	(a)	3547.15
MPE-38	08/16/13	3613.81 (h)	63.85	68.88	5.03	3548.75
	11/03/13	()	65.89	68.62	2.73	3547.26
MPE-39	08/16/13	3608.26 (h)	(a)	60.45	(a)	3547.81
	11/03/13		(a)	60.21	(a)	3548.05
MPE-40	08/16/13	3610.84 (h)	61.52	61.95	0.43	3549.22
	11/03/13		61.95	62.25	0.30	3548.82
MPE-41	08/16/13	3605.49 (h)	60.40	60.90	0.50	3544.97
	11/03/13		56.19	62.74	6.55	3547.73
	11/13/13		56.58	62.72	6.14	3547.44
SVE-22	03/10/09	NA	33.00	33.20	0.20	NA
	10/08/09		32.92	33.10	0.18	NA
	01/26/10		33.05	33.05 (TD)	0.00	NA
	03/22/10		33.02	33.02 (TD)	0.00	NA
	04/17/11		32.90	33.00 (TD)	0.10	NA
	12/22/11		(a)	33.04	(a)	NA
	04/17/12		(a)	33.00 (TD)	(a)	NA
	10/18/12		(a)	33.00 (TD)	(a)	NA
	04/15/13		(a)	32.98	(a)	NA
	11/03/13	3616.76 (h)	(a)	33.08	(a)	3583.68
SVE-23	03/10/09	NA	32.78	36.75	3.97	NA
	10/08/09		33.01	33.79	0.78	NA
	01/26/10		33.12	36.98 (TD)	3.86	NA
	03/22/10		32.09	33.65	1.56	NA
	04/17/11		33.00	33.30	0.30	NA
	12/22/11		33.60	34.05	0.45	NA
	04/17/12		33.62	34.10	0.48	NA
	10/18/12		34.11	34.68	0.57	NA
	04/15/13	0040 45 (1)	33.65	33.92	0.27	NA 0570.05
	11/03/13	3612.45 (h)	33.73	36.52	2.79	3578.05
SVE-24	03/10/09	NA	(a)	dry	(a)	NA
	10/08/09		(a)	dry	(a)	NA
	01/26/10		(a)	dry	(a)	NA
	03/22/10		(a)	dry	(a)	NA
	04/17/11		(a)	dry	(a)	NA
	12/22/11		(a)	dry	(a)	NA
	04/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	04/15/13	2609 07 (h)	(a)	dry	(a)	NA NA
	11/03/13	3608.97 (h)	(a)	dry	(a)	NA
SVE-25	03/10/09	NA	(a)	32.70	(a)	NA
	10/08/09		(a)	31.40	(a)	NA
	01/26/10		(a)	dry	(a)	NA
	03/22/10		(a)	32.80	(a)	NA
	04/17/11		(a)	32.23	(a)	NA

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Table 4-2. Summary of Groundwater Surface Elevations Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
	12/22/11		(a)	32.65	(a)	NA
	04/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	32.70	(a)	NA
	04/15/13		(a)	dry	(a)	NA
	11/03/13	3617.02 (h)	(a)	32.72	(a)	3584.30
SVE-26	03/10/09	NA	(a)	dry	(a)	NA
	10/08/09		(a)	dry	(a)	NA
	01/26/10		(a)	dry	(a)	NA
	03/22/10		(a)	dry	(a)	NA
	04/17/11		(a)	dry	(a)	NA
	12/22/11		(a)	dry	(a)	NA
	04/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	04/15/13	00444041	(a)	dry	(a)	NA
	11/03/13	3614.43 (h)	(a)	dry	(a)	NA
SVE-27	03/10/09	NA	(a)	32.92	(a)	NA
	10/08/09		(a)	33.63	(a)	NA
	01/26/10		(a)	dry	(a)	NA
	03/22/10		(a)	33.70	(a)	NA
	04/17/11		(a)	33.70	(a)	NA
	12/22/11		(a)	33.83	(a)	NA
	04/17/12		(a)	dry	(a)	NA NA
	10/18/12		(a)	dry	(a)	NA
	04/15/13 11/03/13	3613.19 (h)	(a) (a)	33.82 dry	(a) (a)	NA NA
CVE 20	02/40/00	NA				NA
SVE-28	03/10/09 10/08/09	INA	(a)	28.60 28.95	(a)	NA NA
	01/26/10		(a)	26.95 dry	(a)	NA NA
	03/22/10		(a)	29.07	(a)	NA NA
	04/17/11		(a) (a)	29.17	(a) (a)	NA NA
	12/22/11		(a) (a)	29.65	(a)	NA NA
	04/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	04/15/13		(a)	33.58	(a)	NA
	11/03/13	3607.84 (h)	(a)	dry	(a)	NA
SVE-30	03/10/09	NA	(a)	39.32	(a)	NA
- · - · ·	10/08/09		(a)	39.29	(a)	NA
	03/22/10		(a)	40.28	(a)	NA
	04/17/11		(a)	40.11	(a)	NA
	12/22/11		(a)	41.11	(a)	NA
	04/17/12		(a)	41.65	(a)	NA
	10/18/12		(a)	41.42	(a)	NA
	04/15/13		(a)	41.67	(a)	NA
	11/03/13	3616.00 (h)	(a)	43.02	(a)	3572.98
SVE-31	03/10/09	NA	(a)	30.45	(a)	NA
	10/08/09		(a)	30.43	(a)	NA
	01/26/10		(a)	30.55	(a)	NA
	03/22/10		(a)	31.49	(a)	NA
	04/17/11		(a)	dry	(a)	NA

Table 4-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM

Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
12/22/11 04/17/12 10/18/12 04/15/13 11/03/13	3612.67 (h)	(a) (a) (a) (a) (a)	28.50 dry dry dry dry	(a) (a) (a) (a) (a)	NA NA NA NA
03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/18/12 04/15/13	NA	(a) (a) (a) (a) (a) (a) (a)	33.17 33.48 33.62 33.80 34.26 34.57 35.16 35.77	(a) (a) (a) (a) (a) (a) (a)	NA NA NA NA NA NA
	12/22/11 04/17/12 10/18/12 04/15/13 11/03/13 03/10/09 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/18/12	Date Casing (ft) 12/22/11 04/17/12 10/18/12 04/15/13 11/03/13 3612.67 (h) 03/10/09 NA 10/08/09 03/22/10 04/17/11 12/22/11 04/17/12 10/18/12 04/15/13	Date Casing (ft) PSH (ft) 12/22/11 (a) 04/17/12 (a) 10/18/12 (a) 04/15/13 (a) 11/03/13 3612.67 (h) (a) 03/10/09 NA (a) 10/08/09 (a) 03/22/10 (a) 04/17/11 (a) 12/22/11 (a) 04/17/12 (a) 10/18/12 (a) 04/15/13 (a)	Date Casing (ft) PSH (ft) Groundwater (ft) 12/22/11 (a) 28.50 04/17/12 (a) dry 10/18/12 (a) dry 04/15/13 (a) dry 11/03/13 3612.67 (h) (a) 33.17 10/08/09 (a) 33.48 03/22/10 (a) 33.62 04/17/11 (a) 33.80 12/22/11 (a) 34.26 04/17/12 (a) 35.16 04/15/13 (a) 35.77	Date Casing (ft) PSH (ft) Groundwater (ft) PSH (II) 12/22/11 (a) 28.50 (a) 4/17/12 (a) dry (a) 10/18/12 (a) dry (a) 11/03/13 3612.67 (h) (a) dry (a) 11/03/13 3612.67 (h) (a) dry (a) 11/03/13 3612.67 (h) (a) 33.17 (a) 10/08/09 (a) 33.48 (a) 03/22/10 (a) 33.62 (a) 04/17/11 (a) 33.80 (a) 12/22/11 (a) 34.26 (a) 04/17/12 (a) 35.16 (a) 04/15/13 (a) 35.16 (a) 04/15/13 (a) 35.77 (a)

PSH - Phase separated hydrocarbon

Corrections to ground water surface elevation for PSH is calculated assuming a specific gravity of 0.76 (NA) Information not available

- (a) Not applicable since no measurable thickness of PSH is present
- (b) Elevation based on survey by Wagener Engineering dated 5/6/98
- (c) Elevation based on survey by Wagener Engineering dated 9/17/98
- (d) Elevation based on survey by Wagener Engineering dated 11/29/00
- (e) Elevation based on survey by Wagener Engineering dated 10/03/01
- (f) Elevation based on survey by Cypress Engineering dated 03/14/03
- (g) Elevation based on survey by Cypress Engineering dated 06/23/07
- (h) Elevation based on survey by PR Patton & Associates dated 10/01/13

Historical data before 2009 is presented in previous reports

Table 4-3. Sampling and Analysis Plan Transwestern Compressor Station No. 9 - Roswell, NM

-						
	1st	2nd			Consecutive	
	Semiannual	Semiannual			Events	
	Event	Event	Date of	Benzene (ppb)	< NMWQCC	
	Analytical	Analytical	Most Recent	Most Recent	Standard or EPA	
Well ID	Requirements	Requirements	Sample	Sample	MCL	Comments
		·	•	•		•
MW-1B			na	na	na	PSH in well
MW-2			na	na	na	Insufficient water to sample
MW-3			09/16/08	<1	20	clean perimeter well
MW-5			03/23/99	<1	10	well P&A'd Aug. 2013
MW-6			03/23/99	<1	10	well P&A'd Aug. 2013
MW-7			09/11/08	<1	21	clean perimeter well
MW-8			03/25/99	<1	9	well P&A'd Aug. 2013
MW-9			03/24/99	<1	9	well P&A'd Aug. 2013
MW-10			09/16/08	<1	18	clean perimeter well
MW-11			09/11/08	<1	18	clean perimeter well
MW-12			na	na	na	PSH in well
MW-13		BTEX	11/18/13	<1	17	Previously contained elevated benzene
MW-14		BTEX	11/18/13	<1	6	Previously contained elevated benzene
MW-15			09/11/08	<1	18	clean perimeter well
MW-16	BTEX	BTEX	11/18/13	320	0	Previously contained PSH in well
MW-17			09/11/08	<1	18	clean perimeter well
MW-18			03/24/99	<1	7	well P&A'd Aug. 2013
MW-19			03/24/99	<1	8	well P&A'd Aug. 2013
MW-20	VOCs	VOCs	11/18/13	1.6 (DCE)	1	COCs: DCA, DCE, TCA
MW-21		BTEX	11/18/13	<1	16	Previously contained elevated benzene
MW-22	VOCs	VOCs	11/18/13	<2 (DCE)	22	COCs: DCA, DCE, TCA
MW-23D			04/16/13	<1	24	well P&A'd Aug. 2013
MW-24D		BTEX	11/18/13	<1	3	clean deep well
MW-25D			04/17/13	<1	21	well P&A'd Aug. 2013
MW-26	VOCs	VOCs	11/15/13	45 (DCE)	0	COCs: DCA, DCE, TCA
MW-27			na	na	na	PSH in well
MW-28			09/10/08	<1	12	clean perimeter well
MW-29	BTEX	BTEX	11/14/13	<1	8	Previously contained elevated benzene
MW-30			09/16/08	<1	12	clean perimeter well
MW-31			09/10/08	<1	9	well P&A'd Aug. 2013
MW-32	BTEX	BTEX	11/14/13	<1	14	Previously contained elevated benzene
MW-33			09/10/08	<1	9	clean perimeter well
MW-34	BTEX	BTEX	11/14/13	7.2	0	Elevated benzene
MW-35	BTEX	BTEX	11/14/13	<1	23	clean downgradient well
MW-36			03/11/09	<1	12	well P&A'd Aug. 2013
MW-37	BTEX	BTEX	11/14/13	<1	13	clean downgradient well
MW-38			03/11/09	<1	12	well P&A'd Aug. 2013
MW-39		VOCs	11/15/13	15 (DCE)	0	COCs: DCA, DCE, TCA
MW-40		VOCs	11/15/13	<1 (DCE)	2	clean downgradient well
MW-41		VOCs	11/15/13	<1 (DCE)	1	COCs: DCA, DCE, TCA
MW-42		VOCs	11/15/13	<1 (DCE)	2	clean downgradient well

¹⁾ Non-detect results are shown with the "<" symbol followed by the reporting limit

²⁾ na - not available; well is not part of the sampling plan

³⁾ BTEX (Benzene, Toluene, Ethylbenzene and Xylenes) and VOCs (Volatile Organic Compounds) to be analyzed by EPA method 8260 4) Italics denote well plugged and abandoned in August 2013

Table 4-4. Summary of Groundwater Analytical Results Transwestern Compressor Station No. 9 - Roswell, NM

Well NMW	Sampling Date QCC Standard:	Denzene	Toluene	Ethylbenzene	Xylenes (total)	다.1-Dichloroethane	വ 1,1-Dichloroethene
	USEPA MCL:	5	1000	700	10000	none	7
	OOLI / TIMOL.	<u> </u>	1000	700	10000	Hone	,
MW-13	03/11/09 10/07/09 09/24/10 01/02/12 10/19/12 11/18/13	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 3.0 < 3.0 < 3.0 < 2.0 < 2.0 < 2.0	NA NA NA NA NA	NA NA NA NA NA
MW-14	10/07/09 09/23/10 01/02/12 10/19/12 11/18/13	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 3.0 < 3.0 < 2.0 < 2.0 < 2.0	NA NA NA NA	NA NA NA NA
MW-16	10/21/12 04/17/13 11/18/13	1000 650 320	< 50 < 50 50	270 210 210	2300 2400 1900	NA NA NA	NA NA NA
MW-20	03/12/09 10/07/09 03/30/10 09/24/10 04/19/11 01/03/12 04/18/12 10/19/12 04/17/13 11/18/13	< 1.0 2.8 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	<1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5	14 7.2 13 4.6 14 5.1 6.4 2.9 3.2 1.8	35 13 28 9.7 22 6.4 8.6 8.1 4.5
MW-21	03/11/09 10/07/09 09/23/10 01/03/12 10/25/12 11/18/13	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 3.0 < 3.0 < 3.0 < 2.0 < 2.0 < 2.0	NA NA NA NA NA	NA NA NA NA NA

Table 4-4. Summary of Groundwater Analytical Results Transwestern Compressor Station No. 9 - Roswell, NM

Well	Sampling Date	. Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene
NMW	QCC Standard:	10	750	750	620	25	5
	USEPA MCL:	5	1000	700	10000	none	7
MW-22	03/12/09	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.2
	10/07/09	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
	03/30/10	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1
	09/23/10	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	1.6
	01/03/12	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
	04/18/12	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1
	10/21/12	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
	04/17/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	2.2
	11/18/13	< 2.0	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0
MW-23D	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	09/26/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	10/21/12	1.6	8.1	2.8	10	NA	NA
	12/14/12	< 1.0	1.4	< 1.0	< 2.0	NA	NA
	01/21/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
MW-24D	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	09/26/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	10/21/12	< 1.0	2.1	1.0	3.5	NA	NA
	12/14/12	9.6	17	4.9	14	NA	NA
	01/21/13	< 1.0	< 1.0	3.3	6.0	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	11/18/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
MW-25D	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	09/26/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	10/21/12	< 1.0	1.2	< 1.0	2.2	NA	NA
	12/14/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	01/21/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/17/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA

Table 4-4. Summary of Groundwater Analytical Results Transwestern Compressor Station No. 9 - Roswell, NM

	_						
Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene
NMW	QCC Standard:	10	750	750	620	25	5
	USEPA MCL:	5	1000	700	10000	none	7
MW 26	02/44/00	. 1.0	.10	. 1.0	. 2.0	4.2	42
MW-26	03/11/09 10/07/09	< 1.0 < 1.0	< 1.0	< 1.0	< 3.0	4.2 5.5	43 42
	03/30/10	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	< 1.5 < 1.5	5.5 5.5	60
	09/24/10	< 1.0	< 1.0 < 1.0	< 1.0	< 1.5	6.2	50
	04/19/11	< 1.0	< 1.0	< 1.0	< 1.5	5.9	60
	01/03/12	< 1.0	< 1.0	< 1.0	< 1.5	7.8	57
	04/18/12	< 1.0	< 1.0	< 1.0	< 1.5	6.7	53
	10/19/12	< 1.0	< 1.0	< 1.0	< 1.5	5.6	54
	04/17/13	< 1.0	< 1.0	< 1.0	< 1.5	6.2	53
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	6.0	45
MW-29	03/11/09	4.1	< 1.0	< 1.0	< 3.0	NA	NA
	10/07/09	8.4	< 1.0	< 1.0	< 3.0	NA	NA
	03/30/10	1.4	< 1.0	< 1.0	< 2.0	NA	NA
	09/23/10	1.3	< 1.0	< 1.0	< 3.0	NA	NA
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	01/02/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/18/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	10/21/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
MW-32	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	03/30/10	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	01/02/12	1.8	< 1.0	< 1.0	< 2.0	NA	NA
	04/18/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	10/19/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA

Table 4-4. Summary of Groundwater Analytical Results Transwestern Compressor Station No. 9 - Roswell, NM

	Sampling	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene
Well	Date						
NIMIVV	QCC Standard: USEPA MCL:	10 5	750 1000	750 700	620	25	5 7
	OSLI A WICE.	3	1000	700	10000	none	1
MW-34	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	03/30/10	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	04/19/11	20	< 1.0	< 1.0	< 2.0	NA	NA
	01/02/12	210	< 1.0	< 1.0	< 2.0	NA	NA
	04/18/12	210	< 1.0	< 1.0	< 2.0	NA	NA
	10/19/12	140	< 1.0	< 1.0	< 2.0	NA	NA
	04/16/13	60	< 1.0	< 1.0	< 2.0	NA	NA
	11/14/13	7.2	< 1.0	< 1.0	< 2.0	NA	NA
MW-35	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
11117 00	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	03/30/10	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	01/02/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/18/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	10/21/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
MW-37	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
MW-39	08/16/13	2.8	< 1.0	< 1.0	< 1.5	2.0	19
10100-00	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	1.6	15
	,,		1		1.10		
MW-40	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
MW-41	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
MW-42	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0

Only constituents detected in one or more groundwater samples are shown in this table All results reported above the applicable standard are shown in bold type NA - Not analyzed; constituent is not part of the sampling plan Historical data before 2009 is presented in previous reports

Table 5-1. Summary of Vapor Sample Analyses for the SVE System Transwestern Compressor Station No. 9 - Roswell, NM

Sample ID	Date		oline VOCs	Estimated Process Flow	Potential Emissions	< C5	C5-C6	C6-C7	C7-C8	C8-C9	C9-C10	C10-C11	C11-C12	C12-C14	C14+
		(ug/L)	(ppbv) (a)	(scfm)	(lb/hr)					(0	%)				
West Baker Furnace	10/06/09	1.770	539	142	0.9		10.5	46.2	38.1	4.0	1.2	0.0	0.0	0.0	0.0
West Baker Furnace	08/10/11	3,200	974	147	1.8										
West Baker	07/03/12	3,700	1,126	162	2.2										
West Baker Furnace	10/05/12	1,400	426	162	0.8										
West Baker Furnace	10/22/12	1,670	508	162	1.0		17.1	44.2	28.6	4.2	5.0	0.5	0.2	0.1	0.1
West Baker Furnace	01/29/13	1,130	344	160	0.7		20.3	44.9	25.9	3.9	4.6	0.3	0.0	0.1	0.0
West Baker Furnace	02/27/13	1,120	341	160	0.7		14.2	40.2	30.2	6.1	8.3	0.6	0.4	0.0	0.0
West Baker Furnace	03/29/13	694	211	160	0.4		14.8	42.0	29.5	8.1	5.1	0.2	0.1	0.2	0.0
West Baker Furnace	04/30/13	850	259	160	0.5		31.1	32.1	23.6	8.0	4.3	0.7	0.1	0.1	0.0
West Baker Furnace	05/16/13	5,610	1,707	160	3.4		33.5	31.4	26.8	5.8	2.0	0.4	0.1	0.0	0.0
West Baker Furnace	06/17/13	4,600	1,400	160	2.8										
West Baker Furnace	07/17/13	4,680	1,424	160	2.8		28.6	30.3	30.3	6.9	3.5	0.3	0.1	0.0	0.0
West Baker Furnace	08/27/13	3,040	925	160	1.8		25.7	28.7	31.0	8.3	5.0	0.9	0.3	0.1	0.0
West Baker Furnace	09/25/13	2,280	694	160	1.4		25.4	29.5	24.8	10.0	7.5	1.9	0.8	0.1	0.0
West Baker Furnace	10/17/13	1,900	578	160	1.1		28.0	38.7	21.3	7.4	3.6	0.5	0.4	0.1	0.0
West Baker Furnace	11/22/13	2,100	639	160	1.3		31.9	35.5	23.4	5.9	3.0	0.1	0.1	0.1	0.0
West Baker Furnace	12/17/13	1,980	603	160	1.2		28.6	37.8	21.0	7.3	4.1	0.7	0.3	0.2	0.0
East Baker Furnace	10/06/09	2,010	612	216	1.6		15.4	49.3	31.4	2.9	1.0	0.0	0.0	0.0	0.0
East Baker Furnace	08/10/11	2,200	669	147	1.2										
East Baker	07/03/12	2,100	639	159	1.3										
East Baker Furnace	10/05/12	1,200	365	159	0.7										
East Baker Furnace	10/22/12	1,780	542	160	1.1		15.3	41.0	29.6	5.8	7.1	0.9	0.1	0.1	0.1
East Baker Furnace	01/29/13	928	282	160	0.6		16.4	46.9	24.9	6.2	5.4	0.2	0.0	0.0	0.0
East Baker Furnace	02/27/13	860	262	160	0.5		15.2	43.2	30.0	6.2	5.2	0.2	0.0	0.0	0.0
East Baker Furnace	03/29/13	555	169	160	0.3		16.6	47.6	24.4	6.1	4.5	0.5	0.2	0.1	0.0
East Baker Furnace	04/30/13	772	235	160	0.5		27.7	28.9	29.6	8.0	4.6	0.9	0.2	0.1	0.0
East Baker Furnace	05/16/13	5,350	1,628	160	3.2		31.4	30.2	27.7	6.9	2.7	8.0	0.2	0.1	0.0
East Baker Furnace	06/17/13	4,700	1,430	160	2.8										
East Baker Furnace	07/17/13	5,780	1,759	160	3.5		29.5	29.8	29.1	7.0	3.6	8.0	0.2	0.0	0.0
East Baker Furnace	08/27/13	3,040	925	160	1.8		25.6	28.7	31.0	8.5	5.1	0.9	0.2	0.0	0.0
East Baker Furnace	09/25/13	2,040	621	160	1.2		25.9	30.1	25.4	9.5	7.4	1.2	0.4	0.1	0.0
East Baker Furnace	10/17/13	1,650	502	160	1.0		30.5	32.8	22.8	7.9	4.6	0.6	0.4	0.2	0.2
East Baker Furnace	11/22/13	1,960	596	160	1.2		29.6	32.5	24.2	7.9	4.4	0.7	0.4	0.3	0.0
East Baker Furnace	12/17/13	1,770	539	160	1.1		31.4	33.2	22.8	7.2	4.2	0.6	0.3	0.3	0.0

(a) Conversion Factor:

P = 1.00 atm, MW = 79 g/mole, R = 0.08205 L*atm/(K*mole), $T = 293^{\circ} \text{K}$

C ppbv = C ug/L * ((R * T)/(MW*P))

C ppbv = C ug/L * 0.3043

Table 5-2. SVE System Potential Emissions Estimate for Total Non-Methane Hydrocarbons
Transwestern Compressor Station No. 9 - Roswell, NM

		Wes	t Unit			East	Unit				Total		
	Total		Potential	Projected	Total		Potential	Projected		Potential	Projected	Projected	Projected
	NMHC	Flow Rate	Emissions	TPY	NMHC	Flow Rate	Emissions	TPY	Flow Rate	Emissions	TPY	GPY	PPY
Date	C(ug/L)	Q(scfm)	M(lb/hr)	M(tons/yr)	C(ug/L)	Q(scfm)	M(lb/hr)	M(tons/yr)	Q(scfm)	M(lb/hr)	M(tons/yr)	M(gal/yr)	M(lbs/yr)
					•								
01/29/13	1130	160	0.7	3.0	928	160	0.6	2.4	320	1.2	5.4	1705	10804
02/27/13	1120	160	0.7	2.9	860	160	0.5	2.3	320	1.2	5.2	1640	10395
03/29/13	694	160	0.4	1.8	555	160	0.3	1.5	320	0.7	3.3	1035	6557
04/30/13	850	160	0.5	2.2	772	160	0.5	2.0	320	1.0	4.3	1343	8515
05/16/13	5610	160	3.4	14.7	5350	160	3.2	14.0	320	6.6	28.8	9078	57539
06/17/13	4600	160	2.8	12.1	4700	160	2.8	12.3	320	5.6	24.4	7703	48824
07/17/13	4680	160	2.8	12.3	5780	160	3.5	15.2	320	6.3	27.5	8664	54914
08/27/13	3040	160	1.8	8.0	3040	160	1.8	8.0	320	3.6	16.0	5036	31919
09/25/13	2280	160	1.4	6.0	2040	160	1.2	5.4	320	2.6	11.3	3578	22679
10/17/13	1900	160	1.1	5.0	1650	160	1.0	4.3	320	2.1	9.3	2940	18637
11/22/13	2100	160	1.3	5.5	1960	160	1.2	5.1	320	2.4	10.7	3363	21315
12/17/13	1980	160	1.2	5.2	1770	160	1.1	4.6	320	2.2	9.8	3106	19687
										Ger	neral Average	4099	25982
									Actua	l Average at 8	7% Runtime	3551	22505

1) Concentrations based on Hall Lab analysis of SVE system samples

Table 5-3. Summary of Treated Water Irrigation Rates Transwestern Compressor Station No. 9 - Roswell, NM

1		1			Cummulative		Cummulative		1	
			Meter	Irrigated	Irrigated	Elapsed	Elapsed	Average	Average	Year
			Reading	Volume	Volume	Time	Time		Recovery Rate	Total
Date	Time	Inspector	(gallons)	(gallons)	(gallons)	(days)	(days)	(GPD)	(GPM)	(gallons)
Date	TITIC	Порсосог	(gallorio)	(ganorio)	(gallorio)	(dayo)	(dayo)	(01 5)	(01 101)	(gallorio)
12/31/03										2003-2008
11/18/08					1,241,140					1,241,140
05/01/09	1200	СВ	964480	15,180	15,180	164.0	164.0	93	0.06	
05/16/09	1200	CB	976370	11,890	27,070	15.0	179.0	793	0.55	
05/20/09	1200	CB	985920	9,550	36,620	4.0	183.0	2388	1.66	
05/25/09	1200	СВ	1003890	17,970	54,590	5.0	188.0	3594	2.50	
05/29/09	1200	СВ	1014750	10,860	65,450	4.0	192.0	2715	1.89	
05/31/09	1200	СВ	1019820	5,070	70,520	2.0	194.0	2535	1.76	
06/04/09	1200	СВ	1030720	10,900	81,420	4.0	198.0	2725	1.89	
06/08/09	1200	СВ	1040710	9,990	91,410	4.0	202.0	2498	1.73	
06/15/09	1200	СВ	1055760	15,050	106,460	7.0	209.0	2150	1.49	
06/20/09	1200	СВ	1064810	9,050	115,510	5.0	214.0	1810	1.26	
06/25/09	1200	СВ	1068440	3,630	119,140	5.0	219.0	726	0.50	
07/04/09	1200	СВ	1074550	6,110	125,250	9.0	228.0	679	0.47	
07/07/09	1200	СВ	1082120	7,570	132,820	3.0	231.0	2523	1.75	
07/13/09	1200	СВ	1094120	12,000	144,820	6.0	237.0	2000	1.39	
07/17/09	1200	СВ	1098480	4,360	149,180	4.0	241.0	1090	0.76	
07/21/09	1200	СВ	1105500	7,020	156,200	4.0	245.0	1755	1.22	
07/27/09	1200	СВ	1107950	2,450	158,650	6.0	251.0	408	0.28	
07/31/09	1200	СВ	1110600	2,650	161,300	4.0	255.0	663	0.46	
08/04/09	1200	СВ	1112060	1,460	162,760	4.0	259.0	365	0.25	
08/10/09	1200	СВ	1124810	12,750	175,510	6.0	265.0	2125	1.48	
08/13/09	1200	СВ	1130140	5,330	180,840	3.0	268.0	1777	1.23	
08/17/09	1200	СВ	1137560	7,420	188,260	4.0	272.0	1855	1.29	
08/21/09	1200	СВ	1145780	8,220	196,480	4.0	276.0	2055	1.43	
08/28/09	1200	СВ	1158470	12,690	209,170	7.0	283.0	1813	1.26	
09/01/09	1200	СВ	1158960	490	209,660	4.0	287.0	123	0.09	
09/07/09	1200	СВ	1162130	3,170	212,830	6.0	293.0	528	0.37	
09/14/09	1200	СВ	1163840	1,710	214,540	7.0	300.0	244	0.17	
09/21/09	1200	СВ	1165080	1,240	215,780	7.0	307.0	177	0.12	
09/25/09	1200	СВ	1165680	600	216,380	4.0	311.0	150	0.10	
09/30/09	1200	СВ	1166290	610	216,990	5.0	316.0	122	0.08	
10/06/09	1200	СВ	1176620	10,330	227,320	6.0	322.0	1722	1.20	
10/12/09	1200	СВ	1177250	630	227,950	6.0	328.0	105	0.07	
10/22/09	1200	СВ	1180690	3,440	231,390	10.0	338.0	344	0.24	
10/26/09	1200	СВ	1180920	230	231,620	4.0	342.0	58	0.04	
10/31/09	1200	СВ	1187620	6,700	238,320	5.0	347.0	1340	0.93	

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Table 5-3. Summary of Treated Water Irrigation Rates Transwestern Compressor Station No. 9 - Roswell, NM

			Meter	Irrigated	Cummulative Irrigated	Elapsed	Cummulative Elapsed	Average	Average	Year
			Reading	Volume	Volume	Time	Time		Recovery Rate	Total
Date	Time	Inspector	(gallons)	(gallons)	(gallons)	(days)	(days)	(GPD)	(GPM)	(gallons)
11/05/09	1200	СВ	1196570	8,950	247,270	5.0	352.0	1790	1.24	
11/05/09	1200	СВ	1214350	17,780	265,050	11.0	363.0	1616	1.12	2009
11/23/09	1200	CB	1223480	9,130	274,180	7.0	370.0	1304	0.91	274,180
06/20/10	1200	CB	1223490	10	274,190	209.0	579.0	0	0.00	27 1,100
06/24/10	1200	CB	1224100	610	274,800	4.0	583.0	153	0.11	
06/30/10	1200	СВ	1227190	3,090	277,890	6.0	589.0	515	0.36	
07/07/10	1200	СВ	1232290	5,100	282,990	7.0	596.0	729	0.51	
07/14/10	1200	СВ	1235080	2,790	285,780	7.0	603.0	399	0.28	
07/19/10	1200	СВ	1236340	1,260	287,040	5.0	608.0	252	0.18	
07/26/10	1200	СВ	1242910	6,570	293,610	7.0	615.0	939	0.65	
07/30/10	1200	СВ	1248140	5,230	298,840	4.0	619.0	1308	0.91	
08/05/10	1200	СВ	1248520	380	299,220	6.0	625.0	63	0.04	
08/10/10	1200	СВ	1250320	1,800	301,020	5.0	630.0	360	0.25	
08/19/10	1200	СВ	1252630	2,310	303,330	9.0	639.0	257	0.18	
08/23/10	1200	СВ	1258090	5,460	308,790	4.0	643.0	1365	0.95	
08/30/10	1200	СВ	1265630	7,540	316,330	7.0	650.0	1077	0.75	
09/06/10	1200	СВ	1274270	8,640	324,970	7.0	657.0	1234	0.86	
09/14/10	1200	CB	1279310	5,040	330,010	8.0	665.0	630	0.44	
09/20/10	1200	CB	1286040	6,730	336,740	6.0	671.0	1122	0.78	
09/21/10	1200	CB	1287050	1,010	337,750	1.0	672.0	1010	0.70	
09/28/10	1200	CB	1288380	1,330	339,080	7.0	679.0	190	0.13	
11/05/10	1200	CB	1288390	10	339,090	38.0	717.0	0	0.00	
11/08/10	1200	СВ	1290290	1,900	340,990	3.0	720.0	633	0.44	2010
11/10/10	1200	СВ	1292380	2,090	343,080	2.0	722.0	1045	0.73	68,900
06/28/11	1200	СВ	1292590	210	343,290	230.0	952.0	1	0.00	
06/30/11	1200	СВ	1294730	2,140	345,430	2.0	954.0	1070	0.74	
07/13/11	1200	СВ	1297670	2,940	348,370	13.0	967.0	226	0.16	
07/20/11	1200	СВ	1303020	5,350	353,720	7.0	974.0	764	0.53	
08/01/11	1200	СВ	1304610	1,590	355,310	12.0	986.0	133	0.09	
08/12/11	1200	СВ	1312240	7,630	362,940	11.0	997.0	694	0.48	
08/19/11	1200	СВ	1313260	1,020	363,960	7.0	1004.0	146	0.10	
08/23/11	1200	СВ	1315750	2,490	366,450	4.0	1008.0	623	0.43	
08/30/11	1200	СВ	1316650	900	367,350	7.0	1015.0	129	0.09	
09/03/11	1200	СВ	1317270	620	367,970	4.0	1019.0	155	0.11	
09/09/11	1200	СВ	1319870	2,600	370,570	6.0	1025.0	433	0.30	
09/13/11	1200	СВ	1321030	1,160	371,730	4.0	1029.0	290	0.20	
09/22/11	1200	СВ	1321270	240	371,970	9.0	1038.0	27	0.02	

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Table 5-3. Summary of Treated Water Irrigation Rates Transwestern Compressor Station No. 9 - Roswell, NM

			Meter Reading	Irrigated Volume	Cummulative Irrigated Volume	Elapsed Time	Cummulative Elapsed Time	Average	Average Recovery Rate	Year Total
Date	Time	Inspector	(gallons)	(gallons)	(gallons)	(days)	(days)	(GPD)	(GPM)	(gallons)
Date	Tillio	Порсотог	(galloris)	(galloris)	(galloris)	(days)	(days)	(01 5)	(OI W)	(galloris)
09/25/11	1200	СВ	1326090	4,820	376,790	3.0	1041.0	1607	1.12	
09/28/11	1200	СВ	1329140	3,050	379,840	3.0	1044.0	1017	0.71	
09/30/11	1200	СВ	1331610	2,470	382,310	2.0	1046.0	1235	0.86	
10/04/11	1200	СВ	1336700	5,090	387,400	4.0	1050.0	1273	0.88	
10/10/11	1200	СВ	1344310	7,610	395,010	6.0	1056.0	1268	0.88	
10/14/11	1200	СВ	1348220	3,910	398,920	4.0	1060.0	978	0.68	
10/17/11	1200	СВ	1352830	4,610	403,530	3.0	1063.0	1537	1.07	
10/20/11	1200	СВ	1355140	2,310	405,840	3.0	1066.0	770	0.53	
10/25/11	1200	СВ	1356640	1,500	407,340	5.0	1071.0	300	0.21	
11/01/11	1200	СВ	1357820	1,180	408,520	7.0	1078.0	169	0.12	
11/06/11	1200	СВ	1370170	12,350	420,870	5.0	1083.0	2470	1.72	
11/14/11	1200	СВ	1378250	8,080	428,950	8.0	1091.0	1010	0.70	
11/19/11	1200	СВ	1383060	4,810	433,760	5.0	1096.0	962	0.67	
11/25/11	1200	СВ	1388650	5,590	439,350	6.0	1102.0	932	0.65	2011
11/30/11	1200	СВ	1390930	2,280	441,630	5.0	1107.0	456	0.32	98,550
04/20/12	1200	СВ	1390930	0	441,630	142.0	1249.0	0	0.00	
04/26/12	1200	CB	1408050	17,120	458,750	6.0	1255.0	2853	1.98	
04/28/12	1200	CB	1411210	3,160	461,910	2.0	1257.0	1580	1.10	
04/30/12	1200	CB	1413930	2,720	464,630	2.0	1259.0	1360	0.94	
05/04/12	1200	CB	1416840	2,910	467,540	4.0	1263.0	728	0.51	
05/07/12	1200	CB	1420770	3,930	471,470	3.0	1266.0	1310	0.91	
05/12/12	1200	CB	1424710	3,940	475,410	5.0	1271.0	788	0.55	
05/17/12	1200	CB	1430680	5,970	481,380	5.0	1276.0	1194	0.83	
05/22/12	1200	CB	1436750	6,070	487,450	5.0	1281.0	1214	0.84	
05/27/12	1200	СВ	1442280	5,530	492,980	5.0	1286.0	1106	0.77	
05/31/12	1200	СВ	1444830	2,550	495,530	4.0	1290.0	638	0.44	
06/06/12	1200	CB	1450860	6,030	501,560	6.0	1296.0	1005	0.70	
06/14/12	1200	CB	1452950	2,090	503,650	8.0	1304.0	261	0.18	
06/22/12	1200	СВ	1453470	520	504,170	8.0	1312.0	65	0.05	
06/27/12	1200	СВ	1459530	6,060	510,230	5.0	1317.0	1212	0.84	
07/04/12	1200	СВ	1464990	5,460	515,690	7.0	1324.0	780	0.54	
07/11/12	1200	СВ	1470150	5,160	520,850	7.0	1331.0	737	0.51	
07/20/12	1200	СВ	1474920	4,770	525,620	9.0	1340.0	530	0.37	
07/25/12	1200	СВ	1479740	4,820	530,440	5.0	1345.0	964	0.67	
07/31/12	1200	СВ	1479740	0	530,440	6.0	1351.0	0	0.00	
08/06/12	1200	СВ	1482850	3,110	533,550	6.0	1357.0	518	0.36	
08/10/12	1200	СВ	1484650	1,800	535,350	4.0	1361.0	450	0.31	

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Table 5-3. Summary of Treated Water Irrigation Rates Transwestern Compressor Station No. 9 - Roswell, NM

			Meter Reading	Irrigated Volume	Cummulative Irrigated Volume	Elapsed Time	Cummulative Elapsed Time	Average Recovery Rate	Average Recovery Rate	Year Total
Date	Time	Inspector	(gallons)	(gallons)	(gallons)	(days)	(days)	(GPD)	(GPM)	(gallons)
08/15/12	1200	СВ	1486280	1,630	536,980	5.0	1366.0	326	0.23	
08/21/12	1200	СВ	1491810	5,530	542,510	6.0	1372.0	922	0.64	
08/25/12	1200	СВ	1496550	4,740	547,250	4.0	1376.0	1185	0.82	
08/30/12	1200	СВ	1498830	2,280	549,530	5.0	1381.0	456	0.32	
09/05/12	1200	CB	1502280	3,450	552,980	6.0	1387.0	575	0.40	
09/09/12	1200	CB	1505820	3,540	556,520	4.0	1391.0	885	0.61	
09/13/12	1200	CB	1509500	3,680	560,200	4.0	1395.0	920	0.64	
09/17/12	1200	CB	1510800	1,300	561,500	4.0	1399.0	325	0.23	
09/25/12	1200	CB	1513290	2,490	563,990	8.0	1407.0	311	0.22	
09/30/12	1200	CB	1519120	5,830	569,820	5.0	1412.0	1166	0.81	
10/03/12	1200	CB	1520950	1,830	571,650	3.0	1415.0	610	0.42	
10/08/12	1200	СВ	1522170	1,220	572,870	5.0	1420.0	244	0.17	
10/23/12	1200	CB	1522170	0	572,870	15.0	1435.0	0	0.00	
10/25/12	1200	СВ	1524400	2,230	575,100	2.0	1437.0	1115	0.77	
10/31/12	1200	СВ	1531100	6,700	581,800	6.0	1443.0	1117	0.78	
11/05/12	1200	СВ	1537050	5,950	587,750	5.0	1448.0	1190	0.83	
11/11/12	1200	СВ	1540910	3,860	591,610	6.0	1454.0	643	0.45	
11/28/12	1200	СВ	1541110	200	591,810	17.0	1471.0	12	0.01	2012
11/30/12	1200	СВ	1541170	60	591,870	2.0	1473.0	30	0.02	150,240
04/19/13	1200	СВ	1541170	0	591,870	140.0	1613.0	0	0.00	
04/20/13	1200	СВ	1542440	1,270	593,140	1.0	1614.0	1270	0.88	
04/22/13	1200	СВ	1545800	3,360	596,500	2.0	1616.0	1680	1.17	
04/30/13	1200	СВ	1553090	7,290	603,790	8.0	1624.0	911	0.63	
05/23/13	1200	СВ	1576010	22,920	626,710	23.0	1647.0	997	0.69	
05/29/13	1200	СВ	1576100	90	626,800	6.0	1653.0	15	0.01	
05/31/13	1200	СВ	1577610	1,510	628,310	2.0	1655.0	755	0.52	
06/30/13	1200	СВ	1614920	37,310	665,620	30.0	1685.0	1244	0.86	2013
07/24/13	1200	СВ	1641540	26,620	692,240	24.0	1709.0	1109	0.77	100,370

NOTES:

Irrigated Volume (gallons) = Difference between prior meter reading and current meter reading (gallons)

Cummulative Irrigated Volume (gallons) = Cummulative sum of Irrigated Volume (gallons)

Elapsed Time (days) = Calculated number of days from the prior date and time

Cummulative Elapsed Time (days) = Cummulative sum of Elapsed Time (days)

Average Recovery Rate (GPD) = Irrigated Volume (gallons) / Elapsed Time (days)

Average Recovery Rate (GPM) = Average Recovery Rate (GPD) / 24 (hours/day) / 60 (minutes/hour)

Historical data before 2009 is presented in previous reports

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Table 5-4. Summary of Water Treatment System Analyses Transwestern Compressor Station No. 9 - Roswell, NM

P					
Sample Point	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)
NMWQC	C Standard:	10	750	750	620
Post-Treatment	05/25/09 06/22/09 07/21/09 08/24/09 09/28/09 10/29/09 11/18/09 06/30/10 07/31/10 08/30/10 11/10/10 08/10/11 10/09/11 11/03/11 04/30/12 06/28/12 07/25/12 08/15/12 09/23/12 11/28/12 05/16/13 06/17/13	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5 < 1.5
Between GACs	06/22/09 07/21/09 08/24/09 09/28/09 10/29/09 11/18/09 06/30/10 07/31/10 08/30/10 11/10/10 08/10/11 10/09/11 11/03/11 04/30/12 06/05/12 06/28/12 07/25/12 08/15/12	350 < 1.0 < 1.0 < 1.0 < 1.0 9.3 2.1 200 300 < 1.0 < 1.0 3.2 2.8 3.6 3.9 4.7 1.8 1.7 1.7	570 < 1.0 < 1.0 < 1.0 < 1.0 3.3 < 1.0 200 440 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	16 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1	210 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0

Table 5-4. Summary of Water Treatment System Analyses Transwestern Compressor Station No. 9 - Roswell, NM

	,	1		1	
Sample Point	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)
NMWQC	C Standard:	10	750	750	620
Between GACs -continued-	10/25/12 11/28/12 05/16/13 06/17/13 07/17/13	1.5 1.5 3.3 4.0 3.2	< 1.0 < 1.0 < 1.0 < 1.0	< 1.0 < 1.0 < 1.0 < 1.0 < 1.0	< 2.0 < 2.0 < 2.0 < 2.0 < 2.0
Post-Air Stripper	05/25/09 06/22/09 07/21/09 08/24/09 09/28/09 10/29/09 11/18/09 06/30/10 07/31/10 08/30/10 11/10/10 08/10/11 10/09/11 11/03/11 04/30/12 06/05/12 06/28/12 07/25/12 08/15/12 09/23/12 10/25/12 11/28/12 05/16/13 06/17/13	260 960 280 230 290 450 200 450 59 1.4 21 30 <1 <1 <1 <1 <1 <1 <1 <1 <1 <5 <5 <5 <5 <5 <5 <5	680 1,600 500 350 72 670 470 460 200 660 97 2.7 37 66 1.3 1.0 < 1 270 16 < 5 < 5 8.4 < 5 < 5 < 5	33 63 < 20 13 19 42 18 13 11 < 10 < 1 2.0 3.4 < 1 < 1 < 5 < 5 < 5 < 5 < 5 < 5 < 5	790 830 280 220 240 430 300 250 140 450 65 3.0 22 47 2.2 < 2 < 2 < 2 < 130 10 < 10 < 10 < 10 < 10 < 10 < 10 < 10
Pre-Treatment	07/17/13 05/25/09 06/22/09 07/21/09 08/24/09 09/28/09 10/29/09 11/18/09 06/30/10 07/31/10 08/30/10 11/10/10 08/10/11 10/09/11	640 2,700 2,500 2,700 2,900 3,000 1,400 2,700 1,900 1,800 2,400 970 3,000	1,700 4,500 4,600 4,000 910 4,100 3,300 2,800 2,000 2,600 3,900 1,900 4,800	99 210 210 200 220 280 140 120 140 150 220 130 240	1,900 2,400 2,600 2,500 2,200 2,700 2,000 1,500 1,300 1,800 2,100 1,400 2,500

Table 5-4. Summary of Water Treatment System Analyses Transwestern Compressor Station No. 9 - Roswell, NM

Sample Point	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)
NMWQC	C Standard:	10	750	750	620
Pre-Treatment -continued-	11/03/11 04/30/12 06/05/12 06/28/12 07/25/12 08/15/12 09/23/12	2,400 3,100 2,600 3,000 2,900 2,900 2,600	4,900 3,400 3,900 4,500 4,600 3,500 3,600	260 200 220 250 260 270 270	2,800 2,100 2,200 2,300 2,700 2,300 2,400
	10/25/12 11/28/12 05/16/13 06/17/13 07/17/13	3,200 2,300 2,800 2,500 3,000	4,400 3,700 4,900 4,500 5,300	280 230 260 260 270	2,600 2,300 2,600 2,500 2,600

Results reported above the NMWQCC standard are shown in bold type Historical data before 2009 is presented in previous reports

FIGURES



REPORT OF 2013 GROUNDWATER REMEDIATION ACTIVITIES
TRANSWESTERN PIPELINE COMPANY, LLC
TRANSWESTERN COMPRESSOR STATION No. 9
(ROSWELL COMPRESSOR STATION)
ROSWELL, CHAVES COUNTY, NEW MEXICO

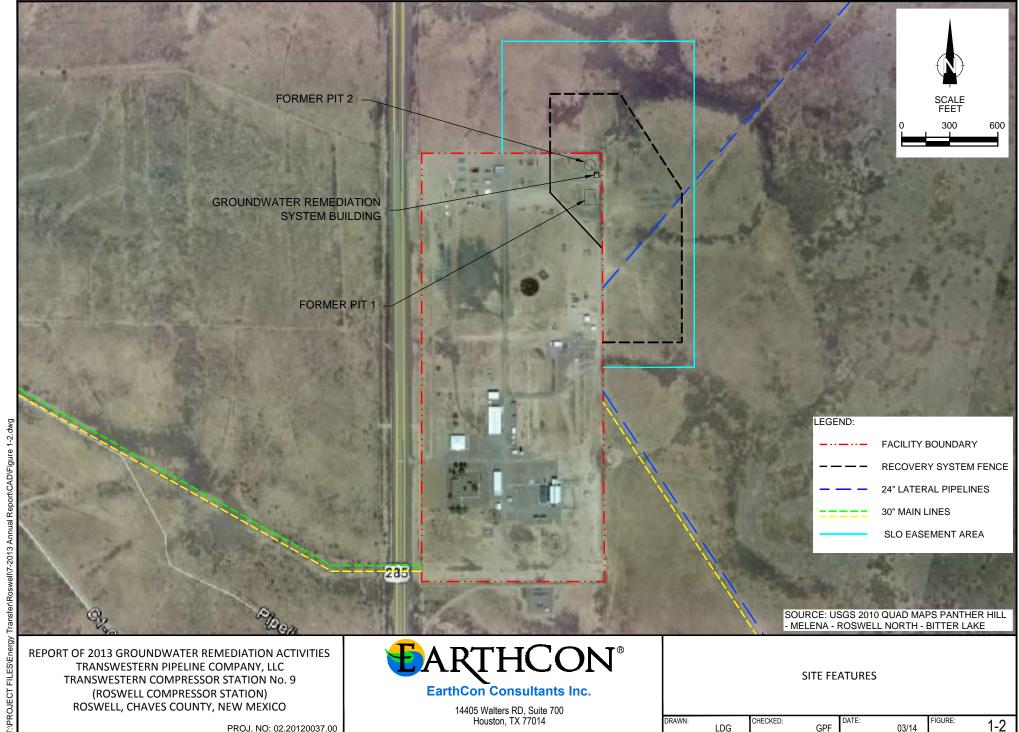
EARTHCON®

EarthCon Consultants Inc.

14405 Walters RD, Suite 700 Houston, TX 77014 SITE LOCATION MAP

DRAWN: LDG CHECKED: GPF DATE: 03/14 FIGURE: 1-1

PROJ. NO: 02.20120037.00



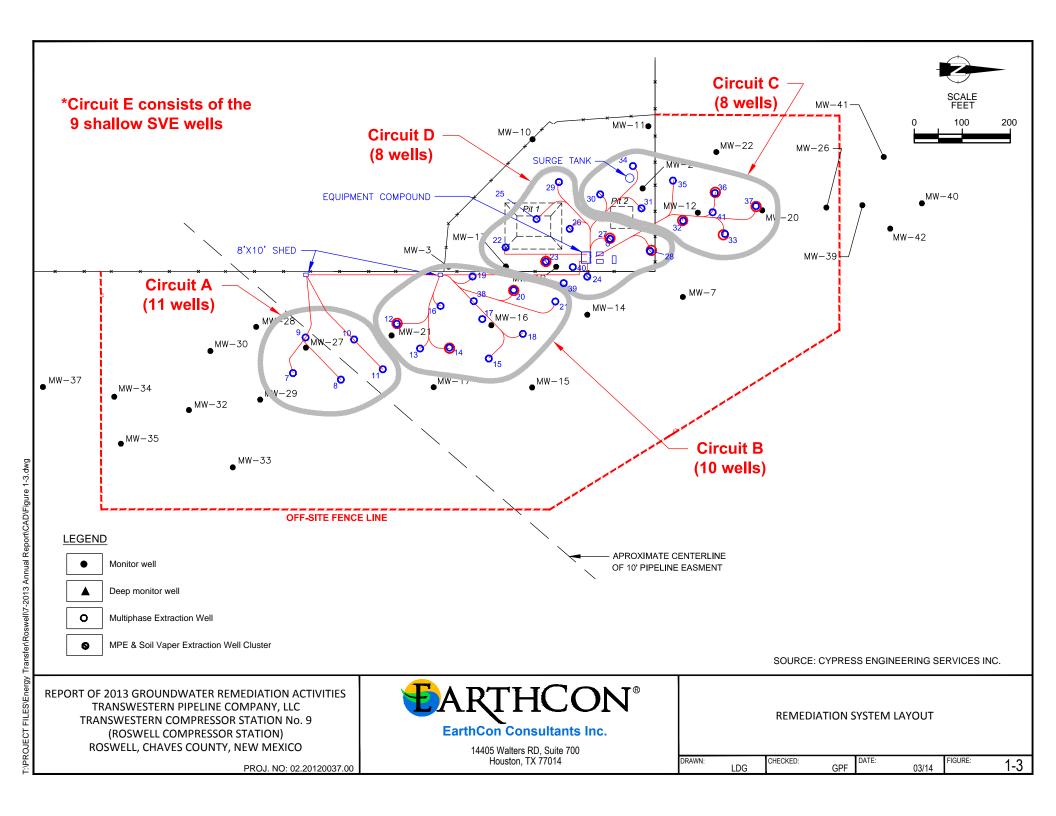
(ROSWELL COMPRESSOR STATION)
ROSWELL, CHAVES COUNTY, NEW MEXICO

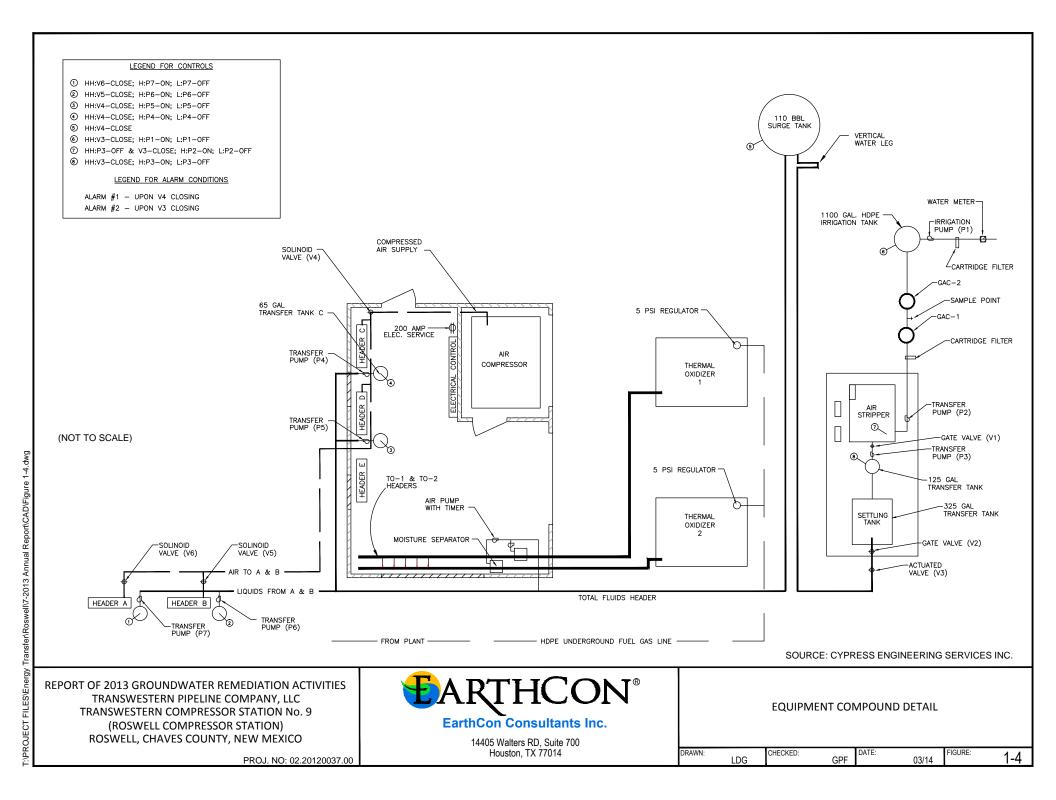
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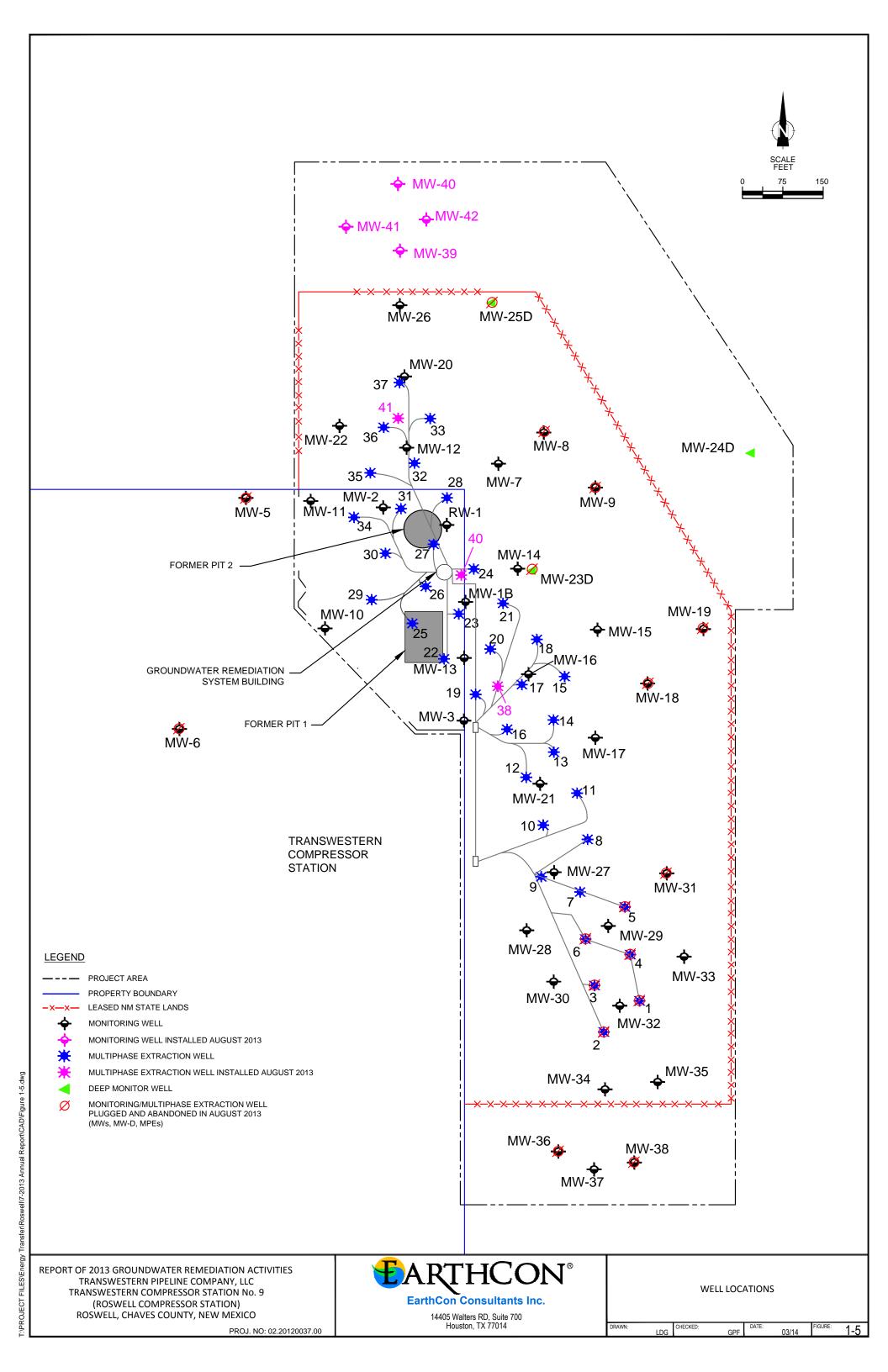
EarthCon Consultants Inc.

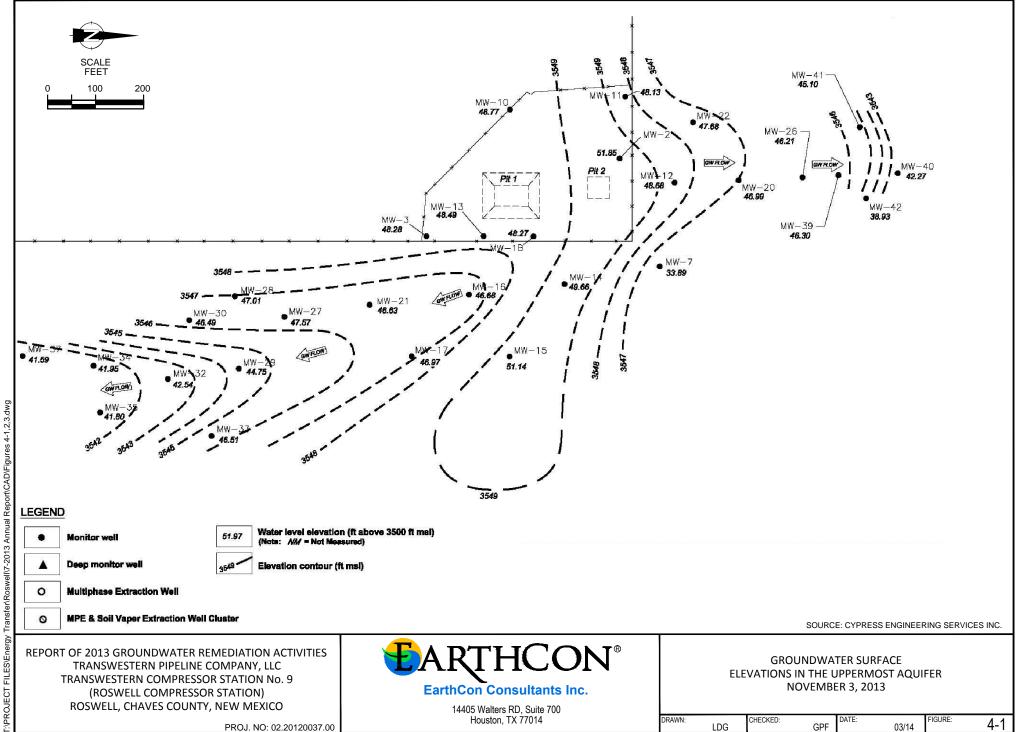
14405 Walters RD, Suite 700 Houston, TX 77014

FIGURE: DRAWN: CHECKED: DATE: 1-2 LDG GPF 03/14









TRANSWESTERN PIPELINE COMPANY, LLC TRANSWESTERN COMPRESSOR STATION No. 9 (ROSWELL COMPRESSOR STATION) ROSWELL, CHAVES COUNTY, NEW MEXICO

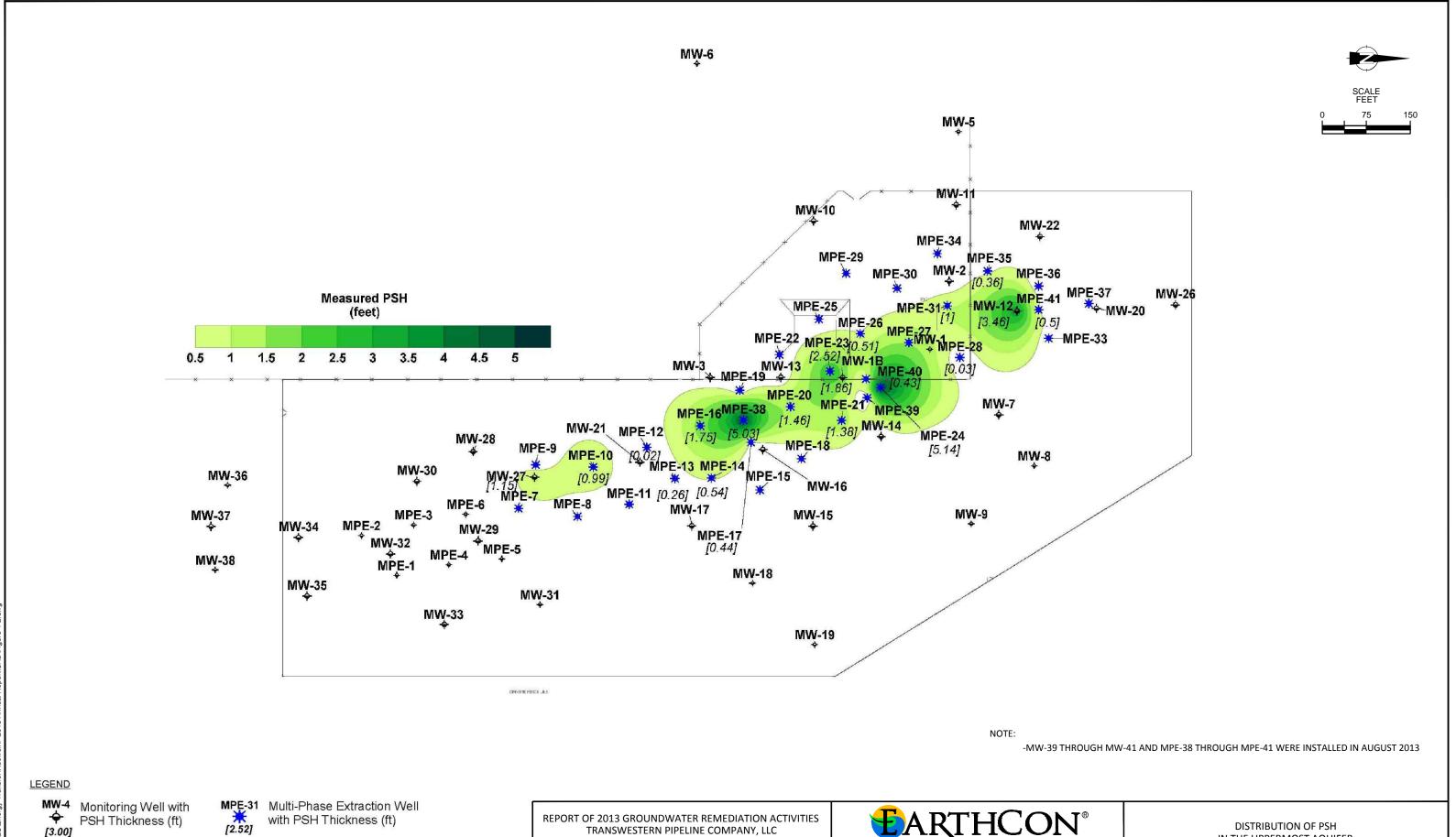
PROJ. NO: 02.20120037.00



14405 Walters RD, Suite 700 Houston, TX 77014

ELEVATIONS IN THE UPPERMOST AQUIFER NOVEMBER 3, 2013

DRAWN: CHECKED: DATE: FIGURE: 4-1 LDG GPF 03/14



TRANSWESTERN PIPELINE COMPANY, LLC

TRANSWESTERN COMPRESSOR STATION No. 9

(ROSWELL COMPRESSOR STATION) ROSWELL, CHAVES COUNTY, NEW MEXICO

PROJ. NO: 02.20120037.00

EarthCon Consultants Inc.

14405 Walters RD, Suite 700 Houston, TX 77014

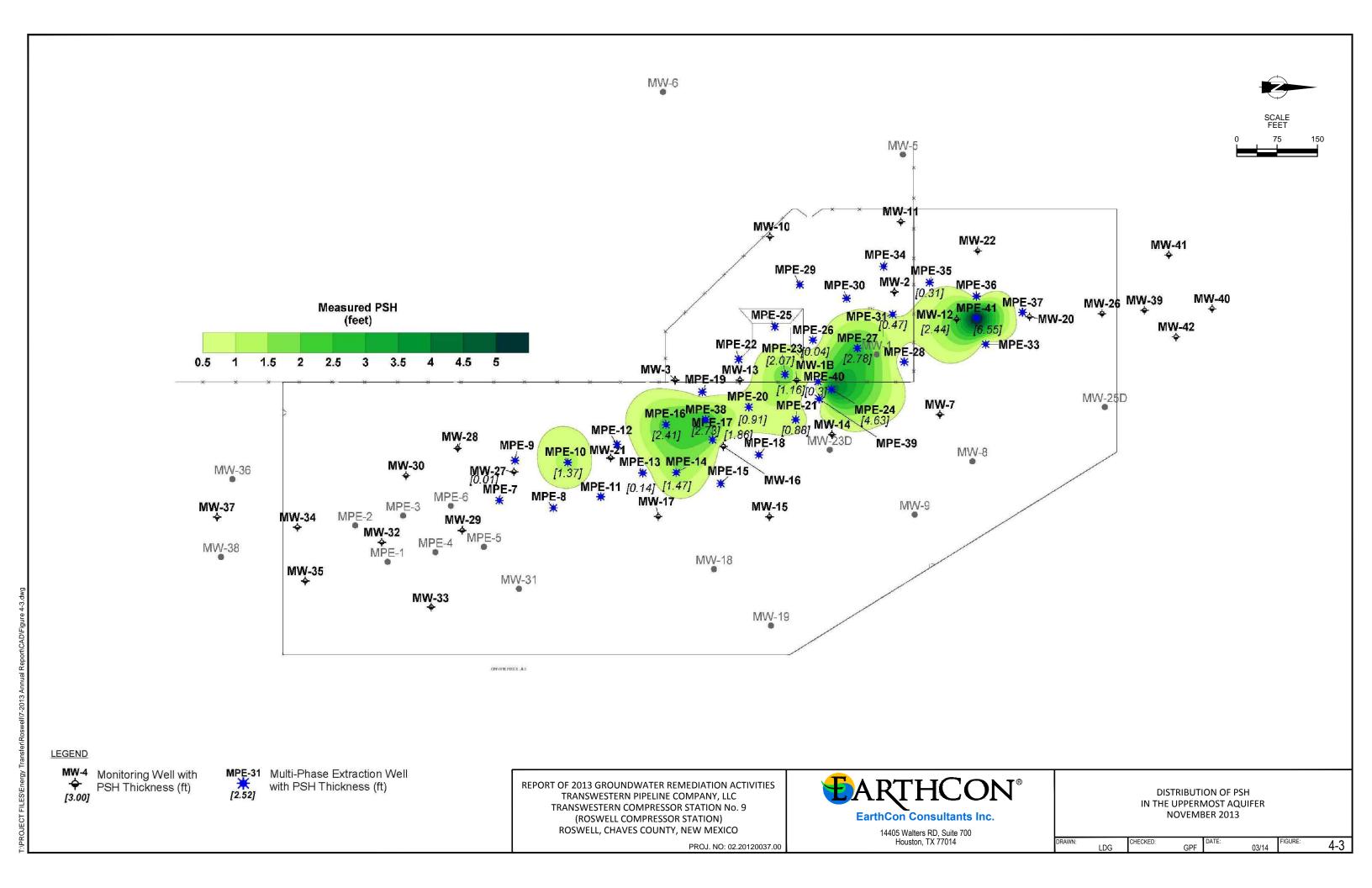
DISTRIBUTION OF PSH

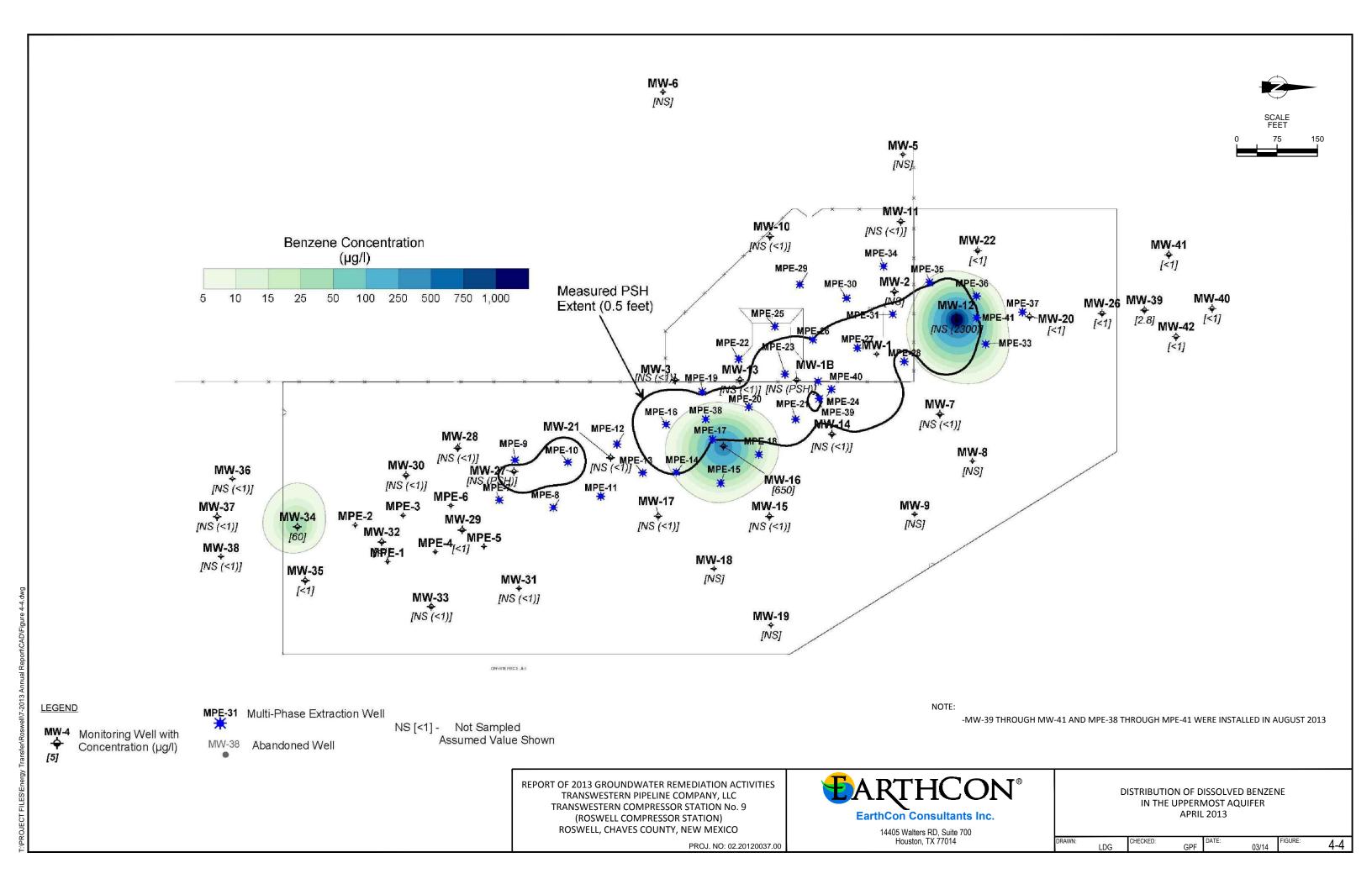
IN THE UPPERMOST AQUIFER

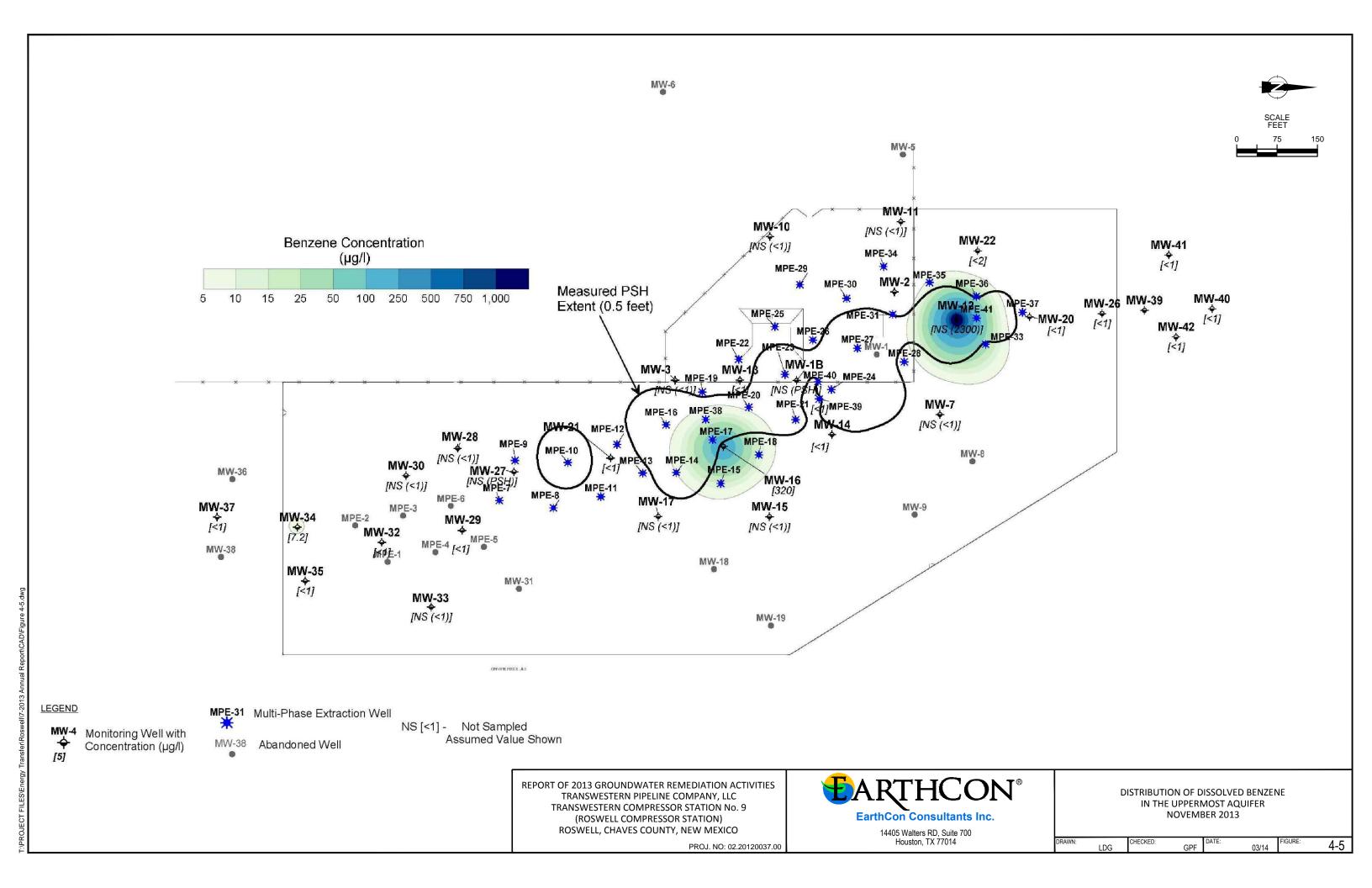
APRIL 2013

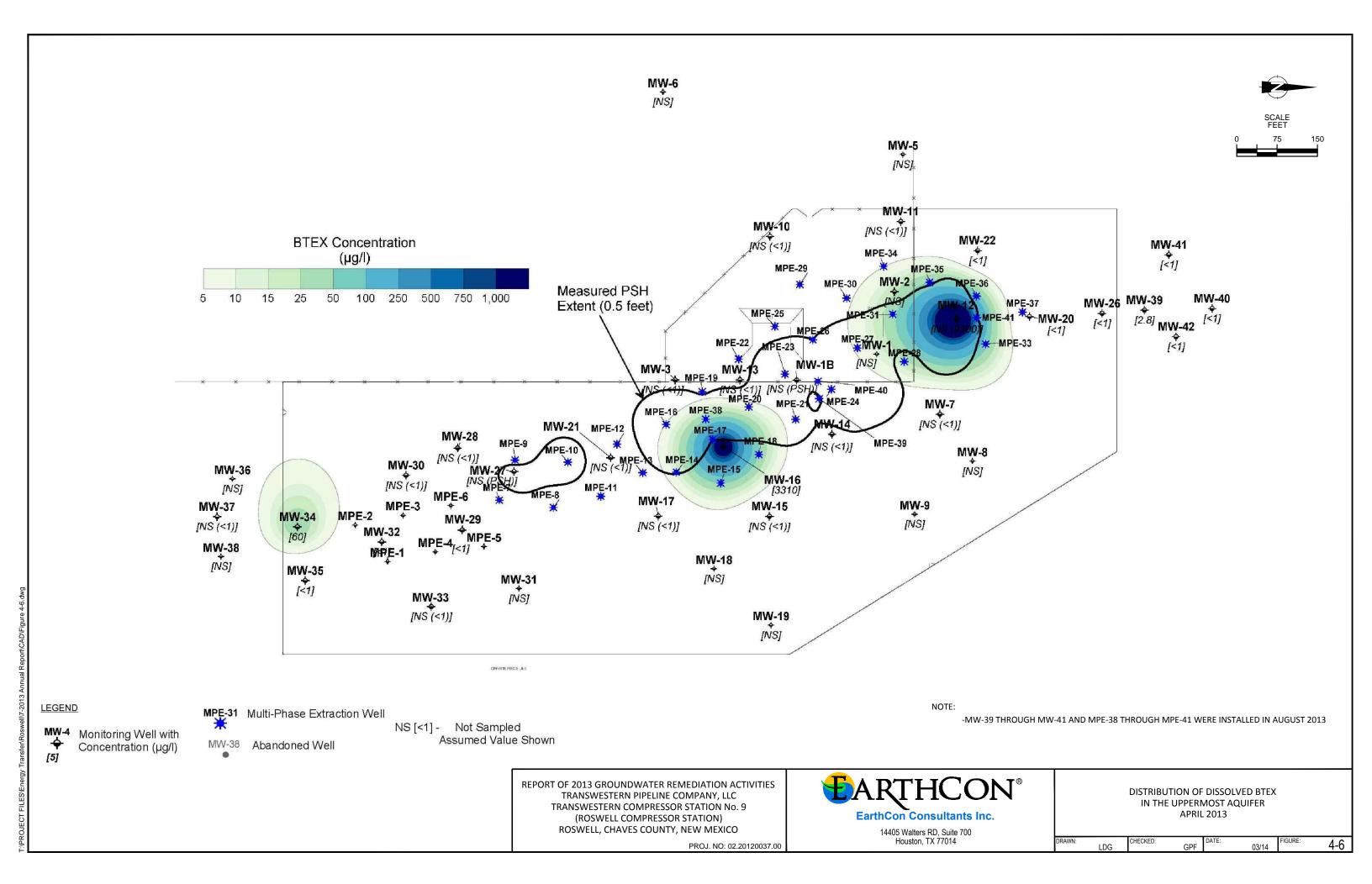
4-2

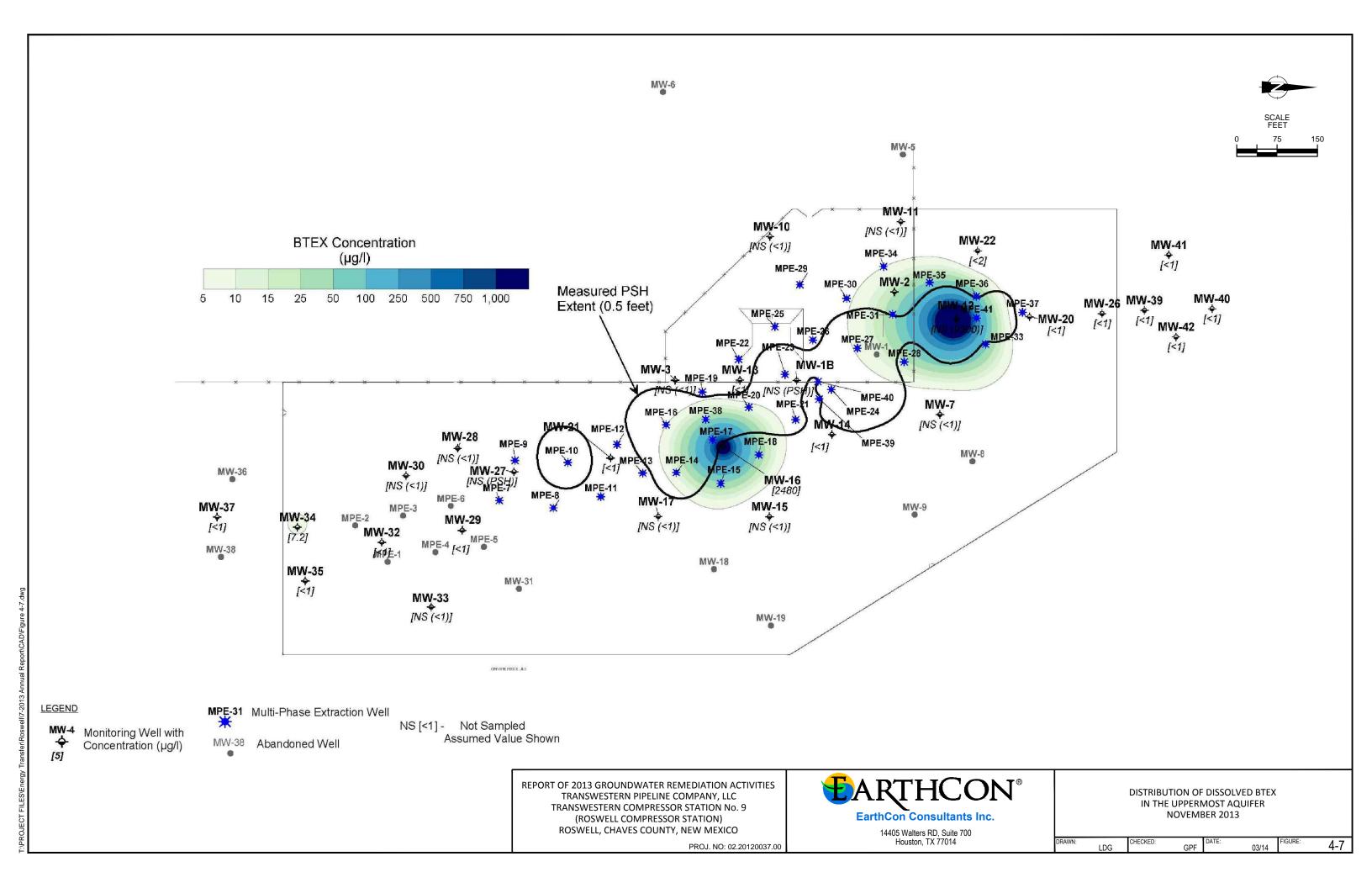
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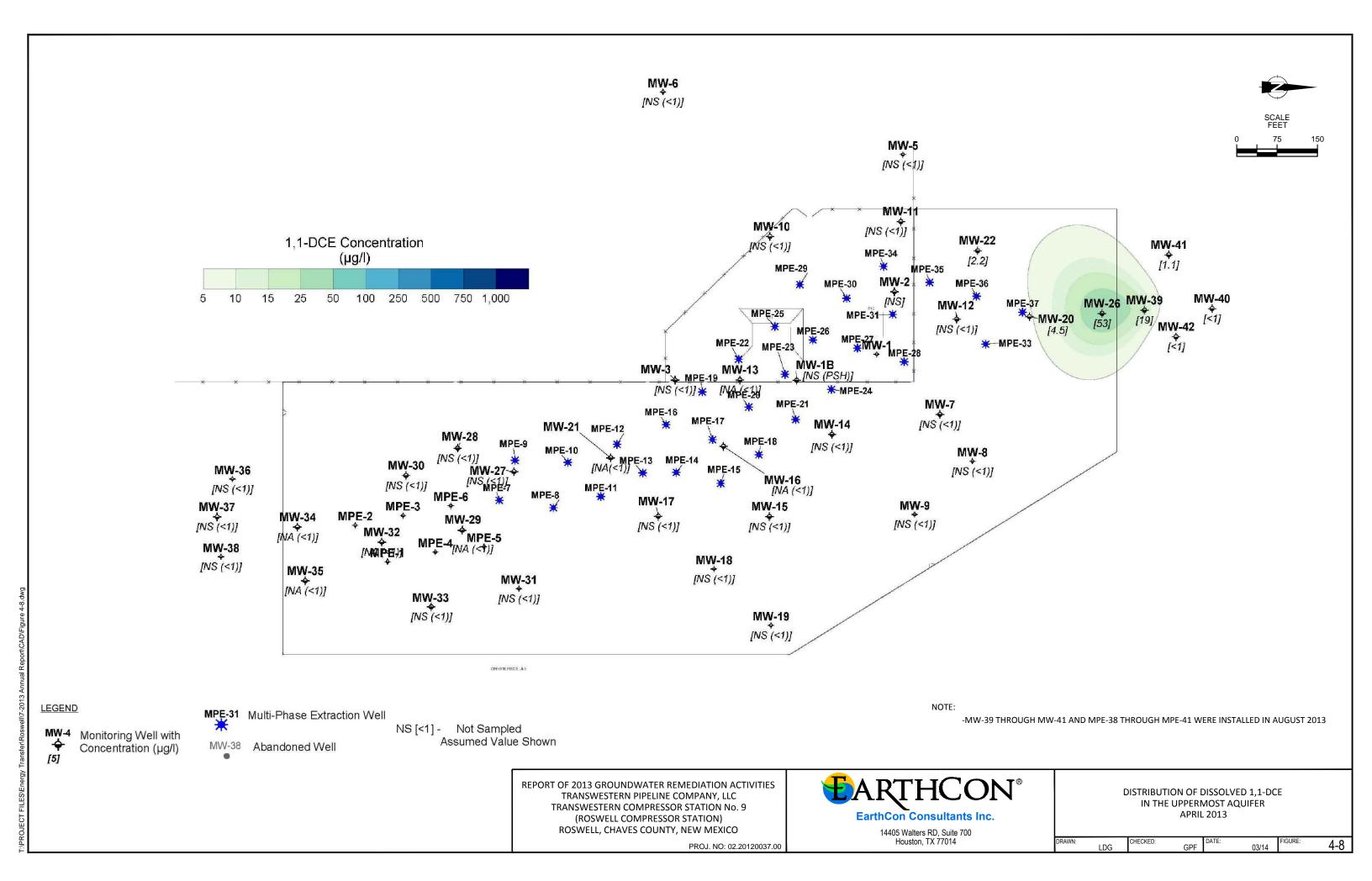


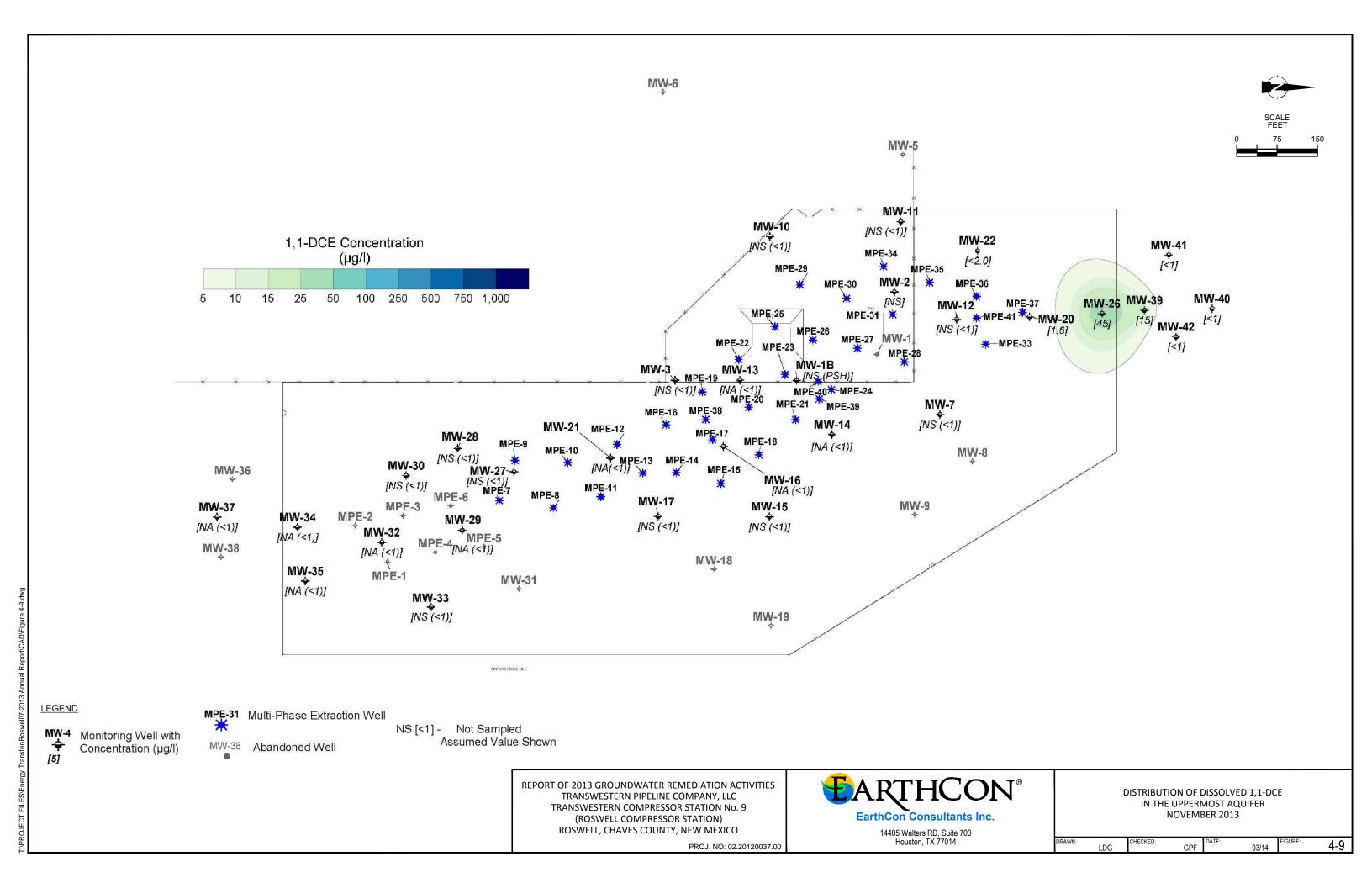












Appendix A

Copies of April and November 2013 Field Notes

GROUNDWATER SAMPLING LOG

SITE NAME:	WP Ros	swell S	Tatto	, #9	<u> </u>	TE CATION: 7	K051	well	NM			
WELL NO:	mw			SAMPLE II	I.Wfg	TROSA				DATE:	04/17/	113
					PÚRO	ING DA			7		7.7	
WELL 2	150# 40 f	TUBING DIAMET	ER (inches):		SCREEN H 46.4 fe	INTERVAL et to 7/.4	eet TO	TATIC D	EPTH R (feet): 66.	17 PU OF	IRGE PUMP T	YPE
	UME PURGE: if applicable)	1 WELL VOL	UME = (TOT				TO WATE	R) X	WELL CAPACI	ſΥ	Å.	Disposable
· ·		4 FOLE	= (eet –	6.17		et) X	D-/6 JBING LENGTH)	gallons/fo	oot = 0'	gallons
1	if applicable)	JRGE: 1 EQUI	PIVIENT VOL	. = PUMP VOLU	,				•			
INITIAL DIL	MP OR TUBIN		FINIAL DIA	= gall IP OR TUBING	ons + (PURGIN	ons/foot X		feet)	+	gallons TOTAL VO	LIME .
1	WELL (feet):			WELL (feet):			ED AT:	10:49	ENDED AT:	10:49	PURGED (
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	CON (circle µmho: or µS	units) s/cm	DISSOLVED OXYGEN (circle units) mg/L <u>or</u> % saturation	JURBIDI (NTUS		
10:44	0	Int 16/		66.17	No	Parai	neto	15	Taker		WISH	un edek
10:44	0.25	0.25		Wate	V K	appl s	Tro	116	hydro	CONF	100	
10:45	0.25	0.50		scher	n, all	19 51	ron	j J	Phoroco	rbin	odne	_ +
10:47	0.25	0.75	-	MOUN	da	naye	Dr	rbe	5			
10:48	0.25	1.0					<u> </u>					
Samo	led m	2W-16	27	unlicat	-	14	150	ho				
Exitings	100	,,,,	1									
WELL CAP	PACITY (Gallon ISIDE DIA. CAI	ns Per Foot): 0. PACITY (Gal./F	.75" = 0.02; t.): 1/8" = 0.	1" = 0.04; 1 0006; 3/16 " =	1.25" = 0.00 : 0.0014;	6; <u>(2" = 0.1</u> 1/4" = 0.002		= 0.37; 16" = 0.0		5" = 1.02; 006; 1 /2	6" = 1.47; 2" = 0.010;	12" = 5.88 5/8" = 0.016
PURGING	EQUIPMENT (ODES: B	= Bailer; I	BP = Bladder Pu		SP = Electric		ible Pur	np; PP = Pe	ristaltic Pur	mp; O = C	ther (Specify)
CAMBLED	BY (PRINT) / A	VEET INTION:		SAMPLERS		LING DA	ATA					
SAMPLED SMAT	01 (FRINT) 17 200 Pi Kasa m	refliction.	1055	SHINE GERGE		(U).	yanaya Kasania ay	-	SAMPLING INITIATED AT	14:5	SAMPLIN ENDED	NG AT: 14:55
PUMP OR		rapaj	CPS	TUBING	-			FIELD-	FILTERED: Y	NZ	FILTER S	
	WELL (feet): CONTAMINATION	ON; PUMI	P Y (N	MATERIAL COI	DE: TUBING	Y N (r	eplaced)	Filtratio	on Equipment Typ	oe:	- N	
		ER SPECIFICA				RESERVATIO	· · · · ·		INTENDE	 	SAMPLING	SAMPLE PUMP
SAMPLE	#	MATERIAL	VOLUME	PRESERVATIV		TOTAL VOL		INAL	ANALYSIS AN	ID/OR E	EQUIPMENT CODE	FLOW RATE
ID CODE	CONTAINERS	CODE	Home	USED	ADDE	D IN FIELD ((mL)	pH	Button	200	\mathcal{B}	(mL per minute)
-	3 3(Dup	100	HOME	nec	-				11EX8	101	B	
	3 Dup	100	7000	nec				•	BTEXE		<i>D</i>	
		-										
									-			
REMARKS	:								,			
				a. 5:								011 (0
MATERIAL		AG = Amber G		Clear Glass;		/ethylene;	PP = Po					Other (Specify)
SAMPLING	EQUIPMENT			ristaltic Pump; se Flow Peristalti	B = Bai c Pump;		Bladder		ESP = Electri Gravity Drain);			

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

Revision Date: February 12, 2009

SITE /	TUP RO	SUELL	SIA	a		TE DCATION:	Rosau	Le N	w		
WELL NO:		1-20		SAMPLE		Pos	well .	5/A 9	DATE: 4	117/13	3
L	17 (00					SING DA		-6-1		1 1 1 1 2	
WELL SO	(inches): Z	TUBING DIAMET	ER (inches):	DEF	LL SCREEN PTH: 46, §fe	et to 61.2	STATIC D	R (feet): 53	.70 OR	RGE PUMP TYP BAILER: S	_
MELT AOF	UME PURGE: if applicable)	1 WELL VOL	UME = (TOTA	LWELL DEF	71H - SIA	IIC DEPTH	IO WATER) X	WELL CAPAC	1 1 7	11	
EQUIPMEN	IT VOLUME PU	JRGE: 1 EQUI	= (4 PMENT VOL.	= PUMP VOL	feet – 5 UME + (TUE	BING CAPAC	feet) X ITY X TU	D163 IBING LENGTH	gallons/foo) + FLOW CE	LL VOLUME	gallons
(only fill out	if applicable)			= g	allons + (galle	ons/foot X	feet) +	gallons =	gallons
1	MP OR TUBIN WELL (feet):	G	FINAL PUMI DEPTH IN V	P OR TUBING	3	PURGIN	IG ED AT: //20	PURGING ENDED AT:	1140	TOTAL VOLUI PURGED (gall	VIE ons): 3,0
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or saturation	TURBIDITI (NTUS)	(describe)	ODOR (describe)
1125	0.5	6.5		53.9	7.06	19,10	3872	5,70	54.9	Cury	<u> </u>
1129	6.5	1.0		-	7.05	19.09	3880	5,68	53,9	11	1
1135	1.0	2.0			7.07	19.14	3880	5.58	53.6	//	U
1139	2.0	3.0	<u> </u>		7.02	19.14	3861	5,55	51.9	16	41
1140	SAUGH	20									-
									-		
			-						 		
									_		
		s Per Foot): 0. PACITY (Gal./F		1" = 0.04; 006; 3/16"	1.25" = 0.00 ' = 0.0014;				5" = 1.02; 0.006; 1/2 '		2" = 5.88 3" = 0.016
PURGING I	EQUIPMENT C	ODES: B	= Bailer; B	P = Bladder i			Submersible Pur	np; PP = P	eristaltic Pum	p; O = Othe	er (Specify)
SAMPLED	BY (PRINT) / A	FFILIATION: /		SAMPLER(S)	SIGNATURE	LING DA	AIA	SAMPLING		SAMPLING	
SAW	py Sh	MAP/C	E5		7	×4-		INITIATED A	т: ///О	ENDED AT:	1153
PUMP OR	TUBING WELL (feet):	- ' '		TUBING WATERIAL Q	ODE:		l l	FILTERED: Y	,	FILTER SIZE	.: μm
	ONTAMINATION	ON: PUMF	$\overline{}$		TUBING	Y (NA	eplaced)	DUPLICATE:	• • • •	(N)	
SAMP	LE CONTAINE	ER SPECIFICA	TION		SAMPLE PF	RESERVATIO)N	INTEND			SAMPLE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVAT USED		TOTAL VOL D IN FIELD (FINAL	ANALYSIS A		QUIPMENT (FLOW RATE mL per minute)
ID CODE	3	<u>C</u> 6-	40 ml	HOO	ADDE		mL) pH	8260	2001	BP	
									121		
REMARKS:											
MATERIAL	CODES	AG = Amber G	lace: CG =	Clear Glass;	PE = Poly	rethvlene:	PP = Polypropyle	ene; S = Silico	one; T = Te	flon: O = Oth	er (Specify)
	EQUIPMENT	CODES: A	PP = After Peri	staltic Pump;	B = Bai	ler; BP =	Bladder Pump; Method (Tubing	ESP = Electi	ric Submersib	le Pump;	л (ороспу)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

SITE NAME: 1	WP RE	SUELL	SIA	9		TE CATION:	Rosast	C NM			
WELL NO:	MIN	-77		SAMPLE			WICK S	w)	DATE:	1/7/	/3
	<i>pv</i> (00			1		ING DA					
WELL SC DIAMETER	(inches): Z	TUBING DIAME	TER (inches):	DEF	LL SCREEN FOR THE STATE OF THE	et to 65	STATIC D	R (feet): 58.	OR صا ک	RGE PUMP TYP BAILER:	E DISPOSAS
MELL VOL	UME PURGE: if applicable)	1 WELL VO	_UME = (TO	TAL WELL DEF	PTH - STA	TIC DEPTH	TO WATER) X feet) X	WELL CAPAC	TY	ot = 0.7	
	IT VOLUME PI if applicable)	JRGE: 1 EQL	IPMENT VO	L. = PUMP VOI	_UME + (TŪB	ING CAPAC	ITY X TU	JBING LENGTH)	+ FLOW CE	ELL VOLUME	gallons
INITIAL DIII	MP OR TUBIN	<u> </u>	EINAI DII	= g MP OR TUBING	allons + (BURGI	ons/foot X	feet) PURGING	+	gallons =	gallons
	WELL (feet):			WELL (feet):	у Т	INITIAT	ED AT: <i>1333</i>	ENDED AT:	1349	PURGED (gal	ons): 2, 17
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm	OXYGEN (circle units) mg/L or % saturation	TURBIDI (NTUS) m Volt	8	` '
1335	0.5	0.5		58.36	9.11	18.74	3845	6.35	49.5		
1339	0.5	1.0			7.09	18.92	3841	6.30	50.3		4
1345	0.75	1.75	^		7.07	1887	3802	6.27	561	LL	N
1349	0.35	210	-		X WEL	- BAL	SON DOW	· N			
1450	625An	0160 2	359N	llons							
_			0								
	 ACITY (Gallon SIDE DIA. CAI			1" = 0.04; .0006; 3/16'					 5" = 1.02; .006; 1/2		2" = 5.88 3" = 0.016
PURGING I	EQUIPMENT C	ODES: B	= Bailer;	BP = Bladder I			Submersible Pur	mp; PP = Pe	eristaltic Pum	np; O = Othe	er (Specify)
SAMPLED	BY (PRINT) / A	FFILIATION:	/	SAMPLER(S)		LING D	AIA	CAMPUNO		CAMPUNIC	
SAWD	v Shav	40/	CES.	5	5/4			SAMPLING INITIATED A	r: 1245	SAMPLING ENDED AT:	1450
PUMP OR T	(UBING WELL (feet):	7		TUBING / MATERIAL @	ODE:	3		FILTERED: Yon Equipment Ty	N	FILTER SIZI	Ξ:μm
	ONTAMINATIO	ON: OLIPASA		SANAL	KENTHO KENTHO	(Y) N (r	eplaced)	DUPLICATE:	Y	(N)	
SAMP	LE CONTAINE	R SPECIFICA	TION	71,01	SAMPLE PR	RESERVATION	DN	INTENDE			SAMPLE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVAT USED		OTAL VOL D IN FIELD (mL) FINAL pH	ANALYSIS AI METHO		QUIPMENT (FLOW RATE mL per minute)
	3	C6-	40ml	HeD		*****		8260 1	10CS	B	
W.Z	3	CG	40 del	HIL				8021 B	TEX	B	
REMARKS:	WELL	BAUE	SO DR	y @ Z	il gat	CLE	There,	DEZAMY	EPE	WA FO	SAUFILIY
MATERIAL	CODES:	AG = Amber	Glass; CG	= Clear Glass;	PE = Poly	ethylene;	PP = Polypropyl	ene; S = Silico	ne; T = Te	eflon; O = Oth	er (Specify)
SAMPLING	EQUIPMENT			eristaltic Pump;			Bladder Pump;	ESP = Electr	ic Submersit	ole Pump;	

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

^{2.} STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

SITE - NAME: 4	TWP X	205W41	Statio	19		TE DCATION:	Koswe	11, NN	1					
	1 23D				ID:TWP;	Riswell:	Station 9.	MW 23D	DATE: 04	/16/2	013			
F						ING DA				//				
DIAMETER		DIAMET	TER (inches):	DEF	LL SCREEN PTH: 167 fe	et to <i>187</i> fe	STATIC D	R (feet): 7/,4	5.3 OR 84		e 4 SCH41 IC Bailer			
(only fill out	t if applicable)		= (/	22.47	feet - 7	1.53	feet) X	WELL CAPAC 0.653	gallons/foot		97 gallons			
	NT VOLUME PU t if applicable)	JRGE: 1 EQUI	IPMENT VOL.		_UME + (TUB allons + (JBING LENGTH)			anllone.			
INITIAL PU	JMP OR TUBIN		T FINAL PUN	= ga IP OR TUBING			ns/foot X G	feet) PURGING		gallons = TOTAL VOLUI	gallons MF //o			
	WELL (feet):		DEPTH IN V		·	INITIATE	G AT: 1634	ENDED AT:	1700	PURGED (gall				
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm er µS/cm	DISSOLVED OXYGEN (circle units) or % saturation	TURBIDITY (NTUS) M VOITS	COLOR (describe)	ODOR (describe)			
1634	Initia/	0		71.53	8.25	20.14	3.372	4.88	-30.2	Cler	None			
1639	10	10			8.10	19.29	3.433	4.29	-39.0	clean				
1645	10	20			8.23	19.06	3.427	4.33	-25.4	clear				
1651	10	30			8,17	19.04	3.438	4.52	-32.7		. 4			
1658														
			<u> </u>	<u> </u>										
Sam	ped	MW-6	73D	<u>e</u> /	7:00	MOUL	-				_			
					<u> </u>					-				
			-											
	-		<u>.</u>											
WELLCAR	PACITY (Gallon	- Por Footh: C	1 7E" - 0 02:	4" - 0 04:	1.25" = 0.06	6; 2" = 0.16	3" = 0.37;	4" = 0.65;	5" = 1.02; 6'	" = 1,47; 12	2" = 5.88			
	ISIDE DIA. CAF			0.04, 0006; 3/16 "	' = 0.0014;	1/4" = 0.002					2" = 5.88 3" = 0.016			
PURGING	EQUIPMENT C	ODES: B	= Bailer; B	3P = Bladder F			Submersible Pur	mp; PP = Pe	eristaltic Pump;	O = Othe	er (Specify)			
SAMPLED	BY (PRINT) / A	EEII IATION:	 	SAMPLER (8)		LING DA	\TA	T						
	Environm		CES	SAMPLERS	Jan M	2(8). Sall.		SAMPLING INITIATED A	1621	SAMPLING ENDED AT:	1700			
PUMP OR				TUBING	1800-10	can		FILTERED: Y		FILTER SIZE				
	WELL (feet):	Bar	/LA	MATERIAL CO				on Equipment Ty	pe:					
	CONTAMINATIO			so mpic			placed)	DUPLICATE:	Y	N				
	PLE CONTAINE	MATERIAL				RESERVATIO		INTENDE ANALYSIS AI			SAMPLE PUMP FLOW RATE			
ID CODE	# CONTAINERS	CODE	VOLUME	PRESERVAT UŞED	ADDE	TOTAL VOL D IN FIELD (r	FINAL nL) pH	METHO			mL per minute)			
	3	CG	40mL	Hel		0		BTEXS	302/	3				
									,					
				····-										
REMARKS	:								 -					
MATERIAL		AG = Amber G	,	Clear Glass;	PE = Poly		PP = Polypropyle				er (Specify)			
SAMPLING	3 EQUIPMENT		.PP = After Per . FPP = Reverse				Bladder Pump; Method (Tubing	Gravity Drain);	ic Submersible O = Other (S					

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

NAME: 7	TWP K	05 WC// «	statio.	119		CATION:	KOSWE	11, NM			
WELLAPH	1240			SAMPLE	ID: TWI	Rusher	1 Station	9 MW 240	DATE:	04/14	2013
					PURC	SING DA	TA				
DIAMETER	(inches): PV	DIAMET	ER (inches):	DEP	L SCREEN TH: <i>1</i> 46 fe TH STA	et to / 7/6 f	STATIC Deet TO WATE	ER (feet): 62. WELL CAPACI	76' OR	RGE PUMP T	YPE IN SLH YO PV Baile
(only fill out	if applicable)		= (180	feet - 6	2.76	feet) X	0.653	gallons/foo	t = 76	
	IT VOLUME PU if applicable)	JRGE: 1 EQUI	IPMENT VOL.		UME + (TUE allons + (TY X TU ons/foot X	JBING LENGTH) feet)		gallons	= gallons
	MP OR TUBINO	3		IP OR TUBING WELL (feet):		DUDGIN		DUBCING		TOTAL VOI PURGED (LUME //B
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or as/cm	OXYGEN (circle units) (mg/l or % saturation	ORF TURBIDIT (NTU) m Vol7	Y COLO , (describ	
1458	Initial	0		62.76	8.09	21.42	N/A	4.54	-7/.5	- Clei	n None
1502	10	10			7.80	19.12	NA	3.4/	-441/	' Chee	
1509	2010	20			7.39	18.89	3.31/	3.28	-14.0		
1514	10	30			7.45	18-84	3.322	4.85	-0.8	,	
1520	10	40			7.63	18.69	3.330	4.10	1.5	Clew	u None
50.		2011-	2160	0 112		40	house				
Samp	red 11	NW-2	721	0 15	-15.	701	100K	T			
WELL OAF	PACITY (Gallon:	- Dan Facility 6	75" - 0.00	1" = 0.04;	1.25" = 0.0	6; 2" = 0.1	6; 3 " = 0.37;	4" = 0.65;	5" = 1.02;	6" = 1.47;	12" = 5.88
TUBING IN	ISIDE DIA. CAF	ACITY (Gal./F	t.): 1/8" = 0.02,	0006; 3/16"		1/4" = 0.002				" = 0.010;	5/8" = 0.016
PURGING	EQUIPMENT C	ODES: B	= Bailer; I	BP = Bladder F			Submersible Pu	mp; PP = P	eristaltic Pum	p; O = O	ther (Specify)
SAMPLED	BY (PRINT) / A	EEILIATION:		SAMPLERAS)		LING DA	AIA	T		-	
_	Envirmm		NES		John	Bolle	(E)	SAMPLING INITIATED A	_{т:} 1448	3 SAMPLIN ENDED A	AT: 1615
PUMP OR	TUBING	-	./	TUBING MATERIAL CO		N. C.C.C.	FIELD	-FILTERED: Y	(N)	FILTER S	SIZE: μm
	WELL (feet): CONTAMINATION	 	P (V) N	RINSE	TUDING.	(Y) N (re	eplaced)	on Equipment Ty DUPLICATE:		Q	
	PLE CONTAINE		TION	Samp	. Section 1.	RESERVATIO	·	INTEND		SAMPLING	SAMPLE PUMP
SAMPLE	#	MATERIAL	1	PRESERVAT	IVE	TOTAL VOL	FINAL	ANALYSIS A	ND/OR E	QUIPMENT	FLOW RATE (mL per minute)
ID CODE	OOMITAINETIO	- OODL		USED		ED IN FIELD (mL) pH			B	(III per IIIII de)
65	3	CG	Home	Hec		<i></i>	5	BTEX	004	<i></i>	,
			-								
REMARKS	:										
BEATTERIE	CODES:	AC - A	Olana, CC	Cloor Cloos	DE - D-1	vothyla = a ·	DD - Dohman	long S = Cita	nno: T - T	flon: O = 1	Other (Specify)
MATERIAL		AG = Amber (<u></u>	Clear Glass;		yethylene;	PP = Polypropy		one; T = Te ric Submersib		Other (Specify)
SAIMPLING	3 EQUIPMENT			eristaltic Pump; se Flow Perista	B = Ba Itic Pump;		· Bladder Pump; · Method (Tubing			r (Specify)	

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

^{2.} STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

NAME: 7	WP KOS	well S	Tation	9	LO	CATION:	Koshe!	NM						
	MW- 3			SAMPLE	ID:TWP	ROSWEIL	STATION M	14250	DATE: 04	1/17/21	9/3			
						ING DA								
	SCH 40F				LL SCREEN I		STATIC D	EPTH R (feet): 58.	puro	GE PUMP TYP	E4 SCH 40			
DIAMETER	(inches):	DIAMET	ER (inches):	DEF	TH: 119 fee	et to /4 7 fo	eet TO WATE O WATER) X	R (feet): O O ·	TY OR B	ATLER /	evc Bailen			
	if applicable)	TWEEL TO	= (150'		8.06		0.653		= 60.	12			
EQUIPMEN	IT VOLUME PL	JRGE: 1 EQU		, –	UME + (TUB	ING CAPACI	TY X TU	BING LENGTH)	+ FLOW CEL	L VOLUME	03 gallons			
(only fill out	if applicable)			= 0	allons + (nallo	ns/foot X	feet)		gallons =	gallons			
INITIAL PU	MP OR TUBING	 G	FINAL PUN	IP OR TUBING		PURGIN	G .			TOTAL VOLL	IMF .			
	WELL (feet):			WELL (feet):		INITIATE	DAT: 08/6	PURGING ENDED AT:	0830	PURGED (ga	llons): <i>40</i>			
	VOLUME	CUMUL. VOLUME	PURGE	DEPTH TO	рН	TEMP.	COND. (circle units)	DISSOLVED OXYGEN	JURBIDITY	COLOR	ODOR			
TIME	PURGED	PURGED	RATE	WATER	(standard units)	(°C)	μmhos/cm	(circle units)	-(NTUS)	(describe				
	(gallons)	(gallons)	(gpm)	(feet)	unitaj		or µS/cm	% saturation	MVolts					
0816	Initia/	0		58.06	7.54	18.07	3.094	3.54	45.4	Clear				
0820														
0826	0826 10 20 7.31 18.02 3.170 3.03 10.0 Clear None													
0844	0844 10 30 7.38 17.83 3.166 3.54 11.3 Clear None													
0848														
Same	Ved M	W-25	000	285011	OUK_		,	,						
			_											
	ACITY (Gallon									•	2" = 5.88 '8" = 0.016			
PURGING	EQUIPMENT C	ODES: B	= Bailer;	BP = Bladder F			Submersible Pur	np; PP = Pe	eristaltic Pump	; O = Oth	er (Specify)			
				-	SAMP	LING DA	TA		0800		o Gan			
SAMPLED	BY (PRINT) / A Environm		QES	SAMPLER(S)		Saule	re e	SAMPLING INITIATED AT	08/6	SAMPLING				
PUMP OR		11/4/	LF3	TUBING	010/118	Janu	FIELD	FILTERED: Y	(N)	FILTER SIZ				
	WELL (feet):	Bail	len	MATERIAL C	ODE:			n Equipment Ty		FILTER SIZ	Ε:μ m			
FIELD DEC	CONTAMINATIO	ON: PUM	P 🕢 N	KINGE	TUBING	Y AND	placed)	DUPLICATE:	Y	(N)				
SAME	PLE CONTAINE			7	SAMPLE PR	ESERVATIO	N	INTENDE	I .		SAMPLE PUMP			
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVAT USED	IVE T	OTAL VOL D IN FIELD (r	FINAL nL) pH	ANALYSIS AI METHO	_	UIPMENT CODE	FLOW RATE (mL per minute)			
ID CODE	3	OODL	40ML	Hel		<i>O</i>		BTEX 8	302/	3				
			70	1120		0		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	/					
							 							
								 						
REMARKS	:							<u> </u>	<u> </u>					
MATERIAL	. CODES:	AG = Amber 0	Glass; CG =	Clear Glass;	PE = Poly	ethylene;	PP = Polypropyl	ene; S = Silico	one; T = Tefl	on; O = Ot	ner (Specify)			
SAMPLING	EQUIPMENT			ristaltic Pump;	B = Bail		Bladder Pump;		ic Submersible					
		R	FPP = Revers	e Flow Perista	itic Pump;	SM = Straw	Method (Tubing	Gravity Drain);	O = Other (Specify)				

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

SITE NAME:	TWP RO	swell	SLA)	SI	ΓΕ CATION:	Risull	NM			
WELL NO:		-26					en St		DATE: 4	117/13	
		-				ING DA		, -	16	/ / / -	
DIMINETER	CH 40 R (inches): Z		ER (inches):	DEF	L SCREEN I	et to 63 f	STATIC D	R (feet): 5/	70 OR	RGE PUMP TYPI BAILER: <i>B</i>	ō
	.UME PURGE: if applicable)	1 WELL VOL	•	/ -	TH - STA			WELL CAPACI		ot = Z_1Z_1	gallons
	NT VOLUME PI	URGE: 1 EQUI	PMENT VOL.	= PUMP VOL	UME + (TUB	ING CAPACI	TY X TU	JBING LENGTH)	+ FLOW CE	LL VOLUME	
			LEDIAL BURA		allons + (ons/foot X	feet)	+	gallons =	gallons
	MP OR TUBIN WELL (feet):	G T	DEPTH IN V	P OR TUBINO VELL (feet):	; 	PURGIN	ED AT: 1200	PURGING ENDED AT: DISSOLVED	/225	TOTAL VOLUM PURGED (gall	ons): 5.5
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/em or µS/cm	OXYGEN (circle units) mo// or % saturation	MINE MISC	COLOR (describe)	ODOR (describe)
1204	1.0	1.0		51.70	7.02	18.75	3917	4,25	53.6		
1209	1.5	2.5		1	6.97	1885	3930	4.18	52,4		4 4
1214	1.0	3.5		1	6.92	18.83	3928	3.62	53, Z		10
1221	1.5	5.0		$+\mathcal{I}$	1 97	18.54	3927	· 3.36 3.36	54,2 54,2		1
1725	0.5	2.2		-	10-10	10,07	3130	2.00	5 6. 5		
1225	SAMO	<u> </u>	-								
					-						
									<u> </u>		
		ns Per Foot): 0 PACITY (Gal./F		1" = 0.04; 006; 3/16"	1.25" = 0.06 = 0.0014;				5" = 1.02; .006; 1/2'		2" = 5.88 3" = 0.016
PURGING	EQUIPMENT C	ODES: B	= Bailer; B	P = Bladder f	<u></u>		Submersible Pur	mp; PP = Pe	eristaltic Pum	p; O = Othe	er (Specify)
SAMPLED	BY (PRINT) / A	EEII IATION:		SAMPLE R(S)		LING D	ATA	T		T	
A	NAS	Thisur	7/68		97	12/	フ	SAMPLING INITIATED AT	://55	SAMPLING ENDED AT:	1243
PUMP OR				TUBING				-FILTERED: Y	N	FILTER SIZE	
	WELL (feet): CONTAMINATION	ON: PUMI		MATERIA(C)	TUBING	Y (NO)	Filtration Fil	DUPLICATE:	pe:	N	
	· · · · · · · · · · · · · · · · · · ·	ER SPECIFICA				RESERVATIO		INTENDE			SAMPLE PUMP
SAMPLE	#	MATERIAL		PRESERVAT	IVE 1	TOTAL VOL	FINAL	ANALYSIS AI	ND/OR E	QUIPMENT	FLOW RATE mL per minute)
ID CODE	CONTAINERS	CODE	40 ml	USED	ADDE	D IN FIELD (mL) pH	8260 0		SP	The por minute)
		ļ									.
		-									
	, , ,										
REMARKS):	4 la									
MATERIAL		AG = Amber C		Clear Glass;	PE = Poly		PP = Polypropyl				er (Specify)
SAMPLING	3 EQUIPMENT		.PP = After Per FPP = Reverse				Bladder Pump; Method (Tubing	ESP = Electr Gravity Drain);			

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

^{2.} STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

SITE NAME:	TWP PO	suell	_SfK	2 9	SI LC	TE DCATION: 🗸	KO8UE	te No	M		,			
WELL NO:				SAMPLE	ID: TWP	su e ll	SLA		DATE:	4/6/1	/3			
L	7 - 1					ING DA	TA	<u>-</u>	V					
	4 40	// TUBING			LL SCREEN		STATIC I	DEPTH ER (feet): 68	-867	RGE PUMP T	YPE A			
WELL VOL	R (inches): Z	1 WELL VOI	TER (inches): LUME = (TOTA	AL WELL DEP	TH - STA	et to 75 for	O WATER) X	WELL CAPACI	TY OR	A DAILER.	<i>J</i> 1			
	t if applicable)		= (-	74.61	feet 6	8,34	feet) X	0.163		pot = /.6	gallons			
	NT VOLUME PU	JRGE: 1 EQL	JIPMENT VOL.	= PUMP VOL	.UME + (TUE	BING CAPACI	TY X TI	UBING LENGTH)		ELL VOLUME				
(Offig fill Out	t if applicable)			= ga	allons + (gallo	ns/foot X	feet)	+	gallons	= gallons			
	MP OR TUBING WELL (feet):	G	FINAL PUM DEPTH IN V	IP OR TUBINO	3	PURGIN INITIATE		PURGING ENDED AT:	1720	TOTAL VOI	LUME gallons): Z. Ø			
DEI IIIII	VVEEL (ICCI).	CUMUL.		DEPTH		T	COND.	DISSOLVED	OPT	2	,			
TIME	VOLUME PURGED	VOLUME PURGED	PURGE RATE	TO WATER	pH (standard	TEMP. (°C)	(circle units)	OXYGEN (circl e u qits)	TURBIDI (NTUS)	1 1				
	(gallons)	(gallons)	(gpm)	(feet)	units)	(0)	ομ μS/cm	mg/L or % saturation	mvol	\$ 1	(describe)			
41706	6.5	0.5		68.34	7,07	19-72	2556	1.48	5,7	Cles	ac Nove			
1711	0.5	1.0			7.03	19.75	2520	6.39	2.5		61			
1716 6.5 1.5 7.02 19.85 2562 0,24 -3.8 1 4														
1120	1720 0.5 20 7.80 19.88 7606 6.51 -8.7 - 5													
1720	1720 SAMPHED													
	THE SECTION													
						<u> </u>			<u> </u>					
									· · · · · · ·					
	PACITY (Gallon				1.25" = 0.0 ' = 0.0014;				5" = 1.02;	6" = 1.47; 2" = 0.010;	12" = 5.88 5/8" = 0.016			
	EQUIPMENT C			3P = Bladder F			Submersible Pu		eristaltic Pur	-	Other (Specify)			
						LING DA	AF							
	BY (PRINT) A	FFILIATION:	1000	SAMPLER(S)	SIGNATUR	ESS		SAMPLING INITIATED A	T. /7 6/7	SAMPLIN ENDED A				
PUMP OR		vonzy	jæs	ZUBING	7	$\longrightarrow \nearrow$	FIELD	-FILTERED: Y	· ·	FILTER S	1100			
DEPTH IN	WELL (feet):			MATERIAL 9			Filtrati	on Equipment Ty	pe:					
	CONTAMINATIO		<u> </u>	2	TUBING	<u> </u>	placed)	DUPLICATE:		(N)	<u> </u>			
SAMI SAMPLE	PLE CONTAINE	R SPECIFICA MATERIAL		PRESERVAT		RESERVATIO	N FINAL	INTENDI ANALYSIS A	ND/OR E	SAMPLING EQUIPMENT	SAMPLE PUMP FLOW RATE			
ID CODE	CONTAINERS	CODE	VOLUME	USED		D IN FIELD (METHO		CODE	(mL per minute)			
	3	CG	Hon	Hee				802B	15%	BP				
REMARKS	S:	LL	L				I	<u> </u>			l			
MATERIAI		AG = Amber		Clear Glass;	PE = Pol	<u></u>	PP = Polypropy				Other (Specify)			
SAMPLING	G EQUIPMENT		APP = After Per RFPP = Revers				Bladder Pump; Method (Tubing	ESP = Electi Gravity Drain);		ible Pump; er (Specify)				

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

SITE NAME: T	WP RO	suecc	- Sti	19		TE DCATION:	Eosevez	L NN	~					
WELL NO:	MW-			SAMPLE	ID: TWI	P Ros	ute.	1 1	DATE: 6	416/19	2			
				, l	PÚRG	SING DA	TA			·				
WELL SCA	4 40 (inches): 2	TUBING	FER (inches):	WEI DEF	L SCREEN	INTERVAL et to 75 fe	STATIC D	ER (feet): 66.	3,3 PL	IRGE PUMP T R BAILER:	YPE P			
WELL VOL	UME PURGE: if applicable)	1 WELL VOL	.UMÈ = (TÓTA	AL WELL DEP	TH - STA	TIC DEPTH T	O WATER) X	WELL CAPACI	TY	1 /	ıL			
FOLIDMEN	IT VOLUME PL	IRGE: 1 FOLL	= (= PUMP VOI			feet) X	<i>D.16</i> 3 JBING LENGTH)	gallons/fo		7 gallons			
	if applicable)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			allons + (ns/foot X	feet)		gallons	= gallons			
i e	MP OR TUBING	3	1	IP OR TUBINO	}	PURGIN	G ED AT: /625	PURGING ENDED AT:	1653	TOTAL VOI	LUME 3,75			
		CUMUL.		DEPTH			COND.	DISSOLVED	OH	>				
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	PURGE RATE (gpm)	TO WATER (feet)	pH (standard units)	TEMP. (°C)	(circle units) µmhos/cm or µS/cm	OXYGEN (circle units) mg/L)or % saturation	MTUS M VOC	(describ				
1629	0.5	0.5		66.33	7,17	19.73	3134	0.75	42,0	2 Clos	e Nont			
1633	6.5	1.0			7.01	P.67	3105	6.28	44.0		11			
16037	1.5	2.5			702	19.63	3162	0.24	43.2	2 4	1			
1643	1.0	3.5			693	19.70	3178	0.18	44.4	n	65			
1645	1645 Sanguar													
	7648 SANGUED													
		,												
						L								
WELL CAP	PACITY (Gallon ISIDE DIA. CAI	s Per Foot): 0 PACITY (Gal./F	0.75" = 0.02; Ft.): 1/8" = 0.0	1" = 0.04; 0006;3/16"	1.25" = 0.0 ' = 0.0014;	6; 2" = 0.1 1/4" = 0.002			5" = 1.02; .006; 1 /	6" = 1.47; 2" = 0.010;	12" = 5.88 5/8" = 0.016			
PURGING	EQUIPMENT C	ODES: B	= Bailer; E	3P = Bladder F	oump; E	SP = Electric	Submersible Pu	mp; PP = Pe	eristaltic Pu	mp; O = 0	ther (Specify)			
<u></u>						LING DA	ATA							
SAMPLED	BY (PRINT) / A	FFILIATION:		SAMPLER(S)	SIGNATUR	E(S):		SAMPLING INITIATED AT	1.1625	SAMPLIN ENDED				
PUMP OR	TUBING WELL (feet):			TUBING MATERIAL C	ODE:			-FILTERED: Y on Equipment Ty	N pe:	FILTER S	SIZE: μm			
	ONTAMINATIO	ON: PUM	IP Y N		TUBING	Y N (re	eplaced)	DUPLICATE:	Υ	N				
SAMF	PLE CONTAINE	ER SPECIFICA	TION		SAMPLE PI	RESERVATIO	N	INTENDE		SAMPLING	SAMPLE PUMP			
SAMPLE	#	MATERIAL	VOLUME	PRESERVAT		TOTAL VOL	FINAL	ANALYSIS AI METHO		EQUIPMENT CODE	FLOW RATE (mL per minute)			
ID CODE	CONTAINERS 3	CODE	40 ml	HCO	ADDE	D IN FIELD (I	mL) pH	8021 6		BP				
		u	70 400	1100	,			1000	115/	ν				
REMARKS	:	<u> </u>												
MATERIAL	CODES:	AG = Amber	Glass; CG =	Clear Glass;	PE = Pol	yethylene;	PP = Polypropy	lene; S = Silico	one; T =	Teflon; O = 0	Other (Specify)			
SAMPLING	EQUIPMENT		APP = After Per RFPP = Revers				Bladder Pump; Method (Tubing	ESP = Electr Gravity Drain);		ible Pump; er (Specify)				

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

SITE _ NAME:	TWP R	osuell	. SH	79	SIT LO	TE CATION:	Posws	U NN	1		
WELL NO:	mu	-34		SAMPLE	ID. Was	P Re	Bustl	-/ -	DATE: 4//	6/158	
					PURG	ING DA	TA				
WELL SCH					L SCREEN I	NTERVAL et to 79 f	STATIC E	DEPTH ER (feet): 63.	PURG OR BA	E PUMP TYP	Ž D
WELL VOL	(inches): UME PURGE:	1 WELL VOL	ER (inches): .UME = (TOT/				O WATER) X	WELL CAPACI	TY	ILEN. D	<u> </u>
` `	if applicable)		= (7	5.75	feet - 63	3.25	feet) X	0-163	gallons/foot	= 2.0	gallons
	IT VOLUME PU if applicable)	JRGE: 1 EQU	IPMENT VOL.	= PUMP VOL	UME + (TUB	ING CAPACI	TY X T	JBING LENGTH)	+ FLOW CELL	VOLUME	
(Only in out	п аррпсавіс)				allons + (ons/foot X	feet)	·	gallons =	<u>-</u>
	MP OR TUBIN WELL (feet):	G	FINAL PUM DEPTH IN \	P OR TUBINO VELL (feet):	3	PURGIN	G ED AT: 5 40	PURGING ENDED AT:	1615	OTAL VOLU PURGED (ga	JME illons):
DET TITLE	NEEL (1999)	CUMUL.		DEPTH	-11		COND.	DISSOLVED	ORP	T	
TIME	VOLUME PURGED	VOLUME PURGED	PURGE RATE	TO WATER	pH (standard	TEMP. ([©] C)	(circle units) μmhos/cm	(circle units)	TURBIDITY (NTUs)	COLOR (describe	
	(gallons)	(gallons)	(gpm)	(feet)	units)		or µS/cm	mg/L)or % saturation	mvolts	BROWN	. `
1540	0.5	a5		63.28	7.12	1974	3800	0.30	-6-6	TOPEI	d vous
1558	2.5	3.0			7.08	19.71	3788	0.18	8.0	Clerke	
1605	100	4.0	,2		7.02	19-65	3782	0.17	15.0	<i>y</i> .	<u>ک</u>
1609	1.0	50	,2		7.03	19.65	3783	0,16	22.4	a	21
1614	1.0	6.0	12		7.UT	17.6t	3781	0,14	26.1		
1615	SAM	phosp						,		 	
WELL CAP	PACITY (Gallon ISIDE DIA. CAI	s Per Foot): (P ACITY (Gal./F).75" = 0.02; ft.): 1/8" = 0.0	1" = 0.04; 0006; 3/16 "	1.25" = 0.06 = 0.0014;	6; 2" = 0.1 1/4" = 0.002			•		12" = 5.88 /8" = 0.016
PURGING	EQUIPMENT C	ODES: B	= Bailer; I	3P = Bladder I			Submersible Pu	mp; PP = Po	eristaltic Pump;	O = Oth	ner (Specify)
SAMDLED	BY (PRINT) / A	EEILIATION:	т	SAMPLER(S)		LING DA	ATA				
SAMO	<i></i>		5	OAWIELINO)		ax		SAMPLING INITIATED A	T: 1540	SAMPLING ENDED AT	1620
PUMP OR	TUBING	100	4	TUBING		- 0		-FILTERED: Y	(N)	FILTER SIZ	ΖΕ; μm
	WELL (feet): CONTAMINATION	ON: PUM	P Y (N	MATERIA(C	TUBING	Y (N (F	Filtrati eplaced)	on Equipment Ty DUPLICATE:		(N)	
	PLE CONTAINE			/-		RESERVATION		INTEND			SAMPLE PUMP
SAMPLE	#	MATERIAL		PRESERVAT	IVE 7	OTAL VOL	FINAL	ANALYSIS A	ND/OR EQU	IPMENT CODE	FLOW RATE (mL per minute)
NA ID CODE	CONTAINERS 3	CG	40ml	USED	ADDE	D IN FIELD (mL) pH	8021		0	
1	<u> </u>		TOM	110C			7	8000	7100 B	' /	
											
REMARKS	: :										
MATERIAI	_ CODES:	AG = Amber	Glass: CG =	Clear Glass;	PE = Poly	vethylene:	PP = Polypropy	rlene; S = Silico	one; T = Teflo	n; O = Ot	her (Specify)
	EQUIPMENT	CODES: A	APP = After Pe	ristaltic Pump;	B = Bai	ler; BP =	Bladder Pump;	ESP = Elect	ric Submersible	Pump;	7-1
		F	RFPP = Revers	e Flow Perista	iltic Pump;	SM = Straw	Method (Tubing	g Gravity Drain);	O = Other (S	specify)	

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

SITE NAME: 1	WP Z	swell	sta	7	SI ⁻	TE CATION:	Rosa	EU 1	IM	_ ,		
	MW-		,			P Pos		Lu 9	DATE:	4/16/1	Q .	
	W • • • • • • • • • • • • • • • • • • •	رر				ING DA				1111		
DIAMETER	40 PVC (inches): 2	DIAME	TER (inches):	DEF	LL SCREEN PTH: 49 fe	et to 7-9 f	STATIC I	ER (feet): 60,	ω	PURGE PUMP T OR BAILER:	YPE BLANDER	
			UME = (TOTA = (UPMENT VOL.					WELL CAPAC	gallons	/foot = 2.5	gallons	
EQUIPMEN (only fill out	IT VOLUME PU if applicable)	JRGE: 1 EQU	IPMENT VOL.					UBING LENGTH				
INITIAL DIII	MP OR TUBING	2	FINAL PLIM	= g: P OR TUBING	allons + (ons/foot X	feet PURGING	<u> </u>	gallons TOTAL VO	I LIME /	
DEPTH IN \			DEPTH IN V		,	INITIATE	ED AT: 1450	ENDED AT:		PURGED (gallons): 4:80	
TIME VOLUME PURGED (gallons) VOLUME (gpm) VOLUME (feet) VOLUME (gpm) VOLUME (feet) VOLUME (feet) VOLUME (feet) VOLUME (feet) VOLUME (feet) VOLUME (feet) VOLUME (circle units) (mg/L) or (mg/L)												
1454	0.5	0.5		60.28	7.17	19.89	4076		47.	8 CW	W-	
1504	1.0	1.5	Dol		7.41	20.02	4075	4,10	5%	7 4	. 4	
1514	1.0	2.5	0./		7.12	20.21	4079	4.17	J 7,	8 4	/	
1527	1. 25 SANOU	3.75			7.14	20.25	4070	4.01	54	0 ~	<u>,</u>	
1530	SAMOU	eg '4.0										
, , , , , , , , , , , , , , , , , , , ,												
										011 1 17	401 500	
WELL CAP TUBING IN	ACITY (Gallon SIDE DIA, CAF	s Per Foot): (PACITY (Gal./).75" = 0.02; Ft.): 1/8" = 0.0	1" = 0.04; 0006; 3/16'	1.25" = 0.00	6; 2" = 0.1 1/4" = 0.002			5" = 1.02; 0.006;	; 6" = 1.47; 1/2" = 0.010;	12" = 5.88 5/8" = 0.016	
PURGING I	EQUIPMENT C	ODES: B	= Bailer; E	BP = Bladder I			Submersible Pu	imp; PP = P	eristaltic P	oump; O = 0	Other (Specify)	
SAMPLED	BY (PRINT) / A	FEILIATION:		SAMPLER(S)		LING DA	AIA	T		64450		
	ShARD,	1005	-		×3/			SAMPLING INITIATED A	T: /44C	SAMPLII ENDED	NG AT: 1535	
PUMP OR	TUBING 1/			TUBING MATERIAL C	ODE: S	+)-FILTERED: Y			SIZE: μm	
	WELL (feet): ONTAMINATION	ON: PUM			TUBING	Y (N)	eplaced)	DUPLICATE		(N)		
	LE CONTAINE			<u> </u>		RESERVATIO	<u> </u>	INTEND		SAMPLING	SAMPLE PUMP	
SAMPLE	#	MATERIAL	VOLUME	PRESERVAT	IVE	TOTAL VOL	FINAL		ND/OR	EQUIPMENT CODE	FLOW RATE (mL per minute)	
MA-	CONTAINERS 3	CG	40ml	HCL	ADDE	D IN FIELD (mL) pH	8021 B		BP	(III. per IIIIIIde)	
1V PC		<u> </u>	7UM	nex	-			0000	,70			
						-						
REMARKS												
MATERIAL	CODES:	AG = Amber	Glass. CG -	Clear Glass;	PF = Pol	vethylene;	PP = Polypropy	vlene; S = Silic	one: T =	= Teflon: O =	Other (Specify)	
	EQUIPMENT		APP = After Pe				Bladder Pump;			rsible Pump;	Calor (Opcony)	
			RFPP = Revers				Method (Tubing			ther (Specify)		

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

1

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater)

WELL NO:		_		on #		, 0, 1, 1011.	20/ /11	1-019		Swell N	/)4
	MW.	-13		SAMPLE	.ID: //	N-13			DATE: ////	8/13	
			····			SING DA					
WELL DIAMETER WELL VOLU	<u> </u>	DIAMET	'ER (inches):	2 DEP	L SCREEN TH: 57 fe	et to 72 f	STATIC I eet TO WATE	DEPTH ER (feet): 64 WELL CAPAC	OR BAIL	PUMP TYPE ER: Ded : Ca	
		3 WELL VOL	= (72	feet - 4	64.70	feet) X		gallons/foot =	- 1.16	
EQUIPMEN	T VOLUME PU	JRGE: 1 EQU	IPMENT VOL.	= PUMP VOL	gallons .UME + (TUE	BING CAPACI	TY X T	UBING LENGTH) + FLOW CELL V	OLUME	
(only fill out	if applicable)			= gs	allons + (gallo	ons/foot X	feet) +	gallons ≔	
INITIAL PUI DEPTH IN V	MP OR TUBINO VELL (feet):	65.65		IP OR TUBING WELL (feet):	65.65	PURGIN	IG ED AT: <i>13: 3</i>		14:11 TO	OTAL VOLUME JRGED (gallor	E ns)
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (galions)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μπhos/cm <u>or</u> μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	
13:33	Initio/	0	0.10	64.70	7.42	21.29	3.294	3.74	-26.1/31.8	Clear	,
13:43	/		0.10		7.22	21.71	3.323	4.12	-159/14.5	Clear	٦,
13:52	2	غ	0.10		7.18	21.43	3.326	2.92	-14.3 /26.	3 C/cm	-
214:00	3	2.5	Well	pumped	DOW.	v-Wil	11 let 1	e-chor	se then	Samo	1
	3.5		-								
,	<i>i</i> 1										
11.00-01.00											
INSTRUME	NTS USED:	VSI	556	mps s	Seriel	# 0	5F 22	TYAL			
WELL CAP	ACITY (Gallons		556 575" = 0.02; 51): 1/8" = 0.0	1" = 0.04;	1.25" = 0.0	6; 2" = 0.1		4" = 0.65;		= 1.47; 12 "	
WELL CAP		PACITY (Gal./F	. 75" = 0.02; ft.); 1/8" = 0.0	1" = 0.04;	1 .25" = 0.0 ' = 0.0014;	6; 2" = 0.1 1/4" = 0.002	6; 3" = 0.37; 26; 5/16" = 0	4" = 0.65; .004; 3/8" = 0			=
WELL CAP TUBING IN: PURGING E	ACITY (Gallons SIDE DIA, CAP EQUIPMENT U	PACITY (Gal./F ISED: B =	1.75" = 0.02; ft.); 1/8" = 0.0 Bailer; BF	1" = 0.04; 0006; 3/16" P = Bladder Pu	1.25" = 0.0 ' = 0.0014; imp; ES	6; 2" = 0.1 1/4" = 0.002 P = Electric S	6; 3" = 0.37; 26; 5/16" = 0 Submersible Pur	4" = 0.65; .004; 3/8" = 0	0.006; 1/2" = 0	.010; 5/8"	=
WELL CAPATUBING INS PURGING E	ACITY (Gallons SIDE DIA. CAP EQUIPMENT U	PACITY (Gal./F ISED: B =	1.75" = 0.02; it.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 0006; 3/16" P = Bladder Pu	1.25" = 0.0 ' = 0.0014; imp; ES	6; 2" = 0.1 1/4" = 0.002 P = Electric S	6; 3" = 0.37; 26; 5/16" = 0 Submersible Purr	4" = 0.65; .004; 3/8" = (pp; PP = Per SAMPLING INITIATED A	0.006; 1/2" = 0 Pistaltic Pump;	.010; 5/8"	=
WELL CAP TUBING IN: PURGING E	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USBY (PRINT) / AI	PACITY (Gal./F ISED: B =	75" = 0.02; t): 1/8" = 0.0 Bailer; BP	1" = 0.04; 0006; 3/16" 2 = Bladder Pu SAMPLEB(S) TUBING	1.25" = 0.00 " = 0.0014; imp; ES SAMP	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S):	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr	4" = 0.65; .004; 3/8" = (pp; PP = Per SAMPLING INITIATED A D-FILTERED: Y	0.006; 1/2" = 0 istaltic Pump; T: 14:06	0.010; 5/8" O = Other (S	= Sp
WELL CAP TUBING IN: PURGING E SAMPLED E PUMP OR T DEPTH IN V	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USBY (PRINT) / AI	PACITY (Gal./FISED: B= FFILIATION: Arn hi // 65.62	75" = 0.02; t): 1/8" = 0.0 Bailer; BF	1" = 0.04; 0006; 3/16" 2 = Bladder Pu SAMPLED(S) TÜBING MATERIAL CO	1.25" = 0.00 " = 0.0014; imp; ES SAMP	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S):	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr	4" = 0.65; .004; 3/8" = (pp; PP = Per SAMPLING INITIATED A	0.006; 1/2" = 0 istaltic Pump; T: 14:06 F //pe:	O = Other (S SAMPLING ENDED AT:	Sp /
WELL CAP TUBING INS PURGING E SAMPLED E PUMP OR T DEPTH IN V FIELD DECO	ACITY (Gallons SIDE DIA. CAP EQUIPMENT U BY (PRINT) / AI FUBING NELL (feet):	FACITY (Gal./FISED: B = FFILIATION: GATA hi // G5.62 DN: PUM	75" = 0.02; t.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Pu SAMPLEDS) TUBING MATERIAL CO	1.25" = 0.0 ' = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S):	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA ¹ FIELD Filtrati	4" = 0.65; .004; 3/8" = (pp; PP = Per SAMPLING INITIATED A 0-FILTERED: Y ion Equipment Ty	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe:	O = Other (S SAMPLING ENDED AT:	= Sp
WELL CAP TUBING INS PURGING E SAMPLED E PUMP OR T DEPTH IN V FIELD DECO	ACITY (Gallons SIDE DIA. CAP EQUIPMENT UBY (PRINT) / AI WILL (feet): ONTAMINATION #	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM R SPECIFICA MATERIAL	75" = 0.02; t): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Pu SAMPLEDS) TUBING MATERIAL CO	1.25" = 0.0 ' = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PR	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL	A" = 0.65; .004; 3/8" = (p; PP = Per SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE; INTEND ANALYSIS A	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: Y	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PARENT F	Sp Mile
SAMPLED ECUAL SAMPLE ID CODE	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USE ON MEDING MELL (feet): ONTAMINATION CONTAINERS	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM ER SPECIFICA MATERIAL CODE	75" = 0.02; it.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Put SAMPLEDS) TUBING MATERIAL CO PRESERVAT USED	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PRIVE ADDE	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO TOTAL VOL ED IN FIELD (6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (DP; PP = Per SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE; INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT DDE (m)	三字ーノー・ハルト
WELL CAP TUBING INS PURGING E SAMPLED E PUMP OR T DEPTH IN V FIELD DECO	ACITY (Gallons SIDE DIA. CAP EQUIPMENT UBY (PRINT) / AI WILL (feet): ONTAMINATION #	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM R SPECIFICA MATERIAL	75" = 0.02; t): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Pu SAMPLEDS) TUBING MATERIAL CO	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PRIVE ADDE	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (ip; PP = Pei SAMPLING INITIATED A D-FILTERED: Y on Equipment Ty DUPLICATE INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT DDE (m)	E P
SAMPLED ECUAL SAMPLE ID CODE	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USE ON MEDING MELL (feet): ONTAMINATION CONTAINERS	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM ER SPECIFICA MATERIAL CODE	75" = 0.02; it.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Put SAMPLEDS) TUBING MATERIAL CO PRESERVAT USED	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PRIVE ADDE	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO TOTAL VOL ED IN FIELD (6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (DP; PP = Per SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE; INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT DDE (m)	三字ーノー・ハルト
SAMPLED ECUAL SAMPLE ID CODE	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USE ON MEDING MELL (feet): ONTAMINATION CONTAINERS	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM ER SPECIFICA MATERIAL CODE	75" = 0.02; it.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Put SAMPLEDS) TUBING MATERIAL CO PRESERVAT USED	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PRIVE ADDE	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO TOTAL VOL ED IN FIELD (6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (DP; PP = Per SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE; INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT DDE (m)	E P
SAMPLED ECUAL SAMPLE ID CODE	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USE ON MEDING MELL (feet): ONTAMINATION CONTAINERS	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM ER SPECIFICA MATERIAL CODE	75" = 0.02; it.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Put SAMPLEDS) TUBING MATERIAL CO PRESERVAT USED	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PRIVE ADDE	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO TOTAL VOL ED IN FIELD (6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (DP; PP = Per SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE; INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT DDE (m)	E P
SAMPLED ECUAL SAMPLE ID CODE	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USE ON MEDING MELL (feet): ONTAMINATION CONTAINERS	FACITY (Gal./FISED: B = FFILIATION: Arn hi // 65.62 DN: PUM ER SPECIFICA MATERIAL CODE	75" = 0.02; it.): 1/8" = 0.0 Bailer; BF	1" = 0.04; 2006; 3/16" P = Bladder Put SAMPLEDS) TUBING MATERIAL CO PRESERVAT USED	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PRIVE ADDE	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO TOTAL VOL ED IN FIELD (6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (DP; PP = Per SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE; INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT DDE (m)	三字ーノー・ハルト
SAMPLED ECTION OF THE CODE	ACITY (Gallons SIDE DIA. CAPEQUIPMENT USES OF MEDICAL (Feet): ONTAMINATION ONTAMINES CONTAINERS 3	FACITY (Gal./FISED: B = FFILIATION: Arnhill 65.62 DN: PUM ER SPECIFICA MATERIAL CODE CG	1.75" = 0.02; t.): 1/8" = 0.0 Bailer; BF / CFS P Y (N) TION VOLUME 40 mL	1" = 0.04; 2006; 3/16" P = Bladder Pu SAMPLED'S) TUBING MATERIAL CO PRESERVAT USED	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PR	6; 2" = 0.1 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO TOTAL VOL ED IN FIELD (20 m L	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) DN FINAL pH	A" = 0.65; .004; 3/8" = (pp; PP = Pei SAMPLING INITIATED A D-FILTERED: Y ion Equipment Ty DUPLICATE, INTEND ANALYSIS A METHO	0.006; 1/2" = 0 istaltic Pump; T: 14:06 E //pe: ED SAMF ND/OR EQUIF CO	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT FODE (m)	- MLL Z
PUMP OR 1 DEPTH IN V FIELD DECO SAMPLE ID CODE	ACITY (Gallons SIDE DIA. CAP EQUIPMENT U. BY (PRINT) / AI I DIA M BY (PRINT) /	FACITY (Gal./FISED: B = FFILIATION: Arnhill 65.62 DN: PUM ER SPECIFICA MATERIAL CODE CG	176" = 0.02; t.): 1/8" = 0.0 Bailer; BF /CFS P Y N TION VOLUME 40mC	1" = 0.04; 2006; 3/16" P = Bladder Pu SAMPLEB(S) TUBING MATERIAL CO PRESERVAT USED HCL	1.25" = 0.0 1 = 0.0014; Imp; ES SAMP SIGNATURI ODE: 7 TUBING SAMPLE PR	ESERVATION TOTAL VOL.	6; 3" = 0.37; 26; 5/16" = 0 submersible Purr ATA FIELD Filtrati eplaced) NN FINAL pH 7.//8	A" = 0.65; .004; 3/8" = (ID; PP = Pei SAMPLING INITIATED A PFILTERED: Y ON Equipment Ty DUPLICATE INTEND ANALYSIS A METHO	D.006; 1/2" = 0 istaltic Pump; T: 14:06 F T: 14:06 F T: Y ED SAMP EQUIP CO 3.260 B 2.560//on	O = Other (S SAMPLING ENDED AT: FILTER SIZE: PLING PMENT ODE (m)	MLC L

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

SITE -	TWP	Rosno	115Tai	10h #	9 81	TE CATION:	381 N.	Main Str	et Bish	ell NM	38-201			
WELL NO:		1-14	<i>y</i>	SAMPLE		W-/4	, /	14/11/01/0	DATE:	118/201	2			
						SING DA		L		10/01/	>			
WELL VOL		// TUBING DIAME	TER (inches): 1	2 DEF	LL SCREEN PTH: 49,5 fe PTH - STA	et to 64.5 f	STATIC eet TO WAT	DEPTH ER (feet):55. WELL CAPAC	89 OR BALL	PUMP TYPE (LER: Debic?	REP 2" tel BP			
EQUIPMEN	IT VOLUME P	3 WELL VOL		4.11 = PIMP VOI	gallons			- ,	6 gallons/foot		galions			
(only fill out	if applicable)		MENT TOE.) + FLOW CELL \					
INITIAL PU	MP OR TUBIN	G 6781	FINAL PUM	P OR TUBINO VELL (feet):	alions + (PURGIN	ons/foot X	feet)	. / . / a TO	gallons = DTAL VOLUME	gallons			
DEPTH IN	WELL (feet):	1	DEPTH IN V		3 /. 85	INITIATE	D AT: //:2		//.58 PI	JRGED (gallon:	3:4.25			
TIME	PORGED (gallons) PURGED (gallons) PURGED (gallons) POTENTIAL (describe) POTENTIAL (describe) 1/25 Tay Fig. O 0.20 55.89 7.22 18.20 3.137 5.93 -15.4/213.8 C/m Name Name													
11:25	11:25 Lostial 0 0.20 55.89 7.22 18.20 3.137 5.93 -15.4/217.8 clan None													
11:30			0.20		7.14	19.10	3.189	3.52	-11.7/216	6 Clare	Non			
11:35	2_	2	0.20		7.14	19.07	3.205	2.84	-11.3/20	70/cm	None			
11:43	11-1	3	0,14		7.21	18.85	3.212	2.76	-12.2/20	6 Cken	None			
11:34 4.25 4.21 0.14 - 7.12 18.46 3.223 3.40 -11.7/197.6 Clear Nome														

1	NTS USED:	V	SI 5	56 MPS	Ser	16/4	- 05	F 227	441-	1	<u> </u>			
WELL CAP TUBING IN	ACITY (Gallon SIDE DIA, CAI	s Per Foot): 70 PACITY (Gal./F	1.75" = 0.02; (t.): 1/8" = 0.0	1" = 0.04;	1.25" = 0.06 = 0.0014;	3; 2" = 0.16 1/4" = 0.002		4 " = 0.65;	5" = 1.02; 6" =	= 1.47; 12" =				
	EQUIPMENT U			= Bladder Pu	mp; /ESI	P = Electric S	ıbmersible Pun		i.006; 1/2" = 0 istaltic Pump;	O = Other (Sp	0.016 ecify)			
SAMPLED	BY (PRINT) / A	EEII IATION:		SAMPLER(S)		ING DA	TA ¹							
	on MB		CES	SAIVIPLED(S)		(8):		SAMPLING INITIATED AT	: 11:55	SAMPLING ENDED AT: /	1:28			
PUMP OR DEPTH IN V		57.85		TUBING MATERIAL CO	DOE: P	F	FIELD	FILTERED: Y	\mathcal{N}	ILTER SIZE:	μm			
	ONTAMINATIO				TUBING	Y We	placed)	on Equipment Type DUPLICATE:		\sim				
SAMP	LE CONTAINE	R SPECIFICA	TION		SAMPLE PR	ESERVATIO		INTENDE			PLE PUMP			
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATI USED		OTAL VOL	FINAL	ANALYSIS AN	ND/OK EQUIP	INEN! FL	OW RATE per minute)			
MW-14	3		40 m	HeL		DIN FIELD (r	7.12	BTEXE			. 14			
								10/10						
						/ / / / / /								
				· · · · · · · · · · · · · · · · · · ·		·								
REMARKS:	FUK	GE HO	o Plac	16 In	0n-s	ite Z	Zevm							
MATERIAL		AG = Amber G	Blass; CG = 0	Clear Glass;	PE = Polye	ethylene;	PP = Polypropy	lene; S = Silico	ne; T = Teflon;	O = Other (S	Specify)			
SAMPLING	EQUIPMENT (PP = After Peri PP = Reverse	staltic Pump; Flow Peristalt	B = Baile tic Pump;		Bladder Pump; Method (Tubing	ESP = Electri Gravity Drain);	ic Submersible Pu O = Other (Spe	ımp;				

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L

Oxygen Reduction Potential: ≤ 10% mV

		''				<i>りぃー/』</i> SING DA			DATE:	11118/1	ر
WELL	0//	TUBING		1.80-1	LL SCREEN		CTATIC D	EDTU	T ==	MAP ======	V
1	R (inches):	DIAMET	ER (inches):	V/A DEF		in i ERVAL et to フルソ f	STATIC D	R (feet): 66.	49 OF	RGE PUMP T	YPE
WELL VOI	LUME PURGE:	1 WELL VOL	UME = (TOTA	L WELL DEP	PTH - STA	TIC DEPTH T	O WATER) X	WELL CAPAC	TY		3,2
			= (7	1.46	feet -	6.48	feet) X	0.16	gallons/fo	oot = <i>O</i> .	79
		3 WELL VOL							•		• /
EQUIPME!	NT VOLUME P	3 WELL VOL URGE: 1 EQU	PMENT VOL.	= PUMP VOL	UME + (TUE	ING CAPACI	TY X TU	BING LENGTH	+ FLOW C	ELL VOLUME	
(Offity fill Ou	t if applicable)			= ga	allons + (galio	ons/foot X	feet)	+	gallons	=
	JMP OR TUBIN	IG 1/1		OR TUBINO		PURGIN	IG 11116	PURGING	11110	TOTALLO	
DEPTH IN	WELL (feet):	10/17	DEPTH IN V	VELL (feet):	11/4	INITIATE	ED AT: 14:50		17.50	PURGED (gallons):/
	VOLUME	CUMUL. VOLUME	PURGE	DEPTH TO	pH	TEMP.	COND. (circle units)	DISSOLVED OXYGEN	OXYGE		OD .
TIME	PURGED (gallons)	PURGED	RATE	WATER	(standard units)	(°C)	μmhos/cm	(circle units) mg/L or	POTENT	ΓIAL (desc	
1/11.16	11	(gallons)	(gpm)	(feet)	4/4		or μS/cm	% saturation	(mV)	<u> </u>	
17.40	Gnit1a/	0	0.25	66.49	NO	Darak	neters	Taken		8/00	
19:50	 /	DRY	0.25		STA	ng t	y droc	arbon o	dox	10	đ
	1.5		0.25		Blace	1 19	10 WIT	4 5Tru	49 50	checy	
	2.0		0.21		Well	1541/	6 De	0 14	150	15-11	100
	2.5		0.25		DUY	16-	Will!	le fire	-Ch	irge 7	Tica
					Sam	ple.	- Very	1 Black	110	5/g 11	20
	-						1				
	 										
	<u> </u>		ļ								
INCTOLINA	 ENTS USED:		<u> </u>						<u> </u>		
		Y5 T	556 MI	15 Se	116/ A	05	F 2274	<u> </u>	No	Varame	<i></i>
							1 /017	MU		•	7825
WELL CAP TUBING IN	PACITY (Gallor ISIDE DIA. CA	s Per Foot): 0 PACITY (Gal./F	. 75" ≈ 0.02;	1" = 0.04;	1.25" = 0.08 ' = 0.0014;	3; 2" = 0.1	6; 3" = 0.37;	4" = 0.65;	5" = 1.02;	6" = 1.47;	12" = 5.8
TUBING IN	PACITY (Gallor ISIDE DIA. CA EQUIPMENT L	is Per Foot): 0 PACITY (Gal./F	.75" = 0.02; t.): 1/8" = 0.0	1" = 0.04;	1.25" = 0.06 ' = 0.0014;	3; 2" = 0.19 1/4" = 0.002	6; 3" = 0.37;	4" = 0.65; 004; 3/8" = 0	5" = 1.02;	6" = 1.47; 2" = 0.010;	
TUBING IN PURGING	ISIDE DIA. CA EQUIPMENT (ns Per Foot): 0 PACITY (Gal./F JSED: B =	.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 006; 3/16" = Bladder Pu	1.25" = 0.06 ' = 0.0014; emp; ESI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0	5" = 1.02; .006; 1/2	6" = 1.47; 2" = 0.010;	12" = 5.8 5/8" = 0.0
PURGING SAMPLED	EQUIPMENT L BY (PRINT) / A	PACITY (Gal./F JSED: B =	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 006; 3/16"	1.25" = 0.06 ' = 0.0014; emp; ESI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 0; PP = Peri	5" = 1.02; .006; 1/2 staltic Pump	6" = 1.47; 2" = 0.010; 0; O = Oth	12" = 5.8 5/8" = 0.0 ner (Specif
PURGING SAMPLED	EQUIPMENT (BY (PRINT) / A	PACITY (Gal./F JSED: B =	75" = 0.02; t): 1/8" = 0.0 Bailer; BP	1" = 0.04; 006; 3/16" = Bladder Pu	1.25" = 0.06 ' = 0.0014; emp; ESI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 b; PP = Pen SAMPLING INITIATED A	5" = 1.02; .006; 1/2 staltic Pump	6" = 1.47; 2" = 0.010; b; O = Oth	12" = 5.8 5/8" = 0.0 ner (Specif
PURGING SAMPLED PUMP OR	EQUIPMENT (BY (PRINT) / A	PACITY (Gal./F JSED: B =	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 006; 3/16" = Bladder Pu SAMPLER(S) FUBING MATERIAL CO	1.25" = 0.00 ' = 0.0014; amp: ESI SAMPI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 0; PP = Peri	5" = 1.02; .006; 1/2 staltic Pump	6" = 1.47; 2" = 0.010; 0; O = Oth	12" = 5.8 5/8" = 0.0 ner (Specif
SAMPLED PUMP OR DEPTH IN	BY (PRINT) // TUBING	IS PERFOOD): 0 PACITY (Gal./F JSED: B = AFFILIATION: N/A	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 006; 3/16" = Bladder Pu SAMPLER(S) FUBING MATERIAL CO	1.25" = 0.00 ' = 0.0014; amp: ESI SAMPI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 b; PP = Peri SAMPLING INITIATED A' FILTERED: Y	5" = 1.02; .006; 1/2 staltic Pump	6" = 1.47; 2" = 0.010; b; O = Oth	12" = 5.8 5/8" = 0.0 ner (Specif
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PR	AFFILIATION: N/A	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(S) TUBING MATERIAL CO	1.26" = 0.00 2 = 0.0014; Imp: ESI SAMPI SIGNATURE ODE: TUBING	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA ¹ FIELD- Filtratio	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED AT FILTERED: Y on Equipment Ty DUPLICATE: INTENDE	5" = 1.02; .006; 1/2 staltic Pump	6" = 1.47; 2" = 0.010; b; O = Oth SAMPLIN FILTER S	12" = 5.8 5/8" = 0.0 ner (Specif
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PRINT) / A BY (PRINT) / A TUBING WELL (feet): CONTAMINATION #	AFFILIATION: AF	7.75" = 0.02; 1.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(S TUBING MATERIAL CO	1.26" = 0.00 2 = 0.0014; Imp: ESI SAMPI SIGNATURE TUBING SAMPLE PR	3; 2" = 0.11 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE:	5" = 1.02; .006; 1/2 staltic Pump -: /4'5 oe: Y	6" = 1.47; 2" = 0.010; D; O = Oth SAMPLIN ENDED A FILTER S SAMPLING EQUIPMENT	12" = 5.8 5/8" = 0.0 ner (Specif
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PR	AFFILIATION: AF	7.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(8) TUBING MATERIAL CO PRESERVATI USED	1.26" = 0.014; Imp: ESI SAMPI IGNATURE TUBING SAMPLE PE IVE T ADDE	2" = 0.1' 1/4" = 0.002 P = Electric S LING DA E(S): Y Nuc RESERVATIO OTAL VOL D IN FIELD (I	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2 staltic Pump c: ///5 DD ED	6" = 1.47; 2" = 0.010; b; O = Oth SAMPLIN FILTER S	12" = 5.8 5/8" = 0.0 der (Specification of Specification
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PRINT) / A BY (PRINT) / A TUBING WELL (feet): CONTAMINATION #	AFFILIATION: AF	7.75" = 0.02; 1.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(S TUBING MATERIAL CO	1.26" = 0.014; Imp: ESI SAMPI IGNATURE TUBING SAMPLE PE IVE T ADDE	3; 2" = 0.11 1/4" = 0.002 P = Electric S LING DA E(S): Y NA RESERVATIO	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2 staltic Pump -: /4'5 oe: Y	6" = 1.47; 2" = 0.010; D; O = Oth SAMPLIN ENDED A FILTER S SAMPLING EQUIPMENT	12" = 5.8 5/8" = 0.0 ner (Specif
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PRINT) / A BY (PRINT) / A TUBING WELL (feet): CONTAMINATION #	AFFILIATION: AF	7.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(8) TUBING MATERIAL CO PRESERVATI USED	1.26" = 0.014; Imp: ESI SAMPI IGNATURE TUBING SAMPLE PE IVE T ADDE	2" = 0.1' 1/4" = 0.002 P = Electric S LING DA E(S): Y Nuc RESERVATIO OTAL VOL D IN FIELD (I	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2 staltic Pump c: ///5 DD ED	6" = 1.47; 2" = 0.010; D; O = Oth SAMPLIN ENDED A FILTER S SAMPLING EQUIPMENT	12" = 5.8 5/8" = 0.0 der (Specification of Specification
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PRINT) / A BY (PRINT) / A TUBING WELL (feet): CONTAMINATION #	AFFILIATION: AF	7.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(8) TUBING MATERIAL CO PRESERVATI USED	1.26" = 0.014; Imp: ESI SAMPI IGNATURE TUBING SAMPLE PE IVE T ADDE	2" = 0.1' 1/4" = 0.002 P = Electric S LING DA E(S): Y Nuc RESERVATIO OTAL VOL D IN FIELD (I	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2 staltic Pump c: ///5 DD ED	6" = 1.47; 2" = 0.010; D; O = Oth SAMPLIN ENDED A FILTER S SAMPLING EQUIPMENT	12" = 5.8 5/8" = 0.0 der (Specification of Specification
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PRINT) / A BY (PRINT) / A TUBING WELL (feet): CONTAMINATION #	AFFILIATION: AF	7.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(8) TUBING MATERIAL CO PRESERVATI USED	1.26" = 0.014; Imp: ESI SAMPI IGNATURE TUBING SAMPLE PE IVE T ADDE	2" = 0.1' 1/4" = 0.002 P = Electric S LING DA E(S): Y Nuc RESERVATIO OTAL VOL D IN FIELD (I	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2 staltic Pump c: ///5 DD ED	6" = 1.47; 2" = 0.010; D; O = Oth SAMPLIN ENDED A FILTER S SAMPLING EQUIPMENT	12" = 5.8 5/8" = 0.0 der (Specification of Specification
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) / A BY (PRINT) / A BY (PRINT) / A TUBING WELL (feet): CONTAMINATION #	AFFILIATION: AF	7.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(8) TUBING MATERIAL CO PRESERVATI USED	1.26" = 0.014; Imp: ESI SAMPI IGNATURE TUBING SAMPLE PE IVE T ADDE	2" = 0.1' 1/4" = 0.002 P = Electric S LING DA E(S): Y Nuc RESERVATIO OTAL VOL D IN FIELD (I	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 004; 3/8" = 0 0; PP = Peri SAMPLING INITIATED A' FILTERED: Y on Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2 staltic Pump c: ///5 DD ED	6" = 1.47; 2" = 0.010; D; O = Oth SAMPLIN ENDED A FILTER S SAMPLING EQUIPMENT	12" = 5.8 5/8" = 0.0 der (Specification of Specification
PUMP OR DEPTH IN FIELD DEC	BY (PRINT) // EQUIPMENT (BY (PRINT) // TUBING WELL (feet): CONTAMINATION # CONTAINERS 3	AFFILIATION: AF	7.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pu SAMPLER(8) FUBING MATERIAL CO PRESERVATI USED	1.26" = 0.0014; imp: ESI SAMPI ODE: TUBING SAMPLE PR ADDE	2" = 0.11 1/4" = 0.002 P = Electric S LING DA E(S): P = Electric S LING DA E(S): P = Electric S LING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio aplaced) N FINAL	4" = 0.65; 204; 3/8" = 0 2; PP = Perion SAMPLING INITIATED AT FILTERED: Yen Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO BYEN	5" = 1.02; .006; 1/2 staltic Pump :: /4'.5 oe: Y ED ND/OR E	6" = 1.47; 2" = 0.010; b; O = Oth SAMPLING ENDED A FILTER S SAMPLING EQUIPMENT CODE	12" = 5.8 5/8" = 0.0 ier (Specification of Specification

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L

Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

SITE - NAME: /	TWP Ro	Swell 5	Station	9	Si LC	TE DCATION: 6	6381 N	Mains	treet	RISHELLA	M 8820
WELL NO				SAMPLE		W-21	•		DATE:	/18/20	17
l						SING DA		<u>-</u>		110/00/	ا ک
	R (inches): 2	// TUBING DIAME	TER (inches):	ク″ DEF	LL SCREEN PTH: <i>46,6</i> fe	et to 6/8 1	STATIC I	ER (feet):54-	35 OR	RGE PUMP TYP BAILER: Pod,	CARL 2"
WELL VO	LOME PURGE:	: 1 WELL VO	LUME = (TOTA				•	WELL CAPAC	ITY		BP
		3 WELL VOI	= (_UMES =	64 4.63	gallons	4.35		0.16	gallons/foc	ot = 1.59	galions
EQUIPME (only fill or	NT VOLUME P at if applicable)	URGE: 1 EQU	JIPMENT VOL.	= PUMP VOL	UME + (TUE	ING CAPACI	ITY X TI	UBING LENGTH	+ FLOW CE	LL VOLUME	
INVENAL D			T		allons + (ons/foot X	feet) +	gallons =	gallons
DEPTH IN	JMP OR TUBIN WELL (feet):	IG N/A	DEPTH IN V	P OR TUBINO VELL (feet):	NA	PURGIN INITIATI	IG ED AT: 10:0	PURGING ENDED AT:		TOTAL VOLUM PURGED (gail	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (galions)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μπhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIA (mV)	ON COLOR AL (describe	ODOR
10:07	tritial	0	0.125	54.35	7.34	18.06	3.178	7.15	-27.171	The Clem	None
10:15		/	1.125		7.31	18127	3.202	7.30	-20.5/1	695 Cles	,
10:20	12	2	0.20		7.24	18.33	3.197	7.24	-17.4/1	72. Cles	R NONE
10:25	3	3	0.20		7.25	18.29	3.183	3.52	-16.7/1	73.1 C/eu	- None
10:30		4	0,20		7.27	18.27	3.177	5.44	17.2/1	47,9 C/en	None
10.39	4.75	7.73	0.20		7.22	18.28	3.174	5.42	15.9/	THE clas	Nome
INSTRUM	ENTS USED:		1/6	7 72	1 hn 01	' Ca!	14				
WELL CA	PACITY (Gallon	ns Per Foot): ().75" = 0.02; Ft.): 1/8" = 0.0		1.25" = 0.06 = 0.0014;	5er 6; 2" = 0.10 1/4" = 0.002	6; 3 " = 0.37;	05 F 22 4" = 0.65; 004; 3/8" = 0	5" = 1.02;	6" = 1.47; 12	" = 5.88
	EQUIPMENT L			= Bladder Pu	mp; ES I	P = Electric S	ubmersible Pum		staltic Pump;	O = Other (" = 0.016 (Specify)
SAMPLED	BY (PRINT) / A	SELLATION:		SAMPLER		LING DA	TA ¹				
/ 2/ /	To MB	, ,	CES	SAIVELEKS	SIGNATURE	=(8):		SAMPLING INITIATED AT	10:34	SAMPLING ENDED AT:	10:36
PUMP/OR		NA	la -	TUBING VIATERIAL CO	ope. F	7	FIELD	-FILTERED: Y		FILTER SIZE	
	CONTAMINATION	ON: PUM			TUBING	Y Nore	= Filtration F	DUPLICATE:	pe; Y	(D_	
SAM	PLE CONTAINE	ER SPECIFICA				RESERVATIO		INTENDE			AMPLE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME F	PRESERVATI	VE T	OTAL VOL	FINAL	ANALYSIS AI	ND/OR EQ	UIPMENT	FLOW RATE
MW-20	3		40ml	HEL		DINFIELD (r -O MC		Voc's 8		22 6	nt per minute)
			700	7100		-c mc	1.22	1000	100 1		0.20 6Pu
REMARKS											
VEW IVIVO	\mathcal{P}_{i}	large	purge	1 Ha	0 in	On-	Site	55 Ga	1/2	Dn:	
MATERIAL			Glass; CG = (PE = Poly		PP = Polypropylo		····		- (0 :*)
·	EQUIPMENT	CODES: A	PP = After Peris	staltic Pump;	B = Bail	er; BP=	Bladder Pump;	ESP = Electri	c Submersible	e Pump;	r (Specify)
······································		R	FPP = Reverse	Flow Peristal	tic Pump;	SM = Straw	Method (Tubing	Gravity Drain);	O = Other	(Specify)	

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization: STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L Oxygen Reduction Potential: ≤ 10% mV

SITE 7	WP RO	swell	Statio	n 9	SI'	TE DCATION:	381 Nn	nain stra	et K	Swell K)W 8824
WELL NO:		W-21		SAMPLE		mw-	_		DATE:	11/18/2	
						ING DA					_
	(inches): 2 UME PURGE:		G TER (inches): / LUME = (TOTA	2 DEF	LL SCREEN PTH - STA	et to 74 1	STATIC D	DEPTH ER (feet): 66, WELL CAPAC	<i>08</i> OF	JRGE PUMP T R BAILER:	YPE QED 20 dicated BP
		3 WELL VOI	= (75		66.08	•	0.16	gallons/fo	oot = /.	42 gallons
	T VOLUME PU	JRGE: 1 EQU	JIPMENT VOL.	= PUMP VOI	UME + (TUB	ING CAPAC	TY X TI	JBING LENGTH)	+ FLOW C	ELL VOLUME	······································
					allons + (ons/foot X	feet)	+	gallons	= gallons
DEPTH IN V	MP OR TUBIN WELL (feet):	68.21		P OR TUBING		PURGIN INITIATI	IG ED AT: /2:/L		12:36	TOTAL VO	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (galions)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGI REDUCT POTEN (mV)	TION COL	
12:05	Initial	0	0.2	66.08	7.63	19.11	2.962	7.75	38.41	1736 G	len None
12:10	/		0.2		7.15	18.94	2.762	1.35	-13.81	1660 C	ten None
12:15	2	2	0.20		7.15	18.93	2.786	2.64	-14.51	160.8 CI	lea None
12:22	3	3	0.14		7.30	18.69	2.796	2.78	-16.1	359 C	lean Nowe
12:33	4.60	4.50	0.13		7.20	18.59	2.801	2.53	-15,2	12030	clear Nor
INSTRUME WELL CAP	ACITY (Gallon	s Per Foot):	0.75" ≈ 0.02;	1" = 0.04:	6 MP 1,25" = 0.00	25 Se 16; 2" = 0.1	ria/# 6; 3"=0.37;	05F 4"=0.65;	22 74 5" = 1.02;	6" = 1.47;	12" = 5.88
			Ft.): 1/8" = 0.0	006; 3/16'	' = 0.0014;			004; 3/8" = 0	.006; 1/	2" = 0.010;	5/8" = 0.016
PURGING	EQUIPMENT U	SED: B=	Bailer; BP	= Bladder Pu		LING DA	ubmersible Pum	p; PP = Per	istaltic Pum	p; O = Ot	her (Specify)
	BY (PRINT) / A		ICES	SAMPLER	SIGNATURI			SAMPLING INITIATED A	12.2	SAMPLI	NG 17:21
PUMP OR 1 DEPTH IN V	FUBING	68, 2	,	TUBING MATERIAL C	ODE: F	T E	FIELD	-FILTERED: Y on Equipment Ty	(N)	FILTER S	
	ONTAMINATIO	ON: PUN			TUBING		eplaced)	DUPLICATE:		200	· i
SAMPLE	LE CONTAINE # CONTAINERS	R SPECIFICA MATERIAL CODE	ATION	PRESERVÄT	IVE T	RESERVATION	FINAL	INTENDI ANALYSIS A METHO	ND/OR I	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml_per minute)
W/2/	B		40 mc	HO		DINFIELD (BIEX	8260	BP	(ml_per_minute)
1/2/	3	CG	40mc	Hel		20ml		BTEX 8		BP	0.13
											-
REMARKS:											
MATERIAL	CODES:	AG = Amber	Glass: CG =	Clear Glass;	PE = Poly	ethylene:	PP = Polypropyl	lene; S = Silico	ne. T = 7	reflon; O=	Other (Specify)
	EQUIPMENT	CODES:	APP = After Per RFPP = Reverse	istaltic Pump;	B = Bai	ler; BP =	Bladder Pump; Method (Tubing	ESP = Electr	ic Submers	· · · · · · · · · · · · · · · · · · ·	Carol (Openly)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

SITE -	TWPK	oswell	Stati	on 9	SìT	CATION:	381	N.	moin s	trect	- ROSAZ	ell arm
WELL NO:		22	****	SAMPLE		ルース				DATE:	11/18/	22/3
					PURG	ING DA	TA					
WELL DIAMETER	(inches): 2	TUBING DIAMET	ER (inches):	DEP	L SCREEN I TH: 🍎 e	et to 🔊 To	et TO	TIC DE	R (feet):58. 9	14 OR	RGE PUMP TY	
WELL VOL	UME PURGE:	1 WELL VOL		AL WELL DEP	TH 3 //STAT	TIC DEPTH T	OVAILI) X	. /	11	217	IC Disposol
		3 WELL VOL		4.34	feet - 3	8.94	fee	t) X	0.16	gallons/fo	ot = /.4	galions
	IT VOLUME PU			= PUMP VOL	UME + (TUB			TUI	BING LENGTH)		LL VOLUME	
INDEED DIE	MD OD TUDIN		POLAL BUA		illons + (ns/foot X		feet)	+	gallons =	
	MP OR TUBING WELL (feet):	<u></u>	DEPTH IN V	P OR TUBING VELL (feet):	j	PURGIN INITIATE	DAT: //	:50	PURGING ENDED AT:	11:10	PURGED (g	UME allons):4,50
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	CONE (circle ur µmhos/ or µS/o	nits) cm	OXYGEN (circle units) mg/L or % saturation	OXYGE REDUCTI POTENT (mV)	ON COLO	
10:50	Initial	0.25	0.25	58.34	7.10	18,25	3.2	53	6.45	-9.2/	69.5 Tues	None None
10:53	1	1.25	0.25		7.17	18.41	3.16	6	6.98	-/3///	70.4 Red	Nove.
10:58	2	2.00	0.25		7.19	18.42	3.06	2	7.04	-14.41	180.8 R.	NONe
11:01	3	3.00	0.25		7.21	18.25	3.0	96	7.20	-15.6/	83.1 Bel	37-None
11:07	4.5	4.50	0.25		7.21	18.36	2.8	52	6.87	14.8/1	19.6 TVL	No Nove
INSTRUME	NTS USED:		VSI	556 M	PS 50	rial	*	05	F 227	YAL	-	
WELL CAP	PACITY (Gallon ISIDE DIA, CAI	s Per Foot): 0	.75" = 0.02;	1" = 0.04;	1.25" = 0.06 = 0.0014;	3; 2" = 0.1 1/4" = 0.002	6; 3" =	0.37; 5" = 0.0	4" = 0.65;	5" = 1.02;		12" = 5.88 5/8" = 0.016
	EQUIPMENT L			P = Bladder Pu		P = Electric S				staltic Pump		er (Specify)
				\sim		LING DA	TA ¹					
1 1	BY (PRINT) / A		CES	SAMPLED(S)	SIGNATURE	E(8):		-	SAMPLING INITIATED AT	r: 11:08	SAMPLIN- ENDED A	
PUMP OR	TUBING	Alla		TUBING	<i>-</i>	al In			FILTERED: Y	N		ZE:μm
	WELL (feet): CONTAMINATION	ON: PUM	P Y (N	MATERIAL C	ODE: TUBING	Y (No		Filtratio	n Equipment Ty DUPLICATE:			
				<u> </u>			eplaced)			· · · · · · · · · · · · · · · · · · ·	CAMBUNG I	CANEL E DUAR
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVAT USED	IVE T	RESERVATIO FOTAL VOL D IN FIELD (FI	NAL	INTENDI ANALYSIS A METHO	ND/OR E	SAMPLING QUIPMENT CODE	FLOW RATE (m) per minute)
MW-22	3	CG	40ml	Hel		o mc	7.	pH .2/	Voc's 2	3260	2	0.25
			1	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	1/	-v 1 1	<u> </u>			200		رسو . د
	·							* ,				
												
REMARKS	Place	rd pr	rged,	420 1.	n On	-Site	De	um				
MATERIAL		AG = Amber		Clear Glass;	PE = Poly		PP = Poly		ene; S = Silico	one; T = T	efion; O = C	ther (Specify)
SAMPLING	G EQUIPMENT		APP = After Pe FPP = Revers		B = Bai ltic Pump;		Bladder F Method (1		ESP = Electr Gravity Drain);		bie Pump; er (Specify)	

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L Oxygen Reduction Potential: ≤ 10% mV

L	o: MW	-24D		SAMPLE	ID: 🖊	1W-24	ער	ŀ	DATE:	ect Ris	88
	77700					SING DA				18/13	
WELL		,, TUBING		z / WEL				EPTH	PUF	RGE PUMP TYP	E £5-
DIAMET	ER (inches): 4	" DIAMET	ER (inches):	78 DEP	TH:/46 fe	et to / 76 f	STATIC D reet TO WATE TO WATER) X	R (feet): 69	1,47 OR	BAILER: 18.	Sulange
WELLV	OLUME PURGE:	: 1 WELL VOL								_	
				80		4.42	feet) X	0.653	gallons/foo	t = 75.4	'7 s
EQUIPM	ENT VOLUME P	3 WELL VOL URGE: 1 EQU	UMES = 2 IPMENT VOL.	26.42 = PUMP VOL	∼ galions UME + (TUB	ING CAPACI	TY X TU	BING LENGTH	+ FLOW CE	L VOLUME	······································
(only fill o	out if applicable)	•			allons + (ons/foot X				_
INITIAL	PUMP OR TUBIN	IG /	FINAL PUM	IP OR TUBING	· ·	PURGIN		feet PURGING		gallons = TOTAL VOLU	9
DEPTH	N WELL (feet):	120	DEPTH IN \	VELL (feet);	120'	INITIATE	DAT: 15:1/	ENDED AT:	1533	PURGED (ga	lons):53
	VOLUME	CUMUL. VOLUME	PURGE	DEPTH	pΗ	TEMP	COND.	DISSOLVED OXYGEN	OXYGE		
TIME	PURGED	PURGED	RATE	TO WATER	(standard units)	TEMP. (°C)	(circle units) μmhos/cm	(circle units)	POTENTI		
1	(gallons)	(gallons)	(gpm)	(feet)	units)		<u>or</u> μS/cm	mg/L. <u>or</u> % saturation	(mV)	()	
15:11	Initial	0	25	64.42	7.36	17.62	3.205	0.33	0.3	3 Clean	- N
15:19	10	10	2.5		7.13	18.58	3.225	0.17	-12.01	13. C/c	were
15:1	9 20	20	2.5		7.12	18.70	3.223	0.17	10.8/-3	TA Clean	z N.
15:2	3 30	30	2.5		7.12	18.72	3.223	0.15	-10.3/-3	8.1 Clean	No
15:3	7 40	40	2.5		7.11	18.76	3.222	0.14	-10.3/-	62.5 cle	a N
15:3	555	55	2.5		7.11	18.80	3.2/7	0.16	-10.0/	635 C	can 1
			<u> </u>				/				
INCTO	MENTS USED:	1/2	5I 3	56 MB	05 (# 05 F	2221	6n1		
1		У	_	-0-14	/ 3	JE 10 1	" 05 "	02/7	M		
WELL C	APACITY (Gallor	ns Per Foot): 0	75" = 0.02:	1" = 0.04:	1.25" = 0.06	3; 2" = 0.1	6: 3" = 0.37:	4" = 0.65:	5" = 1.02:		2" = 5.88
WELL C. TUBING	APACITY (Gallor INSIDE DIA. CA G EQUIPMENT L	PACITY (Gal./F	. 75" = 0.02; t.): 1/8" = 0.0	1" = 0.04; 0006; 3/16"	1.25" = 0.06 = 0.0014;	3; 2" = 0.10 1/4" = 0.002	6; 3" = 0.37; 6; 5/16" = 0.0	4" = 0.65; 004; 3/8" = 0	5" = 1.02; .006; 1/2 "	= 0.010; 5/	8" = 0.01
WELL C. TUBING PURGIN	INSIDE DIA. CA G EQUIPMENT L	PACITY (Gal./F JSED: B =	. 75" = 0.02; t.): 1/8" = 0.0	1" = 0.04:	1.25" = 0.06 = 0.0014; mp; ESI	3; 2" = 0.10 1/4" = 0.002	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0	5" = 1.02:		8" = 0.01
WELL C TUBING PURGIN	INSIDE DIA. CAI G EQUIPMENT L D BY (PRINT) / A	PACITY (Gal./F JSED: B = AFFILIATION: ,	. 75" = 0.02; t.):	1" = 0.04; 0006; 3/16"	1.25" = 0.06 = 0.0014; mp; ESI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 o; PP = Pen	5" = 1.02; .006; 1/2" staltic Pump;	= 0.010; 5/ O = Other	8" = 0.01 (Specify)
WELL C. TUBING PURGIN	INSIDE DIA. CAI GEQUIPMENT L DBY (PRINT) //	PACITY (Gal./F JSED: B = AFFILIATION: ,	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 0006; 3/16" P = Bladder Pur	1.25" = 0.06 = 0.0014; mp; ESI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A	5" = 1.02; .006; 1/2" staltic Pump;	= 0.010; 5/	8" = 0.01 (Specify)
WELL C. TUBING PURGIN SAMPLE PUMP O	D BY (PRINT) / A TUBING	PACITY (Gal./F JSED: B = AFFILIATION: ,	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 0006; 3/16" P = Bladder Pur SAMPLER(8) TUBING	1.25" = 0.06 = 0.0014; mp; ESI SAMPI	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump	4" = 0.65; 004; 3/8" = 0 0; PP = Per SAMPLING INITIATED A' FILTERED: Y	5" = 1.02; .006; 1/2" staltic Pump;	O = Other	8" = 0.016 (Specify)
WELL C, TUBING PURGIN SAMPLE V/A PUMP O DEPTH I	INSIDE DIA. CAI GEQUIPMENT L DBY (PRINT) //	PACITY (Gal./F JSED: B= AFFILIATION: / Barnh/	.75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 0006; 3/16" P = Bladder Pur	1.25" = 0.06 = 0.0014; mp; ESI SAMPI	3; 2" = 0.1(1/4" = 0.002 P = Electric S _ING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA ¹ FIELD- Filtratio	4" = 0.65; 004; 3/8" = 0 x; PP = Per SAMPLING INITIATED A' FILTERED: Y n Equipment Ty	5" = 1.02; .006; 1/2" staltic Pump;	O = Other SAMPLING ENDED AT: FILTER SIZE	8" = 0.016 (Specify)
WELL C. TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI	INSIDE DIA. CAL GEQUIPMENT L D BY (PRINT) / A L O M M R TUBING N WELL (feet):	PACITY (Gal./F JSED: B = AFFILIATION: /20 ON: PUM	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 1006; 3/16" = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI SIGNATURE DDE: TUBING	3; 2" = 0.10 1/4" = 0.002 P = Electric S LING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump .TA ¹ FIELD- Filtratio	4" = 0.65; 004; 3/8" = 0 o; PP = Pen SAMIPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE:	5" = 1.02; .006; 1/2" staltic Pump; f: /535	SAMPLING ENDED AT:	8" = 0.01((Specify)
WELL C. TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE	INSIDE DIA. CAI G EQUIPMENT L D BY (PRINT) / A 4	PACITY (Gal./F JSED: B = AFFILIATION: /20 ON: PUMI ER SPECIFICA: MATERIAL	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 1006; 3/16" = Bladder Pur SAMPLER B TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI SIGNATURE TUBING SAMPLE PR	3; 2" = 0.1(1/4" = 0.002 P = Electric S _ING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump .TA ¹ FIELD- Filtratio	4" = 0.65; 04; 3/8" = 0 SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS A	5" = 1.02; .006; 1/2" staltic Pump; f: //3/5" pe: Y	SAMPLING ENDED AT: FILTER SIZE AMPLING SUIPMENT	8" = 0.010 (Specify)
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE	D BY (PRINT) / A TUBING N WELL (feet): ECONTAINERS	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI RIGHARD DDE: TUBING SAMPLE PR VE T ADDE	P = Electric S LING DA E(S): Y EESERVATIO TOTAL VOL D IN FIELD (IT	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	8" = 0.01((Specify)
WELL C. TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE	D BY (PRINT) / A TUBING N WELL (feet): ECONTAINERS	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 1006; 3/16" = Bladder Pur SAMPLER B TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI RIGHARD DDE: TUBING SAMPLE PR VE T ADDE	3; 2" = 0.10; 1/4" = 0.002 P = Electric S LING DA E(S): Y	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 04; 3/8" = 0 SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS A	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	8" = 0.01 (Specify) (Specify) E: GAMPLE (FLOW R) (ML-per M)
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE	D BY (PRINT) / A TUBING N WELL (feet): ECONTAINERS	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI RIGHARD DDE: TUBING SAMPLE PR VE T ADDE	P = Electric S LING DA E(S): Y EESERVATIO TOTAL VOL D IN FIELD (IT	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	SAMPLE FLOW R (Marper mark) 1.53
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE	D BY (PRINT) / A TUBING N WELL (feet): ECONTAINERS	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI RIGHARD DDE: TUBING SAMPLE PR VE T ADDE	P = Electric S LING DA E(S): Y EESERVATIO TOTAL VOL D IN FIELD (IT	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	SAMPLE FLOW RITE POR THE PORT OF THE PORT
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE	D BY (PRINT) / A TUBING N WELL (feet): ECONTAINERS	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI RIGHARD DDE: TUBING SAMPLE PR VE T ADDE	P = Electric S LING DA E(S): Y EESERVATIO TOTAL VOL D IN FIELD (IT	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	8" = 0.010 (Specify)
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE	D BY (PRINT) / A TUBING N WELL (feet): ECONTAINERS	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP	1" = 0.04; 2006; 3/16" = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI RIGHARD DDE: TUBING SAMPLE PR VE T ADDE	P = Electric S LING DA E(S): Y EESERVATIO TOTAL VOL D IN FIELD (IT	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	SAMPLE FLOW RITE POR THE PORT OF THE PORT
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE MW 24/2	D BY (PRINT) / A R TUBING N WELL (feet): ECONTAMINATION CONTAINERS 3	PACITY (Gal./F JSED: B = AFFILIATION: /20 ON: PUMI ER SPECIFICA: MATERIAL CODE C.G.	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP ///CES PO N FION VOLUME 40 ML	1" = 0.04; 1006; 3/16" P = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI SIGNATURE TUBING SAMPLE PR VE ADDE /2	P = 0.10 1/4" = 0.002 P = Electric S LING DA E(S): P = Electric S LING DA E(S): P = Electric S LING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	SAMPLE (FLOW FM)
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE	D BY (PRINT) / A R TUBING N WELL (feet): ECONTAMINATION CONTAINERS 3	PACITY (Gal./F JSED: B = AFFILIATION: / 20 ON: PUMI ER SPECIFICA: MATERIAL CODE	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP ///CES PO N FION VOLUME 40 ML	1" = 0.04; 1006; 3/16" P = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI SIGNATURE TUBING SAMPLE PR VE ADDE /2	P = 0.10 1/4" = 0.002 P = Electric S LING DA E(S): P = Electric S LING DA E(S): P = Electric S LING DA E(S):	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 004; 3/8" = 0 0; PP = Pen SAMPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe; Y	SAMPLING SUIPMENT CODE	SAMPLE (FLOW RIPER PRINCE)
WELL C, TUBING PURGIN SAMPLE PUMP O DEPTH I FIELD DI SAMPLE ID CODE MW 24/1	D BY (PRINT) / A R TUBING N WELL (feet): ECONTAMINATION CONTAINERS 3	PACITY (Gal./F JSED: B = AFFILIATION: /20 ON: PUMI ER SPECIFICA: MATERIAL CODE C.G.	75" = 0.02; t.): 1/8" = 0.0 Bailer; BP ///CTCS POWN FION VOLUME // OM/ /	1" = 0.04; 1006; 3/16" P = Bladder Pur SAMPLER(8) TUBING MATERIAL CO	1.25" = 0.06 = 0.0014; mp; ESI SAMPI SIGNATURE TUBING SAMPLE PR VE ADDE /2	P = 0.11 1/4" = 0.002 P = Electric S LING DA E(S): Y PESSERVATIO OTAL VOL D IN FIELD (r D M C	6; 3" = 0.37; 6; 5/16" = 0.0 ubmersible Pump TA FIELD- Filtratio eplaced) N FINAL pH	4" = 0.65; 04; 3/8" = 0 c; PP = Period SAMIPLING INITIATED A' FILTERED: Y n Equipment Ty DUPLICATE: INTENDE ANALYSIS AI METHO	5" = 1.02; .006; 1/2" staltic Pump; f: 1535 pe: Y ED S. ND/OR EG	SAMPLING SUIPMENT CODE	SAMPLE FLOW RITE POR THE PORT OF THE PORT

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization: STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

Revision Date: October 22, 2013

SITE NAME:	TWPKI	Swell S	tation	9	Si	TE OCATION: 4	5381	N.n.	lains	trec		Dewell	(N Day
WELL NO:		W-26		SAMPLE		nw-		7700	l l	DATE:	11/1	5/13	88207
				·		ING DA					-//	3//0	
WELL DIAMETER WELL VOL	(inches):2	TUBING DIAMET	ER (inches):	WEI DEP	L SCREEN TH: 43 fe	INTERVAL et to 63 for	STATI	IC DEPTH ATER (fee	et)52.2	22 F	PURGE F OR BAILE	PUMP TYPE ER: QE/	Dodicates
		3 WELL VOL	= (65			•		,		/foot =	2.04	∠ gallons
(only fill out	NT VOLUME Po t if applicable)	JRGE: 1 EQU		= PUMP VOL			TY X	TUBING	LENGTH)			OLUME gallons =	gallons
INITIAL PU DEPTH IN	MP OR TUBIN WELL (feet):	G56.63	FINAL PUM DEPTH IN V	P OR TUBING VELL (feet):		Ł DUDOW	·····	13 PI	URGING NDED AT:	163	ТОТ	TAL VOLUME RGED (gallor	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units μmhos/cn <u>or</u> μS/cm	s) Oi n (cire	SOLVED XYGEN cle units) ng/L <u>or</u> saturation	OXYO REDUC POTEI (m)	CTION	COLOR (describe)	ODOR (describe)
1603	Inital	0	0.40	52.22	7.46	19.24	3.108		10,07	-34:	7/864	e cler	None
1608	1	2,	0.40		6.93	18.42	3.136	1 5	.20	8.7/	118,3	Tueso	Wore
1615	1 4	4	0.28		6.90	18.42	3.133	5 4	472	- 7.9/	13/.	Clear	None
1678	6.25	6.25	0.173		6.91	18.41	3.74)	/	7.50	-6.7/	1418	Clean	None
WELL CAP	NTS USED: PACITY (Gallon ISIDE DIA, CAI	s Per Foot): 0		1" = 0.04;	SCE17/ 1.25" = 0.04 = 0.0014;	# 8 6; 2" = 0.1 1/4" = 0.002	6; 3" = 0.	274 / 37; 4" = 0.004:	= 0.65;		6" = 1/2" = 0.0		= 5.88 = 0.016
	EQUIPMENT L			= Bladder Pu	mp; ES	P = Electric S	ubmersible F			staltic Pu		O = Other (S	
SAMPLED	BY (PRINT) / A	EEII IATION:		SAMPLER (2)		LING DA	TA ¹						
Clogi	ton M Bai	rnhill /C	ES!	(M	4/011	20		IN	MPLING		7 E	AMPLING NDED AT: /	
PUMP OR DEPTH IN	TUBING WELL (feet):	36		TUBING MATERIAL CO	\mathcal{P}	E	Fill	ELD-FILTE tration Equ	ERED: Y uipment Ty	pe:		ILTER SIZE:	µm
FIELD DEC	OTAMINATIO	ON: PUM	PYCN	2	TUBING	Y DUF	eplaced)	DL	JPLICATE:	<u></u>	<u> </u>	· · · · · · · · · · · · · · · · · · ·	
SAMPLE ID CODE	# CONTAINERS	LATERIAL I		PRESERVAT UŞED	IVE 7	RESERVATIO FOTAL VOL ED IN FIELD (1	FINA	~L	INTENDE ALYSIS AI METHO	ND/OR	SAMPI EQUIPI COL	MENT F	MPLE PUMP LOW RATE L per minute)
MW-26	3	CG	40ml	HGL		20 mL			06'5 8	3260	BP	0 0	7.173
MW-26	3	CG	Home	Hec		20ml	6.9	7/ V	OC'5 2	3260	BF	\circ	.173
REMARKS	•	- 1	,										
TALINICAL INCO	F	Placed	purge	H20	in On	-5,7c	550	Sa Non	DR	UM			
MATERIAL		AG = Amber (Clear Glass;	PE = Poly		PP = Polypr	·····			Teflon;	O = Other	(Specify)
SAMPLING	EQUIPMENT		PP = After Per FPP = Reverse		B = Bai Itic Pump;		Bladder Pun Method (Tuk		SP = Electr ty Drain);		rsible Pur ther (Spe		

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization: STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

Revision Date: October 22, 2013

SITE	TWP	ROSWELL	Stati	ion #	9 81	TE CATION:					
WELL NO:		1-29		SAMPLE		W-2	a		DATE:	11/14/	12
I		0.7				SING DA		<u></u>		11/7/	<u> </u>
WELL DIAMETER WELL VOI	R (inches): 2 LUME PURGE:	// TUBING DIAMET	TER (inches):	1/2" WE AL WELL DEF	TH: 💪 🐧 fe	et to 7 C f	STATIC DE COMMENTE CO	R (feet):	'' 4 / I a	JRGE PUMP T R BAILER	YPE Dedication
		3 WELL VOL	UMES =	2,39	gallons	•		0.16		oot = 0,	79 gallons
(only fill ou	NT VOLUME P it if applicable)	URGE: 1 EQU	IPMENT VOL.		-			UBING LENGTH			
INITIAL PL	JMP OR TUBIN	1G 68,87	FINAL PUM	= g P OR TUBINO VELL (feet):	allons + (galk PURGIN	ons/foot X	feet PURGING	,	gallons / TOTAL VO	UMF -
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER	pH (standard units)	/ INITIATE TEMP. (°C)	COND. (circle units) µmhos/cm	DISSOLVED OXYGEN (circle units) mg/L or	OXYG REDUCT POTEN	EN TION COL	
1625	10	-1-6	2,10	(feet)	718	102	<u>or</u> μS/cm	% saturation		fort	2/
1629	0.5	D.50	0.111	Ø7.7/	7/1	10111	2.384	3.79	-20/	1999	how None
1635	1.0	1,0	0.10		703	18,67	2.178	2,94	14/1	1222	les None
1645	2.0	2.0	0.10		6.98	18,72	2,262	1.5/	-11.7/	777 81	Care Vine
1650	2.5	2.5	0.10		6.98	18.72	2.273	1.33	-11.7/	-80.2 0	CON NON
WELL CAP	ENTS USED: PACITY (Gallor ISIDE DIA. CA	ns Per Foot): 0 PACITY (Gal./F	/57 .75" = 0.02; t.): 1/8" = 0.0	556 1" = 0.04; 006; 3/16"	<i>mp5</i> 1.25" = 0.06 = 0.0014;	Sevi 5; 2 " = 0.11 1/4" = 0.002	3; 3" = 0.37;		5" = 1.02;	6" = 1.47;	12" = 5.88 5/8" = 0.016
PURGING	EQUIPMENT L	JSED: B =	Baller; BP	= Bladder Pu			ubmersible Pum	p; PP = Pei	istaltic Pum	p; O = Oth	er (Specify)
U/a	BY (PRINT) / A	AFFILIATION: Barnhil	1, CES	SAMPLER(SY	SIGNATURE	LING DA	.IA	SAMPLING INITIATED A	1651	SAMPLIN ENDED A	G 1654
PUMP OR DEPTH IN	TUBING WELL (feet):	68,87	11	TUBING MATERIAL CO	ODE: P	E		-FILTERED: Y		FILTER S	IZE: μm
· · · · · · · · · · · · · · · · · · ·	CONTAMINATIO			2	TUBING	Y NA	placed)	DUPLICATE	Y		
SAMPLE ID CODE	# CONTAINERS	R SPECIFICA MATERIAL CODE		PRESERVATI USED	VE T	ESERVATIO OTAL VOL D IN FIELD (r	FINAL	INTEND ANALYSIS A METHO	ND/OR E	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL-per minute)
MW29	3	CG 1	HOML	Hel		20 MC	6.98	BTEX	8260	BP	0.1060
REMARKS											
	•										
MATERIAL SAMPLING	CODES:		ilass; CG = 0 PP = After Peri PP = Reverse		PE = Poly B = Bail tic Pump;	er; BP=	PP = Polypropyle Bladder Pump; Method (Tubing	ESP = Electr	ic Submersi		ther (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L Oxygen Reduction Potential: ≤ 10% mV

SITE NAME: 7	WP RO	swell s	Statio	in #	3 SI	TE CATION:	38/1	V. May	i, 4	ert	Doce	ر د در در م	4 8820/
WELL NO:		1-32		SAMPLE		W-3.				DATE:	11/	14/1 =	, 8000
						ING DA				 	-///	1/13	
WELL DIAMETER WELL VOL	(inches):	TUBING DIAMET 1 WELL VOL	ER (inches):	ン″ DEF	LLSCREEN PTH:////fe PTH - STA	et to 7	STAT	IC DEPTH ATER (feet): X WELL	: 66 CAPACI	95 0	URGE PL R BAILEI	JMP TYPE. R: QED	Dedicated 2" Bladd
		3 WELL VOL	JMES = 3	74.20 3.48	gallons		·		•	gallons/		1.16	gallons
(only fill out	T VOLUME P if applicable)	URGE: 1 EQUI	PMENT VOL.		•			TUBING L	ENGTH)	+ FLOW (CELL VO	UME	
INITIAL PUI	MP OR TUBIN	IG / _ / /	FINAL PLIM	= ga P OR TUBINO	allons + (gallo PURGIN	ons/foot X	Tour	feet)	+		allons =	gallons
DEPTH IN V	VELL (feet):	G68.61	DEPTH IN V		68.6	INITIATE	D AT: 15	43 END	DED AT:	1600	PUR	AL VOLUME GED (gallor	ns): 3.5Ga
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units μmhos/cm <u>or</u> μS/cm	OXY (circle mg/	OLVED 'GEN units) Loruration	OXYG REDUC POTEN	EN TION	COLOR (describe)	ODOR (describe)
15:43	0	Initial	0.33	66.95	7.60	19.66	2.590	7/2	23	-36.2	195	Elen	None
15:48		1	0.33		6.99	19.03	2.56	0.1	69	-12.1	87.2	Cleur	None
13:32	2	2	0.33		6.97	19.00	2.581	1	39	-11.3	73/	Clear	,
15:55	3	3	0.33	-	6.97	19.01	2.59	2 0.	32	-11.2	1641	Clen	None
75:37	<i>3. 5</i>	3.50	0.33		6.97	19.00	2.59	9 0.	3/	-11.2	161.1	<u> </u>	None
INSTRUME WELL CAP TUBING INS	ACITY (Gallor	s Per Foot): 0.	515 75° = 0.02; 1): 1/8° = 0.0	1" = 0.04;	1.25" = 0.06	V' a V' a V' b V' a V' a V' b V' a V' b V' b V' b V' c V' c V' c V' d V	6; 3" = 0.3		2 2 7 0.65; 5 3/8" = 0.	" = 1.02;	6" = 1. /2" = 0.01		= 5.88 = 0.016
PURGING E	QUIPMENT L	JSED: B = I	Bailer; BP	= Bladder Pu	mp; ES I	P = Electric S	ubmersible P	 		staltic Pum		= Other (S	
///	BY (PRINT) / A ON M BU TUBING		CES	SAMPLER (S)		LING DA		SAMI INITI/		1558	5 EN	MPLING DED AT: TER SIZE:	1600
DEPTH IN V		60.6	<u>/ </u>	MATERIAL CO			Filt	ration Equip	ment Typ	le:			μπ
	TANIMATIC				TUBING		eplaced)		JCATE:	Y	(N	· · · · · · · · · · · · · · · · · · ·	
SAMPLE ID CODE	# CONTAINERS	CODE	VOLUME	PRESERVATI UŞED	VE T ADDE	ESERVATIO OTAL VOL D IN FIELD (I	mL) FINA	L ANAL	NTENDE YSIS AN METHOD	ID/OR	SAMPLII EQUIPMI CODE	ENT FI	MPLE PUMP LOW RATE per minute)
MW32	3	CG	Home	HCL	/2	oml	6.9	7 87	EX 8.	260	<i>BP</i>	0	. 336P
REMARKS:													
MATERIAL (CODES: EQUIPMENT		lass; CG = 0 PP = After Peri PP = Reverse	Clear Glass; staltic Pump; Flow Peristal	PE = Poly B = Bail tic Pump;	er; BP=	PP = Polypro Bladder Pun Method (Tub	D: ESP	s = Silicor = Electric Drain);	Submers	Teflon; ible Pump er (Specit		(Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization: STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

SITE 7	WP Ro	swell s	5/2/10	,#9	SI'	TE OCATION: 6	38/1	V. Main	5/:	Roser	· NM SS
WELL NO:	MW-			SAMPLE ID		W-3	•		DATE:	11/14/2	2013
					PURG	ING DÁ	TA				
WELL	(inches):2	TUBING	ER (inches)	3 / WELL	SCREEN	INTERVAL et to 79 fe	STATIC	DEPTH TER (feet): 63.	G/ F	URGE PUMP T	YPE VELICATE D2" Black
				L WELL DEPTH	1. 7 7 10 1 - STA	TIC DEPTH T	O WATER)	X WELL CAPAC		OK BAILER	PHA
						63.81	-	× 0.16	nallone	/foot = /.	
		3 WELL VOL	•••		gallons	- /	10019	,, ,	ganona	1001 - 7 - 7	y ganon
		JRGE: 1 EQUI	PMENT VOL.	= PUMP VOLUM	VE + (TUB	ING CAPACI	TY X	TUBING LENGTH	+ FLOW	CELL VOLUME	
only fill out	if applicable)			= gallo	ons + (gallo	ns/foot X	feet) +	galions	= gallons
	MP OR TUBIN	G / A		P OR TUBING	1-0	PURGIN	G ///	2 PURGING	1111	TOTAL VO	LUME
DEPTH IN	WELL (feet):	67.0	DEPTH IN V	1 1	110	INITIATE	D AT: 10:	ENDED AT:	11/1	'''''''	gallons):5 /S
T15 AF-	VOLUME	VOLUME	PURGE	DEPTH TO	рН	TEMP.	COND. (circle units)	OXYGEN	REDUC	GEN COL	OR ODOR
TIME	PURGED (gallons)	PURGED (gallons)	RATE (gpm)	WATER (feet)	standard units)	(°C)	μmhos/cm	(circle units) mg/L or	POTEN	CTION COL	ribe) (describe
0:14		(gallol)(s)	0 1	1 - 61	7 11	1014	or μS/cm	% saturation	(m)	4-1-01	
15:14	LAITIO	181/16/	010/1	69.81	1.11	18.47	3.080	3.32	19.4/	STOCIE	ek Non
10.50	1	-/-	10.071		7.04	18.73	3.083	0.55	19.6	-936	LEN NO
18:17	9		0.63	- 2	7.07	18.82	3.078	0.53	14.6	1-966 6	Ka Non
10.49	1/	3,	0.09		7.03	18.76	3.070	1.33	-14,9	1-1043	Clea Non
1110	stor-	7	10.10	- 1	7.03	16 62	3.066 3.063	9.73	14.3/	-1022 0	ca Nov
7.0/	3.75	3,75	010//	1	7.03	10.72	3.005	0133	141/	1-1019 C	Ken Non
							·····	<u> </u>			
INSTRUME	NTS USED:	V5-1	EE1 1	VO1 50	vial	1 12	FF 22	74 11		<u>1</u>	
		s Per Foot): 0		1" = 0.04; 1	// 2/ .25" = 0.00	6; 2 " = 0.10		7; 4" = 0.65;	5" = 1.02;	6" = 1.47;	12" = 5.88
	SIDE DIA. CAI EQUIPMENT U			006; 3/16" =	·	1/4" = 0.002				1/2" = 0.010;	5/8" = 0.016
OKOMO	LGON WENT U	OLD. U-	bailer, Br	<u> </u>		LING DA	ubmersible Pu	mp; PP = P6	istaltic Pur	np; U = Ot	ner (Specify)
SAMPLED	BY (PRINT) / A	FFILIATION:	,	SAMPLED SYSI				SAMPLING		a SAMPLII	VG /// 2
	v M Bari	nhill /	CES	Caye	MM	Sal	are and a second	INITIATED A	_	ENDED	
PUMP ^F OR 1 DEPTH IN 1	TUBING WELL (feet):	67.0		TUBING / MATERIAL COD	DE: P	E		D-FILTERED: Y		FILTER 8	SIZE: μm
	ONTAMINATION	ON: PUMI		· · · · · · · · · · · · · · · · · · ·	TUBING	Y (N)	eplaced)	DUPLICATE		> N	1
SAME	LE CONTAINE	R SPECIFICA	TION	S/	AMPLE PF	RESERVATIO	<u> </u>	INTEND	·	SAMPLING	SAMPLE PUMI
SAMPLE	#	MATERIAL		PRESERVATIVI	E 7	TOTAL VOL	FINAL	ANALVOIC A	ND/OR	EQUIPMENT	FLOW RATE
10 CODE 1W-34	CONTAINERS 3	CODE		USED		D IN FIELD (I	47 5			CODE	(mk per minute
14-34	3		HOME	HCC		20 mc		30 /- /- (BP	0.077
ימעם:	5	CG "	4000	HEL	//2	20 MC	7.03	BTEX &	5100	BP	0.07/
REMARKS:											
MATERIAL	CODES:	AG = Amber G	Blass; CG =	Clear Glass;	PE = Poly	rethylene;	PP = Polyprop	oylene; S = Silic	one; T=	Teflon; O =	Other (Specify)
	EQUIPMENT	CODES: A	PP = After Per	istaltic Pump;	B = Bai	ler; BP =	Bladder Pump	; ESP = Elect	ric Submer	sible Pump:	
	· · · · · · · · · · · · · · · · · · ·	RI	FPP = Reverse	Flow Peristaltic	Pump;	SM = Straw	Method (Tubir	ng Gravity Drain);	O = Qt	her (Specify)	

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

SITE /	WP R	Swell	5/2/1	in #	3 SI	TE CATION: 6	36/ N M	Paris Str	eet Ki	swell, K	IM 8820
WELL NO:		1W-35		SAMPLE		14-3		i i	DATE:	1/11/1	2
						ING DA			····································	111/1-	<u> </u>
WELL VOL		TUBING DIAMETI WELL VOLU	ER (inches): JME = (TOTA	2 DEF	L SCREEN TH:49 fe TH - STA	et to 79 f	STATIC D	EPTH R (feet): 60. WELL CAPACI	8/ OR		PERELIZATI D218/a/S
		3 WELL VOLU	= (7 IMES = 7:	6.71	feet - 6	0.81	feet) X	0.16		ot = 2 . 5	9 gallons
EQUIPMEN (only fill out	T VOLUME PU if applicable)	IRGE: 1 EQUI	PMENT VOL.	= PUMP VOL	UME + (TUB	ING CAPACI	TY X TU	JBING LENGTH)	+ FLOW CE	LL VOLUME	
(AUTIAL DIS	AD OD TUDING			~ 	allons + (ons/foot X	feet)	+	gallons :	= gallons
DEPTH IN V	MP OR TUBINO WELL (feet):	61.05	FINAL PUMF DEPTH IN W		61.05	PURGIN INITIATE	IG ED AT:/ <i>2:39</i>	PURGING ENDED AT:	1443	TOTAL VOL PURGED (g	UME allons): <i>7: 75</i>
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm <u>or</u> μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGE REDUCTI POTENTI (mV)	N	R ODOR
12:38	0	Intic/	0.035	40.81	7.39	19.14	3,298	6.07-	31.2 /	191 7	cars Nor
13:10	_/_		0.035		7.13	19.50	3.290	6.08	19.21		Very NOA
13:36	2	2	0.038		7.10	19.14	3.296	6.39	17.71	7-17	clear Non
13:47	3	_3,	0.09		7.09	19.03	3.298	6.29	-/7.2/		lan Non
13:35	4	4	0.125	<u></u>	7.06	19.01	3.299	6.16	-17.61	150,1 C	lene Non
14:04	3	3	01/25		7.07	18.93	3.299	5.66	-17.6/	152.401	CK None
7.13	6-	6	0.08		7.03	18.98	3.302	6.10	-16.11	152.2 C	lear No4
14.51	7. 15	7.75	0.08		7.//	18.93	3.299	6.14	-/6.5/	151.2 C/2	en None
TUBING INS	ACITY (Gallons	Per Foot): 0. ACITY (Gal./Ft	.): 1/8" = 0.00	1" = 0.04; 106; 3/16"	1.25" = 0.06 = 0.0014;	1/4" = 0.002	6; 5/16" = 0.0	004; 3/8'' = 0.		"= 0.010;	12" = 5.88 5/8" = 0.016
CROING	CON MENT O	3ED. 9-E	Danel, DP	= Bladder Pu		ING DA	ubmersible Pump	o; PP = Peri	staltic Pump	O = Othe	er (Specify)
SAMPLED	PRINT) (AI	/. //	CES	AMPLED SY	SIGNATURE			SAMPLING INITIATED AT	14:40	SAMPLING ENDED A	
PUMP OR T DEPTH IN V	UBING	41.05		UBING ATERIAL CO	DDE:	PE	FIELD-	FILTERED: Y on Equipment Typ	ND.	FILTER SI	
FIELD DEC	OITAMINATIO	N: PUMP	Y		TUBING	Y Note	eplaced)	DUPLICATE:	Y	(N)	
		R SPECIFICAT	ION		SAMPLE PR	ESERVATIO	N	INTENDE	D S	AMPLING	SAMPLE PUMP
SAMPLE ID CODE	CONTAINERS	MATERIAL , CODE	/OLUME P	RESERVATI USED		OTAL VOL D IN FIELD (r	FINAL nL) pH	ANALYSIS AN METHOL		QUIPMENT CODE	FLOW RATE (ml. per minute)
114-35	3	CG 4	TOML	Hel		20 ml		BTEX	8260	3P	0.080
											7
REMARKS:						****					
MATERIAL (AG = Amber G	ass; CG = C	lear Glass;	PE = Poly	ethylene;	PP = Polypropyle	ene; S = Silico	ne; T = Te	flon; O = Ot	her (Specify)
SAMPLING	EQUIPMENT C		P = After Peris PP = Reverse		B = Bail tic Pump;		Bladder Pump; Method (Tubing (ESP = Electri Gravity Drain);	c Submersib O = Other		

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

SITE /	WPX	OSWELL	5/01	Ton A	Eg SIT	ΓΕ ICATION: Δ	6381 N	Main	< T =	Pachell	NM 8820
WELL NO:	MW-	- ,	<u> </u>	SAMPLE	,	W-Z	7		DATE:	1/14/	2012
L	7.7.00				PURG	ING DA	TA	<u>l</u>		11110	0/3
WELL DIAMETER	(inches); 2	// TUBING	ER (inches):		LL SCREEN I		STATIC D	DEPTH ER (feet):58	99 OR	RGE PUMP TY	Delical
		1 WELL VOL	JME = (TOTÁ	L WELL DEF	PTH - STA	TIC DEPTH T	O WATER) X	WELL CAPAC	EITY		PV
				_	feet - 5	8.99	feet) X	0.16	gallons/fo	ot = 1.6	gallons gallons
	Γ VOLUME PU	3 WELL VOLU IRGE: 1 EQUI	IMES = 5. PMENT VOL.:	= PUMP VOI	gallons LUME + (TUB	ING CAPACI	TY X TI	UBING LENGTH) + FLOW CE	LL VOLUME	
(only fill out i	applicable)			= g	allons + (gallo	ons/foot X	fee	t) +	gailons :	= gallons
INITIAL PUN DEPTH IN V	IP OR TUBING /ELL (feet):	64.20	FINAL PUMF DEPTH IN W		64.20	PURGIN	G D AT: <i>0922</i>		0951	TOTAL VOL PURGED (g	allons): 5.09
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm <u>or</u> μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGE REDUCTI POTENTI (mV)	ON COLC	be) (describe)
0925	Instial	0	0.33		7.1/	18.15	3.170	6.03	-30.4/	201.70	BID NONE
0928			0.33		7.17	18.57	3.133	3.82	19.6/19	12.2 TVL	Pio None
0932	2	2	0.33		7.09	18.62	3.100	3.74	-17.//	1886 TU	KAID NONE
0941	3,	_3	0.125		7.03	18.64	3.148	3.6	-147/	SYO CK	IL NIKC
0011	- 		0.20		7.03	18.67	3.162	3.39	+ 14:1/1	8/10 0/0	e Nove
	ACITY (Gallons	YST: B Per Foot): 0.	75" = 0.02;	1" = 0.04;	1.25" = 0.00			274 A (2) 4" = 0.65; .004; 3/8" =	5" = 1.02; 0.006: 1/2		12" = 5.88 5/8" = 0.016
	QUIPMENT U			Bladder P			ubmersible Pum		ristaltic Pump		er (Specify)
SAMPLEDE	Y (PRINT) / A	EEU IATIONI-		SAMPLER (S	SAMPI	LING DA	(TA ¹				
Conto	n MBar	m hill 1	CES	Mi	July 1	Gall		SAMPLING INITIATED A	T: 0949	SAMPLINE ENDED A	
PUMP OR T DEPTH IN V		64.20		TUBING MATERIAL C	CODE: PZ	=				FILTER SI	ZE:μm
FIELD DEC	ONTAMINATIO	ON: PUMF	9 Y (N)		TUBING	Y (N)(1)	eplaced)	DUPLICATE		(N)	***************************************
SAMPI SAMPLE	E CONTAINE	R SPECIFICAT		PRESERVAT		RESERVATIO	N I FINAL	INTENE ANALYSIS A		SAMPLING QUIPMENT	SAMPLE PUMP FLOW RATE
ID CODE	CONTAINERS	CODE	VOLUME	USED	ADDE	D IN FIELD (mL) pH	METHO		CODE	(mL per minute)
mw-37	3 (6	Home	Hel	_ /,	20 mc	- 7.02	- BTEX	8400	BP	0.506PM
				·							
REMARKS:											
MATERIAL	CODES:	AG = Amber G	Slass; CG = 0	Clear Glass;	PE = Poly	ethylene;	PP = Polypropy	rlene; S = Silic	one; T = Te	eflon; O = O	ther (Specify)
SAMPLING	EQUIPMENT		PP = After Peri		; B = Bai	ler; BP=	Bladder Pump; Method (Tubing	ESP = Elec	tric Submersit		

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization: STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

SITE 7	WPK	1 15wc// .	Stati	1 # 9	3 SI	TE CATION:	1381	N mai	45/2	ert n	1505WOM		
WELL NO:	MW	1-39		SAMPLE		W-3	_		DATE:	1/20-1	12 5820		
L						ING DA		L		11011	<u> </u>		
WELL DIAMETER WELL VOL	(inches): 2	TUBING DIAMET	ER (inches):	2 DEP		et to f	STATIC I	DEPTH ER (feet):5/2 WELL CAPAC	98 PUF OR	RGE PUMP TY BAILER:	/PE		
		3 WELL VOL	= (10.11	feet - 5	1.08	feet) X	n ./		ot = <i>3.</i> 2	gallons		
EQUIPMEN (only fill out	IT VOLUME PU	JRGE: 1 EQU	IPMENT VOL.	= PUMP VOL	UME + (TUB	ING CAPACI	TY X T	UBING LENGTH) + FLOW CE	LL VOLUME			
· · · · · · · · · · · · · · · · · · ·			T		allons + (ons/foot X	feet) + ,	gallons	= gallons		
	MP OR TUBIN NELL (feet):	64.0	FINAL PUM DEPTH IN V	P OR TUBING VELL (feet):	64.0	PURGIN	G ED AT: 13:3		1428	TOTAL VOL PURGED (g	_UME pallons): /0 <i>6-</i> 4/.		
TIME VOLUME PURGED (gallons) CUMUL. VOLUME PURGE PURGED (gallons) CUMUL. VOLUME PURGE PURGED (standard units) PURGED (gallons) COND. (circle units) OXYGEN (circle units) Matter (feet) COND. (circle units) (circle units) Matter (describe) COLOR (describe) COLOR (describe)													
13:42	2	2	0.16		6.94	18.85	3.214	4.27	-9.5/14	4.2 TURE			
13:52	4	4	0.20		692	18.69	3.212	3.8/	-8.9/12	533 TUK	sio None		
14:03	6	6	0.20		6.98	18.79	3.216	3.04	-12-1/	1544 TVA	BED Nonce		
14:13	8	8	0.20		6.99	18.69	3.215	2.58	-12.6/13	S. Y TUR	KBID None		
14:24	10	10	0.20		7.06	18.58	3.219	2.30	15.6/1	55.1 TUL	Nove		
WELL CAP	NTS USED:	s Per Fóot): 0	1 550 0.75° = 0.02;	1" = 0.04:	5 Sen 1.25" = 0.06	(12/# 3; 2"=0.1	05F	2-274 to 4" = 0.65;	9 <i>L</i>	6" = 1.47:	12" = 5.88		
		PACITY (Gal./F		006; 3/16"	= 0.0014;	1/4" = 0.002	6; 5/16" = 0	.004; $3/8" = 0$	0.006; 1/2	" = 0.010;	5/8" = 0.016		
PURGING	EQUIPMENT U	ISED: B=	Bailer; BP	= Bladder Pu		P = Electric S LING DA	ubmersible Pun	np; PP = Per	istaltic Pump;	O = Oth	er (Specify)		
C1.		FFILIATION: Barnh	1/1065	SAMPLEIKS)				SAMPLING INITIATED A	T: 1425	SAMPLIN ENDED A			
PUMP OR T DEPTH IN \	TUBING WELL (feet):	64.0		TUBING / MATERIÁL CO	DDE:	E		D-FILTERED: Y Ion Equipment Ty		FILTER SI	IZE:μm		
FIELD DEC	ONTAMINATIO	ON: PUM	Pay N		TUBING	Y Nre	eplaced)	DUPLICATE:	(Y)	N			
SAMP SAMPLE	LE CONTAINE	R SPECIFICA		PRESERVATI		RESERVATIO	N FINAL	INTENDI ANALYSIS A		SAMPLING QUIPMENT	SAMPLE PUMP FLOW RATE		
ID CODE	CONTAINERS 3	CODE	YOLUME YOMU	USED	ADDE	DINFIELD (mL) pH	METHO WETHO		CODE BP	(mt_per minute)		
MW-39 DUP	3	-	40 mC	HOL		20 mc			000	BP	0.20GPA		
2 1													

REMARKS:	Porge	- Hro	Place	6 14.	- ON= 8	site.		1/on Dr	evm				
MATERIAL		AG = Amber (Clear Glass;	PE = Poly		PP = Polypropy			flon; O = O	ther (Specify)		
SAMPLING	EQUIPMENT		PP = After Per FPP = Reverse		B = Bai tic Pump;		Bladder Pump; Method (Tubing	ESP = Electr Gravity Drain);	ric Submersib O = Other				

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L Oxygen Reduction Potential: ≤ 10% mV

SITE - NAME:	TWP RO	DSWC11S	Totion	#9	SI	TE CATION:	38/N.	moin ST	rect	-ROSI	wc 17	Nm
WELL NO		N-41)		SAMPLE		mW- 4	40	1		1/15	-112	5
					PURC	SING DA	TA			////	//_	2
WELL	R (inches): 2	// TUBING	ER (inches):	/ // WE	LL SCREEN		STATIC	DEPTH ER (feet):54.	2/ PI	URGE PUMI	TYPE ²	elicated
WELL VO	LUME PURGE:	: 1 WELL VOL	UME = (TOTA	L WELL DEF	PTH: fe PTH – STA	et to f	eet TO WATI O WATER) X	WELL CAPAC	ITY O	R BAILER: 2	XED	2180
= $(70.13 \text{ feet} - 54.2/ \text{ feet}) \times 0.16 \text{ gallons/foot} = 2.54 \text{ gallons}$												
EQUIPME	EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons												
INITIAL PU DEPTH IN	JMP OR TUBIN WELL (feet):	1G62.31	FINAL PUMI DEPTH IN V		62.31	PURGIN INITIATE	G ED AT: <i>10:38</i>	PURGING ENDED AT:	10:19		/OLLIME	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP, (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYG REDUC' POTEN (mV	TION C	OLOR escribe)	ODOR (describe)
10:38	Instial	0	4.005	54.21	7.12	18.02	3.167	5.12	-16.2	/. a . la	117881	None
10:07	12	2	0.50		6.92	18.43	3.122	3.84	7.8/		KBID	None
10:06	14	4	0.50		6.90	18.47	3.120	3.70	7.5/	143.3	TUKB12	, None
10:12	8	8	0.33		6.88	18.4%	3.1/6	3.7/	-6.8/	, , ,	VEBB	None
70.7	0	8	0.35		6.88	18.47	3.114	3.92	-6.7//	1521 7	VZ 3/10	Nose
	ENTS USED:	s Per Foot): 0.	I 56	6 MPS	1 25" = 0.06	1 6 / 1 / 1 / 3; 2" = 0.16	05/= 5; 3" = 0.37;	2274 A" = 0.65;	4 C 5" = 1.02;	6 " = 1.47;	40!	
TUBING IN	ISIDE DIA. CAI EQUIPMENT L	PACITY (Gal./Fi	.): 1/8" = 0.00	006; 3/16"	= 0.0014;	1/4" = 0.002	3; 5/16" = 0.	.004; $3/8" = 0$.006; 1/	2" = 0.010;		0.016
FUNGING	EGOIPMENT	19ED: B = 6	Bailer; BP	= Bladder Pu		- Electric St	ıbmersible Pum ΤΔ ¹	p; PP = Peri	staltic Pum	p; O = 0	Other (Sp	ecify)
	BY (PRINT) / A	AFFILIATION: MBarnh:	n CFC	AMPLER(S)	MATUR			SAMPLING INITIATED AT	. 10:17	7 SAMPI		10:19
PUMP OR DEPTH IN	TUBING WELL (feet);	62.3		UBING NATERIAL CO	ODE: P	E		-FILTERED: Y	(N)	<u></u>	R SIZE:	μm
	CONTAMINATION	ON: PUMP		INTENIAL O	TUBING	Y (Note		on Equipment Type DUPLICATE:	oe: Y	1		
SAMI	PLE CONTAINE	R SPECIFICAT	ION		SAMPLE PR	ESERVATIO		INTENDE	D	SAMPLING	SAM	PLE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL , CODE	OLUME F	RESERVATI USED	\$	OTAL VOL D IN FIELD (n	FINAL	ANALYSIS AN METHO	ND/OR E	EQUIPMENT CODE	「	OW RATE per minute)
mw-41)	3		tomL	HOL		20 ML		Voc's		BP		7.33
REMARKS	REMARKS: Placed Purge Hzo in On-site Drum											
MATERIAL	CODES:	AG = Amber G	ass; CG = C	lear Glass;	PE = Polye	ethylene; I	P = Polypropyl	ene; S = Silico	ne; T =T	eflon; O	= Other (8	Specify)
SAMPLING	EQUIPMENT		P = After Peris PP = Reverse		B = Baile	er; BP = I	Bladder Pump;	ESP = Electri	c Submersi	ble Pump;		,/
		***	Neverse	I IOW I CITORAL	ao rump,	OW - OTHEW	Method (Tubing	Gravity Drain);	U = Othe	er (Specify)	······································	

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

<u>STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:</u>

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

SITE -	TWP K	05Well 3	Station	9	SI ⁻	TE CATION:	6381	N. Main	Stree	1- KO	SWA	INM
WELL NO:		W-41		SAMPLE		MW-	111		DATE:	11/15	112	201
L		//	· · · · · · · · · · · · · · · · · · ·			ING DA				11/10/	/	
	R (inches): 2 LUME PURGE:	// TUBING DIAMETI	ER (inches): JME = (TOTA	ンプ DEF L WELL DEF	LL SCREEN I PTH: fe PTH - STA	INTERVAL et to f	STATIC TO WATER)	DEPTH FER (feet): 56.	63 a			dicate SP 2"
	= (70.06 feet - 56.63' feet) X 0.16 gallons/foot = 2.14 gallons 3 WELL VOLUMES = 6.44 gallons EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill ou	NT VOLUME PI t if applicable)	URGE: 1 EQUI	PMENT VOL.	= PUMP VOL	.UME + (TUB	ING CAPACI	TY X 1	TUBING LENGTH) + FLOW (CELL VOLUM	1E	
INITIAL DI	JMP OR TUBIN	<u>.</u>	EINIAL DUM	= ga	allons + (ons/foot X	fee		gallor		gallons
	WELL (feet):	58.49	DEPTH IN V	VELL (feet):	58.49	PURGIN INITIATE	IG ED AT: 10:3	PURGING ENDED AT:	11:21	TOTAL \	/OLUME) (gallons	6.50
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm <u>or</u> μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYG REDUC' POTEN (mV	GEN TION CO	OLOR scribe)	ODOR (describe)
10:53	Initial	0		56.63	7.16	18.28	3.053	6.37	-18.31	145/ 7	VKEI	None
11:01	12	2	0.25		6.94	18.80	3.034	1	-9.9/	1553 7	UKBA	None
11:18	1/10	1 -	0.29		6.93	18.83	3.032		1-9.5/		car	None
11.17	6150	6.50	0.29		6.94	18.94	3.033	5.73	9.8/1	59.1 C	lear	None
									 			
												
	ENTS USED:	X5	I 55	6 MPS	Ser,	10/ H	05F	22741	90			
WELL CAP TUBING IN	PACITY (Gallon ISIDE DIA. CAF	s Per Foot): 0. PACITY (Gal./Ft	75" = 0.02; .): 1/8" = 0.00	1" = 0 04.	1.25" = 0.06	3; 2" = 0.10 1/4" = 0.002		4" = 0.65; 0.004; 3/8" = 0	5" = 1.02;	6" = 1.47; /2" = 0.010;	12" = 5/8" =	
	EQUIPMENT U			= Bladder Pu	mp; ESF	P = Electric S	ubmersible Pun	····	istaltic Pum		Other (Sp	
SAMPLED.	BY (PRINT) (A	EEU IATIONI	17	SAMPLER(S)	SAMPL	ING DA	TA ¹					
Clay	tinm Ba	rnh 11 /	CES	PAIVIPLER	WILL	(8):		SAMPLING INITIATED A	T. 11:10	3 SAMPL ENDER		12/
PUMP OR	TUBING	6814	, 7	TUBING /	1	Œ	FIELD	D-FILTERED: Y	(N)			. — µm
	WELL (feet): CONTAMINATIO	90.49 ON: PUMP		MATERIAL C	DDE: / TUBING			tion Equipment Ty	rpe:			
		R SPECIFICAT			SAMPLE PR		eplaced)	DUPLICATE		N)		
SAMPLE	#	MATERIAL		PRESERVATI	VE T	OTAL VOL	FINAL	INTEND ANALYSIS A	ND/OR I	SAMPLING EQUIPMENT	FLO	PLE PUMP DW RATE
MW-U	CONTAINERS	CODE	40mL	USED Hal		O IN FIELD (r		METHO		CODE		per minute)
1110 -11	<u> </u>		10190	HOL	//	20 ML	6.94	Voc's	1260	BP	0	29

REMARKS	REMARKS:											
	PURSE HAD Placed in On-Site 35 Gallon DRUM											
MATERIAL	MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING	EQUIPMENT		P = After Peris PP = Reverse		B = Baile	er; BP=	Bladder Pump;	ESP = Electron Gravity Drain);	ic Submersi		(0	
								, cravity Diani),	<u> </u>	or (obsciry)		

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: \leq 10% units Temperature: \leq 10% °C Specific Conductance: \leq 10% μ S/cm Dissolved Oxygen: all readings \leq 10% mg/L Oxygen Reduction Potential: \leq 10% mV

SITE	TWPA	75 We	115/21	Top #		TE CATION: (6381	Novi	4 M	11h 57	tront	ROSWEIT
WELL NO:	mw.	-42	<i>7</i>	SAMPLE	7	m 111-	42	7	DAT		15/1	NM SEZ
					PURC	SING DA	TA					
WELL	(inches): 2	// TUBING			L SCREEN		STAT	IC DEPTH ATER (feet):	56 29	PURG		E DEGKOT
		1 WELL VOL	ER (inches): /				feet TOW. TOWATER)	X WELL (CAPACITY	- OR B/	AILER: ()E	0 8.7.2
= (75.95 feet - 56.28 feet) × 0.16 gallons/foot = 3.14 gallons												
	IT VOLUME PU	JRGE: 1 EQUI		= PUMP VOL		ING CAPACI	ITY X	TUBING LE	NGTH) + F	LOW CELL	LVOLUME	
1 ' '	,			= ga	allons + (galle	ons/foot X		feet) +		gallons =	gallons
INITIAL PU DEPTH IN	MP OR TUBIN WELL (feet):	64.03	FINAL PUMI DEPTH IN V	OR TUBING VELL (feet):	64.0	PURGIN INITIATI	IG ED AT: 08	9/ END	GING ED AT: 0	917	TOTAL VOLU PURGED (gal	ME lons): 9.50
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units µmhos/cm or µS/cm	S) OXYO	GEN units) F	OXYGEN REDUCTION POTENTIAL (mV)	L (describe	(describe)
0841	Initial	0	0.25	56,28	6.85	16.85	3.130	4.	18 6	.4/173		10.7
0850	2	2	0.25		6.92	17.81	3,15	8 3.3	38 -8	3.8/17	OS TUXE	12 Rob 517
0858	4	4	0.25		6.91	17.93	3.15			8.6/17	no clea	x None
0906	6	6	0.25		6.91	18.09	3.147	3.4		15/16	9.0 Che	or None
09//	8	4.E8	0.41		6.91	18,10	3.14	4 3.	7	815/16	85010	
0916	9.50	7.50	0.40		10.91	18,16	3.12	3.8	7 - ·	8,5/16	78 C/E	u None
WELL CAP TUBING IN	SIDE DIA. CAF	s Per Foot): 0. PACITY (Gal./Fi	75" = 0.02; i.): 1/8" = 0.0		1.25" = 0.0 = 0.0014;	507, 6; 2" = 0.1 1/4" = 0.002		37; 4" = 0	227 .65; 5" = 3/8" = 0.006	1.02; 6	" = 1.47; 1 :	2" = 5.88 8" = 0.016
PURGING I	EQUIPMENT U	SED: B = 6	Bailer; BP	= Bladder Pu		P = Electric S LING DA		ump; P	P = Peristal	tic Pump;	O = Other	(Specify)
	BY (PRINT) / A	3/ / 1/	ICES!	SAMPLER(S)			\IA	SAMP	LING TED AT: (0916	SAMPLING ENDED AT:	0917
PUMP OR	TUBING NELL (feet):	64.02		TUBING WATERIAL CO	NOE:	PE		ELD-FILTERE tration Equipr	ED: Y	ÑZ	FILTER SIZI	Ε:μm
ļ	ONTAMINATIO	ON: PUMF	~ -		TUBING	Y (NA	eplaced)		ICATE:	Y	N N	, , , , , , , , , , , , , , , , , , ,
SAMPLE ID CODE	#	R SPECIFICAT		PRESERVAT	VE	RESERVATION	FINA	ANAL ANAL	NTENDED YSIS AND/ METHOD	SA OR EQL	MPLING S JIPMENT	SAMPLE PUMP FLOW RATE (mL per minute)
MW-42	3	CG 4	omL	HCL		20 mc			15 87		370	0.40
REMARKS:	REMARKS: PURGE the Placed in 55 Gollon DRUM - Oh-Site.											
MATERIAL	CODES:	AG = Amber G	lass; CG =	Clear Glass;	PE = Poh	/ethylene;	PP = Polypr	opvlene: S	= Silicone;	T = Teflo	on: O = Oth	er (Specify)
	EQUIPMENT	CODES: AF	PP = After Peri	staltic Pump;	B = Bai	iler; BP=	Bladder Pun Method (Tuk	np; ESP	= Electric S	· · · · · · · · · · · · · · · · · · ·	Pump;	/===================================

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

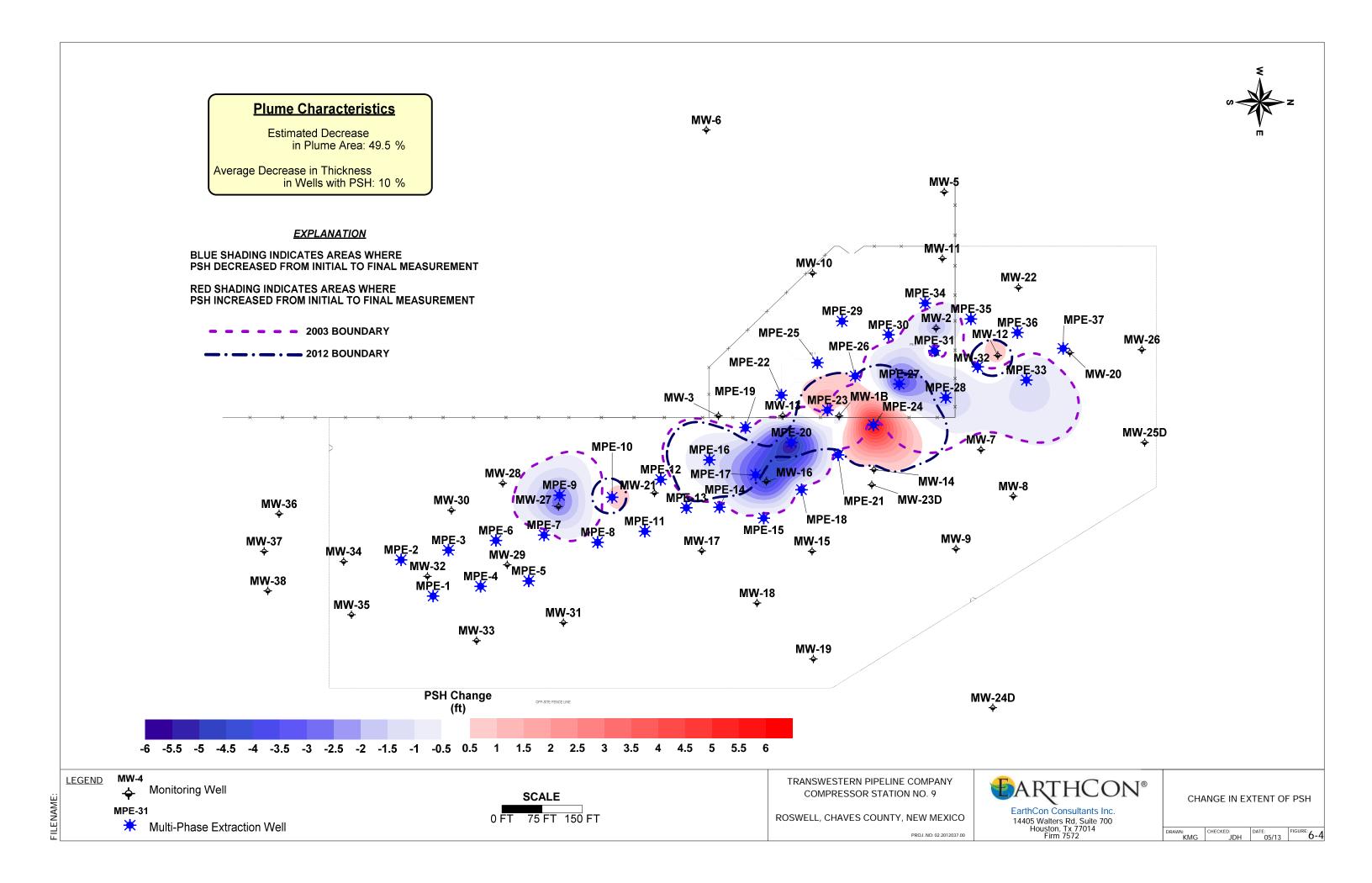
pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L Oxygen Reduction Potential: ≤ 10% mV

FIELD Collegation of VST 556 MIS By: Omb Environmental & Geological 24 Standord: 2 point Collbration = 8.52 mg/c + mol = 8.30 mg/l Location Two Roswell Station 9 Date 11/14/13 Fina (= 1.413 majan - 0740 hove. Services Inc. Fage 1 25 2. Conowitivity Standard: 1413 malom Project / Client 6W Samp / 1019 2013 Fypires 4/24/13 08/13/2014 D.D. In trola 0725 hour Sexial # 05+ 2274AL Coff town expires 08/14/2014 Colitect 4:1 pH Solution - 4.00 pt -In. 110, = 1.547 majom 1 = 7.00 0735. 1na/

Location This fished Sotion 9 Date 11/14/12 Dio = To. 156/= 71/ Mg/le Final - 8.30mg/ My - In tist = 1:352 motor Final = 1413 me lay-Intra = 20 6.84 Final = 7:00 Mimbes Totha = 20 6.84 Final = 225 Dy, CMB Envinomental of Gralasica, 100= 1664 362-Final = 230 pt -6.89 0755 WTW 8#28 1/57 3682 2060/1 Solution: No Expresence 11/18/13 arrive on-5, to a 0845 -10.3 ptms/ USP 361.0 Services For . Page 221 & OMMY ORD Callbration: oject/Clien 6W Sompling 2013 Makine on-site 0820 hour.
At site a 17:30 hour.
Ambient Temp 570 F Re-alported D.O. 11/15/13 - 0835/11. Initial = 8.15 FINO 1 = 8.30. =/0/4.my

Appendix B

Copy of May 2013 *RWP* Figure 6-4 and
2013 Plume Stability Analysis Figures



Summary of Plume Stability Characteristics								
Date	Area (Acres)	Average Conc. (µg/I)	Mass Indicator (lbs)					
1997	0.46	14.8	0.11					
1998	0.77	14.0	0.18					
1999	0.87	13.9	0.20					
2000	1.28	14.4	0.30					
2001	2.21	17.8	0.64					
2002	2.03	15.1	0.50					
2003	2.04	16.9	0.56					
2004	1.94	17.1	0.54					
2005	1.96	23.1	0.74					
2006	1.75	14.3	0.41					
2007	1.77	14.5	0.42					
2008	1.93	15.7	0.49					
2009	1.76	13.1	0.38					
2010	1.83	13.7	0.41					
2011	1.56	13.5	0.34					
2012	1.61	12.2	0.32					
2013	1.19	12.9	0.25					

Mann-Kendall Trend Analysis Summary

	# of samples,		Confidence	Coeff. of	
Parameter	n	S Statistic	Factor	Variation	Conclusion
Plume Area	17	-2	51.6%	0.32	Stable/No Trend
Plume Average Concentration	17	-46	96.8%	0.17	Decreasing Trend
Plume Mass Indicator	17	0	50.0%	0.42	Stable/No Trend

Linear Regression Trend Analysis Summary

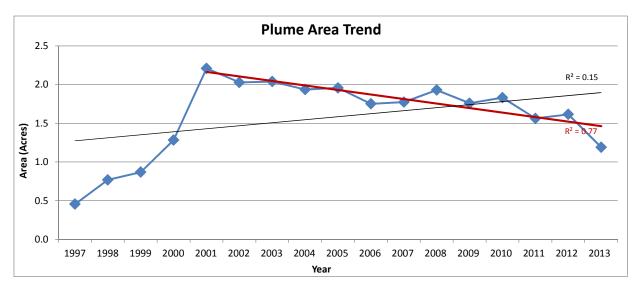
	# of samples,	Slope		Confidence	Coeff. of	
Parameter	n	(yr ⁻¹)	R ²	Factor	Variation	Conclusion
Plume Area	17	14.22	0.15	88.0%	0.32	Stable/No Trend
Plume Average Concentration	17	-52.39	0.08	72.8%	0.17	Stable/No Trend
Plume Mass Indicator	17	1.85	0.02	44.0%	0.42	Stable/No Trend

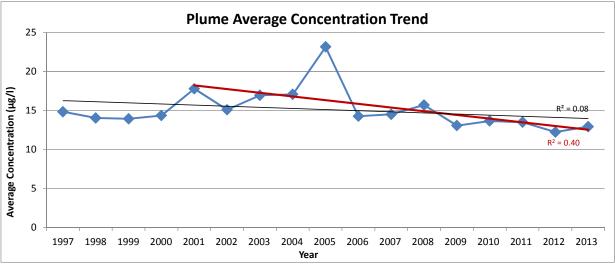
Mann-Kendall Trend Analysis Summary - Data Since 2001

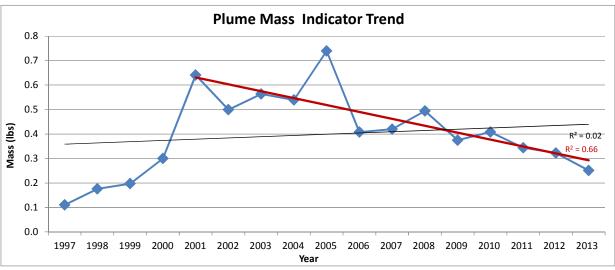
	# of samples,		Confidence	Coeff. of	
Parameter	n	S Statistic	Factor	Variation	Conclusion
Plume Area	13	-58	100.0%	0.14	Decreasing Trend
Plume Average Concentration	13	-50	99.9%	0.19	Decreasing Trend
Plume Mass Indicator	13	-56	100.0%	0.29	Decreasing Trend

Linear Regression Trend Analysis Summary - Data Since 2001

		J				
	# of samples,	Slope		Confidence	Coeff. of	
Parameter	n	(yr ⁻¹)	R ²	Factor	Variation	Conclusion
Plume Area	13	-21.31	0.77	100.0%	0.14	Decreasing Trend
Plume Average Concentration	13	-172.64	0.40	98.0%	0.19	Decreasing Trend
Plume Mass Indicator	13	-10.30	0.66	99.9%	0.29	Decreasing Trend







Roswell Station Remediation Site Transwestern Pipeline Company, LLC Chaves County, New Mexico



1,1-DCE Plume Stability Analysis Summary

DRAWN: EWL CHECKED:

JAR November 8, 2013 FIGURE:

Note: 2012 analysis includes all sampling events.

Summary of Plume Stability Characteristics

Date	Area (Acres)	Average Conc. (µg/l)	Mass Indicator (lbs)
1996	8.7	355	50.1
1997	8.5	179	24.9
1998	7.9	130	16.8
1999	7.8	149	19.0
2000	7.9	155	19.9
2001	8.1	195	25.7
2002	8.0	175	22.9
2003	7.8	106	13.5
2004	3.1	43.1	2.17
2005	3.7	26.1	1.59
2006	3.6	25.3	1.49
2007	2.8	69.2	3.17
2008	2.0	50.2	1.67
2009	1.8	55.6	1.65
2010	1.7	56.6	1.56
2011	2.2	47.2	1.72
2012	1.7	64.2	1.82
2013	1.7	63.9	1.78

Mann-Kendall Trend Analysis Summary

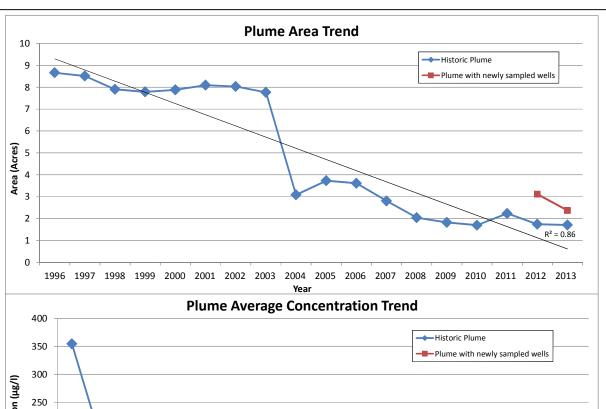
	# of samples,		Confidence	Coeff. of	
Parameter	n	S Statistic	Factor	Variation	Conclusion
Plume Area	18	-125	100.0%	0.60	Decreasing Trend
Plume Average Concentration	18	-69	99.5%	0.77	Decreasing Trend
Plume Mass Indicator	18	-83	99.9%	1.15	Decreasing Trend

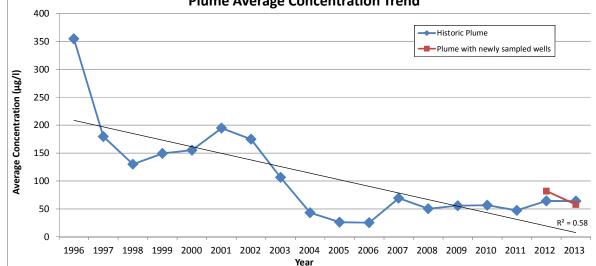
Linear Regression Trend Analysis Summary

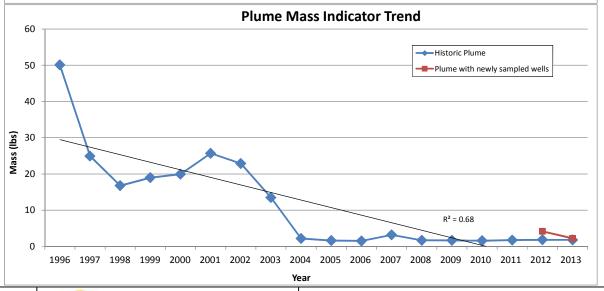
	# of samples,	Slope		Confidence	Coeff. of	
Parameter	n	(yr ⁻¹)	R ²	Factor	Variation	Conclusion
Plume Area	18	-186.70	0.86	100.0%	0.60	Decreasing Trend
Plume Average Concentration	18	-4315.24	0.58	100.0%	0.77	Decreasing Trend
Plume Mass Indicator	18	-761.92	0.68	100.0%	1.15	Decreasing Trend

Notes: Wells not sampled prior to 2012 are not included in analysis, but are tracked on graphs. MPE wells are not included in the analysis. 2012 includes three sampling events.

Roswell Station Remediation Site Transwestern Pipeline Company, LLC **Chaves County, New Mexico**









Benzene Plume Stability Analysis Summary

EWL CHECKED: JAR DATE: November 20, 2013

Summary of Plume Stability Characteristics

	۸۳۵۵	Average Core	Mass
Date	Area (Aerea)	Average Conc.	Indicator
	(Acres)	(µg/l)	(lbs)
1996	8.9	369	53.5
1997	8.6	188	26.3
1998	8.0	139	18.1
1999	7.8	157	20.0
2000	7.9	162	21.0
2001	8.1	203	27.0
2002	8.1	187	24.7
2003	7.9	113	14.5
2004	3.1	43.9	2.24
2005	3.7	26.4	1.61
2006	3.7	27.9	1.67
2007	2.9	98.5	4.67
2008	2.2	88.3	3.23
2009	2.0	97	3.21
2010	1.9	99	3.06
2011	2.4	81	3.22
2012	2.0	155	5.0
2013	1.9	159	5.0

Mann-Kendall Trend Analysis Summary

	# of		Confidence	Coeff. of	
Parameter	samples, n	S Statistic	Factor	Variation	Conclusion
Plume Area	18	-123	100.0%	0.57	Decreasing Trend
Plume Average Concentration	18	-49	96.5%	0.60	Decreasing Trend
Plume Mass Indicator	18	-63	99.1%	1.05	Decreasing Trend

Linear Regression Trend Analysis Summary

	# of	Slope		Confidence	Coeff. of	
Parameter	samples, n	(yr ⁻¹)	R ²	Factor	Variation	Conclusion
Plume Area	18	-183.48	0.85	100.0%	0.57	Decreasing Trend
Plume Average Concentration	18	-2846.72	0.27	97.4%	0.60	Decreasing Trend
Plume Mass Indicator	18	-749.80	0.63	100.0%	1.05	Decreasing Trend

8
7
6
5
4
3
2
1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

Year

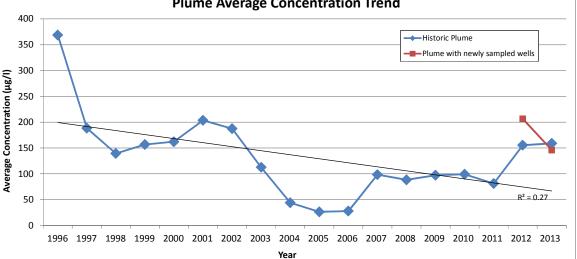
Plume with newly sampled wells

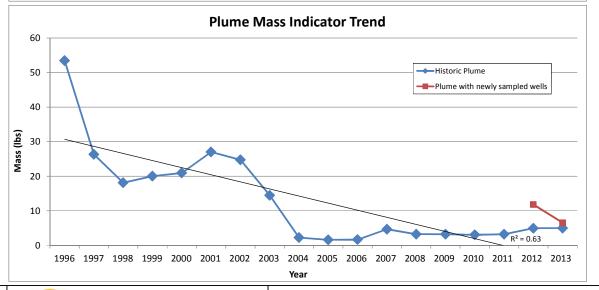
R² = 0.85

Year

Plume Average Concentration Trend

Plume Area Trend





Notes: Wells not sampled prior to 2012 are not included in analysis, but are tracked on graphs.

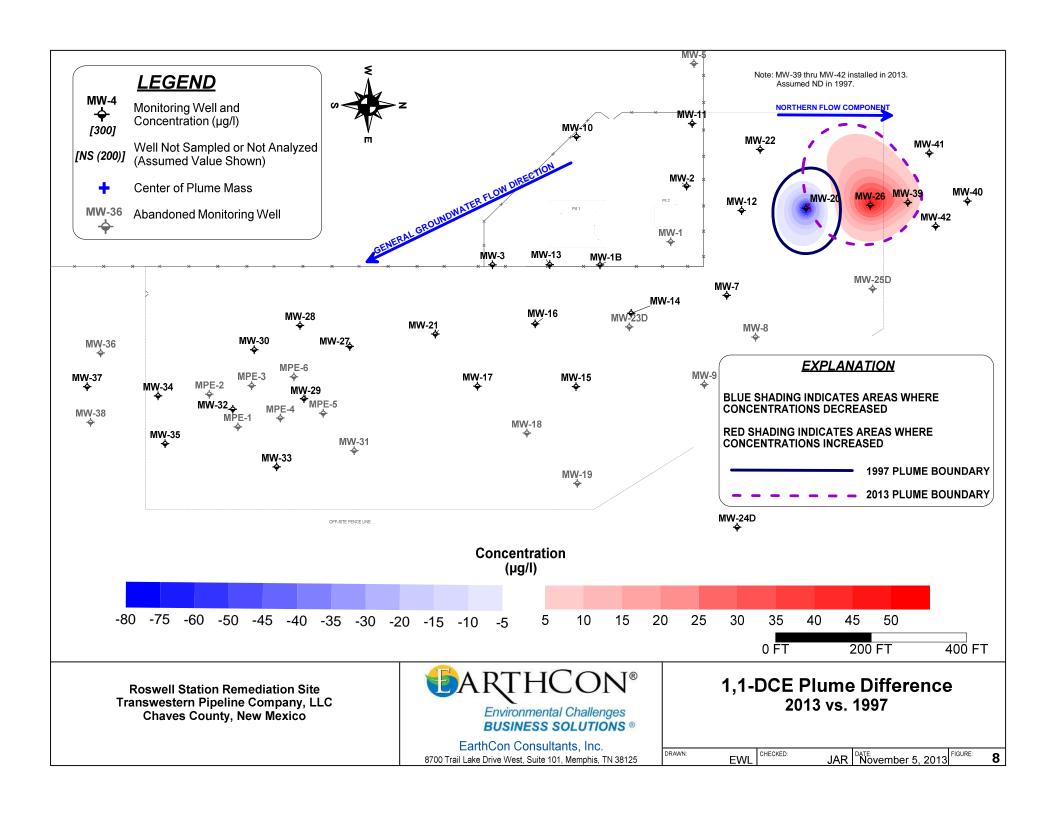
MPE wells are not included in the analysis.
2012 includes three sampling events.

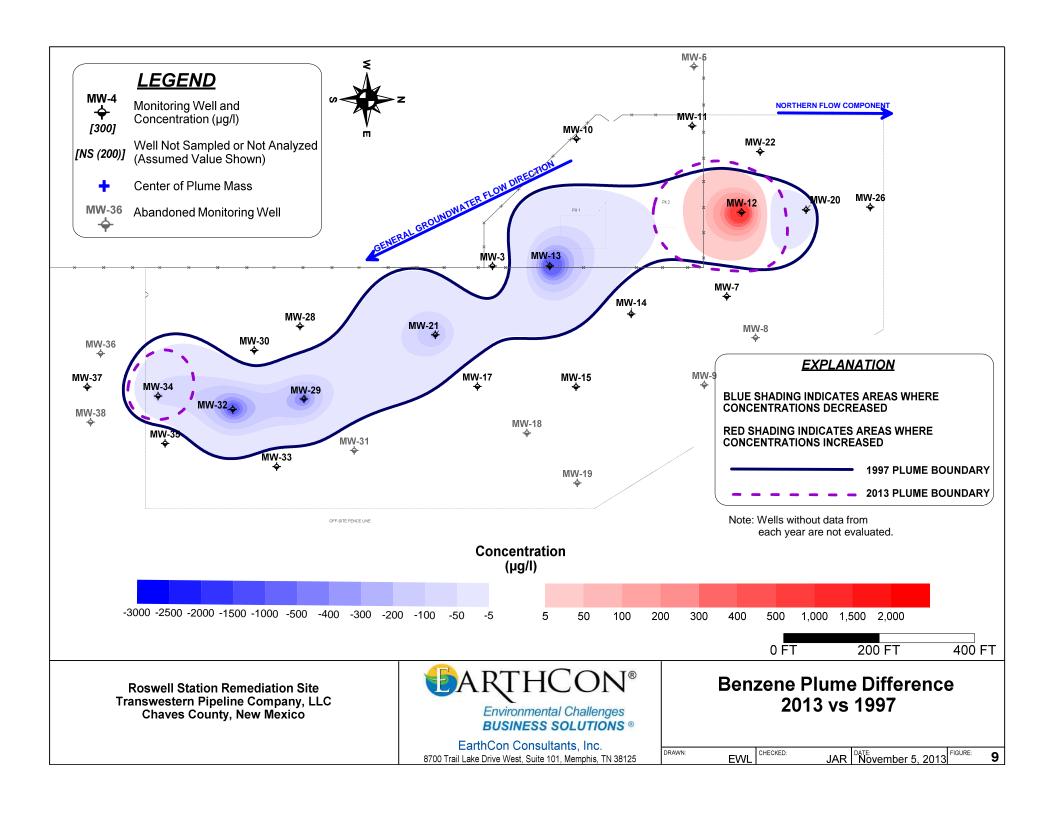
Roswell Station Remediation Site Transwestern Pipeline Company, LLC Chaves County, New Mexico

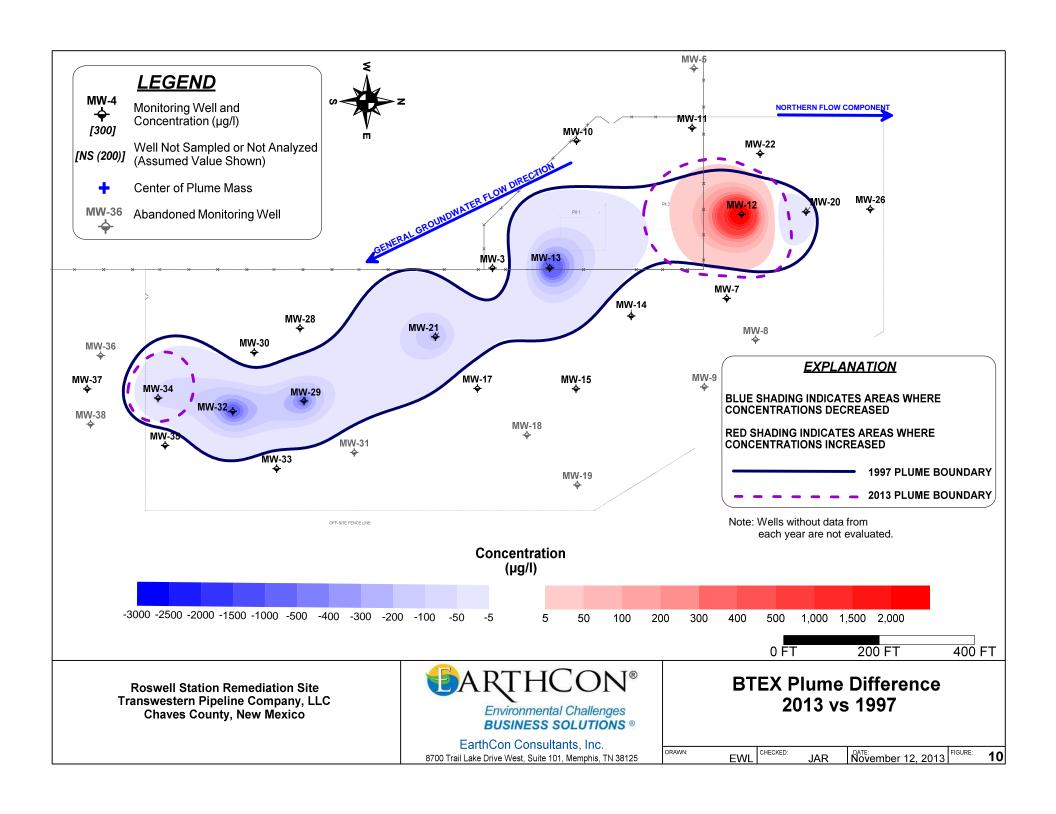


BTEX Plume Stability Analysis
Summary

EarthCon Consultants, Inc. 8700 Trail Lake Drive West, Suite 101, Memphis, TN 38125 AWN: EWL CHECKED: JAR November 20, 2013







Appendix C

Analytical Data Packages – Semiannual Groundwater Sampling

Data Validation Report - RPDs Roswell Compressor Station - Roswell, NM

			BTEX (ug/	/L)			Oth	er VOCs (u	g/L)
Samp	ole ID	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,1-Dichloroethene
MW-16	(MW-16 Dup)	04/17/13 04/17/13 RPD:	650 690 -6.0	< 50 < 50	210 230 -9.1	2400 2400 0.0	NA NA 	NA NA 	NA NA
MW-26	(MW-26 Dup)	04/17/13 04/17/13 RPD:	< 1.0 < 1.0 	< 1.0 < 1.0 	< 1.0 < 1.0 	< 1.5 < 1.5 	6.2 6.4 -3.2	< 1.0 < 1.0	53 56 -5.5
MW-21	(MW-21 Dup)	11/18/13 11/18/13 RPD:	< 1.0 < 1.0 	< 1.0 < 1.0 	< 1.0 < 1.0 	< 2.0 < 2.0	NA NA 	NA NA 	NA NA
MW-26	(MW-26 Dup)	11/15/13 11/15/13 RPD:	< 1.0 < 1.0 	< 1.0 < 1.0 	< 1.0 < 1.0 	< 1.5 < 1.5 	6.0 5.9 1.7	< 1.0 < 1.0 	45 46 -2.2
MW-34	(MW-34 Dup)	11/14/13 11/14/13 RPD:	7.2 7.2 	< 1.0 < 1.0	< 1.0 < 1.0 	< 2.0 < 2.0	NA NA 	NA NA 	NA NA
MW-39	(MW-39 Dup)	11/15/13 11/15/13 RPD:	< 1.0 < 1.0 	< 1.0 < 1.0 	< 1.0 < 1.0	< 1.5 < 1.5 	1.6 1.5 6.5	< 1.0 < 1.0	15 16 -6.5

NOTES:

Relative Percent Difference (RPD) = [(S-D) / ((S+D)/2)] * 100S = Concentration of analyte in Real Sample

D = Concentration of analyte in Duplicate Sample

(Page 1 of 1) March 2014



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 03, 2013

George Robinson Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX: (281) 859-1881

RE: Transwestern Pipeline Company Roswell St Order No.: 1304777

Dear George Robinson:

Hall Environmental Analysis Laboratory received 18 sample(s) on 4/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager 4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-35

Transwestern Pipeline Company Roswell Collection Date: 4/16/2013 3:30:00 PM **Project:** 1304777-001 Matrix: AQUEOUS Received Date: 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/25/2013 11:55:35 PM
Toluene	ND	1.0	μg/L	1	4/25/2013 11:55:35 PM
Ethylbenzene	ND	1.0	μg/L	1	4/25/2013 11:55:35 PM
Xylenes, Total	ND	2.0	μg/L	1	4/25/2013 11:55:35 PM
Surr: 4-Bromofluorobenzene	89.8	69.4-129	%REC	1	4/25/2013 11:55:35 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 1 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-34

Transwestern Pipeline Company Roswell **Project: Collection Date:** 4/16/2013 4:15:00 PM 1304777-002 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	60	1.0	μg/L	1	4/26/2013 12:25:50 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 12:25:50 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 12:25:50 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 12:25:50 AM
Surr: 4-Bromofluorobenzene	94.2	69.4-129	%REC	1	4/26/2013 12:25:50 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 2 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: FIELD BLANK 1

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/16/2013 4:20:00 PM 1304777-003 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 1:26:34 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 1:26:34 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 1:26:34 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 1:26:34 AM
Surr: 4-Bromofluorobenzene	91.4	69.4-129	%REC	1	4/26/2013 1:26:34 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 3 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-32

Transwestern Pipeline Company Roswell **Project: Collection Date:** 4/16/2013 4:45:00 PM 1304777-004 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 1:56:47 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 1:56:47 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 1:56:47 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 1:56:47 AM
Surr: 4-Bromofluorobenzene	92.2	69.4-129	%REC	1	4/26/2013 1:56:47 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 4 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-29

Transwestern Pipeline Company Roswell Collection Date: 4/16/2013 5:20:00 PM **Project:** 1304777-005 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 2:27:07 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 2:27:07 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 2:27:07 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 2:27:07 AM
Surr: 4-Bromofluorobenzene	92.4	69.4-129	%REC	1	4/26/2013 2:27:07 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 5 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-24D

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/16/2013 3:40:00 PM 1304777-006 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 2:57:17 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 2:57:17 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 2:57:17 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 2:57:17 AM
Surr: 4-Bromofluorobenzene	92.8	69.4-129	%REC	1	4/26/2013 2:57:17 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 6 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-23D

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/16/2013 5:00:00 PM 1304777-007 Matrix: AQUEOUS Received Date: 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 3:27:17 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 3:27:17 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 3:27:17 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 3:27:17 AM
Surr: 4-Bromofluorobenzene	92.7	69.4-129	%REC	1	4/26/2013 3:27:17 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 7 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: MW-25D **CLIENT:** Cypress Engineering

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 8:50:00 AM **Project:** 1304777-008 Matrix: AQUEOUS Received Date: 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 3:57:33 AM
Toluene	ND	1.0	μg/L	1	4/26/2013 3:57:33 AM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 3:57:33 AM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 3:57:33 AM
Surr: 4-Bromofluorobenzene	91.6	69.4-129	%REC	1	4/26/2013 3:57:33 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 8 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-16

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 2:50:00 PM **Project:** 1304777-009 Matrix: AQUEOUS Received Date: 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	650	50	μg/L	50	4/26/2013 6:49:36 PM
Toluene	ND	50	μg/L	50	4/26/2013 6:49:36 PM
Ethylbenzene	210	50	μg/L	50	4/26/2013 6:49:36 PM
Xylenes, Total	2400	100	μg/L	50	4/26/2013 6:49:36 PM
Surr: 4-Bromofluorobenzene	105	69.4-129	%REC	50	4/26/2013 6:49:36 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 9 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-16 DUP

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 2:50:00 PM **Project:** 1304777-010 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	690	50	μg/L	50	4/26/2013 8:20:21 PM
Toluene	ND	50	μg/L	50	4/26/2013 8:20:21 PM
Ethylbenzene	230	50	μg/L	50	4/26/2013 8:20:21 PM
Xylenes, Total	2400	100	μg/L	50	4/26/2013 8:20:21 PM
Surr: 4-Bromofluorobenzene	103	69.4-129	%REC	50	4/26/2013 8:20:21 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 10 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-20

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 11:40:00 AM **Project:** 1304777-011 Lab ID: Matrix: AQUEOUS **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Benzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Toluene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Ethylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Naphthalene	ND	2.0	μg/L	1	4/27/2013 2:26:34 AM
1-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 2:26:34 AM
2-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 2:26:34 AM
Acetone	ND	10	μg/L	1	4/27/2013 2:26:34 AM
Bromobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Bromodichloromethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Bromoform	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Bromomethane	ND	3.0	μg/L	1	4/27/2013 2:26:34 AM
2-Butanone	ND	10	μg/L	1	4/27/2013 2:26:34 AM
Carbon disulfide	ND	10	μg/L	1	4/27/2013 2:26:34 AM
Carbon Tetrachloride	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Chlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Chloroethane	ND	2.0	μg/L	1	4/27/2013 2:26:34 AM
Chloroform	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Chloromethane	ND	3.0	μg/L	1	4/27/2013 2:26:34 AM
2-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
4-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
cis-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	4/27/2013 2:26:34 AM
Dibromochloromethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Dibromomethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,1-Dichloroethane	3.2	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,1-Dichloroethene	4.5	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,3-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
2,2-Dichloropropane	ND	2.0	μg/L	1	4/27/2013 2:26:34 AM
1,1-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Hexachlorobutadiene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
2-Hexanone	ND	10	μg/L	1	4/27/2013 2:26:34 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 11 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-20

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 11:40:00 AM **Project:** 1304777-011 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Isopropylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
4-Isopropyltoluene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
4-Methyl-2-pentanone	ND	10	μg/L	1	4/27/2013 2:26:34 AM
Methylene Chloride	ND	3.0	μg/L	1	4/27/2013 2:26:34 AM
n-Butylbenzene	ND	3.0	μg/L	1	4/27/2013 2:26:34 AM
n-Propylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
sec-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Styrene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
tert-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	4/27/2013 2:26:34 AM
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
trans-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,1,1-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Trichloroethene (TCE)	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
1,2,3-Trichloropropane	ND	2.0	μg/L	1	4/27/2013 2:26:34 AM
Vinyl chloride	ND	1.0	μg/L	1	4/27/2013 2:26:34 AM
Xylenes, Total	ND	1.5	μg/L	1	4/27/2013 2:26:34 AM
Surr: 1,2-Dichloroethane-d4	82.0	70-130	%REC	1	4/27/2013 2:26:34 AM
Surr: 4-Bromofluorobenzene	85.9	69.5-130	%REC	1	4/27/2013 2:26:34 AM
Surr: Dibromofluoromethane	85.4	70-130	%REC	1	4/27/2013 2:26:34 AM
Surr: Toluene-d8	83.9	70-130	%REC	1	4/27/2013 2:26:34 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 12 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-26

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 12:25:00 PM **Project:** 1304777-012 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Benzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Toluene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Ethylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Naphthalene	ND	2.0	μg/L	1	4/27/2013 2:58:14 AM
1-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 2:58:14 AM
2-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 2:58:14 AM
Acetone	ND	10	μg/L	1	4/27/2013 2:58:14 AM
Bromobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Bromodichloromethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Bromoform	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Bromomethane	ND	3.0	μg/L	1	4/27/2013 2:58:14 AM
2-Butanone	ND	10	μg/L	1	4/27/2013 2:58:14 AM
Carbon disulfide	ND	10	μg/L	1	4/27/2013 2:58:14 AM
Carbon Tetrachloride	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Chlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Chloroethane	ND	2.0	μg/L	1	4/27/2013 2:58:14 AM
Chloroform	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Chloromethane	ND	3.0	μg/L	1	4/27/2013 2:58:14 AM
2-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
4-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
cis-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	4/27/2013 2:58:14 AM
Dibromochloromethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Dibromomethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,1-Dichloroethane	6.2	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,1-Dichloroethene	53	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,3-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
2,2-Dichloropropane	ND	2.0	μg/L	1	4/27/2013 2:58:14 AM
1,1-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Hexachlorobutadiene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
2-Hexanone	ND	10	μg/L	1	4/27/2013 2:58:14 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 13 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-26

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 12:25:00 PM **Project:** 1304777-012 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Isopropylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
4-Isopropyltoluene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
4-Methyl-2-pentanone	ND	10	μg/L	1	4/27/2013 2:58:14 AM
Methylene Chloride	ND	3.0	μg/L	1	4/27/2013 2:58:14 AM
n-Butylbenzene	ND	3.0	μg/L	1	4/27/2013 2:58:14 AM
n-Propylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
sec-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Styrene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
tert-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	4/27/2013 2:58:14 AM
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
trans-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,1,1-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Trichloroethene (TCE)	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
1,2,3-Trichloropropane	ND	2.0	μg/L	1	4/27/2013 2:58:14 AM
Vinyl chloride	ND	1.0	μg/L	1	4/27/2013 2:58:14 AM
Xylenes, Total	ND	1.5	μg/L	1	4/27/2013 2:58:14 AM
Surr: 1,2-Dichloroethane-d4	82.0	70-130	%REC	1	4/27/2013 2:58:14 AM
Surr: 4-Bromofluorobenzene	85.4	69.5-130	%REC	1	4/27/2013 2:58:14 AM
Surr: Dibromofluoromethane	83.2	70-130	%REC	1	4/27/2013 2:58:14 AM
Surr: Toluene-d8	84.4	70-130	%REC	1	4/27/2013 2:58:14 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 14 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-26DUP

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/17/2013 12:25:00 PM 1304777-013 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	3				Analyst: RAA
Benzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Toluene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Ethylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Naphthalene	ND	2.0	μg/L	1	4/27/2013 3:29:46 AM
1-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 3:29:46 AM
2-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 3:29:46 AM
Acetone	ND	10	μg/L	1	4/27/2013 3:29:46 AM
Bromobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Bromodichloromethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Bromoform	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Bromomethane	ND	3.0	μg/L	1	4/27/2013 3:29:46 AM
2-Butanone	ND	10	μg/L	1	4/27/2013 3:29:46 AM
Carbon disulfide	ND	10	μg/L	1	4/27/2013 3:29:46 AM
Carbon Tetrachloride	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Chlorobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Chloroethane	ND	2.0	μg/L	1	4/27/2013 3:29:46 AM
Chloroform	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Chloromethane	ND	3.0	μg/L	1	4/27/2013 3:29:46 AM
2-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
4-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
cis-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	4/27/2013 3:29:46 AM
Dibromochloromethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Dibromomethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,1-Dichloroethane	6.4	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,1-Dichloroethene	56	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,3-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
2,2-Dichloropropane	ND	2.0	μg/L	1	4/27/2013 3:29:46 AM
1,1-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Hexachlorobutadiene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
2-Hexanone	ND	10	μg/L	1	4/27/2013 3:29:46 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 15 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-26DUP

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/17/2013 12:25:00 PM 1304777-013 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Isopropylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
4-Isopropyltoluene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
4-Methyl-2-pentanone	ND	10	μg/L	1	4/27/2013 3:29:46 AM
Methylene Chloride	ND	3.0	μg/L	1	4/27/2013 3:29:46 AM
n-Butylbenzene	ND	3.0	μg/L	1	4/27/2013 3:29:46 AM
n-Propylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
sec-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Styrene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
tert-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	4/27/2013 3:29:46 AM
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
trans-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,1,1-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Trichloroethene (TCE)	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
1,2,3-Trichloropropane	ND	2.0	μg/L	1	4/27/2013 3:29:46 AM
Vinyl chloride	ND	1.0	μg/L	1	4/27/2013 3:29:46 AM
Xylenes, Total	ND	1.5	μg/L	1	4/27/2013 3:29:46 AM
Surr: 1,2-Dichloroethane-d4	84.9	70-130	%REC	1	4/27/2013 3:29:46 AM
Surr: 4-Bromofluorobenzene	82.6	69.5-130	%REC	1	4/27/2013 3:29:46 AM
Surr: Dibromofluoromethane	85.7	70-130	%REC	1	4/27/2013 3:29:46 AM
Surr: Toluene-d8	85.6	70-130	%REC	1	4/27/2013 3:29:46 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 16 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-22

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 2:50:00 PM **Project:** 1304777-014 Matrix: AQUEOUS **Received Date:** 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Benzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Toluene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Ethylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Naphthalene	ND	2.0	μg/L	1	4/27/2013 4:01:29 AM
1-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 4:01:29 AM
2-Methylnaphthalene	ND	4.0	μg/L	1	4/27/2013 4:01:29 AM
Acetone	ND	10	μg/L	1	4/27/2013 4:01:29 AM
Bromobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Bromodichloromethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Bromoform	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Bromomethane	ND	3.0	μg/L	1	4/27/2013 4:01:29 AM
2-Butanone	ND	10	μg/L	1	4/27/2013 4:01:29 AM
Carbon disulfide	ND	10	μg/L	1	4/27/2013 4:01:29 AM
Carbon Tetrachloride	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Chlorobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Chloroethane	ND	2.0	μg/L	1	4/27/2013 4:01:29 AM
Chloroform	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Chloromethane	ND	3.0	μg/L	1	4/27/2013 4:01:29 AM
2-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
4-Chlorotoluene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
cis-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	4/27/2013 4:01:29 AM
Dibromochloromethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Dibromomethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,1-Dichloroethene	2.2	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,3-Dichloropropane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
2,2-Dichloropropane	ND	2.0	μg/L	1	4/27/2013 4:01:29 AM
1,1-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Hexachlorobutadiene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
2-Hexanone	ND ND	1.0	μg/L μg/L	1	4/27/2013 4:01:29 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 17 of 30

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: MW-22

Transwestern Pipeline Company Roswell Collection Date: 4/17/2013 2:50:00 PM **Project:** 1304777-014 Matrix: AQUEOUS Received Date: 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Isopropylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
4-Isopropyltoluene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
4-Methyl-2-pentanone	ND	10	μg/L	1	4/27/2013 4:01:29 AM
Methylene Chloride	ND	3.0	μg/L	1	4/27/2013 4:01:29 AM
n-Butylbenzene	ND	3.0	μg/L	1	4/27/2013 4:01:29 AM
n-Propylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
sec-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Styrene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
tert-Butylbenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	4/27/2013 4:01:29 AM
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
trans-1,2-DCE	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,1,1-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Trichloroethene (TCE)	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
1,2,3-Trichloropropane	ND	2.0	μg/L	1	4/27/2013 4:01:29 AM
Vinyl chloride	ND	1.0	μg/L	1	4/27/2013 4:01:29 AM
Xylenes, Total	ND	1.5	μg/L	1	4/27/2013 4:01:29 AM
Surr: 1,2-Dichloroethane-d4	85.2	70-130	%REC	1	4/27/2013 4:01:29 AM
Surr: 4-Bromofluorobenzene	83.1	69.5-130	%REC	1	4/27/2013 4:01:29 AM
Surr: Dibromofluoromethane	86.6	70-130	%REC	1	4/27/2013 4:01:29 AM
Surr: Toluene-d8	83.3	70-130	%REC	1	4/27/2013 4:01:29 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 18 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Field Blank 2

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/17/2013 11:30:00 AM 1304777-015 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 10:53:39 PM
Toluene	ND	1.0	μg/L	1	4/26/2013 10:53:39 PM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 10:53:39 PM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 10:53:39 PM
Surr: 4-Bromofluorobenzene	97.1	69.4-129	%REC	1	4/26/2013 10:53:39 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 19 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Equipment Blank 2

Transwestern Pipeline Company Roswell **Project:** Collection Date: 4/17/2013 1:00:00 PM 1304777-016 Matrix: AQUEOUS Received Date: 4/18/2013 1:15:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/26/2013 11:24:03 PM
Toluene	ND	1.0	μg/L	1	4/26/2013 11:24:03 PM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 11:24:03 PM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 11:24:03 PM
Surr: 4-Bromofluorobenzene	96.8	69.4-129	%REC	1	4/26/2013 11:24:03 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 20 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Transwestern Pipeline Company Roswell **Project: Collection Date:**

1304777-017 Lab ID: Matrix: TRIP BLANK **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/26/2013 11:54:16 PM
Benzene	ND	1.0	μg/L	1	4/26/2013 11:54:16 PM
Toluene	ND	1.0	μg/L	1	4/26/2013 11:54:16 PM
Ethylbenzene	ND	1.0	μg/L	1	4/26/2013 11:54:16 PM
Xylenes, Total	ND	2.0	μg/L	1	4/26/2013 11:54:16 PM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	4/26/2013 11:54:16 PM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	4/26/2013 11:54:16 PM
Surr: 4-Bromofluorobenzene	95.3	69.4-129	%REC	1	4/26/2013 11:54:16 PM

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 21 of 30

Date Reported: 5/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW 24D Equipment Rinse

Transwestern Pipeline Company Roswell Collection Date: 4/16/2013 4:04:00 PM **Project:** 1304777-018 Matrix: AQUEOUS Lab ID: **Received Date:** 4/18/2013 1:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	4/27/2013 12:24:35 AM
Toluene	ND	1.0	μg/L	1	4/27/2013 12:24:35 AM
Ethylbenzene	ND	1.0	μg/L	1	4/27/2013 12:24:35 AM
Xylenes, Total	ND	2.0	μg/L	1	4/27/2013 12:24:35 AM
Surr: 4-Bromofluorobenzene	94.4	69.4-129	%REC	1	4/27/2013 12:24:35 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 22 of 30

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 5ML RB Client ID: PBW	•	ype: ME		TestCode: EPA Method RunNo: 10128			8021B: Volati	iles		
Prep Date:	Analysis D	ate: 4/	25/2013	5	SeqNo: 2	88679	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		97.6	69.4	129			

Sample ID: 100NG BTEX LCS	SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSW	Batch	1D: R1	0128	F	RunNo: 10	0128				
Prep Date:	Analysis D	ate: 4/	25/2013	S	SeqNo: 2	88680	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		105	69.4	129			

Sample ID: 1304660-001AMS	SampT	ype: MS	5	Tes	tCode: El	PA Method	8021B: Volati	iles		
Client ID: BatchQC	Batch	1D: R1	0128	F	RunNo: 1	0128				
Prep Date:	Analysis D	ate: 4/	25/2013	9	SeqNo: 2	88687	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	37	2.0	40.00	0	92.5	80	120			
Toluene	38	2.0	40.00	0.5720	93.4	80	120			
Ethylbenzene	38	2.0	40.00	0	94.4	80	120			
Xylenes, Total	120	4.0	120.0	0	101	80	120			
Surr: 4-Bromofluorobenzene	40		40.00		99.6	69.4	129			

Sample ID: 1304660-001AM	SD SampT	уре: МS	D	Tes	tCode: El	PA Method	8021B: Volati	iles		
Client ID: BatchQC	Batch	n ID: R1	0128	F	RunNo: 1	0128				
Prep Date:	Analysis D	Date: 4/	25/2013	9	SeqNo: 2	88688	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	37	2.0	40.00	0	93.3	80	120	0.883	20	
Toluene	38	2.0	40.00	0.5720	92.8	80	120	0.645	20	
Ethylbenzene	38	2.0	40.00	0	94.6	80	120	0.138	20	
Xylenes, Total	120	4.0	120.0	0	99.4	80	120	1.34	20	
Surr: 4-Bromofluorobenzene	41		40.00		102	69.4	129	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limitsS Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBW Batch ID: R10148 RunNo: 10148 Analysis Date: 4/26/2013 Prep Date: SeqNo: 289297 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Methyl tert-butyl ether (MTBE) ND 2.5 ND Benzene 1.0 Toluene ND 1.0 Ethylbenzene ND 1.0 Xylenes, Total ND 2.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 Surr: 4-Bromofluorobenzene 20.00 69.4 129 20 98.4

Sample ID: 100NG BTEX LCS	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	n ID: R1	0148	F	RunNo: 10	0148				
Prep Date:	Analysis D	ate: 4/	26/2013	5	SeqNo: 2	89298	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20	2.5	20.00	0	99.4	76.9	115			
Benzene	20	1.0	20.00	0	98.0	80	120			
Toluene	20	1.0	20.00	0	98.3	80	120			
Ethylbenzene	20	1.0	20.00	0	97.5	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	98.8	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		100	69.4	129			

Sample ID: 1304777-009AMS	Samp1	Гуре: МS	5	Tes	tCode: El	PA Method	8021B: Volati	iles		
Client ID: MW-16	Batc	h ID: R1	0148	F	RunNo: 10	0148				
Prep Date:	Analysis [Date: 4/	26/2013	9	SeqNo: 28	89305	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	930	120	1000	0	93.0	65.6	125			
Benzene	1700	50	1000	646.2	102	80	120			
Toluene	1000	50	1000	21.00	98.7	80	120			
Ethylbenzene	1200	50	1000	214.9	102	80	120			
Xylenes, Total	5400	100	3000	2361	101	80	120			
1,2,4-Trimethylbenzene	1300	50	1000	234.5	103	74	128			
1,3,5-Trimethylbenzene	1200	50	1000	144.5	106	75.5	130			
Surr: 4-Bromofluorobenzene	1100		1000		105	69.4	129			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limitsS Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 1304777-009AMSI	SampType: MSD TestCode: EPA Method 8021B: Volatiles									
Client ID: MW-16	Batch	n ID: R1	0148	F	RunNo: 10	0148				
Prep Date:	Analysis D	Date: 4/ 2	26/2013	S	SeqNo: 28	39306	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	970	120	1000	0	97.4	65.6	125	4.58	20	
Benzene	1700	50	1000	646.2	101	80	120	1.06	20	
Toluene	1000	50	1000	21.00	100	80	120	1.53	20	
Ethylbenzene	1200	50	1000	214.9	101	80	120	1.39	20	
Xylenes, Total	5300	100	3000	2361	98.8	80	120	1.41	20	
1,2,4-Trimethylbenzene	1200	50	1000	234.5	99.9	74	128	2.28	20	
1,3,5-Trimethylbenzene	1200	50	1000	144.5	103	75.5	130	2.56	20	
Surr: 4-Bromofluorobenzene	1100		1000		107	69.4	129	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 5ml-rb	SampT	уре: МЕ	BLK	Tes	tCode: EF	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0158	F	RunNo: 10	0158				
Prep Date:	Analysis D	ate: 4/	26/2013	5	SeqNo: 28	89475	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

Page 26 of 30

S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 5ml-rb	SampT	уре: МЕ	BLK	Tes	Code: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0158	R	tunNo: 10	0158				
Prep Date:	Analysis D	ate: 4/	26/2013	S	eqNo: 2	89475	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.4	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		85.8	69.5	130			
Surr: Dibromofluoromethane	8.6		10.00		86.0	70	130			
Surr: Toluene-d8	8.6		10.00		85.7	70	130			

Sample ID: 100ng Ics	SampT	ype: LC	s	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	1D: R1	0158	F	RunNo: 10	0158				
Prep Date:	Analysis D	ate: 4/	26/2013	8	SeqNo: 28	89477	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	110	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.4	85.8	133			
Trichloroethene (TCE)	20	1.0	20.00	0	98.3	70	130			

R

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

RPD outside accepted recovery limits

Page 27 of 30

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 100ng Ics	SampT	ype: LC	s	Tes	tCode: El	ATILES				
Client ID: LCSW	Batch	Batch ID: R10158			RunNo: 10	0158				
Prep Date:	Analysis Date: 4/26/2013			SeqNo: 289477			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.9	69.5	130			
Surr: Dibromofluoromethane	8.1		10.00		81.0	70	130			
Surr: Toluene-d8	8.5		10.00		84.7	70	130			

Sample ID: b2	SampT	ype: ME	BLK	Tes	Code: EF	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0158	R	unNo: 10	0158				
Prep Date:	Analysis D	ate: 4/	27/2013	S	eqNo: 28	89501	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: b2	SampTy	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R1	0158	F	RunNo: 10	0158				
Prep Date:	Analysis Da	ate: 4/	27/2013	\$	SeqNo: 2	89501	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.8	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.3	69.5	130			
Surr: Dibromofluoromethane	8.6		10.00		86.1	70	130			
Surr: Toluene-d8	8.7		10.00		86.6	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304777**

03-May-13

Client: Cypress Engineering

Project: Transwestern Pipeline Company Roswell Sta 9

Sample ID: 100ng lcs2	SampT	ype: LC	S	Tes	TestCode: EPA Method 8260B: VOLATILES									
Client ID: LCSW	Batch	n ID: R1	0158	F	RunNo: 10									
Prep Date:	Analysis D	ate: 4/	27/2013	S	SeqNo: 28	89503	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	22	1.0	20.00	0	110	70	130							
Toluene	22	1.0	20.00	0	108	80	120							
Chlorobenzene	21	1.0 20.00		0	104	70	130							
1,1-Dichloroethene	20	1.0	20.00	0	98.5	85.8	133							
Trichloroethene (TCE)	20	1.0	20.00	0	98.5	70	130							
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.9	70	130							
Surr: 4-Bromofluorobenzene	8.3		10.00		83.2	69.5	130							
Surr: Dibromofluoromethane	8.8		10.00		87.7	70	130							
Surr: Toluene-d8	8.4		10.00		84.0	70	130							

Sample ID: 1304a02-001a ms	SampT	уре: М S	5	Tes						
Client ID: BatchQC	Batch	ID: R1	0158	F	RunNo: 10	0158				
Prep Date:	Analysis D	ate: 4/	27/2013	8	SeqNo: 2	89518	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	120	5.0	100.0	13.54	110	70	130			
Toluene	110	5.0	100.0	0	108	68.5	128			
Chlorobenzene	100	5.0	100.0	0	103	70	130			
1,1-Dichloroethene	100	5.0	100.0	0	102	70	130			
Trichloroethene (TCE)	100	5.0	100.0	0	104	61.3	102			S
Surr: 1,2-Dichloroethane-d4	42		50.00		84.4	70	130			
Surr: 4-Bromofluorobenzene	41		50.00		83.0	69.5	130			
Surr: Dibromofluoromethane	44		50.00		88.1	70	130			
Surr: Toluene-d8	42		50.00		84.2	70	130			

Sample ID: 1304a02-001a msd	Sampi	ype: MS	SD	les						
Client ID: BatchQC	Batch	ID: R1	0158	F	RunNo: 1	0158				
Prep Date:	Analysis D	ate: 4/ 2	27/2013	8	SeqNo: 2	89519	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	130	5.0	100.0	13.54	114	70	130	3.02	20	
Toluene	110	5.0	100.0	0	108	68.5	128	0.324	20	
Chlorobenzene	100	5.0	100.0	0	103	70	130	0.292	20	
1,1-Dichloroethene	110	5.0	100.0	0	106	70	130	3.38	20	
Trichloroethene (TCE)	100	5.0	100.0	0	102	61.3	102	1.63	20	S
Surr: 1,2-Dichloroethane-d4	45		50.00		90.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	42		50.00		83.9	69.5	130	0	0	
Surr: Dibromofluoromethane	48		50.00		95.7	70	130	0	0	
Surr: Toluene-d8	43		50.00		86.3	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limitsS Spike Recovery outside accepted recovery limits

Page 30 of 30



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

CYP Work Order Number: 1304777 RcptNo: 1 Client Name: Received by/date: Michelle Garcia 4/18/2013 1:15:00 PM Logged By: Completed By: 4/18/2013 3:59:37 PM Michelle, Garcia Reviewed-By: Chain of Custody Not Present ✓ No 1 Custody seals intact on sample bottles? Yes Not Present 2. Is Chain of Custody complete? Yes No 3. How was the sample delivered? **UPS** Log In 4. Was an attempt made to cool the samples? NA Nο Yes 5. Were all samples received at a temperature of >0° C to 6.0°C No NA : : No 6. Sample(s) in proper container(s)? Yes 7. Sufficient sample volume for indicated test(s)? Nο 8. Are samples (except VOA and ONG) properly preserved? No Yes NA 9. Was preservative added to bottles? No Yes 10.VOA vials have zero headspace? No VOA Vials Yes No 11. Were any sample containers received broken? Yes No # of preserved bottles checked No for pH: 12. Does paperwork match bottle labels? Yes (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? Nο 14. Is it clear what analyses were requested? No Checked by: 15. Were all holding times able to be met? No (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA 🗸 Person Notified: Date: By Whom: Via: eMail Phone In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Good

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com		(les	o ss∂) eiG\ss∂	H9T + (1.81) (1.40) (1.	-\OQ + OO + BE	BTEX + MI BTEX + MT TPH Method TPH (Method EDB (Method 8310 (PNA RCRA 8 Method RCRA 8 Method RCRA 8 Method ROR1 Pestion 8270 (Semi	×										×	- X-X-	Remarks: CA 204 22/13 "INS	per George For
Turn-Around Time: Note Standard I Rush Project Name: Transcress for Programs Commy	Project #:	Project Manager:	George Robinson	Sampler: Stanty Shay Mun Backhille	Sample Temperature	Container Preservative THEALN®. Type and # Type TSOUTETE	3/40 ml Hel -601	/ / - 000	-(203	h00-	- 005	900-	100-	800~	000-			81 / OB	Received by Time	Received by: Date Time
Record Second	30/7		□ Level 4 (Full Validation)			Sample Request ID	MW-35	MW-34	FIELD BLANK 1	MW-32	MW-29	MW-24D	MW-23 D	MW-250	MW-16	mw-16 Dup	MW -20	MUNTED	120	1
Chain-of-Custody I	Phone # 281.79	[a, [QA/QC Package: Standard	Accreditation	□ EDD (Type)	Date Time Matrix	1/16/13 1530 W	1 1615 /	1620 (J&K	27.0	0451	13400	17/3 5850	05h1	1450	1 140 /		Date: Time: Relinquisper by:	-

ENVIDONMENTAL	YSIS LABORATORY	www.hallenvironmental.com	Albuquerque, NM 87109	Fax 505-345-4107	Analysis Request			2 / 8082 5 / 8083 (A)	N(I θ ΟV-	PCRA 8 Me D.(F).C Solos (YO) 8260B (YO) 8260B (Semi		×.											
	ANAL	www.ha	4901 Hawkins NE	Tel. 505-345-3975		(մլս	(ලෳ	+ TPH (5.81) (1.81) (1.40)	9 po 19 80 19 80 19 80 19 19 19 19 19 19 19 19 19 19 19 19 19 1	BTEX + MT TPH Method TPH (Method TPH (Method								•				Remarks:	
ïme:	□ Rush	Steen Piperus Contrag	1 849 1	2	Power SH ?		Rabinson	1) Thang I Clay Brenk, U.	erature / r ()	Preservative Type スクピコアデ	AC -6003	h10-	(- 615)	(0110-)		X 810- /						04/18/13 RIS	Date Time
Turn-Around Time:	X Standard	Project Name:	3	Project #:	TWP D	Project Manager	Greage	Sampler: Shw	Sample Temp	Container Type and #	3/40N		<u></u>		7m0h/2	1/402	1				<u></u>	Received by	Received by U
Chain-of-Custody Record	4HBS FNGINEOUN SOMES	29.75	Ex 77095		797 3420		□ Level 4 (Full Validation)			Sample Request ID	MW 26 000	MW-22	FIELD BLANK Z		Tax Glank	7	•		,			of by.) Aqp
n-of-Cu	1685 A	maff H	<i>\$19</i> 4/. :ssc		28179	£.		□ Other	(e	e Matrix	S W	/ 100	\ 0	()		γ)						Relinquished by	Refinequished by
Chai	Client: (U)	HH	Mailing Address:	i.	Phone #:	email or Fax#:	QA/QC Package: A Standard	Accreditation	□ EDD (Type)	Date Time	सिंह १११5	0541	1130	1300		1/16/18 1/004		Ē				Date; Time:	



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

November 26, 2013

George Robinson Cypress Engineering 7171 Highway 6 North

Suite 102

Houston, TX 770952422 TEL: (281) 797-3420

FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1311912

Dear George Robinson:

Hall Environmental Analysis Laboratory received 22 sample(s) on 11/20/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 11/26/2013

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-13

Collection Date: 11/18/2013 2:06:00 PM **Project:** TWP Roswell Station 9 Matrix: AQUEOUS Lab ID: 1311912-001 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analys	st: cadg
Benzene	ND	1.0	μg/L	1	11/22/2013 2:10:45 P	M R15006
Toluene	ND	1.0	μg/L	1	11/22/2013 2:10:45 P	M R15006
Ethylbenzene	ND	1.0	μg/L	1	11/22/2013 2:10:45 P	M R15006
Xylenes, Total	ND	2.0	μg/L	1	11/22/2013 2:10:45 P	M R15006
Surr: 1,2-Dichloroethane-d4	98.1	70-130	%REC	1	11/22/2013 2:10:45 P	M R15006
Surr: 4-Bromofluorobenzene	106	70-130	%REC	1	11/22/2013 2:10:45 P	M R15006
Surr: Dibromofluoromethane	100	70-130	%REC	1	11/22/2013 2:10:45 P	M R15006
Surr: Toluene-d8	95.0	70-130	%REC	1	11/22/2013 2:10:45 P	M R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2 for VOA and TOC only.
- P
- Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-14

Project: TWP Roswell Station 9 **Collection Date:** 11/18/2013 11:55:00 AM Matrix: AQUEOUS Lab ID: 1311912-002 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analys	st: cadg
Benzene	ND	1.0	μg/L	1	11/22/2013 3:36:49 P	M R15006
Toluene	ND	1.0	μg/L	1	11/22/2013 3:36:49 P	M R15006
Ethylbenzene	ND	1.0	μg/L	1	11/22/2013 3:36:49 P	M R15006
Xylenes, Total	ND	2.0	μg/L	1	11/22/2013 3:36:49 P	M R15006
Surr: 1,2-Dichloroethane-d4	97.6	70-130	%REC	1	11/22/2013 3:36:49 P	M R15006
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	11/22/2013 3:36:49 P	M R15006
Surr: Dibromofluoromethane	99.6	70-130	%REC	1	11/22/2013 3:36:49 P	M R15006
Surr: Toluene-d8	94.9	70-130	%REC	1	11/22/2013 3:36:49 Pl	M R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 2 of 41 Sample pH greater than 2 for VOA and TOC only.
- P
- Reporting Detection Limit

Lab Order **1311912**

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-16

 Project:
 TWP Roswell Station 9
 Collection Date: 11/18/2013 2:55:00 PM

 Lab ID:
 1311912-003
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Anal	yst: cadg
Benzene	320	10	μg/L	10	11/23/2013 12:57:35	5 PM R15020
Toluene	50	10	μg/L	10	11/23/2013 12:57:35	5 PM R15020
Ethylbenzene	210	10	μg/L	10	11/23/2013 12:57:35	5 PM R15020
Xylenes, Total	1900	20	μg/L	10	11/23/2013 12:57:35	5 PM R15020
Surr: 1,2-Dichloroethane-d4	94.2	70-130	%REC	10	11/23/2013 12:57:35	5 PM R15020
Surr: 4-Bromofluorobenzene	98.0	70-130	%REC	10	11/23/2013 12:57:35	5 PM R15020
Surr: Dibromofluoromethane	93.6	70-130	%REC	10	11/23/2013 12:57:35	5 PM R15020
Surr: Toluene-d8	94.7	70-130	%REC	10	11/23/2013 12:57:35	5 PM R15020

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 3
- ND Not Detected at the Reporting Limit Page 3 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-20

Project: TWP Roswell Station 9 **Collection Date:** 11/18/2013 10:34:00 AM Lab ID: 1311912-004 Matrix: AQUEOUS Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF Date Analyzed Ba	atch
EPA METHOD 8260B: VOLATILES				Analyst: ca	adg
Benzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Toluene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Ethylbenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Naphthalene	ND	2.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Acetone	ND	10	μg/L	1 11/22/2013 4:34:04 PM R	15006
Bromobenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Bromodichloromethane	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Bromoform	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Bromomethane	ND	3.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
2-Butanone	ND	10	μg/L	1 11/22/2013 4:34:04 PM R	15006
Carbon disulfide	ND	10	μg/L	1 11/22/2013 4:34:04 PM R	15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Chlorobenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Chloroethane	ND	2.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Chloroform	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Chloromethane	ND	3.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Dibromochloromethane	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Dibromomethane	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,1-Dichloroethane	1.8	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,1-Dichloroethene	1.6	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/22/2013 4:34:04 PM R	15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/22/2013 4:34:04 PM R	15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 4 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order **1311912**

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: MW-20

 Project:
 TWP Roswell Station 9
 Collection Date: 11/18/2013 10:34:00 AM

 Lab ID:
 1311912-004
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
2-Hexanone	ND	10	μg/L	1	11/22/2013 4:34:04 PM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/22/2013 4:34:04 PM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Styrene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/22/2013 4:34:04 PM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/22/2013 4:34:04 PM	R15006
Surr: 1,2-Dichloroethane-d4	91.6	70-130	%REC	1	11/22/2013 4:34:04 PM	R15006
Surr: 4-Bromofluorobenzene	107	70-130	%REC	1	11/22/2013 4:34:04 PM	R15006
Surr: Dibromofluoromethane	97.0	70-130	%REC	1	11/22/2013 4:34:04 PM	R15006
Surr: Toluene-d8	102	70-130	%REC	1	11/22/2013 4:34:04 PM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page
 - ND Not Detected at the Reporting Limit Page 5 of 41
 - P Sample pH greater than 2 for VOA and TOC only.
 - RL Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-21

Project: TWP Roswell Station 9 Collection Date: 11/18/2013 12:33:00 PM Matrix: AQUEOUS Lab ID: 1311912-005 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SI	HORT LIST				Analy	st: cadg
Benzene	ND	1.0	μg/L	1	11/22/2013 5:02:39 P	M R15006
Toluene	ND	1.0	μg/L	1	11/22/2013 5:02:39 P	M R15006
Ethylbenzene	ND	1.0	μg/L	1	11/22/2013 5:02:39 P	M R15006
Xylenes, Total	ND	2.0	μg/L	1	11/22/2013 5:02:39 P	M R15006
Surr: 1,2-Dichloroethane-d4	100	70-130	%REC	1	11/22/2013 5:02:39 P	M R15006
Surr: 4-Bromofluorobenzene	103	70-130	%REC	1	11/22/2013 5:02:39 P	M R15006
Surr: Dibromofluoromethane	99.5	70-130	%REC	1	11/22/2013 5:02:39 P	M R15006
Surr: Toluene-d8	98.3	70-130	%REC	1	11/22/2013 5:02:39 P	M R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-22

Project: TWP Roswell Station 9 **Collection Date:** 11/18/2013 11:08:00 AM Lab ID: 1311912-006 Matrix: AQUEOUS Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst	cadg
Benzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Toluene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Ethylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Methyl tert-butyl ether (MTBE)	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2,4-Trimethylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,3,5-Trimethylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2-Dichloroethane (EDC)	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2-Dibromoethane (EDB)	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Naphthalene	ND	4.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1-Methylnaphthalene	ND	8.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
2-Methylnaphthalene	ND	8.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Acetone	ND	20	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Bromobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Bromodichloromethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Bromoform	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Bromomethane	ND	6.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
2-Butanone	ND	20	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Carbon disulfide	ND	20	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Carbon Tetrachloride	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Chlorobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Chloroethane	ND	4.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Chloroform	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Chloromethane	ND	6.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
2-Chlorotoluene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
4-Chlorotoluene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
cis-1,2-DCE	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
cis-1,3-Dichloropropene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2-Dibromo-3-chloropropane	ND	4.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Dibromochloromethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Dibromomethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2-Dichlorobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,3-Dichlorobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,4-Dichlorobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Dichlorodifluoromethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,1-Dichloroethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,1-Dichloroethene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2-Dichloropropane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,3-Dichloropropane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
2,2-Dichloropropane	ND	4.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 7 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-22

Project: TWP Roswell Station 9 **Collection Date:** 11/18/2013 11:08:00 AM Lab ID: 1311912-006 Matrix: AQUEOUS Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	cadg
1,1-Dichloropropene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Hexachlorobutadiene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
2-Hexanone	ND	20	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Isopropylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
4-Isopropyltoluene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
4-Methyl-2-pentanone	ND	20	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Methylene Chloride	ND	6.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
n-Butylbenzene	ND	6.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
n-Propylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
sec-Butylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Styrene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
tert-Butylbenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,1,1,2-Tetrachloroethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,1,2,2-Tetrachloroethane	ND	4.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Tetrachloroethene (PCE)	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
trans-1,2-DCE	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
trans-1,3-Dichloropropene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2,3-Trichlorobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2,4-Trichlorobenzene	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,1,1-Trichloroethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,1,2-Trichloroethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Trichloroethene (TCE)	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Trichlorofluoromethane	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
1,2,3-Trichloropropane	ND	4.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Vinyl chloride	ND	2.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Xylenes, Total	ND	3.0	Р	μg/L	2	11/22/2013 5:31:13 PM	R15006
Surr: 1,2-Dichloroethane-d4	98.9	70-130	Р	%REC	2	11/22/2013 5:31:13 PM	R15006
Surr: 4-Bromofluorobenzene	109	70-130	Р	%REC	2	11/22/2013 5:31:13 PM	R15006
Surr: Dibromofluoromethane	102	70-130	Р	%REC	2	11/22/2013 5:31:13 PM	R15006
Surr: Toluene-d8	94.8	70-130	Р	%REC	2	11/22/2013 5:31:13 PM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 8 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-21 Duplicate

Project: TWP Roswell Station 9 Collection Date: 11/18/2013 12:33:00 PM 1311912-007 Matrix: AQUEOUS **Received Date:** 11/20/2013 1:00:00 PM Lab ID:

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	EPA METHOD 8260: VOLATILES SHORT LIST				
Benzene	ND	1.0	μg/L	1 11/22/2013 5:59:47	PM R15006
Toluene	ND	1.0	μg/L	1 11/22/2013 5:59:47	PM R15006
Ethylbenzene	ND	1.0	μg/L	1 11/22/2013 5:59:47	PM R15006
Xylenes, Total	ND	2.0	μg/L	1 11/22/2013 5:59:47	PM R15006
Surr: 1,2-Dichloroethane-d4	99.8	70-130	%REC	1 11/22/2013 5:59:47	PM R15006
Surr: 4-Bromofluorobenzene	105	70-130	%REC	1 11/22/2013 5:59:47	PM R15006
Surr: Dibromofluoromethane	103	70-130	%REC	1 11/22/2013 5:59:47	PM R15006
Surr: Toluene-d8	96.3	70-130	%REC	1 11/22/2013 5:59:47	PM R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 9 of 41 Sample pH greater than 2 for VOA and TOC only.
- P
- Reporting Detection Limit

Date Reported: 11/26/2013

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-24D

Project: TWP Roswell Station 9 Collection Date: 11/18/2013 3:35:00 PM Matrix: AQUEOUS Lab ID: 1311912-008 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SI	HORT LIST			An	alyst: cadg
Benzene	ND	1.0	μg/L	1 11/22/2013 6:28:2	0 PM R15006
Toluene	ND	1.0	μg/L	1 11/22/2013 6:28:2	0 PM R15006
Ethylbenzene	ND	1.0	μg/L	1 11/22/2013 6:28:2	0 PM R15006
Xylenes, Total	ND	2.0	μg/L	1 11/22/2013 6:28:2	0 PM R15006
Surr: 1,2-Dichloroethane-d4	106	70-130	%REC	1 11/22/2013 6:28:2	0 PM R15006
Surr: 4-Bromofluorobenzene	105	70-130	%REC	1 11/22/2013 6:28:2	0 PM R15006
Surr: Dibromofluoromethane	102	70-130	%REC	1 11/22/2013 6:28:2	0 PM R15006
Surr: Toluene-d8	96.7	70-130	%REC	1 11/22/2013 6:28:2	0 PM R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 10 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order **1311912**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-26

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 4:29:00 PM

 Lab ID:
 1311912-009
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qua	al Units	DF Date Analyzed Ba	atch
EPA METHOD 8260B: VOLATILES				Analyst: ca	adg
Benzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Toluene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Ethylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R ²	15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R ²	15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R ²	15006
Naphthalene	ND	2.0	μg/L	1 11/22/2013 6:56:54 PM R ²	15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/22/2013 6:56:54 PM R ²	15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Acetone	ND	10	μg/L	1 11/22/2013 6:56:54 PM R	15006
Bromobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Bromodichloromethane	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Bromoform	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Bromomethane	ND	3.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
2-Butanone	ND	10	μg/L	1 11/22/2013 6:56:54 PM R	15006
Carbon disulfide	ND	10	μg/L	1 11/22/2013 6:56:54 PM R	15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Chlorobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Chloroethane	ND	2.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Chloroform	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Chloromethane	ND	3.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Dibromochloromethane	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Dibromomethane	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,1-Dichloroethane	6.0	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,1-Dichloroethene	45	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/22/2013 6:56:54 PM R	15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/22/2013 6:56:54 PM R	15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 11 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-26

Project: TWP Roswell Station 9 **Collection Date:** 11/15/2013 4:29:00 PM 1311912-009 Lab ID: Matrix: AQUEOUS Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Ana	lyst: cadg
1,1-Dichloropropene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Hexachlorobutadiene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
2-Hexanone	ND	10	μg/L	1 11/22/2013 6:56:54	PM R15006
Isopropylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
4-Isopropyltoluene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
4-Methyl-2-pentanone	ND	10	μg/L	1 11/22/2013 6:56:54	PM R15006
Methylene Chloride	ND	3.0	μg/L	1 11/22/2013 6:56:54	PM R15006
n-Butylbenzene	ND	3.0	μg/L	1 11/22/2013 6:56:54	PM R15006
n-Propylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
sec-Butylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Styrene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
tert-Butylbenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
trans-1,2-DCE	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Trichlorofluoromethane	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Vinyl chloride	ND	1.0	μg/L	1 11/22/2013 6:56:54	PM R15006
Xylenes, Total	ND	1.5	μg/L	1 11/22/2013 6:56:54	PM R15006
Surr: 1,2-Dichloroethane-d4	103	70-130	%REC	1 11/22/2013 6:56:54	PM R15006
Surr: 4-Bromofluorobenzene	105	70-130	%REC	1 11/22/2013 6:56:54	PM R15006
Surr: Dibromofluoromethane	104	70-130	%REC	1 11/22/2013 6:56:54	PM R15006
Surr: Toluene-d8	99.9	70-130	%REC	1 11/22/2013 6:56:54	PM R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 12 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Received Date: 11/20/2013 1:00:00 PM

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-26 Duplicate

Project: TWP Roswell Station 9 Collection Date: 11/15/2013 4:29:00 PM Matrix: AQUEOUS

Analyses	Result	RL Qua	al Units	DF Date Analyzed Bar	tch
EPA METHOD 8260B: VOLATILES				Analyst: ca	dg
Benzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1:	5006
Toluene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1:	5006
Ethylbenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Naphthalene	ND	2.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Acetone	ND	10	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Bromobenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Bromodichloromethane	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Bromoform	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Bromomethane	ND	3.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
2-Butanone	ND	10	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Carbon disulfide	ND	10	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Chlorobenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Chloroethane	ND	2.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Chloroform	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Chloromethane	ND	3.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
2-Chlorotoluene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
4-Chlorotoluene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
cis-1,2-DCE	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Dibromochloromethane	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Dibromomethane	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,1-Dichloroethane	5.9	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,1-Dichloroethene	46	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/22/2013 7:25:28 PM R1	5006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

Lab ID:

1311912-010

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit Page 13 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-26 Duplicate

Project: TWP Roswell Station 9 Collection Date: 11/15/2013 4:29:00 PM

Lab ID: 1311912-010 **Matrix:** AQUEOUS **Received Date:** 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
2-Hexanone	ND	10	μg/L	1	11/22/2013 7:25:28 PM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/22/2013 7:25:28 PM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Styrene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/22/2013 7:25:28 PM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/22/2013 7:25:28 PM	R15006
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	11/22/2013 7:25:28 PM	R15006
Surr: 4-Bromofluorobenzene	108	70-130	%REC	1	11/22/2013 7:25:28 PM	R15006
Surr: Dibromofluoromethane	102	70-130	%REC	1	11/22/2013 7:25:28 PM	R15006
Surr: Toluene-d8	94.7	70-130	%REC	1	11/22/2013 7:25:28 PM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 14 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-29

Project: TWP Roswell Station 9 Collection Date: 11/14/2013 4:51:00 PM Matrix: AQUEOUS Lab ID: 1311912-011 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST			Analy	st: cadg
Benzene	ND	1.0	μg/L	1 11/22/2013 7:54:02 P	M R15006
Toluene	ND	1.0	μg/L	1 11/22/2013 7:54:02 P	M R15006
Ethylbenzene	ND	1.0	μg/L	1 11/22/2013 7:54:02 P	M R15006
Xylenes, Total	ND	2.0	μg/L	1 11/22/2013 7:54:02 P	M R15006
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1 11/22/2013 7:54:02 P	M R15006
Surr: 4-Bromofluorobenzene	105	70-130	%REC	1 11/22/2013 7:54:02 P	M R15006
Surr: Dibromofluoromethane	104	70-130	%REC	1 11/22/2013 7:54:02 P	M R15006
Surr: Toluene-d8	102	70-130	%REC	1 11/22/2013 7:54:02 P	M R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 15 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-32

Project: TWP Roswell Station 9 Collection Date: 11/14/2013 3:58:00 PM Lab ID: 1311912-012 Matrix: AQUEOUS Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analy	st: cadg
Benzene	ND	1.0	μg/L	1	11/22/2013 8:22:35 F	M R15006
Toluene	ND	1.0	μg/L	1	11/22/2013 8:22:35 F	M R15006
Ethylbenzene	ND	1.0	μg/L	1	11/22/2013 8:22:35 F	M R15006
Xylenes, Total	ND	2.0	μg/L	1	11/22/2013 8:22:35 F	M R15006
Surr: 1,2-Dichloroethane-d4	103	70-130	%REC	1	11/22/2013 8:22:35 F	M R15006
Surr: 4-Bromofluorobenzene	113	70-130	%REC	1	11/22/2013 8:22:35 F	M R15006
Surr: Dibromofluoromethane	101	70-130	%REC	1	11/22/2013 8:22:35 F	M R15006
Surr: Toluene-d8	97.9	70-130	%REC	1	11/22/2013 8:22:35 F	M R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit Page 16 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-34

Project: TWP Roswell Station 9 **Collection Date:** 11/14/2013 11:08:00 AM Matrix: AQUEOUS Lab ID: 1311912-013 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analy	st: cadg
Benzene	7.2	1.0	μg/L	1	11/23/2013 1:55:03 F	PM R15020
Toluene	ND	1.0	μg/L	1	11/23/2013 1:55:03 F	M R15020
Ethylbenzene	ND	1.0	μg/L	1	11/23/2013 1:55:03 F	M R15020
Xylenes, Total	ND	2.0	μg/L	1	11/23/2013 1:55:03 F	M R15020
Surr: 1,2-Dichloroethane-d4	95.8	70-130	%REC	1	11/23/2013 1:55:03 F	M R15020
Surr: 4-Bromofluorobenzene	109	70-130	%REC	1	11/23/2013 1:55:03 F	PM R15020
Surr: Dibromofluoromethane	97.0	70-130	%REC	1	11/23/2013 1:55:03 F	PM R15020
Surr: Toluene-d8	98.6	70-130	%REC	1	11/23/2013 1:55:03 F	M R15020

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 17 of 41 Sample pH greater than 2 for VOA and TOC only.
- P
- Reporting Detection Limit

Lab Order **1311912**

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-34 Duplicate

 Project:
 TWP Roswell Station 9
 Collection Date: 11/14/2013 11:08:00 AM

 Lab ID:
 1311912-014
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: cadg 11/23/2013 2:23:45 PM R15020 Benzene 7.2 1.0 μg/L Toluene ND 1.0 μg/L 11/23/2013 2:23:45 PM R15020 Ethylbenzene ND 1.0 μg/L 11/23/2013 2:23:45 PM R15020 Xylenes, Total ND 11/23/2013 2:23:45 PM R15020 2.0 μg/L Surr: 1,2-Dichloroethane-d4 %REC 103 70-130 11/23/2013 2:23:45 PM R15020 Surr: 4-Bromofluorobenzene 111 70-130 %REC 11/23/2013 2:23:45 PM R15020 Surr: Dibromofluoromethane 99.3 70-130 %REC 11/23/2013 2:23:45 PM R15020 Surr: Toluene-d8 100 70-130 %REC 11/23/2013 2:23:45 PM R15020

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 18 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1311912**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-35

 Project:
 TWP Roswell Station 9
 Collection Date: 11/14/2013 2:40:00 PM

 Lab ID:
 1311912-015
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analys	st: cadg
Benzene	ND	1.0	μg/L	1	11/22/2013 9:48:20 P	M R15006
Toluene	ND	1.0	μg/L	1	11/22/2013 9:48:20 P	M R15006
Ethylbenzene	ND	1.0	μg/L	1	11/22/2013 9:48:20 P	M R15006
Xylenes, Total	ND	2.0	μg/L	1	11/22/2013 9:48:20 P	M R15006
Surr: 1,2-Dichloroethane-d4	97.7	70-130	%REC	1	11/22/2013 9:48:20 P	M R15006
Surr: 4-Bromofluorobenzene	111	70-130	%REC	1	11/22/2013 9:48:20 P	M R15006
Surr: Dibromofluoromethane	101	70-130	%REC	1	11/22/2013 9:48:20 P	M R15006
Surr: Toluene-d8	98.0	70-130	%REC	1	11/22/2013 9:48:20 P	M R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 19 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1311912**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-37

 Project:
 TWP Roswell Station 9
 Collection Date: 11/14/2013 9:49:00 AM

 Lab ID:
 1311912-016
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SI	HORT LIST				Anal	yst: cadg
Benzene	ND	1.0	μg/L	1	11/23/2013 12:11:10	AM R15006
Toluene	ND	1.0	μg/L	1	11/23/2013 12:11:10	AM R15006
Ethylbenzene	ND	1.0	μg/L	1	11/23/2013 12:11:10	AM R15006
Xylenes, Total	ND	2.0	μg/L	1	11/23/2013 12:11:10	AM R15006
Surr: 1,2-Dichloroethane-d4	93.7	70-130	%REC	1	11/23/2013 12:11:10	AM R15006
Surr: 4-Bromofluorobenzene	106	70-130	%REC	1	11/23/2013 12:11:10	AM R15006
Surr: Dibromofluoromethane	96.0	70-130	%REC	1	11/23/2013 12:11:10	AM R15006
Surr: Toluene-d8	102	70-130	%REC	1	11/23/2013 12:11:10	AM R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 20 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-39

Project: TWP Roswell Station 9 Collection Date: 11/15/2013 2:25:00 PM Matrix: AQUEOUS Lab ID: 1311912-017 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF Date Analyzed Ba	atch
EPA METHOD 8260B: VOLATILES				Analyst: ca	adg
Benzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Toluene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Ethylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Naphthalene	ND	2.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Acetone	ND	10	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Bromobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Bromodichloromethane	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Bromoform	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Bromomethane	ND	3.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
2-Butanone	ND	10	μg/L	1 11/23/2013 12:39:43 AM R	15006
Carbon disulfide	ND	10	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Chlorobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Chloroethane	ND	2.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Chloroform	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
Chloromethane	ND	3.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R ²	15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Dibromochloromethane	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Dibromomethane	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,1-Dichloroethane	1.6	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,1-Dichloroethene	15	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 12:39:43 AM R	15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/23/2013 12:39:43 AM R	15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 21 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-39

Project: TWP Roswell Station 9 **Collection Date:** 11/15/2013 2:25:00 PM Lab ID: 1311912-017 Matrix: AQUEOUS Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Ana	lyst: cadg
1,1-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Hexachlorobutadiene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
2-Hexanone	ND	10	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Isopropylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
4-Isopropyltoluene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
4-Methyl-2-pentanone	ND	10	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Methylene Chloride	ND	3.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
n-Butylbenzene	ND	3.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
n-Propylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
sec-Butylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Styrene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
tert-Butylbenzene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
trans-1,2-DCE	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Trichlorofluoromethane	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Vinyl chloride	ND	1.0	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Xylenes, Total	ND	1.5	μg/L	1 11/23/2013 12:39:4	3 AM R15006
Surr: 1,2-Dichloroethane-d4	96.2	70-130	%REC	1 11/23/2013 12:39:4	3 AM R15006
Surr: 4-Bromofluorobenzene	108	70-130	%REC	1 11/23/2013 12:39:4	3 AM R15006
Surr: Dibromofluoromethane	99.8	70-130	%REC	1 11/23/2013 12:39:4	3 AM R15006
Surr: Toluene-d8	103	70-130	%REC	1 11/23/2013 12:39:4	3 AM R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 22 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-39 Duplicate

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 2:25:00 PM

 Lab ID:
 1311912-018
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qua	al Units	DF Date Analyzed Ba	atch
EPA METHOD 8260B: VOLATILES				Analyst: ca	adg
Benzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Toluene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Ethylbenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Naphthalene	ND	2.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Acetone	ND	10	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Bromobenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Bromodichloromethane	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
Bromoform	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Bromomethane	ND	3.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
2-Butanone	ND	10	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Carbon disulfide	ND	10	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Chlorobenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Chloroethane	ND	2.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Chloroform	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Chloromethane	ND	3.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Dibromochloromethane	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Dibromomethane	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,1-Dichloroethane	1.5	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,1-Dichloroethene	16	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 1:08:15 AM R	R15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/23/2013 1:08:15 AM R	₹15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 23 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-39 Duplicate

Project: TWP Roswell Station 9 **Collection Date:** 11/15/2013 2:25:00 PM

Lab ID: Matrix: AQUEOUS 1311912-018 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
2-Hexanone	ND	10	μg/L	1	11/23/2013 1:08:15 AM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/23/2013 1:08:15 AM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Styrene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/23/2013 1:08:15 AM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/23/2013 1:08:15 AM	R15006
Surr: 1,2-Dichloroethane-d4	95.9	70-130	%REC	1	11/23/2013 1:08:15 AM	R15006
Surr: 4-Bromofluorobenzene	109	70-130	%REC	1	11/23/2013 1:08:15 AM	R15006
Surr: Dibromofluoromethane	99.6	70-130	%REC	1	11/23/2013 1:08:15 AM	R15006
Surr: Toluene-d8	99.8	70-130	%REC	1	11/23/2013 1:08:15 AM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 24 of 41 Sample pH greater than 2 for VOA and TOC only.
- P
- Reporting Detection Limit

Lab Order **1311912**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-40

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 10:17:00 AM

 Lab ID:
 1311912-019
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qua	al Units	DF Date A	Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	cadg
Benzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Toluene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Ethylbenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Naphthalene	ND	2.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Acetone	ND	10	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Bromobenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Bromodichloromethane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Bromoform	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Bromomethane	ND	3.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
2-Butanone	ND	10	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Carbon disulfide	ND	10	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Chlorobenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Chloroethane	ND	2.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Chloroform	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Chloromethane	ND	3.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Dibromochloromethane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Dibromomethane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,1-Dichloroethane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,1-Dichloroethene	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/23/	2013 1:36:48 AM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 25 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1311912**

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-40

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 10:17:00 AM

 Lab ID:
 1311912-019
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
2-Hexanone	ND	10	μg/L	1	11/23/2013 1:36:48 AM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/23/2013 1:36:48 AM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Styrene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/23/2013 1:36:48 AM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/23/2013 1:36:48 AM	R15006
Surr: 1,2-Dichloroethane-d4	95.9	70-130	%REC	1	11/23/2013 1:36:48 AM	R15006
Surr: 4-Bromofluorobenzene	105	70-130	%REC	1	11/23/2013 1:36:48 AM	R15006
Surr: Dibromofluoromethane	100	70-130	%REC	1	11/23/2013 1:36:48 AM	R15006
Surr: Toluene-d8	98.3	70-130	%REC	1	11/23/2013 1:36:48 AM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 26 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1311912**

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-41

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 11:19:00 AM

 Lab ID:
 1311912-020
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qua	al Units	DF Date Analyzed B	Batch
EPA METHOD 8260B: VOLATILES				Analyst: c	adg
Benzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	२15006
Toluene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Ethylbenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Naphthalene	ND	2.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Acetone	ND	10	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Bromobenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Bromodichloromethane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Bromoform	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Bromomethane	ND	3.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
2-Butanone	ND	10	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Carbon disulfide	ND	10	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Chlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Chloroethane	ND	2.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Chloroform	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Chloromethane	ND	3.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
Dibromochloromethane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Dibromomethane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
1,1-Dichloroethane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,1-Dichloroethene	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	₹15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/23/2013 2:05:20 AM R	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 27 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: MW-41

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 11:19:00 AM

 Lab ID:
 1311912-020
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
2-Hexanone	ND	10	μg/L	1	11/23/2013 2:05:20 AM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/23/2013 2:05:20 AM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Styrene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/23/2013 2:05:20 AM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/23/2013 2:05:20 AM	R15006
Surr: 1,2-Dichloroethane-d4	98.2	70-130	%REC	1	11/23/2013 2:05:20 AM	R15006
Surr: 4-Bromofluorobenzene	99.8	70-130	%REC	1	11/23/2013 2:05:20 AM	R15006
Surr: Dibromofluoromethane	100	70-130	%REC	1	11/23/2013 2:05:20 AM	R15006
Surr: Toluene-d8	102	70-130	%REC	1	11/23/2013 2:05:20 AM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 28 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Date Reported: 11/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-42

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 9:16:00 AM

 Lab ID:
 1311912-021
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qua	al Units	DF Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Ana	lyst: cadg
Benzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Toluene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Ethylbenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Naphthalene	ND	2.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 2:33:52	AM R15006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Acetone	ND	10	μg/L	1 11/23/2013 2:33:52	AM R15006
Bromobenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Bromodichloromethane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Bromoform	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Bromomethane	ND	3.0	μg/L	1 11/23/2013 2:33:52	AM R15006
2-Butanone	ND	10	μg/L	1 11/23/2013 2:33:52	AM R15006
Carbon disulfide	ND	10	μg/L	1 11/23/2013 2:33:52	AM R15006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Chlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Chloroethane	ND	2.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Chloroform	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Chloromethane	ND	3.0	μg/L	1 11/23/2013 2:33:52	AM R15006
2-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
4-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
cis-1,2-DCE	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Dibromochloromethane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Dibromomethane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,1-Dichloroethane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,1-Dichloroethene	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,2-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
1,3-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 2:33:52	AM R15006
2,2-Dichloropropane	ND	2.0	μg/L	1 11/23/2013 2:33:52	AM R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 29 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Date Reported: 11/26/2013

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MW-42

 Project:
 TWP Roswell Station 9
 Collection Date: 11/15/2013 9:16:00 AM

 Lab ID:
 1311912-021
 Matrix: AQUEOUS
 Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
2-Hexanone	ND	10	μg/L	1	11/23/2013 2:33:52 AM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/23/2013 2:33:52 AM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Styrene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/23/2013 2:33:52 AM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/23/2013 2:33:52 AM	R15006
Surr: 1,2-Dichloroethane-d4	98.9	70-130	%REC	1	11/23/2013 2:33:52 AM	R15006
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	11/23/2013 2:33:52 AM	R15006
Surr: Dibromofluoromethane	100	70-130	%REC	1	11/23/2013 2:33:52 AM	R15006
Surr: Toluene-d8	95.4	70-130	%REC	1	11/23/2013 2:33:52 AM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 30 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1311912-022 **Matrix:** TRIP BLANK **Received Date:** 11/20/2013 1:00:00 PM

Analyses	Result	RL Qua	al Units	DF Date Analyz	ed Batc	h
EPA METHOD 8260B: VOLATILES					Analyst: cadg	9
Benzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Toluene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Ethylbenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Naphthalene	ND	2.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
2-Methylnaphthalene	ND	4.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Acetone	ND	10	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Bromobenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Bromodichloromethane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Bromoform	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Bromomethane	ND	3.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
2-Butanone	ND	10	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Carbon disulfide	ND	10	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Carbon Tetrachloride	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Chlorobenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Chloroethane	ND	2.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Chloroform	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Chloromethane	ND	3.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
2-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
4-Chlorotoluene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
cis-1,2-DCE	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Dibromochloromethane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Dibromomethane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,2-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,3-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,4-Dichlorobenzene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
Dichlorodifluoromethane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,1-Dichloroethane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150	006
1,1-Dichloroethene	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150)06
1,2-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150)06
1,3-Dichloropropane	ND	1.0	μg/L	1 11/23/2013 3:	59:26 AM R150)06
2,2-Dichloropropane	ND	2.0	μg/L	1 11/23/2013 3:	59:26 AM R150)06

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 31 of 41
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311912

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 **Collection Date:**

Lab ID: 1311912-022 Matrix: TRIP BLANK Received Date: 11/20/2013 1:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	cadg
1,1-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Hexachlorobutadiene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
2-Hexanone	ND	10	μg/L	1	11/23/2013 3:59:26 AM	R15006
Isopropylbenzene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
4-Isopropyltoluene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
4-Methyl-2-pentanone	ND	10	μg/L	1	11/23/2013 3:59:26 AM	R15006
Methylene Chloride	ND	3.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
n-Butylbenzene	ND	3.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
n-Propylbenzene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
sec-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Styrene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
tert-Butylbenzene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
trans-1,2-DCE	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,1,1-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,1,2-Trichloroethane	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Trichloroethene (TCE)	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Trichlorofluoromethane	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
1,2,3-Trichloropropane	ND	2.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Vinyl chloride	ND	1.0	μg/L	1	11/23/2013 3:59:26 AM	R15006
Xylenes, Total	ND	1.5	μg/L	1	11/23/2013 3:59:26 AM	R15006
Surr: 1,2-Dichloroethane-d4	93.9	70-130	%REC	1	11/23/2013 3:59:26 AM	R15006
Surr: 4-Bromofluorobenzene	109	70-130	%REC	1	11/23/2013 3:59:26 AM	R15006
Surr: Dibromofluoromethane	101	70-130	%REC	1	11/23/2013 3:59:26 AM	R15006
Surr: Toluene-d8	99.3	70-130	%REC	1	11/23/2013 3:59:26 AM	R15006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 32 of 41 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5mL rb	SampT	уре: МЕ	BLK	TestCode: EPA Method 8260: Volatiles Short List					ist	
Client ID: PBW	Batch	n ID: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 11	1/22/2013	S	SeqNo: 4	33191	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID 100ng lcs	SampT	ype: LC	pe: LCS TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch	1D: R1	5006	5006 RunNo: 15006						
Prep Date:	Analysis D	ate: 1 1	1/22/2013	S	SeqNo: 4	33207	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	97.1	82.2	124			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID 1311912-001a ms	SampT	SampType: MS TestCode: EPA Method 8260: Volatiles Short List								
Client ID: MW-13	Batch	Batch ID: R15006 RunNo: 15006								
Prep Date:	Analysis D	ate: 1 1	1/22/2013	S	SeqNo: 4	33209	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	67.9	137			
Toluene	19	1.0	20.00	0	94.9	77	127			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 33 of 41

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1311912-001a msc	d SampTy	SampType: MSD TestCode: EPA Method 8260: Volatiles Short List								
Client ID: MW-13	Batch	Batch ID: R15006 RunNo: 15006								
Prep Date:	Analysis Da	nalysis Date: 11/22/2013 SeqNo: 433210 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.8	67.9	137	4.58	20	
Toluene	18	1.0	20.00	0	89.6	77	127	5.75	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		102	70	130	0	0	
Surr: Toluene-d8	10		10.00		100	70	130	0	0	

Sample ID 5mL rb	SampT	ype: ME	BLK	Tes	tCode: El	8260: Volatiles Short List				
Client ID: PBW	Batch	1D: R1	5020	F	RunNo: 1	5020				
Prep Date:	Analysis D	ate: 11	1/23/2013	S	SeqNo: 4	33713	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.4	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID 100ng Ics SampType: LCS				TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: R15020			RunNo: 15020							
Prep Date:	Analysis Date: 11/23/2013			SeqNo: 433714			Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	20	1.0	20.00	0	100	70	130				
Toluene	19	1.0	20.00	0	96.4	82.2	124				
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.3	70	130				
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130				
Surr: Dibromofluoromethane	10		10.00		103	70	130				
Surr: Toluene-d8	9.8		10.00		97.9	70	130				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 34 of 41

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5mL rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R15006			RunNo: 15006						
Prep Date:	Analysis Date: 11/22/2013			SeqNo: 433141			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane 1,1-Dichloroethene	ND	1.0								
	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5mL rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	1D: R1	5006	R	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 1	1/22/2013	S	SeqNo: 4	33141	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID 100ng Ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	n ID: R1	5006	R	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 11	1/22/2013	S	SeqNo: 4	33144	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	97.1	82.2	124			
Chlorobenzene	18	1.0	20.00		90.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1311912

26-Nov-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 100ng Ics	SampT	ype: LC	s	Tes						
Client ID: LCSW	Batch	1D: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 11	1/22/2013	9	SeqNo: 4	33144	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	111	83.5	155			
Trichloroethene (TCE)	17	1.0	20.00	0	84.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID b5	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 1	1/22/2013	S	SeqNo: 4	33169	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID **b5** SampType: MBLK TestCode: EPA Method 8260B: VOLATILES RunNo: 15006 Client ID: **PBW** Batch ID: R15006 Analysis Date: 11/22/2013 Prep Date: SeqNo: 433169 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 1,2-Dibromo-3-chloropropane ND 2.0 ND Dibromochloromethane 1.0 ND Dibromomethane 1.0 1,2-Dichlorobenzene ND 1.0 1,3-Dichlorobenzene ND 1.0 1,4-Dichlorobenzene ND 1.0 Dichlorodifluoromethane ND 1.0 ND 1,1-Dichloroethane 1.0 1,1-Dichloroethene ND 1.0 ND 1.0 1,2-Dichloropropane 1,3-Dichloropropane ND 1.0 ND 2.0 2,2-Dichloropropane 1,1-Dichloropropene ND 1.0 Hexachlorobutadiene ND 1.0 2-Hexanone ND 10 Isopropylbenzene ND 1.0 4-Isopropyltoluene ND 1.0 4-Methyl-2-pentanone ND 10 Methylene Chloride ND 3.0 n-Butylbenzene ND 3.0 n-Propylbenzene ND 1.0 sec-Butylbenzene ND 1.0 ND Styrene 1.0 tert-Butylbenzene ND 1.0 1,1,1,2-Tetrachloroethane ND 1.0 1.1.2.2-Tetrachloroethane ND 2.0 Tetrachloroethene (PCE) ND 1.0 trans-1,2-DCE ND 1.0 trans-1,3-Dichloropropene ND 1.0 ND 1,2,3-Trichlorobenzene 1.0 ND 1.2.4-Trichlorobenzene 1.0 1,1,1-Trichloroethane ND 1.0 1,1,2-Trichloroethane ND 1.0 Trichloroethene (TCE) ND 1.0 Trichlorofluoromethane ND 1.0 1,2,3-Trichloropropane ND 2.0 Vinyl chloride ND 1.0 Xylenes, Total ND 1.5 Surr: 1,2-Dichloroethane-d4 10 10.00 100 70 130

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID b5	SampT	уре: МІ	BLK	Tes	tCode: El	ATILES				
Client ID: PBW	Batch	n ID: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 1	1/22/2013	S	SeqNo: 4	33169	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			
Sample ID 100ng lcs 2	SampT	ype: LC	pe: LCS TestCode: EPA Method 8260B: VOLATILES							

Client ID: LCSW	Batcl	n ID: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D)ate: 1	1/22/2013	5	SeqNo: 4	33173	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	70	130			
Toluene	19	1.0	20.00	0	94.3	82.2	124			
Chlorobenzene	18	1.0	20.00	0	89.2	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	83.5	155			
Trichloroethene (TCE)	17	1.0	20.00	0	85.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID 1311912-021a ms	SampT	ype: MS	3	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: MW-42	Batch	1D: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 11	1/23/2013	8	SeqNo: 4	33176	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.3	67.9	137			
Toluene	19	1.0	20.00	0	95.8	77	127			
Chlorobenzene	18	1.0	20.00	0	90.4	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	66.5	131			
Trichloroethene (TCE)	17	1.0	20.00	0	85.4	66.3	134			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			

Sample ID	1311912-021a msd	SampType:	MSD		Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID:	MW-42	Batch ID:	R15006		R	RunNo: 1	5006				
Prep Date:	,	Analysis Date:	11/23/20	13	S	SeqNo: 4	33177	Units: µg/L			
Analyte		Result PC	QL SPK v	/alue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		19	1.0 2	20.00	0	97.0	67.9	137	1.30	20	

10.00

Qualifiers:

Surr: Toluene-d8

* Value exceeds Maximum Contaminant Level.

10

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

102

70

130

- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1311912-021a ms	sd SampT	ype: MS	SD	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: MW-42	Batch	ID: R1	5006	F	RunNo: 1	5006				
Prep Date:	Analysis D	ate: 11	1/23/2013	8	SeqNo: 4	33177	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	18	1.0	20.00	0	91.1	77	127	5.01	20	
Chlorobenzene	18	1.0	20.00	0	88.6	70	130	2.00	20	
1,1-Dichloroethene	21	1.0	20.00	0	107	66.5	131	2.51	20	
Trichloroethene (TCE)	16	1.0	20.00	0	82.3	66.3	134	3.70	20	
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		97.0	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		97.9	70	130	0	0	
Sample ID 5mL rb	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES	_	

Client ID: PBW	Batch	n ID: R1	5020	F	RunNo: 1	5020				
Prep Date:	Analysis D	ate: 1	1/23/2013	S	SeqNo: 4	33673	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Tetrachloroethene (PCE)	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.4	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID 100ng Ics	Sampi	ype: LC	S	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	n ID: R1	5020	F	RunNo: 1	5020				
Prep Date:	Analysis D	oate: 1 1	1/23/2013	5	SeqNo: 4	33675	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	19	1.0	20.00	0	96.4	82.2	124			
Trichloroethene (TCE)	18	1.0	20.00	0	90.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1311912**

26-Nov-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID b5	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	1D: R1	5020	R	RunNo: 1	5020				
Prep Date:	Analysis D	ate: 11	1/23/2013	S	SeqNo: 4	33703	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Tetrachloroethene (PCE)	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID 100ng lcs 2	SampT	ype: LC	S	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch	n ID: R1	5020	F								
Prep Date:	Analysis D	ate: 1 1	1/24/2013	9	SeqNo: 4	33705	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	20	1.0	20.00	0	98.4	70	130					
Toluene	19	1.0	20.00	0	95.6	82.2	124					
Trichloroethene (TCE)	17	1.0	20.00	0	87.3	70	130					
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130					
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130					
Surr: Dibromofluoromethane	9.5		10.00		94.5	70	130					
Surr: Toluene-d8	9.7		10.00		97.3	70	130					

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: CYP	Work Order Number	er: 1311912		RcptNo:	1
Received by/date:	11/20/13				
Logged By: Lindsay Mangin	11/20/2013 1:00:00 F	PM	Straky Hlaggo		
Completed By: Lindsay Mangin	11/21/2013 6:39:50 A	λM	Annaly Alleman		
Reviewed By:	Mallone	2	000		
Chain of Custody	11/ph/del)			
1. Custody seals intact on sample bottles?		Yes 🗆	No 🗆	Not Present ✓	
Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present	
3. How was the sample delivered?		UPS			
3. How was the sample delivered:		<u>010</u>			
<u>Log In</u>					
4. Was an attempt made to cool the samp	les?	Yes 🗹	No 🗔	NA 🗆	
5. Were all samples received at a tempera	sture of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated t	est(s)?	Yes 🗹	No 🗆		
Are samples (except VOA and ONG) pr		Yes 🗹	No 🗆		
Was preservative added to bottles?	opany processes.	Yes	No 🗹	NA \square	
10.VOA vials have zero headspace?		Yes 🗸	No 🗌	No VOA Vials	
·	prokon?	Yes \Box	No ☑	NO VOA VIEIS 🗆	
11. Were any sample containers received by	JOKE 11 :	163	110 🖭	# of preserved bottles checked	
12.Does paperwork match bottle labels?		Yes 🗹	No 🗆	for pH:	
(Note discrepancies on chain of custody				(<2 o Adjusted?	r >12 unless noted)
13. Are matrices correctly identified on Cha		Yes ⊻	No □	Aujusteu r	
14. Is it clear what analyses were requested	1?	Yes 🔽	No ∐ No □	Checked by:	
15. Were all holding times able to be met? (If no, notify customer for authorization.))	Yes 🗹	No □ [
			•		
Special Handling (if applicable)					
16. Was client notified of all discrepancies	with this order?	Yes 🗌	No 🗌	NA 🗹	_
Person Notified:	Date:				
By Whom:	Via:	eMail [Phone Fax	☐ In Person	
Regarding:		V 421 (1011)	to the acceptance of the second of the secon		
Client Instructions:					
17. Additional remarks:					_
18. Cooler information					
Cooler No Temp °C Condition		Seal Date	Signed By		
1 1.4 Good	Yes				

- VEN	ABORATORY								<u>(N</u>		<u>ال</u>	ples	Air Bubl	72											<u>~</u>	ling	11ng (-54)	(d)
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ä	□ Rush	- C	Kesnell Station 9	GW Monitoring	Kuswell Station 9		Robinson; OF		Barnhill, Pl		in the second of the second o		Preservative HEAL No. Type Z G Z	4ec -001	700-	-CO2>	t00-	1 -005	700-	100-	-008	1 -009	900	110- /	600	Date Time	18 18 18 18 18 18 18 18	Date Time
Turn-Around Time:	Standard	Project Name:		Project # 20/3 6	INFK	Project Manager:	Seme		Sampler: CM	On Ice:	Sample-Temperature:			3x your 1	-								101			Received by:	4 hours	Received by/
Chain-of-Custody Record	5 Fullmelin 6 Sonus has Standard	4 / F	Thurs 6 Nort	1 248	1,797.342	81.559		☐ Level 4 (Full Validation)		□ Other			Matrix Sample Request ID	the MW-13	7-11-MW		MW-20						-MW	MW-29	MW	Refination by:		Relinquished by:
Chain	Client: UPRE 55	MILA	Mayling Address	Housto.	''	(素)	OA/QC Package:	A Standard	Accreditation	□ NELAP	□ EDD (Type)		Date Time	118/13 14:06	55:// 5//8	10	18/13/10:34	1/8/12/23	'	16/12 12:33	16/13/15:35	13	5191 8/15/	14/2 1/651	13/1		19	Date: Time:

.≻ ■	Air Bubbles (Y or N)	3				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
HALL ER ANALYS Www.hallenvii 01 Hawkins NE - Albu el. 505-345-3975 Fa	BTEX + MTBE + TPH (Gas only TPH 8015B (GRO / DRO / MRO TPH (Method 418.1) TPH (Method 418.1) PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8260P(VOA) 8260P(VOA)					Octs By Blo Fuch Dichlosocthene (cis
Turn-Around Time: **Standard Rush Project Name: **I W Rosuc Station 9 Project #: 20/3 & W Ministering	Project Manager: (Sampler: Ch Eurhi // Pt Sample Temperature: Container Type Eal No. Container Type Eal No. Container Container	3×0×15 Hel -013	710-	000	100-	Received by: Received by: Date Time Remarks: Received by: Date Time Remarks: Received by: Date Time Remarks:
Fingerery Serving Ful. Schway & North Sutell 1. 1881. 797. 3420	email or Eax#: 28/.854, 186/ Project I QA/QC Package: CA-CAC Package: CA	14/13 11:08 450 MW-34 Duplicte	13 14:40 MW-35 13 0949 MW-39	1425 M	333	Nate: Time: Reinquished by: Recei Pale: Time: Reinquished by:

Appendix D
Analytical Data Packages – SVE and Groundwater Treatment System Sampling

TABLE 4 SYSTEM MONITORING REQUIREMENTS ROSWELL COMPRESSOR STATION, ROSWELL, NEW MEXICO

Monitoring		SYSTEM STARTUP TESTI					
vionitoring Parameter	Frequency	Monitoring Point	Method of Measurement				
Vapor and Water			Pitot tube and Capsuhelic Gauge				
low Rates			Pitot tube and Capsuhelic Gauge				
		7	Pitot tube and Capsuhelic Gauge				
		Pneumatic Pump Manifolds					
		(Individual Wells)	Bucket fill time				
		Downstream of Oil/Water Separator	Totalizing Flow Meter				
Well Vacuum	Daily	Monitor Well Heads	Magnehelic Gauge and Expansion Cap				
		Manifolds (Individual Wells)	Vacuum Gauge				
Vapor	Daily	Manifolds (Individual Wells)	Peristaltic pump / FID				
Concentrations		Upstream of SVE Blowers	Peristaltic pump / FID				
		Downstream of SVE Blowers	FID				
Groundwater	Daily		Sample collection/analysis by EPA metho				
Discharge		Upstream of Air Stripper	8015 for TPH				
Concentrations	l		Sample collection/analysis by EPA metho				
	- "	Downstream of Air Stripper	8015 for TPH				
Oxygen Content	Daily	Manifolds (Individual Wells)	Peristaltic Pump / LEL / O ₂ Meter				
	ł	Upstream of SVE Blowers	Peristaltic Pump / LEL / O ₂ Meter				
		Downstream of SVE Blowers	LEL / O ₂ Meter				
		LONG-TERM OPERATION TI	ESTING				
Monitoring	Energy	Monitoring Point	 Method of Measurement				
Parameter Vapor and Water	Frequency Monthly	SVE Manifolds (Individual Wells)	Pitot tube and Capsuhelic Gauge				
Flow Rates		Upstream of SVE Blowers	Pitot tube and Capsuhelic Gauge				
		Downstream of SVE Blowers	Pitot tube and Capsuhelic Gauge				
		Pneumatic Pump Manifolds	I not table and Capstalions Chage				
		(Individual Wells)	Bucket fill time				
		Downstream of Oil/Water Separator	Totalizing Flow Meter				
Well Vacuum	Monthly	Monitor Well Heads	Magnehelic Gauge and Expansion Cap				
ı	}	Manifolds (Individual Wells)	Vacuum Gauge				
Field Vapor	Monthly	Manifold (Individual Wells)	Peristaltic pump / FID				
Concentrations		Upstream of SVE Blowers	Peristaltic pump / FID				
	ļ	Downstream of SVE Blowers	FID				
Lab Vapor			Peristaltic pump and Tedlar bags; VOCs				
Concentrations	Monthly	Downstream of SVE Blowers	TPH by EPA 8260 and EPA 8015				
Groundwater	Monthly		Sample collection/analysis by EPA meth				
Discharge		Upstream of Air Stripper	8015 for TPH				
Concentrations		Downstern of Air Strings	Sample collection/analysis by EPA meth 8015 for TPH				
	Monthly	Downstream of Air Stripper Manifold (Individual Wells)	Peristaltic Pump / LEL / O ₂ Meter				
0	INTODILITY		Peristaltic Pump / LEL / O2 Meter				
Oxygen Content		II Inctream of SVF Blowere					
Oxygen Content		Upstream of SVE Blowers Downstream of SVE Blowers					
Oxygen Content		Upstream of SVE Blowers Downstream of SVE Blowers	LEL / O ₂ Meter Peristaltic pump and Tedlar bags; Analy				

Notes:

Notes:

ASTM = American Society for Testing and Materials

FID = Flame ionization detector

FID = Photoionization detector

LEL = Lower explosive limit

O₁ = Oxygen

EPA = U.S. Environmental Protection Agency

VOCs = Volatile organic compounds

TPH = Total petroleum hydrocarbons



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

February 01, 2013

George Robinson
Cypress Engineering

7171 Highway 6 North

Suite 102

Houston, TX 770952422 TEL: (281) 797-3420

FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1301962

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/30/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

andes

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1301962 Date Reported: 2/1/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

TWP Roswell Station 9 **Collection Date:** 1/29/2013 11:40:00 AM **Project:** 1301962-001 Received Date: 1/30/2013 10:55:00 AM Lab ID: Matrix: AIR

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	1130	125	μg/L	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C05-C6	20.3	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C06-C7	44.9	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C07-C8	25.9	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C08-C9	3.90	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C09-C10	4.60	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C10-C11	0.300	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C11-C12	ND	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C12-C14	0.100	0	%	25	1/31/2013 1:00:18 PM
% GRO Hydrocarbons: C14+	ND	0	%	25	1/31/2013 1:00:18 PM
Surr: BFB	92.7	56.4-168	%REC	25	1/31/2013 1:00:18 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 1 of 3

Lab Order 1301962 Date Reported: 2/1/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

TWP Roswell Station 9 Collection Date: 1/29/2013 11:50:00 AM **Project:** 1301962-002 Matrix: AIR Received Date: 1/30/2013 10:55:00 AM Lab ID:

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	928	125	μg/L	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C05-C6	16.4	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C06-C7	46.9	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C07-C8	24.9	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C08-C9	6.20	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C09-C10	5.40	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C10-C11	0.200	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C11-C12	ND	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C12-C14	ND	0	%	25	1/31/2013 1:27:55 PM
% GRO Hydrocarbons: C14+	ND	0	%	25	1/31/2013 1:27:55 PM
Surr: BFB	94.7	56.4-168	%REC	25	1/31/2013 1:27:55 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits 2 of 3

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301962**

01-Feb-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1301935-001ADUP SampType: DUP TestCode: EPA Method 8015B: Gasoline Range

Client ID: BatchQC Batch ID: R8394 RunNo: 8394

Prep Date: Analysis Date: 1/31/2013 SeqNo: 242016 Units: µg/L

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

 Gasoline Range Organics (GRO)
 82
 5.0
 3.16
 21

 Surr: BFB
 2000
 2000
 97.9
 56.4
 168
 0
 0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

Page 3 of 3



Hall Environmental Analysis Laborator) 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: CYP Work Order Number: 1301962 Received by/date Logged By: **Ashley Gallegos** 1/30/2013 10:55:00 AM Completed By: 1/30/2013 12:34:51 PM Ashley Gallegos Reviewed By: Chain of Custody Yes No 🗌 Not Present 🗹 1 Were seals intact? Yes 🗸 No 🗌 Not Present 2. Is Chain of Custody complete? 3 How was the sample delivered? UPS <u>Log In</u> NA 🗌 Yes 🗹 No 🗌 4. Coolers are present? (see 19. for cooler specific information) Yes 🗸 No 🗌 NA 🗆 5. Was an attempt made to cool the samples? Yes 🗸 No 🗌 NA 🗀 6. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 No 🗌 7 Sample(s) in proper container(s)? Yes 🔽 No 🗌 8 Sufficient sample volume for indicated test(s)? Yes 🗸 No 🗌 9 Are samples (except VOA and ONG) properly preserved? Yes 🗌 No 🗹 NA 🗌 10. Was preservative added to bottles? Yes 🗌 No 🔲 No VOA Vials 🗹 11. VOA vials have zero headspace? Yes D No 🗹 12. Were any sample containers received broken? # of preserved Yes 🗹 No 🗌 13. Does paperwork match bottle labels? bottles checked (Note discrepancies on chain of custody) for pH: 14. Are matrices correctly identified on Chain of Custody? ✓ No (<2 or >12 unless noted) Adjusted? Yes 🗸 No 🗌 15. Is it clear what analyses were requested? Yes 🗹 No 🗌 16. Were all holding times able to be met? (If no, notify customer for authorization.) Checked by: Special Handling (if applicable) NA 🗹 17. Was client notified of all discrepancies with this order? Yes 🗌 No 🗍 Person Notified: Date: By Whom: Via: ☐ eMail Phone Fax In Person Regarding: **Client Instructions:** 18 Additional remarks: 19. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By Good Yes

HALL ENVIDONMENTAL	LABORATORY	tal.com	Albuquerque, NM 87109	505-345-4107	quest				(\	/ O/	/-in	0V) 80828 ne8) 0728	-41						us Please Call	9 , 6	3420
HAII ENVI	ANALYSIS I	www.hallenvironmental.com	4901 Hawkins NE - Albuquerqu	Tel. 505-345-3975 Fax 505	Analysis Request	O [∜])	S'*C (SI W / '	SIN SIN	ON,8 (1.4 (1.4) 0728	NO ou { 1 €0 E +	CI'	BTEX + Mett TPH (Mett PAH's (83 RCRA 8 M Anions (F,	<u> </u>	>					Remarks: ANY Questions	George Robinson	281.797.
Turn-Around Time:	X Standard □ Rush		TWT KOSWell STATION 9	Broject #: SVE AIR SAMPLINS	BAKER FURNALUS 01/2013		(-corne Kopinson) PE 802		Sampler. CM Barnhill, PE	Tomposture.		Container Preservative HEAL No. X Type and # Type 13019.02 E	100 - SNAN 1247/21	1x1/1/2 None - 002					Received by: Date Time Rel	_)
Chain-of-Custody Record	Client: Client: Services X Standard	ATTIV. GEOVIC Fabiuson, PPE	Mailing Address / LHWY 6 NORTH	1+645ton, TX 77085	281 797. 3420	6	DA/QC Package: Cypres Inc. 165	Z Standard □ Level 4 (Full Validation)	Accreditation	(00)		Date Time Matrix Sample Request ID	13 11:40 AIL WEST BAKEL	13 11:50 MIL FAST BAKEL					Time: Relyfquisyffydy:	Dafte: Time: Rejuduisperby:	



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 22, 2013

George Robinson
Cypress Engineering

7171 Highway 6 North

Suite 102

Houston, TX 770952422 TEL: (281) 797-3420

FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1302913

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/28/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued March 04, 2013.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1302913

Date Reported: 5/22/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: West Baker Furnace

Project: TWP Roswell Station 9 **Collection Date:** 2/27/2013 1:10:00 PM

Lab ID: 1302913-001 **Matrix:** AIR **Received Date:** 2/28/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	1120	250	μg/L	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C05-C6	14.2	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C06-C7	40.2	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C07-C8	30.2	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C08-C9	6.10	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C09-C10	8.30	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C10-C11	0.600	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C11-C12	0.400	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C12-C14	ND	0	%	50	3/1/2013 2:14:11 PM	R8930
% GRO Hydrocarbons: C14+	ND	0	%	50	3/1/2013 2:14:11 PM	R8930
Surr: BFB	91.5	56.4-168	%REC	50	3/1/2013 2:14:11 PM	R8930

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 1 of 3
- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

Lab Order 1302913

Date Reported: 5/22/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

TWP Roswell Station 9

Project:

Client Sample ID: East Baker Furnace

Collection Date: 2/27/2013 1:20:00 PM

Lab ID: 1302913-002 **Matrix:** AIR **Received Date:** 2/28/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	860	100	μg/L	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C05-C6	15.2	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C06-C7	43.2	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C07-C8	30.0	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C08-C9	6.20	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C09-C10	5.20	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C10-C11	0.200	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C11-C12	ND	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C12-C14	ND	0	%	20	3/1/2013 2:41:41 PM	R8930
% GRO Hydrocarbons: C14+	ND	0	%	20	3/1/2013 2:41:41 PM	R8930
Surr: BFB	90.5	56.4-168	%REC	20	3/1/2013 2:41:41 PM	R8930

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 2 of 3
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302913**

22-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1302881-001ADUP SampType: DUP TestCode: EPA Method 8015D: Gasoline Range

Client ID: BatchQC Batch ID: R8930 RunNo: 8930

Prep Date: Analysis Date: 3/1/2013 SeqNo: 255155 Units: µg/L

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

 Gasoline Range Organics (GR0)
 1400
 100
 9.77
 20

 Surr: BFB
 43000
 40000
 108
 56.4
 168
 0
 0

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 3 of 3



4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com

Clie	nt Name:	CYP			Work C	rder Nu	mber:	13029	913		
Rec	eived by/date	9:		•							
Log	ged By:	Anne Thorr	18	2/28/2013 9:50:00	AM		a	ne Sh			
Con	npleted By:	Anne Thorr	ne	2/28/2013			1	one Sc one Sc			
Rev	iewed By:	10		07/18/10/3			u	ne gir			
Cha	in of Cust										
	Were seals i	<u></u>			Yes	s 🗌 N	lo 🗌	No	t Present 🗹		
2.		Custody comp	lete?		Yes	. 🗹 N	lo 🗆	No	t Present 🗌		
3.	How was the	e sample deliv	rered?		<u>UP</u>	<u>s</u>					
Log	<u>in</u>										
		present? (see	19. for cooler sp	pecific information)	Ye	; V N	lo 🗌		NA \square		
5.	Was an atte	mpt made to	cool the samples	?	Yes	; 🗌 N	lo 🗆		NA 🗹		
6.	Were all san	nples receive	d at a temperatur	re of >0° C to 6.0°C	Yes	; 🗌 N	lo 🗆		NA 🗸		
7.	Sample(s) in	n proper conta	iner(s)?		Yes	. 🗹 N	lo 🗆				
8.	Sufficient sa	mple volume	for indicated test	(s)?	Yes	. 🗸 N	lo 🗆				
9.	Are samples	(except VOA	and ONG) prop	erly preserved?	Yes	. 🗸 N	lo 🗌				
10.	Was preserv	ative added t	o bottles?		Yes	. 🗌 N	lo 🗸		NA \square		
11	VOA vials ha	ave zero head	Ispace?		Yes	. 🗆 N	lo 🗆	No V	′OA Viais ☑		
			ers received brok	cen?	Yes		lo 🔽	۱			
•	Does paperv	work match bo			Yes	. 🔽 N	lo 🗌		# of preserve bottles check for pH:		
14.	Are matrices	correctly ide	ntified on Chain	of Custody?	Yes	. ✓ N	lo 🗌		· •	(<2 or >1	2 unless noted)
15.	Is it clear wh	at analyses w	vere requested?		Yes	V N	io 🗌		Adjuste	d?	
16.		ding times ab customer for	le to be met? authorization.)		Yes	. 🔽 N	o 🗆		Checked	d by:	,
Spe	cial Handi	ling (if app	licable)					[
17.	Was client n	otified of all d	iscrepancies with	this order?	Yes	. 🗆 N	o 🗆		NA 🗹		
	Person	Notified:		Da	te			f former debter a			
	By Who	om:	<u> </u>	Via	ı: 🗌 eM	ail 🗌	Phone	e 🔲 F	ax 🔲 in Pers	on	
	Regard	ling:	and the consequent of the property of the second of the se	/// 							
	Client I	nstructions:					· · · · · · · · · · · · · · · · · · ·				
18.	Additional re	emarks:								_	
19.	Cooler Info	<u>rmation</u>									

	ANALYSIS LABORATORY		4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	(°C)) WE	OA MIS	(1.8) (1.40 (1.40) (200,e) (808)	QH 41 11, NC 10 or 11, NC 11,	TEH 80159 TPH 80159 TPH (Methored (M	×							Remarks: Any Questions Plase Cell Gerryc Robinson C	Time: Rekinquisher by: Date Time 281, 797, 3420
Turn-Around Time:	K Standard □ Rush	Project Name:	IWP KOSWELL STATIONY	wou	SVE AIR Sampling 02/13	Project Manager:	Formson P.E.		Sampler: (M. Banhill, R. P. On Ice. Tyes INTRO	Temperature:	Container Preservative HEAL No. X Type and # Type KROOTIS HEAL NO. X TYPE KROTIS HEAL NO. X TYPE KROOTIS HEAL NO. X TYPE KROTIS HEAL NO. X TYPE KROTIS HEAL NO. X TYPE KROOTIS HEAL NO. X TYPE KROTIS HEAL NO. X		Saffar None -002					7	on MAZVIS 0950	Received by: Date Time
Chain-of-Custody Record	Z	Jel noguigo	Malling Address Lylnan 6 North	16 12. Hauston 1x 11095	Phone #: 281, 797, 3420	email or Fax#: george, robinser, @	196: Cypressinc. 165	✓ Standard □ Level 4 (Full Validation)	Accreditation ☐ NELAP ☐ Other	□ EDD (Type)	Matrix Sample Request ID	Holles 13:10 A.1 West Baker Summe	17/1818.20 AV Feet Baken Furnace						. Time: Relinquished/di:	Date: Time: Relinquisher by:



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 22, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1304013

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/1/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 08, 2013.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1304013**Date Reported: 5/22/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 3/29/2013 8:15:00 AM

 Lab ID:
 1304013-001
 Matrix: AIR
 Received Date: 4/1/2013 12:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	694	100	μg/L	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C05-C6	14.8	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C06-C7	42.0	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C07-C8	29.5	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C08-C9	8.10	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C09-C10	5.10	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C10-C11	0.200	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C11-C12	0.100	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C12-C14	0.200	0	%	20	4/3/2013 2:10:02 PM	R9628
% GRO Hydrocarbons: C14+	ND	0	%	20	4/3/2013 2:10:02 PM	R9628
Surr: BFB	86.5	56.4-168	%REC	20	4/3/2013 2:10:02 PM	R9628

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 3

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Lab Order **1304013**Date Reported: **5/22/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: East Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 3/29/2013 8:20:00 AM

 Lab ID:
 1304013-002
 Matrix: AIR
 Received Date: 4/1/2013 12:00:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R			Analys	t: NSB		
Gasoline Range Organics (GRO)	555	50.0	μg/L	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C05-C6	16.6	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C06-C7	47.6	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C07-C8	24.4	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C08-C9	6.10	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C09-C10	4.50	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C10-C11	0.500	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C11-C12	0.200	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C12-C14	0.100	0	%	10	4/3/2013 2:37:32 PM	R9628
% GRO Hydrocarbons: C14+	ND	0	%	10	4/3/2013 2:37:32 PM	R9628
Surr: BFB	88.0	56.4-168	%REC	10	4/3/2013 2:37:32 PM	R9628

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 2 of 3

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304013**

22-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1303B92-002ADUP SampType: DUP TestCode: EPA Method 8015D: Gasoline Range

Client ID: BatchQC Batch ID: R9628 RunNo: 9628

Prep Date: Analysis Date: 4/3/2013 SeqNo: 274628 Units: µg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 25 9.73 580 20 Surr: BFB 34000 10000 337 56.4 0 S 168 0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 3 of 3



Hall Environmental Analysis Laborator) 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

CYP Client Name: Work Order Number: 1304013 RcptNo: 1 Received by/date: 4/1/2013 12:00:00 PM Logged By: **Ashley Gallegos** Completed By: 4/1/2013 12:25:4¥ PM Aşhley Gallegoş Reviewed By Chain of Custody Not Present No 🗌 1. Custody seals intact on sample bottles? Yes 🗌 No 🗆 Not Present 2. Is Chain of Custody complete? Yes 🗸 3. How was the sample delivered? **UPS** Log In NA 🗆 Yes 🗸 No 🗆 4. Was an attempt made to cool the samples? No 🗌 NA 🗌 Were all samples received at a temperature of >0° C to 6.0°C No 🗆 Yes 🔽 6. Sample(s) in proper container(s)? Yes 🗸 7. Sufficient sample volume for indicated test(s)? Yes 🗹 8. Are samples (except VOA and ONG) properly preserved? No 🗹 NA 🗌 Yes 🗌 9. Was preservative added to bottles? No VOA Vials 🗹 Yes No 10.VOA vials have zero headspace? No 🗹 Yes 11, Were any sample containers received broken? # of preserved bottles checked No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? Yes 🗸 No 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? ~ No Checked by: Yes 🗹 No 🗌 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🔲 No 🗌 NA 🗹 16. Was client notified of all discrepancies with this order? Person Notified: Date: Phone Fax By Whom: Via: ☐ eMail Regarding: **Client Instructions:** 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact | Seal No | Seal Date Signed By Good Not Present

TATHER TOTAL STATE OF THE STATE	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107		υly)	(S) (S)	OA MIS	(I. (I. (V) 808	811 804 82 83 83 83	BE (€	TW tho office of	BTEX + I BTEX + I TPH (Me BOB1 Pes BSF0B (Ne BOB1 Pes BST0 (Se BST0 (Se									Remarks: Analysis: TOH MUD SUIS 640	thy Westins please and	George Rubinson C 281.794, 5420	special defeation of this serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	X Standard □ Rush	Project Name: Project Station 9		Project #: Monthey Thermal	Oxidition Text week	Project Manager:	Good - Lobinson DE	101	Sampler: (M Sarnhill, OF	On ice: 🗀 Yes: 🎾 🐿 📗	Sample Température:		Container Preservative HEALNG Type and # Type /2/ff/40/5	Califfe None -001	184 Mine -002							Received by: The Time The County of the Co	Date Time	- 1	
Chain-of-Custody Record		Gerrye Robinson PE.	Maying Address Chinas 6 North	Howstin Tx 720 gc	Phone #: 281 797 3420	Emailtor Fax#: Genryce, Pubinsun C.	QAIQC Package: Cypress Inc. 165	☐ Standard ☐ Level 4 (Full Validation)	uo	□ NELAP □ Other □	□ EDD (Type)		Date Time Matrix Sample Request ID	Hala OKIS AL West Bakertuna	That also Hul tast baker from					,	14	Date: Time: Relinguished by:	Date: Time: Relinquis/ed by:		If necessary, samples submitted to Hall Environmental may be subsortracted to other



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 22, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1305013

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/1/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued May 06, 2013.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1305013**Date Reported: **5/22/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 4/30/2013 8:00:00 AM

 Lab ID:
 1305013-001
 Matrix: AIR
 Received Date: 5/1/2013 10:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R		Analyst	: NSB			
Gasoline Range Organics (GRO)	850	50.0	μg/L	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C05-C6	31.1	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C06-C7	32.1	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C07-C8	23.6	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C08-C9	8.00	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C09-C10	4.30	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C10-C11	0.700	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C11-C12	0.100	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C12-C14	0.100	0	%	10	5/2/2013 11:26:54 AM	R10280
% GRO Hydrocarbons: C14+	ND	0	%	10	5/2/2013 11:26:54 AM	R10280
Surr: BFB	101	56.4-168	%REC	10	5/2/2013 11:26:54 AM	R10280

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 1 of 3
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Lab Order **1305013**

Date Reported: 5/22/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: East Baker Furnace

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1305013-002 **Matrix:** AIR **Received Date:** 5/1/2013 10:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	772	50.0	μg/L	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C05-C6	27.7	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C06-C7	28.9	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C07-C8	29.6	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C08-C9	8.00	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C09-C10	4.60	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C10-C11	0.900	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C11-C12	0.200	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C12-C14	0.100	0	%	10	5/2/2013 11:54:19 AM	R10280
% GRO Hydrocarbons: C14+	ND	0	%	10	5/2/2013 11:54:19 AM	R10280
Surr: BFB	104	56.4-168	%REC	10	5/2/2013 11:54:19 AM	R10280

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 2 of 3
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1305013**

22-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1305013-001ADUP SampType: DUP TestCode: EPA Method 8015D: Gasoline Range

Client ID: West Baker Furnace Batch ID: R10280 RunNo: 10280

Prep Date: Analysis Date: 5/2/2013 SeqNo: 293167 Units: µg/L

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

 Gasoline Range Organics (GRO)
 820
 50
 3.20
 20

 Surr: BFB
 20000
 20000
 99.7
 56.4
 168
 0
 0

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com Client Name: CYP Work Order Number: 1305013 RcptNo: 1 Received by/date:< Logged By: Ashley Gallegos 5/1/2013 11:04:08 AM Completed By: **Ashley Gallegos** Reviewed By: Chain of Custody Not Present ✓ 1 Custody seals intact on sample bottles? Yes No 2. Is Chain of Custody complete? No Not Present Yes 3. How was the sample delivered? <u>UPS</u> <u>Log In</u> 4. Was an attempt made to cool the samples? No NΑ Yes Were all samples received at a temperature of >0° C to 6.0°C No NA Yes Sample(s) in proper container(s)? No Νo 7. Sufficient sample volume for indicated test(s)? Yes 8. Are samples (except VOA and ONG) properly preserved? No Yes NA 9. Was preservative added to bottles? No .✔ Yes No VOA Vials ✔ 10.VOA vials have zero headspace? No Yes 11. Were any sample containers received broken? No V Yes # of preserved bottles checked 12. Does paperwork match bottle labels? No i for pH: Yes 🗸 (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? Yes Νo 14. Is it clear what analyses were requested? Yes Checked by: 15. Were all holding times able to be met? No Yes (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA 🗸 Person Notified: Date: By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp ºC Condition Seal Intact Seal No Yes



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 23, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1305745

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/17/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

andes

4901 Hawkins NE

Albuquerque, NM 87109

Collection Date: 5/16/2013 7:00:00 AM

Lab Order 1305745

Date Reported: 5/23/2013

Hall Environmental Analysis Laboratory, Inc.

TWP Roswell Station 9

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

Lab ID: 1305745-001 **Matrix:** AIR **Received Date:** 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	5610	50.0	μg/L	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C05-C6	33.5	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C06-C7	31.4	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C07-C8	26.8	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C08-C9	5.80	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C09-C10	2.00	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C10-C11	0.400	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C11-C12	0.100	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C12-C14	ND	0	%	10	5/20/2013 4:13:51 PM	R10751
% GRO Hydrocarbons: C14+	ND	0	%	10	5/20/2013 4:13:51 PM	R10751
Surr: BFB	129	56.4-168	%REC	10	5/20/2013 4:13:51 PM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

Project:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 1 of 3
- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

Lab Order **1305745**

Date Reported: 5/23/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 5/16/2013 7:05:00 AM

 Lab ID:
 1305745-002
 Matrix: AIR
 Received Date: 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE F	RANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	5350	50.0	μg/L	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C05-C6	31.4	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C06-C7	30.2	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C07-C8	27.7	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C08-C9	6.90	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C09-C10	2.70	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C10-C11	0.800	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C11-C12	0.200	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C12-C14	0.100	0	%	10	5/20/2013 4:41:03 PM	R10751
% GRO Hydrocarbons: C14+	ND	0	%	10	5/20/2013 4:41:03 PM	R10751
Surr: BFB	145	56.4-168	%REC	10	5/20/2013 4:41:03 PM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 2 of 3
- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1305745**

23-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1305726-001ADUP SampType: DUP TestCode: EPA Method 8015D: Gasoline Range

Client ID: BatchQC Batch ID: R10751 RunNo: 10751

Prep Date: Analysis Date: 5/20/2013 SeqNo: 303926 Units: µg/L

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

 Gasoline Range Organics (GRO)
 63
 5.0
 1.67
 20

 Surr: BFB
 2000
 2000
 101
 56.4
 168
 0
 0

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 3 of 3



4901 Hawkins NE Albuquerque, NM 8710S TEL: 505-345-3975 FAX: 505-345-410'

Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Work Order Number: 1305745 RcptNo: 1 AG- 05/17/13 Received by/date: anne Am Logged By: Anne Thorne 5/17/2013 9:50:00 AM Completed By: Anne Thorne 5/17/2013 Reviewed By: Chain of Custody 1. Custody seals intact on sample bottles? Not Present 2. Is Chain of Custody complete? Yes 🗸 No 🗌 Not Present 3. How was the sample delivered? <u>UPS</u> Log In 4. Was an attempt made to cool the samples? No [NA 🗸 Yes 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C NA 🗸 Sample(s) in proper container(s)? Yes 🗸 7. Sufficient sample volume for indicated test(s)? Yes 🔽 No 8. Are samples (except VOA and ONG) properly preserved? Yes 🗹 No 9. Was preservative added to bottles? No 🔽 Yes 🗌 NA 🗌 10.VOA vials have zero headspace? Yes 🗌 No VOA Vials No | 11. Were any sample containers received broken? Yes 🗀 No 🗸 # of preserved bottles checked 12. Does paperwork match bottle labels? No 🗀 for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) 13. Are matrices correctly identified on Chain of Custody? Adjusted? Yes 🗹 No 🔲 14. Is it clear what analyses were requested? Yes No 15. Were all holding times able to be met? No 🗌 Checked by: Yes 🗸 (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No 🗌 NA 🗹 Person Notified: Date By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information

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June 25, 2013

George Robinson
Cypress Engineering
7171 Highway 6 North
Suite 102
Houston, TX 770952422

TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1306767

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Lab Order **1306767**

Date Reported: 6/25/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: West Baker Furnace

Project: TWP Roswell Station 9 **Collection Date:** 6/17/2013 9:55:00 AM

Lab ID: 1306767-001 **Matrix:** AIR **Received Date:** 6/18/2013 9:55:00 AM

Analyses	Result	Result RL Qual Units			Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	:: NSB
Gasoline Range Organics (GRO)	4600	250	μg/L	50	6/20/2013 2:21:38 PM	R11460
Surr: BFB	99.4	26.3-265	%REC	50	6/20/2013 2:21:38 PM	R11460

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1 of 3
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306767**

Date Reported: 6/25/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 6/17/2013 10:00:00 AM

 Lab ID:
 1306767-002
 Matrix: AIR
 Received Date: 6/18/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE			Anal	st: NSB
Gasoline Range Organics (GRO)	4700	250	μg/L	50 6/20/2013 2:49:11 P	M R11460
Surr: BFB	101	26.3-265	%REC	50 6/20/2013 2:49:11 P	M R11460

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Page 2 of 3
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1306767**

25-Jun-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1306762-001ADUP SampType: DUP TestCode: EPA Method 8015D: Gasoline Range

Client ID: BatchQC Batch ID: R11460 RunNo: 11460

Prep Date: Analysis Date: 6/20/2013 SeqNo: 324084 Units: µg/L

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

 Gasoline Range Organics (GRO)
 75000
 1000
 3.60
 20

 Surr: BFB
 530000
 400000
 132
 26.3
 265
 0
 0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com Client Name: CYP Work Order Number: 1306767 RcptNo: 1 Received by/date: Logged By: Lindsay Mangin 6/18/2013 9:55:00 AM 6/18/2013 3:03:34 PM Completed By: **Lindsay Mangin** Reviewed By: Chain of Custod Not Present 1. Custody seals intact on sample bottles? Yes 🗌 Yes 🗹 Νo Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? **UPS** Log In No 🗌 NA 🗹 Yes \square 4. Was an attempt made to cool the samples? No 🗔 NA 🔽 Yes 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 No 🗌 Sample(s) in proper container(s)? Yes 🔽 Na 7. Sufficient sample volume for indicated test(s)? Yes 🗹 Nο 8. Are samples (except VOA and ONG) properly preserved? NA 🗆 No 🗸 Yes 🗌 9. Was preservative added to bottles? Yes No No VOA Vials 10.VOA vials have zero headspace? Yes No 🔽 11. Were any sample containers received broken? # of preserved bottles checked No 🗆 for pH: Yes 🗸 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗌 Yes 🗹 13. Are matrices correctly identified on Chain of Custody? Yes 🗸 Nο 14. Is it clear what analyses were requested? No 🗌 Checked by: Yes 🔽 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) No 🗌 16. Was client notified of all discrepancies with this order? Yes 🗌 NA 🔽 Person Notified: Date: By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C | Condition | Seal Intact | Seal No | Seal Date NA Yes



August 27, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1307867

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Lab Order 1307867

Date Reported: 8/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 7/17/2013 10:30:00 AM

 Lab ID:
 1307867-001
 Matrix: AIR
 Received Date: 7/18/2013 1:30:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: DAM
Gasoline Range Organics (GRO)	4680	250	μg/L	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: <c6< td=""><td>28.6</td><td>0</td><td>%</td><td>50</td><td>7/19/2013 12:32:54 PM</td><td>1 R12077</td></c6<>	28.6	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C06-C7	30.3	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C07-C8	30.3	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C08-C9	6.90	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C09-C10	3.50	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C10-C11	0.300	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C11-C12	0.100	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C12-C14	ND	0	%	50	7/19/2013 12:32:54 PM	1 R12077
% GRO Hydrocarbons: C14+	ND	0	%	50	7/19/2013 12:32:54 PM	1 R12077
Surr: BFB	96.4	26.3-265	%REC	50	7/19/2013 12:32:54 PM	1 R12077

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1
 - P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1307867

Date Reported: 8/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

Project: TWP Roswell Station 9 **Collection Date:** 7/17/2013 10:35:00 AM 1307867-002 Lab ID: Matrix: AIR Received Date: 7/18/2013 1:30:00 PM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: DAM
Gasoline Range Organics (GRO)	5780	250	μg/L	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: <c6< td=""><td>29.5</td><td>0</td><td>%</td><td>50</td><td>7/19/2013 1:00:23 PM</td><td>R12077</td></c6<>	29.5	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C06-C7	29.8	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C07-C8	29.1	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C08-C9	7.00	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C09-C10	3.60	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C10-C11	0.800	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C11-C12	0.200	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C12-C14	ND	0	%	50	7/19/2013 1:00:23 PM	R12077
% GRO Hydrocarbons: C14+	ND	0	%	50	7/19/2013 1:00:23 PM	R12077
Surr: BFB	101	26.3-265	%REC	50	7/19/2013 1:00:23 PM	R12077

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
 - Sample pH greater than 2 for VOA and TOC only.
- P
- Reporting Detection Limit



4901 Hawkins NE Albuquerque, NM 87109 505-345-3975 FAX: 505-345-4107

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: CYP	Work Order Number:	1307867	,	RcptNo	p: 1
Received by/date:	04/18/13		*		
Logged By: Lindsay Mangin	7/18/2013 1:30:00 PM		Juney Houge		
Completed By: Lindsay Mangin	7/18/2013 2:03:19 PM		Addition		
Reviewed By:	07/10/13		0 5.00		
Chain of Custody	<u> </u>				
1 Custody seals intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🗸	
2. Is Chain of Custody complete?		Yes 🗹	Na 🗆 📉	Not Present	
3. How was the sample delivered?	·	-Glient	A John		
<u>Log In</u>			2		
4. Was an attempt made to cool the samples	9?	Yes	No 🗆	NA 🗹	
5. Were all samples received at a temperatur	re of >0° C to 6.0°C	Yes 🗌	No 🗆	NA 🗹	
6. Sample(s) in proper container(s)?		Yes 🔽	No 🗆		
7. Sufficient sample volume for indicated test	(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) prope	erly preserved?	Yes 🗹	No 🗆		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗆	
10.VOA vials have zero headspace?		Yes 🗌	No 🗆	No VOA Vials	*
11. Were any sample containers received broken	cen?	Yes	No 🗹	# of preserved	
40 -		a		bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 📙	for pH: (<2	or >12 unless noted)
13. Are matrices correctly identified on Chain of	of Custody?	Yes 🗹	No 🗆	Adjusted?	· .
14. Is it clear what analyses were requested?		Yes 🗹	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗆	Checked by:	
,					
Special Handling (if applicable)					
16. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date:				
By Whom:	Via: [eMail	Phone 🔲 Fax	In Person	
Regarding:					
Client Instructions:		· · · · · · · · · · · · · · · · · · ·	· ·		
17. Additional remarks:					
	Seal Intact Seal No Sot Present	Seal Date	Signed By		

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	HALL ENVIRONMENTAL	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109		Analy	s oulg	'Od'	H9T (1.8.1) (1.1) (2.00), (2.00),	62	MTB (Action of the control of the co	TEX + N TEX + N TEX + N TEM (Met TEM (83) TEM (83) TEM (83) TEM (83) TEM (83) TEM (83) TEM (83) TEM (83) TEM (83) TEM (83)	T									Remarks: fry Westigns Place Call	381-797-3420	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
d rum-Around Time;	Service Francisco - Rush	Project Name:	14/	Project #: SVE HIN Somplim?	TWYNELES OTILARS	Somsin, PE	Control of the contro	: Challewale, 11,96	Sample Temperature		Container Preservative HEAL NE Type and # Type	1xth for None -901	1x14tim Nowa								7 57 6 12 330	Received by: Date Time	be subcontracted to other accredited laboratories. This serves as notice of this pr
Chain-of-Custody Record	Chant: Stay meer in Service	Jewy K	Wayng John Jawas 6 North Sitte	M.	Final or Fax#: Crisic : Youngshe	P 1/4	☐ Standard ☐ Level 4 (Full Validation)	Accreditation □ NELAP □ Other	□ EDD (Type)		Date Time Matrix Sample Request ID	1/0/19 10:30 Mr West Baken	1/0/2/0:45 AN 165 ENIA							Date: Time: Defined by:	191001	Date: Time: (Refiniquistred by:	If necessary, samples submitted to Hall Environmental may



September 05, 2013

George Robinson
Cypress Engineering
7171 Highway 6 North
Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX: (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1308C33

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/28/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Lab Order **1308C33**Date Reported: **9/5/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

TWP Roswell Station 9

Lab ID: 1308C33-001

Project:

Callaction

Client Sample ID: West Baker Furnace

Collection Date: 8/27/2013 8:45:00 AM

Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	t: RAA
Gasoline Range Organics (GRO)	3040	250	μg/L	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: <c6< td=""><td>25.7</td><td>0</td><td>%</td><td>50</td><td>9/4/2013 2:37:26 PM</td><td>R13082</td></c6<>	25.7	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C06-C7	28.7	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C07-C8	31.0	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C08-C9	8.30	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C09-C10	5.00	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C10-C11	0.900	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C11-C12	0.300	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C12-C14	0.100	0	%	50	9/4/2013 2:37:26 PM	R13082
% GRO Hydrocarbons: C14+	ND	0	%	50	9/4/2013 2:37:26 PM	R13082
Surr: BFB	104	26.3-265	%REC	50	9/4/2013 2:37:26 PM	R13082

Matrix: AIR

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

 Page 1 of
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1308C33**Date Reported: **9/5/2013**

9/4/2013 3:05:06 PM

9/4/2013 3:05:06 PM

R13082

R13082

Hall Environmental Analysis Laboratory, Inc.

% GRO Hydrocarbons: C14+

Surr: BFB

CLIENT: Cypress Engineering Client Sample ID: East Baker Furance

ND

105

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 8:50:00 AM

 Lab ID:
 1308C33-002
 Matrix: AIR
 Received Date: 8/28/2013 10:00:00 AM

Result **RL Qual Units DF** Date Analyzed Batch Analyses **EPA METHOD 8015D: GASOLINE RANGE** Analyst: RAA 9/4/2013 3:05:06 PM R13082 Gasoline Range Organics (GRO) 3040 250 μg/L % GRO Hydrocarbons: <C6 25.6 0 % 9/4/2013 3:05:06 PM R13082 % GRO Hydrocarbons: C06-C7 0 R13082 28.7 % 9/4/2013 3:05:06 PM % GRO Hydrocarbons: C07-C8 0 9/4/2013 3:05:06 PM R13082 31.0 % % GRO Hydrocarbons: C08-C9 8.50 0 % 9/4/2013 3:05:06 PM R13082 % GRO Hydrocarbons: C09-C10 5.10 0 % 9/4/2013 3:05:06 PM R13082 % GRO Hydrocarbons: C10-C11 0.900 0 % 9/4/2013 3:05:06 PM R13082 % GRO Hydrocarbons: C11-C12 0.200 0 % 9/4/2013 3:05:06 PM R13082 % GRO Hydrocarbons: C12-C14 ND 0 % 9/4/2013 3:05:06 PM R13082

0

26.3-265

%

%REC

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

1900

WO#: 1308C33

05-Sep-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Surr: BFB

Sample ID: 1308C11-003ADUP SampType: DUP TestCode: EPA Method 8015D: Gasoline Range

2000

Client ID: BatchQC Batch ID: R13082 RunNo: 13082

Prep Date: Analysis Date: 9/4/2013 SeqNo: 373376 Units: µg/L

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

Gasoline Range Organics (GRO) 150 5.0 3.53 20

97.2

26.3

265

0

0

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com Work Order Number: 1308C33 RcptNo: 1 Client Name: CYP Received by/date: Ashley Gallegos 8/28/2013 10:00:00 AM Logged By: Completed By: **Ashley Gallegos** 8/28/2013 11:20:32 AM 08/28/13 Reviewed By: Chain of Custody Not Present ✓ Νo 1 Custody seals intact on sample bottles? Yes No Not Present 2. Is Chain of Custody complete? Yes ✓ 3. How was the sample delivered? **UPS** <u>Log In</u> NA Nο 4. Was an attempt made to cool the samples? No : 5. Were all samples received at a temperature of >0° C to 6.0°C NA Yes No Sample(s) in proper container(s)? Yes Νo 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? NA : No 🗸 9. Was preservative added to bottles? Yes No VOA Vials ✔ No 10.VOA vials have zero headspace? Yes Yes | 11. Were any sample containers received broken? No 1 # of preserved bottles checked for pH: No : 12. Does paperwork match bottle labels? Yes (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? Nο No 14. Is it clear what analyses were requested? Yes Checked by: No 15. Were all holding times able to be met? Yes (If no, notify customer for authorization.) Special Handling (if applicable) No 16. Was client notified of all discrepancies with this order? Yes NA 🗸 Person Notified: Date: By Whom: Via: eMail Phone : Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Temp ºC Condition Seal Intact | Seal No Cooler No Seal Date Signed By

Good

Yes

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH (Method 418.1) PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8260B (VOA) 8270 (Semi-VOA) Air Rubbles (Yor N)		Time: Reinfiguished by: 1500
Turn-Around Time: Standard Rush Project Name: [WP Roswell Station of Project #: SVE Him Sampling 2.1 Baker Furnaucs of 2015	ager: ye Rebins. m Barnh: perature: Preservative Type	Fedler Now - 001 Fedler None - 001	Received by: Received by: Received by: A control aboratories. This serves as notice
Chain-of-Custody Record Cliept: yorks Enemerate Relinson PE Majling Address Lett way 6 North. Suite 102 Houston TX 77858 Phone #: 281, 797, 3420	Textering and the second and the sec	18/21/30845 Mrc West Baker. 18/22/3 0850 Mrú Eust Baker.	Sprip 1500 (MM) (MM) (MM) (MM) (MM) (MM) (MM) (M



October 03, 2013

George Robinson Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1309C87

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/26/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Analytical Report Lab Order 1309C87

Date Reported: 10/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 9/25/2013 12:40:00 PM

 Lab ID:
 1309C87-001
 Matrix: AIR
 Received Date: 9/26/2013 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	:: NSB
Gasoline Range Organics (GRO)	2280	250	μg/L	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: <c6< td=""><td>25.4</td><td>0</td><td>%</td><td>50</td><td>9/27/2013 2:40:18 PM</td><td>R13687</td></c6<>	25.4	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C06-C7	29.5	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C07-C8	24.8	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C08-C9	10.0	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C09-C10	7.50	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C10-C11	1.90	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C11-C12	0.800	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C12-C14	0.100	0	%	50	9/27/2013 2:40:18 PM	R13687
% GRO Hydrocarbons: C14+	ND	0	%	50	9/27/2013 2:40:18 PM	R13687
Surr: BFB	105	26.3-265	%REC	50	9/27/2013 2:40:18 PM	R13687

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1 o
 - Page 1 of 2
 P Sample pH greater than 2 for VOA and TOC only.
- DI Denembre Detection Limit
- RL Reporting Detection Limit

Analytical Report Lab Order 1309C87

Date Reported: 10/3/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 9/25/2013 12:45:00 PM

 Lab ID:
 1309C87-002
 Matrix: AIR
 Received Date: 9/26/2013 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	2040	250	μg/L	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: <c6< td=""><td>25.9</td><td>0</td><td>%</td><td>50</td><td>9/27/2013 3:07:24 PM</td><td>R13687</td></c6<>	25.9	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C06-C7	30.1	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C07-C8	25.4	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C08-C9	9.50	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C09-C10	7.40	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C10-C11	1.20	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C11-C12	0.400	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C12-C14	0.100	0	%	50	9/27/2013 3:07:24 PM	R13687
% GRO Hydrocarbons: C14+	ND	0	%	50	9/27/2013 3:07:24 PM	R13687
Surr: BFB	107	26.3-265	%REC	50	9/27/2013 3:07:24 PM	R13687

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: CYP Work Order Numbe	r: 1309C87		RcptNo:	1
Received by/date:	3			
Logged By: Ashley Gallegos 9/26/2013 9:30:00 AM	1	A		
Completed By: Ashley Gallegos 9/26/2013 5:47:24 PM	1	A		
Reviewed By: MA 09/27/13		V		
Chain of Custody				
1 Custody seals intact on sample bottles?	Yes 🗌	No 🗆	Not Present	
2. Is Chain of Cústody complete?	Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?	<u>UPS</u>			
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA \square	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗆	NA □	
6. Sample(s) in proper container(s)?	Yes 🗸	No 🗆		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗸	No 🗆		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA \square	
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?	$_{Yes}$	No 🗹		
			# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🔽	No 🗀	for pH: (<2 or	>12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗸	No 🗌	Adjusted?	
14. Is it clear what analyses were requested?	Yes 🗸	No \square		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗌	Checked by:	
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes \square	No 🗆	NA 🗹	
Person Notified: Date				
By Whom: Via:	eMail	Phone 🔲 Fax	☐ In Person	
Regarding:	MARONIO INSELIENCE SERVICE SER		and the second	
Client Instructions:	one on the contract of the con		And the second s	
17. Additional remarks:	 .			
18. <u>Cooler information</u>				
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By		
1 Good Yes				

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Turn-Around Time:	Star	Project Name:	イ イ	Project #:	Baker Furnale	Project Manager:		\mathcal{C}	Sampler: CM 1	Sample Temperature	N Open and Cheek	Container Type and #	1/X / X / X / X / X / X / X / X / X / X	15	-									AA DO A	Received by:	1 1
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Chain-of-Custody Record	30	17	ddre	to	•	ах#	ckag	, pri	tion	Vpe	;	Time	7.6	17:01	<u> </u>									Time: 1/4/4	Time:	C 26/ 77 5420 Incressary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This service as notice of this necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This service as notice of this necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories.
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



October 28, 2013

George Robinson
Cypress Engineering
7171 Highway 6 North

Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1310926

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Lab Order 1310926

Date Reported: 10/28/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 10/17/2013 1:10:00 PM

 Lab ID:
 1310926-001
 Matrix: AIR
 Received Date: 10/18/2013 9:15:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Ana	lyst: NSB
Gasoline Range Organics (GRO)	1900	125	μg/L	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: <c6< td=""><td>28.0</td><td>0</td><td>%</td><td>25</td><td>10/24/2013 12:09:4</td><td>8 PM R14324</td></c6<>	28.0	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C06-C7	38.7	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C07-C8	21.3	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C08-C9	7.40	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C09-C10	3.60	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C10-C11	0.500	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C11-C12	0.400	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C12-C14	0.100	0	%	25	10/24/2013 12:09:4	8 PM R14324
% GRO Hydrocarbons: C14+	ND	0	%	25	10/24/2013 12:09:4	8 PM R14324
Surr: BFB	98.4	26.3-265	%REC	25	10/24/2013 12:09:4	8 PM R14324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1
- Page 1 of P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1310926

Date Reported: 10/28/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnice

Project: TWP Roswell Station 9 **Collection Date:** 10/17/2013 1:20:00 PM Lab ID: 1310926-002 Matrix: AIR Received Date: 10/18/2013 9:15:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE			Analyst:	NSB
Gasoline Range Organics (GRO)	1650	125	μg/L	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: <c6< td=""><td>30.5</td><td>0</td><td>%</td><td>25 10/24/2013 12:37:02 PM</td><td>R14324</td></c6<>	30.5	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C06-C7	32.8	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C07-C8	22.8	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C08-C9	7.90	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C09-C10	4.60	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C10-C11	0.600	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C11-C12	0.400	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C12-C14	0.200	0	%	25 10/24/2013 12:37:02 PM	R14324
% GRO Hydrocarbons: C14+	0.200	0	%	25 10/24/2013 12:37:02 PM	R14324
Surr: BFB	101	26.3-265	%REC	25 10/24/2013 12:37:02 PM	R14324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com RcptNo: 1 CYP Work Order Number: 1310926 Client Name: Received by/date: 10/18/2013 9:15:00 AM Logged By: Lindsay Mangin Lindaay Mangin 10/18/2013, 11:47:32 AM Completed By: Reviewed By: Chain of Custody Yes Not Present No 🗀 1. Custody seals intact on sample bottles? Yes 🗹 No 🗌 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In Yes 🗌 NA 🔽 No 🗌 4. Was an attempt made to cool the samples? No 🗀 NA 🔽 5. Were all samples received at a temperature of >0° C to 6.0°C No 🗌 Yes 🗸 Sample(s) in proper container(s)? Yes 🗸 7. Sufficient sample volume for indicated test(s)? Yes 🗸 No 8. Are samples (except VOA and ONG) properly preserved? Yes 🗌 No 🔽 NA 🗌 9. Was preservative added to bottles? No VOA Vials 🗹 No Yes 🗌 10.VOA vials have zero headspace? Yes \square No 🗹 11. Were any sample containers received broken? # of preserved bottles checked Yes 🔽 No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No \square Yes 🔽 13. Are matrices correctly identified on Chain of Custody? No 🗌 Yes 🔽 14. Is it clear what analyses were requested? No 🗌 Checked by: Yes 🗹 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable)

6.V	Vas client notified of all d	liscrepancies with this order?	Yes 🗌	No 🗆	NA 🗹
	Person Notified:		Date:		
	By Whom:		Via: 🗌 eMail 🔲 f	Phone 🗌 Fax	In Person
	Regarding:				
	Client Instructions:	The state of the s			

17. Additional remarks:

18. Cooler Information

_	Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
	1	NA	Good	Not Present			

	ANALYSIS LABORATORY		4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis	(*0	OSԠC	MIS	(1.3 (1.4) (1.4) (1.4) (1.4) (1.4) (1.4) (1.4) (1.4)	8 10 8 10 8 10 8 10 8 10	bo bo 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FDB (Methor PAH's (831) PAH's (831) PAH's (831) PAH's (B08) 8260B (VO) 8270 (Semi	XX	X						My question's Hease Cel	ye Kopiusono	281. 797. 3420	ub-contracted data will be clearly notated on the analytical report.
			4901	Tel.								TM + X3T8 82108 H9T					 _	_	╁	is 1	D'	`	y. Any s
												TM + X3T8							 	Remarks	0		possibilit
Turn-Around Time:		Project Name:	TWP formell station 9	Project #: MOWTHIY Explored	taken trumble Discharg	Project Manager:	Gray Colongen 18	Carry	Sampler: M. M. M. M. M. M.	On Ice. The State of the State	Sample Temperature:	Container Preservative HEAL No. Type 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	1 July 10me - 00	200- MMN -002						Received by Date Time	Received by Date Time		If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Chain-of-Custody Record	Client Engineering Sarries Fre	ATM. George Robinson ME	Mailipogodorest Chuse 6North Surte 102	Howlon, TX 7795-2422	Phone #: 281, 797, 3420	CERRENT PAYER GOVILE TOWNSON OF	dho por	Ze Standard □ Level 4 (Full Validation)	Accreditation		□ EDD (Type)	Date Time Matrix Sample Request ID	1917/9 13:10 AM Mest Baken two wave	Offills 13:20 HW Fast Boken Furme						Date: Time: Relinquisheds.	Date: Time: Relinguisher		If necessary, samples submitted to Hall Environmental may be subco.



December 04, 2013

George Robinson
Cypress Engineering
7171 Highway 6 North

Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1311B01

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/25/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Lab Order 1311B01 Date Reported: 12/4/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: West Baker Furnace

Project: TWP Roswell Station 9 **Collection Date:** 11/22/2013 11:30:00 AM 1311B01-001 Lab ID: Matrix: AIR Received Date: 11/25/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: RAA
Gasoline Range Organics (GRO)	2100	125	μg/L	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: <c6< td=""><td>31.9</td><td>0</td><td>%</td><td>25</td><td>11/26/2013 2:54:19 PM</td><td>M R15122</td></c6<>	31.9	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C06-C7	35.5	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C07-C8	23.4	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C08-C9	5.90	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C09-C10	3.00	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C10-C11	0.100	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C11-C12	0.100	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C12-C14	0.100	0	%	25	11/26/2013 2:54:19 PM	M R15122
% GRO Hydrocarbons: C14+	ND	0	%	25	11/26/2013 2:54:19 PM	/ R15122
Surr: BFB	111	26.3-265	%REC	25	11/26/2013 2:54:19 PM	/ R15122

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Lab Order **1311B01**Date Reported: **12/4/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

 Project:
 TWP Roswell Station 9
 Collection Date: 11/22/2013 11:40:00 AM

 Lab ID:
 1311B01-002
 Matrix: AIR
 Received Date: 11/25/2013 11:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Analy	st: RAA
Gasoline Range Organics (GRO)	1960	125	μg/L	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: <c6< td=""><td>29.6</td><td>0</td><td>%</td><td>25</td><td>11/26/2013 3:49:42 P</td><td>M R15122</td></c6<>	29.6	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C06-C7	32.5	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C07-C8	24.2	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C08-C9	7.90	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C09-C10	4.40	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C10-C11	0.700	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C11-C12	0.400	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C12-C14	0.300	0	%	25	11/26/2013 3:49:42 P	M R15122
% GRO Hydrocarbons: C14+	ND	0	%	25	11/26/2013 3:49:42 P	M R15122
Surr: BFB	110	26.3-265	%REC	25	11/26/2013 3:49:42 P	M R15122

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2.
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

	Website: www.hallenvironmenta	al.com		
Client Name: CYP Work	Order Number: 1311B01		RcptNo: 1	
Received by/date: QG ///	65/13		,	
Logged By: Michelle Garcia 11/25/20	213 11:00:00 AM	Michell (Dane)	
Completed Duy and a second	13 3:13:59 PM	Mirus G Mirus G	•	
Reviewed By: 10 11/25/13		· · puniti G	arua)	;
Chain of Custody	·	* · · · · · · · · · · · · · · · · · · ·		:
1. Custody seals intact on sample bottles?	Yes	. F71		
2. Is Chain of Custody complete?	Yes ✓ Yes ✓	No 🗔	Not Present	
3. How was the sample delivered?	<u>UPS</u>	No	Not Present	
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗸	No 🖽	NA ·	
5. Were all samples received at a temperature of >0° C to	o 6.0°C Yes	No ["]	NA 🗸	
6. Sample(s) in proper container(s)?	Yes 🗸	No [
7. Sufficient sample volume for indicated test(s)?	Van adi			
8. Are samples (except VOA and ONG) properly preserved	Yes 🗸	No		
9. Was preservative added to bottles?	Yes .✔: Yes	No M	_	
10 VOA viele have	103	No ✓	NA	
10.VOA vials have zero headspace?	Yes	No :	No VOA Vials	
11. Were any sample containers received broken?	Yes	No 🔽	e e e e e e	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗸	No 🗔	# of preserved bottles checked for pH:	
13. Are matrices correctly identified on Chain of Custody?	Yes 🗸	No		unless noted)
4. Is it clear what analyses were requested?	Yes 🗸	No No	Adjusted?	
 Were all holding times able to be met? (If no, notify customer for authorization.) 	Yes ✔	No	Checked by:	
			·	
pecial Handling (if applicable)				
6. Was client notified of all discrepancies with this order?	Yes 🗔	No 🗔	NA 🗸	
Person Notified:	Date:			
By Whom:	,	one Fax	i i	
Regarding:	F 110	ne rax	In Person	
Client Instructions:				
7. Additional remarks:				
3. Cooler Information Cooler No Temp ⁰C Condition Seal Intact Se	al No Seal Date Sid	gned By		
NA Good Yes	Sato Si	grieu by		

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TM 8015B (RO \ DRO \ MRO) TPH (Method 418.1) PAH's (8310 or 8270 SIMS) PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides \ 8082 PCB's 8081 Pesticides \ 8082 PCB's	arks: # Ary West Twos M	281, 797, 3420 his possibility. Any sub-contracted data will be clearly notated on the analytical report.
Chain-of-Custody Record Chain-of-Custody Record Chain-of-Custody Record Chain-of-Custody Record ATN: Servec Reliness Project Name: Mailing Address: 4way 6 North Surface Though Chair Const Tongs Tongs Project #: MonThirth Baller Phone #: 281. 797. 3420 Phone #: 281. 797. 3420	Cypacus Inc. Ms Level 4 (Full Validation) Other Matrix Sample Request ID	Thy 11:40 And Ext Fale Fume Tells None 1311 Colored 1311	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

December 24, 2013

George Robinson Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 SVE Order No.: 1312968

Dear George Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1312968**Date Reported: **12/24/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: West Baker Furnace

Project: TWP Roswell Station 9 SVE **Collection Date:** 12/17/2013

Lab ID: 1312968-001 **Matrix:** AIR **Received Date:** 12/18/2013 10:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R.	ANGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	1980	125	μg/L	25	12/23/2013 11:12:15	5 AM R15705
% GRO Hydrocarbons: <c6< td=""><td>28.6</td><td>0</td><td>%</td><td>25</td><td>12/23/2013 11:12:1</td><td>5 AM R15705</td></c6<>	28.6	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C06-C7	37.8	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C07-C8	21.0	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C08-C9	7.30	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C09-C10	4.10	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C10-C11	0.700	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C11-C12	0.300	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C12-C14	0.200	0	%	25	12/23/2013 11:12:1	5 AM R15705
% GRO Hydrocarbons: C14+	ND	0	%	25	12/23/2013 11:12:1	5 AM R15705
Surr: BFB	92.7	48.4-164	%REC	25	12/23/2013 11:12:1	5 AM R15705

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

 Page 1 of
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1312968**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/24/2013

CLIENT: Cypress Engineering Client Sample ID: East Baker Furnace

Project: TWP Roswell Station 9 SVE **Collection Date:** 12/17/2013

Lab ID: 1312968-002 **Matrix:** AIR **Received Date:** 12/18/2013 10:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE R	ANGE				Ana	lyst: NSB
Gasoline Range Organics (GRO)	1770	125	μg/L	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: <c6< td=""><td>31.4</td><td>0</td><td>%</td><td>25</td><td>12/23/2013 12:07:0</td><td>5 PM R15705</td></c6<>	31.4	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C06-C7	33.2	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C07-C8	22.8	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C08-C9	7.20	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C09-C10	4.20	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C10-C11	0.600	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C11-C12	0.300	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C12-C14	0.300	0	%	25	12/23/2013 12:07:0	5 PM R15705
% GRO Hydrocarbons: C14+	ND	0	%	25	12/23/2013 12:07:0	5 PM R15705
Surr: BFB	93.1	48.4-164	%REC	25	12/23/2013 12:07:0	5 PM R15705

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

Sample Log-In Check List

Received by/date:	Client Name: CYP	Work Order Number	er: 1312968		RcptNo:	1
Custody seals intact on sample bottles? Yes No Not Present	Received by/date: JB /2/	18/13				
Chain of Custody 1. Custody seals intact on sample bottles?	Logged By: Anne Thorne	12/18/2013 10:20:00	AM	anne Am	_	
Custody seals intact on sample bottles? Yes No Not Present 2	Completed By: Anne Thorne	12/20/2013		anne Am	_	
1. Custody seals intact on sample bottles?	Reviewed By: 12/20//	3				
2. Is Chain of Custody complete? 3. How was the sample delivered? UPS	Chain of Custody					
2. How was the sample delivered? 2. Log In 4. Was an attempt made to cool the samples? 5. Were all samples received at a temperature of >0° C to 6.0°C	1. Custody seals intact on sample bottles?		Yes 🗌	No 🗆	Not Present 🗹	
4. Was an attempt made to cool the samples? Yes No No NA 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA 6. Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? 10. VOA vials have zero headspace? 11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (If applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding:	2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
4. Was an attempt made to cool the samples? Yes No No NA NA 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA 6. Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? 10. VOA vials have zero headspace? 11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (If applicable) 16. Was client notified of all discrepancies with this order? Yes No No No No No No No No No No No No No	3. How was the sample delivered?		<u>UPS</u>			
5. Were all samples received at a temperature of >0° C to 6.0°C	<u>Log In</u>					
6. Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? 10. VOA vials have zero headspace? 11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: Ves V No No No No No No No No No No	4. Was an attempt made to cool the sample	es?	Yes 🗌	No 🗌	NA 🗹	
7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? 10. VOA vials have zero headspace? 11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified: By Whom: Regarding: No No No VOA Vials # of preserved bottles checked for pH: (<2 or >12 unless r Adjusted? No Adjusted? Checked by: Checked by: Person Notified: Date Person Notified: By Whom: Regarding:	5. Were all samples received at a temperat	ure of >0° C to 6.0°C	Yes 🗌	No 🗆	NA 🗹	
8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? 10. VOA vials have zero headspace? 11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified: Person Notified: Date Person Notified: Date Person Notified: Person Noti	6. Sample(s) in proper container(s)?		Yes 🗸	No 🗆		
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10. VOA vials have zero headspace? 11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: No No Woo Wals Wash # of preserved bottles checked for pH: # of preserved has a preserved has a preserved has a preserved has a preserved h	8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🗹	No 🗆		
11. Were any sample containers received broken? 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: Yes No # of preserved bottles checked for pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless replication of pH: (<2 or >12 unless	9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗌	
# of preserved bottles checked for pH: (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? Yes V No Adjusted? 14. Is it clear what analyses were requested? Yes V No Checked by: (If no, notify customer for authorization.) Checked by: Checked by:	10.VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗹	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable)	11. Were any sample containers received by	roken?	Yes	No 🗹	# of preserved	
(Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: (<2 or >12 unless r Adjusted? No Checked by: Checked by: Date Person Notified: Person Notified: Person Notified: Regarding:	40 -		v 🗔	No [T]	bottles checked	
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14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: Yes No Checked by: No NA Person NA Person NA Person Regarding:	,		Yes 🗹	No 🗆	Adjusted?	
15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: Yes No Checked by: No NA Person NA Person NA Person Regarding:	• • •	-	Yes 🗹	No 🗆		
Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Person Notified: By Whom: Regarding: Date Via:eMailPhoneFaxIn Person	15. Were all holding times able to be met?		Yes 🗸	No 🗌	Checked by: _	
Person Notified: By Whom: Regarding: Date Via:eMailPhoneFaxIn Person						
Person Notified: By Whom: Via:eMailPhoneFaxIn Person Regarding:						
By Whom: Via:eMailPhoneFaxIn Person Regarding:	16. Was client notified of all discrepancies w	ith this order?	Yes ∐	No ∐	NA 🗹	٦
Regarding:	Person Notified:	Date	perpendicular annotation con a conference con	AND SEASON IN THE SECRET AND		
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A CONTROL OF THE PROPERTY OF T	Client Instructions:		and the second s	and the control of th		
	18. Cooler Information					

	ANALYSIS LABORATORY		4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Anal	(O)()	(S) (S) (W)	SD)	HqT (1.1) (1) 418 (AC)	.BE	BTEX + MT BTEX + MT BTEX + MT BTEX + MT TPH (Methorer) PPH's (831 PPH's (831 PPH's (831 PPH's (831 PPH's (831 PPH'S (831		X							Remarks: Any averfors Please Gel	Time: Residual by: Residued by: Date Time Capy Columns on e
Turn-Around Time:	✓ Standard □ Rush	Project Name: Rosmell Station 9	SIE	Project #: // 180 THMy Effluit	Laker Formace 12/2013	<u>ن</u>	John Robinson Of		r. Cm tar	On ice: □ Yes 🔀 No	Sample Temperature: (こる)	0 - 1	Tedlar NONE	1x fully vone							Received by: Date Time $12(18)_{13}$ (020)	Regelived by: Date Time
Chain-of-Custody Record	Clients Engineering Services The	ATTM. (george Robinson, PE	6 North Sufere	77045 2422	241, 797. 3420	-ax#: Gebrie. Pubinsing	2 Cypress 146.45	F-Standard □ Level 4 (Full Validation)	on		□ EDD (Type)		12/11/2 Am West Baker Furne	12/1/19 AIR East Baker Firmans	1					N	Date: Time; Relinguis/Actor/	Date: Time: Relifiquished by:



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 31, 2013

George Robinson Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 Order No.: 1305715

Dear George Robinson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/17/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager 4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1305715**

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Pre-Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 5/16/2013 7:20:00 AM

 Lab ID:
 1305715-001
 Matrix: AQUEOUS
 Received Date: 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analy	st: NSB
Methyl tert-butyl ether (MTBE)	ND	250	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
Benzene	2800	100	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
Toluene	4900	100	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
Ethylbenzene	260	100	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
Xylenes, Total	2600	200	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
1,2,4-Trimethylbenzene	160	100	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
1,3,5-Trimethylbenzene	100	100	μg/L	100 5/20/2013 6:35:57 PM	1 R10751
Surr: 4-Bromofluorobenzene	101	69.4-129	%REC	100 5/20/2013 6:35:57 PM	1 R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 26

- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

Lab Order **1305715**

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Post Air- Stripper

 Project:
 TWP Roswell Station 9
 Collection Date: 5/16/2013 7:20:00 AM

 Lab ID:
 1305715-002
 Matrix: AQUEOUS
 Received Date: 5/17/2013 9:50:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB Methyl tert-butyl ether (MTBE) ND 12 μg/L 5 5/20/2013 10:08:04 PM R10751 Benzene ND 5.0 μg/L 5/20/2013 10:08:04 PM R10751 Toluene ND 5.0 5 5/20/2013 10:08:04 PM R10751 μg/L Ethylbenzene ND 5.0 μg/L 5/20/2013 10:08:04 PM R10751 Xylenes, Total ND 10 μg/L 5/20/2013 10:08:04 PM R10751 1,2,4-Trimethylbenzene ND 5.0 μg/L 5/20/2013 10:08:04 PM R10751 1,3,5-Trimethylbenzene ND 5.0 μg/L 5 5/20/2013 10:08:04 PM R10751 Surr: 4-Bromofluorobenzene 99.9 69.4-129 %REC 5/20/2013 10:08:04 PM R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 2 of 26

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Lab Order **1305715**

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Between GAC's

 Project:
 TWP Roswell Station 9
 Collection Date: 5/16/2013 7:20:00 AM

 Lab ID:
 1305715-003
 Matrix: AQUEOUS
 Received Date: 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	5/20/2013 10:38:19 P	M R10751
Benzene	3.3	1.0	μg/L	1	5/20/2013 10:38:19 P	M R10751
Toluene	ND	1.0	μg/L	1	5/20/2013 10:38:19 P	M R10751
Ethylbenzene	ND	1.0	μg/L	1	5/20/2013 10:38:19 P	M R10751
Xylenes, Total	ND	2.0	μg/L	1	5/20/2013 10:38:19 P	M R10751
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	5/20/2013 10:38:19 P	M R10751
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	5/20/2013 10:38:19 P	M R10751
Surr: 4-Bromofluorobenzene	100	69.4-129	%REC	1	5/20/2013 10:38:19 P	M R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 3 of 26

- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

Lab Order **1305715**

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Post Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 5/16/2013 7:20:00 AM

 Lab ID:
 1305715-004
 Matrix: AQUEOUS
 Received Date: 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	7.8	2.0	* mg/L	20	5/17/2013 4:22:43 PM	R10725
Chloride	380	25	mg/L	50	5/20/2013 5:58:00 PM	R10757
Nitrogen, Nitrite (As N)	ND	2.0	mg/L	20	5/17/2013 4:22:43 PM	R10725
Bromide	0.43	0.10	mg/L	1	5/17/2013 4:10:18 PM	R10725
Nitrogen, Nitrate (As N)	ND	0.10	mg/L	1	5/17/2013 4:10:18 PM	R10725
Phosphorus, Orthophosphate (As P)	ND	0.50	mg/L	1	5/17/2013 4:10:18 PM	R10725
Sulfate	1300	25	mg/L	50	5/20/2013 5:58:00 PM	R10757
EPA METHOD 200.7: DISSOLVED MI	ETALS				Analyst	: JLF
Calcium	490	5.0	mg/L	5	5/22/2013 4:12:35 PM	R10804
Magnesium	140	5.0	mg/L	5	5/22/2013 4:12:35 PM	R10804
Potassium	3.2	1.0	mg/L	1	5/22/2013 4:10:06 PM	R10804
Sodium	210	5.0	mg/L	5	5/22/2013 4:12:35 PM	R10804
EPA METHOD 8260B: VOLATILES					Analyst	: cws
Benzene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Toluene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Ethylbenzene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Naphthalene	ND	2.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
1-Methylnaphthalene	ND	4.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
2-Methylnaphthalene	ND	4.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Acetone	59	10	μg/L	1	5/18/2013 7:47:21 PM	R10728
Bromobenzene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Bromodichloromethane	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Bromoform	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Bromomethane	ND	3.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
2-Butanone	ND	10	μg/L	1	5/18/2013 7:47:21 PM	R10728
Carbon disulfide	ND	10	μg/L	1	5/18/2013 7:47:21 PM	R10728
Carbon Tetrachloride	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Chlorobenzene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Chloroethane	ND	2.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Chloroform	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
Chloromethane	ND	3.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
2-Chlorotoluene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
4-Chlorotoluene	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728
cis-1,2-DCE	ND	1.0	μg/L	1	5/18/2013 7:47:21 PM	R10728

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page
 - Page 4 of 26
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Lab Order 1305715

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Post Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 5/16/2013 7:20:00 AM

 Lab ID:
 1305715-004
 Matrix: AQUEOUS
 Received Date: 5/17/2013 9:50:00 AM

Result **RL Oual Units DF** Date Analyzed Batch Analyses **EPA METHOD 8260B: VOLATILES** Analyst: CWS μg/L 5/18/2013 7:47:21 PM cis-1,3-Dichloropropene ND 1.0 R10728 1 1,2-Dibromo-3-chloropropane ND 2.0 μg/L 5/18/2013 7:47:21 PM R10728 Dibromochloromethane ND 1.0 R10728 μg/L 1 5/18/2013 7:47:21 PM ND R10728 Dibromomethane 1.0 μg/L 1 5/18/2013 7:47:21 PM ND 1,2-Dichlorobenzene 1.0 μg/L 5/18/2013 7:47:21 PM R10728 1 1,3-Dichlorobenzene ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 1,4-Dichlorobenzene ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 Dichlorodifluoromethane ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 1,1-Dichloroethane ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 ND 1.0 R10728 1,1-Dichloroethene μg/L 1 5/18/2013 7:47:21 PM 1,2-Dichloropropane ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 1,3-Dichloropropane ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 ND 2.0 μg/L R10728 2,2-Dichloropropane 5/18/2013 7:47:21 PM ND 1.0 5/18/2013 7:47:21 PM 1,1-Dichloropropene μg/L 1 R10728 ND Hexachlorobutadiene 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 ND 2-Hexanone 10 μg/L 1 5/18/2013 7:47:21 PM R10728 Isopropylbenzene ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 ND R10728 4-Isopropyltoluene 1.0 μg/L 1 5/18/2013 7:47:21 PM 4-Methyl-2-pentanone ND 10 μg/L 5/18/2013 7:47:21 PM R10728 1 Methylene Chloride ND 3.0 μg/L 5/18/2013 7:47:21 PM R10728 ND 3.0 R10728 n-Butylbenzene μg/L 5/18/2013 7:47:21 PM n-Propylbenzene ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 sec-Butylbenzene ND 1.0 5/18/2013 7:47:21 PM R10728 μg/L 1 Styrene ND 1.0 R10728 μg/L 1 5/18/2013 7:47:21 PM ND R10728 tert-Butylbenzene 1.0 μg/L 1 5/18/2013 7:47:21 PM 1.1.1.2-Tetrachloroethane ND 1.0 μg/L 1 5/18/2013 7:47:21 PM R10728 1,1,2,2-Tetrachloroethane ND 2.0 μg/L R10728 5/18/2013 7:47:21 PM Tetrachloroethene (PCE) ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 ND 5/18/2013 7:47:21 PM R10728 trans-1,2-DCE 1.0 μg/L trans-1,3-Dichloropropene ND 1.0 5/18/2013 7:47:21 PM R10728 μg/L 1 1,2,3-Trichlorobenzene ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 1.2.4-Trichlorobenzene ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 1 1,1,1-Trichloroethane ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 1,1,2-Trichloroethane ND 1.0 μg/L 5/18/2013 7:47:21 PM R10728 ND R10728 Trichloroethene (TCE) 1.0 μg/L 5/18/2013 7:47:21 PM ND 5/18/2013 7:47:21 PM R10728 Trichlorofluoromethane 1.0 μg/L 1 1,2,3-Trichloropropane ND 2.0 μg/L 1 5/18/2013 7:47:21 PM R10728 Vinyl chloride ND R10728 1.0 μg/L 1 5/18/2013 7:47:21 PM Xylenes, Total ND 1.5 μg/L 5/18/2013 7:47:21 PM R10728 1

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

70-130

%REC

98.7

Qualifiers:

Surr: 1,2-Dichloroethane-d4

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

5/18/2013 7:47:21 PM

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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R10728

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Lab Order **1305715**

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: Post Treatment

Project: TWP Roswell Station 9

Collection Date: 5/16/2013 7:20:00 AM

Lab ID: 1305715-004

Received Date: 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Anal	yst: CWS
Surr: 4-Bromofluorobenzene	102	69.5-130	%REC	1 5/18/2013 7:47:21 F	PM R10728
Surr: Dibromofluoromethane	101	70-130	%REC	1 5/18/2013 7:47:21 F	M R10728
Surr: Toluene-d8	96.8	70-130	%REC	1 5/18/2013 7:47:21 F	PM R10728

Matrix: AQUEOUS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 6 of 26

- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

Lab Order **1305715**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/31/2013

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1305715-005 **Matrix:** TRIP BLANK **Received Date:** 5/17/2013 9:50:00 AM

Analyses	Result	RL Qua	al Units	DF Dat	te Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: CWS
Benzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Toluene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Ethylbenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Naphthalene	ND	2.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1-Methylnaphthalene	ND	4.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
2-Methylnaphthalene	ND	4.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Acetone	ND	10	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Bromobenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Bromodichloromethane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Bromoform	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Bromomethane	ND	3.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
2-Butanone	ND	10	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Carbon disulfide	ND	10	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Carbon Tetrachloride	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Chlorobenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Chloroethane	ND	2.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Chloroform	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Chloromethane	ND	3.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
2-Chlorotoluene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
4-Chlorotoluene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
cis-1,2-DCE	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Dibromochloromethane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Dibromomethane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,2-Dichlorobenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,3-Dichlorobenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,4-Dichlorobenzene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
Dichlorodifluoromethane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,1-Dichloroethane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,1-Dichloroethene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,2-Dichloropropane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,3-Dichloropropane	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
2,2-Dichloropropane	ND	2.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753
1,1-Dichloropropene	ND	1.0	μg/L	1 5/2	0/2013 9:09:02 PM	R10753

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 7 of 26
- R RPD outside accepted recovery limits
 - Spike Recovery outside accepted recovery limits

Lab Order **1305715**

Date Reported: 5/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1305715-005 **Matrix:** TRIP BLANK **Received Date:** 5/17/2013 9:50:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: CWS
Hexachlorobutadiene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
2-Hexanone	ND	10	μg/L	1	5/20/2013 9:09:02 PM	R10753
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
4-Isopropyltoluene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
4-Methyl-2-pentanone	ND	10	μg/L	1	5/20/2013 9:09:02 PM	R10753
Methylene Chloride	ND	3.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
n-Butylbenzene	ND	3.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
n-Propylbenzene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
sec-Butylbenzene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
Styrene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
tert-Butylbenzene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
trans-1,2-DCE	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
Trichloroethene (TCE)	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
1,2,3-Trichloropropane	ND	2.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
Vinyl chloride	ND	1.0	μg/L	1	5/20/2013 9:09:02 PM	R10753
Xylenes, Total	ND	1.5	μg/L	1	5/20/2013 9:09:02 PM	R10753
Surr: 1,2-Dichloroethane-d4	94.6	70-130	%REC	1	5/20/2013 9:09:02 PM	R10753
Surr: 4-Bromofluorobenzene	99.5	69.5-130	%REC	1	5/20/2013 9:09:02 PM	R10753
Surr: Dibromofluoromethane	107	70-130	%REC	1	5/20/2013 9:09:02 PM	R10753
Surr: Toluene-d8	93.5	70-130	%REC	1	5/20/2013 9:09:02 PM	R10753

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Page 8 of 26
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client:	Cypress Engineering
Project:	TWP Roswell Station 9

Sample ID MB	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	
Client ID: PBW	Batch	n ID: R1	0804	F	RunNo: 1	0804				
Prep Date:	Analysis D	oate: 5/	22/2013	8	SeqNo: 3	05413	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LCS	SampT	ype: LC	S	Tes	TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: LCSW	Batch	n ID: R1	0804	F	RunNo: 1	0804					
Prep Date:	Analysis D	ate: 5/	22/2013	8	SeqNo: 3	05414	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	51	1.0	50.00	0	101	85	115				
Magnesium	51	1.0	50.00	0	101	85	115				
Potassium	49	1.0	50.00	0	97.4	85	115				
Sodium	49	1.0	50.00	0	98.4	85	115				

Sample ID	1305406-002AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	200.7: Disso	Ived Metal	ls	
Client ID:	BatchQC	Batch	ID: R1	0804	R	RunNo: 10	0804				
Prep Date:		Analysis D	ate: 5/	22/2013	S	SeqNo: 30	05572	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium		62	1.0	50.00	9.969	104	70	130			
Potassium		52	1.0	50.00	1.638	100	70	130			
Sodium		64	1.0	50.00	13.23	101	70	130			

Sample ID 13	05406-002AMSD	SampT	ype: MS	SD	Tes	tCode: El	PA Method	200.7: Dissol	ved Metal	s	
Client ID: Ba	atchQC	Batch	ID: R1	0804	R	RunNo: 1	0804				
Prep Date:		Analysis D	ate: 5/	22/2013	S	SeqNo: 3	05573	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium		61	1.0	50.00	9.969	102	70	130	1.04	20	
Potassium		51	1.0	50.00	1.638	99.0	70	130	1.20	20	
Sodium		63	1.0	50.00	13.23	100	70	130	0.849	20	

Sample ID 1305406-	002AMS SampT	pType: MS TestCode: EPA Method 200.7: Dissolved Met							ls	
Client ID: BatchQC	Batch	n ID: R1	0804	R	RunNo: 1	0804				
Prep Date:	Analysis D	ate: 5/	22/2013	S	SeqNo: 3	05575	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	320	5.0	250.0	53 08	105	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Page 9 of 26

Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1305406-002AMSD SampType: MSD TestCode: EPA Method 200.7: Dissolved Metals

Client ID: BatchQC Batch ID: R10804 RunNo: 10804

Prep Date: Analysis Date: 5/22/2013 SeqNo: 305579 Units: mg/L

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

Calcium 320 5.0 250.0 53.98 106 70 130 0.940 20

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

	Engineerin swell Stati	-								
Sample ID MB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBW	Batch	n ID: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	17/2013	9	SeqNo: 3	03271	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sample ID LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSW	Batch	n ID: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	17/2013	9	SeqNo: 3	03272	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	98.6	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	101	90	110			
Sample ID 1305706-001AMS	SampT	ype: M \$	3	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: BatchQC	Batch	n ID: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	17/2013	8	SeqNo: 3	03287	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	96.3	83.3	107			
Sample ID 1305706-001AMS	D SampT	ype: MS	SD	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: BatchQC	Batch	n ID: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	17/2013	5	SeqNo: 3	03288	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	94.8	83.3	107	1.63	20	
Sample ID MB	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBW		າ ID: R1			RunNo: 1					
Prep Date:	Analysis D				SeqNo: 3		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Oualifiers:										

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

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Client:

Hall Environmental Analysis Laboratory, Inc.

Cypress Engineering

WO#: **1305715**

31-May-13

Project: TWP Ro	swell Statio	on 9								
Sample ID LCS	SampT	ype: LC	s	Tes	tCode: E	PA Method	300.0: Anion	5		
Client ID: LCSW	Batch	1D: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	17/2013	\$	SeqNo: 3	03328	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.5	90	110			
Bromide	2.4	0.10	2.500	0	95.1	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.2	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	90	110			
Sample ID 1305708-001AMS	SampT	ype: MS	3	Tes	tCode: E	PA Method	300.0: Anion	5		
Client ID: BatchQC	Batch	1D: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	18/2013	9	SeqNo: 3	03344	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.8	0.10	0.5000	2.412	84.0	76.6	110			
Bromide	2.6	0.10	2.500	0.1903	94.9	83.3	107			
Sample ID 1305708-001AMS	D SampT	ype: MS	SD	Tes	tCode: E	PA Method	300.0: Anion	3		
Client ID: BatchQC	Batch	1D: R1	0725	F	RunNo: 1	0725				
Prep Date:	Analysis D	ate: 5/	18/2013	\$	SeqNo: 3	03345	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.8	0.10	0.5000	2.412	83.2	76.6	110	0.145	20	
Bromide	2.6	0.10	2.500	0.1903	95.3	83.3	107	0.382	20	
Sample ID MB	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	300.0: Anion	3		
Client ID: PBW	Batch	n ID: R1	0757	F	RunNo: 1	0757				
Prep Date:	Analysis D	ate: 5/	20/2013	5	SeqNo: 3	04121	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Sample ID LCS	SampT	ype: LC	:S	Tes	tCode: E	PA Method	300.0: Anion	3		
Client ID: LCSW	Batch	1D: R1	0757	F	RunNo: 1	0757				
Prep Date:	Analysis D	ate: 5/	20/2013	5	SeqNo: 3	04122	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
011 11	4.0	0.50								

Qualifiers:

Chloride

Sulfate

* Value exceeds Maximum Contaminant Level.

4.9

9.5

0.50

0.50

5.000

10.00

0

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

90

90

110

110

ND Not Detected at the Reporting Limit

97.2

95.2

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1305715

%RPD

RPDLimit

Qual

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID MB SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBW Batch ID: R10757 RunNo: 10757

Prep Date: Analysis Date: 5/20/2013 SeqNo: 304181 Units: mg/L

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

 Chloride
 ND
 0.50

 Sulfate
 ND
 0.50

Sample ID LCS SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSW Batch ID: R10757 RunNo: 10757

Prep Date: Analysis Date: 5/20/2013 SeqNo: 304182 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Chloride 4.7 0.50 5.000 0 93.5 90 110 Sulfate 0.50 0 92.1 90 9.2 10.00 110

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles PBW Client ID: Batch ID: R10751 RunNo: 10751 Analysis Date: 5/20/2013 SeqNo: 303952 Prep Date: Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Methyl tert-butyl ether (MTBE) ND 2.5 ND Benzene 1.0 Toluene ND 1.0 ND Ethylbenzene 1.0 Xylenes, Total ND 2.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 Surr: 4-Bromofluorobenzene 20.00 98.5 69.4 129 20

Sample ID 100NG BTEX LCS	SampT	ype: LC	s	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	1D: R1	0751	F	RunNo: 1	0751				
Prep Date:	Analysis D	ate: 5/	20/2013	5	SeqNo: 3	03953	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22	2.5	20.00	0	108	76.9	115			
Benzene	22	1.0	20.00	0	108	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	63	2.0	60.00	0	106	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	103	80	120			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	106	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	69.4	129			

Sample ID 1305665-001AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: BatchQC	Batch	n ID: R1	0751	F	RunNo: 1	0751				
Prep Date:	Analysis D	ate: 5/	20/2013	8	SeqNo: 3	03962	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	42	5.0	40.00	0	105	65.6	125			
Benzene	42	2.0	40.00	0.6680	103	80	120			
Toluene	42	2.0	40.00	0.7600	102	80	120			
Ethylbenzene	41	2.0	40.00	0.6320	100	80	120			
Xylenes, Total	120	4.0	120.0	1.548	103	80	120			
1,2,4-Trimethylbenzene	40	2.0	40.00	0.5240	99.2	74	128			
1,3,5-Trimethylbenzene	42	2.0	40.00	0.4600	105	75.5	130			
Surr: 4-Bromofluorobenzene	41		40.00		103	69.4	129			

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R

S Spike Recovery outside accepted recovery limits

RPD outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1305715

31-May-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 1305665-001AM	SD SampT	уре: М\$	SD	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: BatchQC	Batch	n ID: R1	0751	F	RunNo: 10	0751				
Prep Date:	Analysis D	oate: 5/	20/2013	S	SeqNo: 30	03963	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	42	5.0	40.00	0	106	65.6	125	1.25	20	
Benzene	40	2.0	40.00	0.6680	99.5	80	120	3.72	20	
Toluene	40	2.0	40.00	0.7600	96.9	80	120	4.98	20	
Ethylbenzene	39	2.0	40.00	0.6320	96.4	80	120	3.98	20	
Xylenes, Total	120	4.0	120.0	1.548	98.3	80	120	4.23	20	
1,2,4-Trimethylbenzene	39	2.0	40.00	0.5240	95.9	74	128	3.27	20	
1,3,5-Trimethylbenzene	41	2.0	40.00	0.4600	101	75.5	130	3.85	20	
Surr: 4-Bromofluorobenzene	41		40.00		102	69.4	129	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit RL

- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R
- RPD outside accepted recovery limits Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ml rb	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	17/2013	S	SeqNo: 3	03358	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

Spike Recovery outside accepted recovery limits

- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ml rb	SampT	уре: МЕ	BLK	Test	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0728	R	tunNo: 1	0728				
Prep Date:	Analysis D	oate: 5/	17/2013	S	SeqNo: 3	03358	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	69.5	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID 100ng lcs	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	1D: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	17/2013	8	SeqNo: 3	03360	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	85.8	133			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limitsS Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1305715

31-May-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 100ng Ics Client ID: LCSW	·	ype: LC			tCode: El		8260B: VOL	ATILES		
Prep Date:	Analysis D		17/2013	-	SeqNo: 3		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	69.5	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID 1305687-001a ms	SampT	ype: MS	3	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: BatchQC	Batch	n ID: R1	0728	R	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	17/2013	S	SeqNo: 3	03366	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	116	70	130			
Toluene	21	1.0	20.00	0	103	68.5	128			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	23	1.0	20.00	0	114	61.3	102			S
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	69.5	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID 1305687-001a ms	d SampT	уре: М	SD	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: BatchQC	Batch	n ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	oate: 5/	17/2013	8	SeqNo: 3	03367	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130	11.4	20	•
Toluene	19	1.0	20.00	0	95.7	68.5	128	6.97	20	
Chlorobenzene	19	1.0	20.00	0	95.0	70	130	5.91	20	
1,1-Dichloroethene	19	1.0	20.00	0	94.7	70	130	9.35	20	
Trichloroethene (TCE)	20	1.0	20.00	0	101	61.3	102	12.0	20	
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	69.5	130	0	0	
Surr: Dibromofluoromethane	10		10.00		102	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		95.5	70	130	0	0	

Sample ID rb2	SampTy	/pe: ME	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis Da	ate: 5/	18/2013	S	SeqNo: 3	03377	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit RL

- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1305715

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID rb2 SampType: MBLK TestCode: EPA Method 8260B: VOLATILES Client ID: **PBW** Batch ID: R10728 RunNo: 10728 Prep Date: Analysis Date: 5/18/2013 SeqNo: 303377 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Toluene ND 1.0 ND Ethylbenzene 1.0 Methyl tert-butyl ether (MTBE) ND 1.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 ND 2-Methylnaphthalene 4.0 Acetone ND 10 ND 1.0 Bromobenzene Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 Chloromethane ND 3.0 ND 2-Chlorotoluene 1.0 4-Chlorotoluene ND 1.0 cis-1,2-DCE ND 1.0 cis-1,3-Dichloropropene ND 1.0 1,2-Dibromo-3-chloropropane ND 2.0 Dibromochloromethane ND 1.0 Dibromomethane ND 1.0 ND 1,2-Dichlorobenzene 1.0 ND 1.3-Dichlorobenzene 1.0 ND 1.0 1,4-Dichlorobenzene Dichlorodifluoromethane ND 1.0 1,1-Dichloroethane ND 1.0 1,1-Dichloroethene ND 1.0 1,2-Dichloropropane ND 1.0 ND 1,3-Dichloropropane 1.0 2,2-Dichloropropane ND 2.0 1,1-Dichloropropene ND 1.0 ND 1.0 Hexachlorobutadiene

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limitsS Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID rb2	SampT	уре: МЕ	BLK	Test	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0728	R	RunNo: 1	0728				
Prep Date:	Analysis D	oate: 5/	18/2013	S	SeqNo: 3	03377	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	69.5	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID 100ng lcs ii	SampType: LCS TestCode: EPA Method 8260B: VOLATILES									
Client ID: LCSW	Batch	n ID: R1	0728	R	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	18/2013	S	SeqNo: 3	03379	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	21	1.0	20.00	0	106	80	120			
Chlorobenzene	20	1.0	20.00	0	99.2	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	85.8	133			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

SampType: MS

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1305690-007a ms

Sample ID 100ng lcs ii	SampT	ype: LC	s	Tes	tCode: El	ATILES				
Client ID: LCSW	Batch	ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	18/2013	8	SeqNo: 3	03379	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	10		10.00		101	69.5	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

TestCode: EPA Method 8260B: VOLATILES

Client ID: BatchQC	Batch	n ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	oate: 5/	18/2013	5	SeqNo: 3	03397	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	20	1.0	20.00	0	100	68.5	128			
Chlorobenzene	20	1.0	20.00	0	97.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.7	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.0	61.3	102			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	69.5	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID 1305690-007a ms	d SampT	ype: M \$	SD	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: BatchQC	Batch	n ID: R1	0728	R	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	18/2013	S	SeqNo: 3	03398	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.8	70	130	4.74	20	
Toluene	20	1.0	20.00	0	97.6	68.5	128	2.54	20	
Chlorobenzene	19	1.0	20.00	0	93.6	70	130	4.30	20	
1,1-Dichloroethene	17	1.0	20.00	0	85.5	70	130	7.03	20	
Trichloroethene (TCE)	18	1.0	20.00	0	92.3	61.3	102	5.93	20	
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	69.5	130	0	0	
Surr: Dibromofluoromethane	9.5		10.00		95.0	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		97.5	70	130	0	0	

Sample ID rb3	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	18/2013	8	SeqNo: 3	03399	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID rb3	SampT	уре: М	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R1	0728	F	RunNo: 1	0728				
Prep Date:	Analysis D	ate: 5/	18/2013	S	SeqNo: 3	03399	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	1.0								
Z-I ICACITUTIC	ND	10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID rb3	SampType: MBLK TestCode: EPA Met					PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch ID: R10728			R	tunNo: 1	0728				
Prep Date:	Analysis Date: 5/18/2013		SeqNo: 303399			Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	69.5	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID 100ng lcs iii	SampType: LCS TestCode: EPA Method						8260B: VOL	ATILES		
Client ID: LCSW	Batch	Batch ID: R10728 RunNo: 10728								
Prep Date:	Analysis D	oate: 5/	18/2013	SeqNo: 303401			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	70	130			
Toluene	19	1.0	20.00	0	93.4	80	120			
Chlorobenzene	19	1.0	20.00	0	93.6	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.4	85.8	133			
Trichloroethene (TCE)	20	1.0	20.00	0	99.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	69.5	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ml rb

Sample ID 100ng lcs iii SampType: LCS TestCode: EPA Method 8260B: VOLATILES LCSW Client ID: Batch ID: R10728 RunNo: 10728 Prep Date: Analysis Date: 5/18/2013 SeqNo: 303401 Units: µg/L Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: Dibromofluoromethane 70 10 10.00 102 130 98.7 Surr: Toluene-d8 9.9 10.00 70 130

TestCode: EPA Method 8260B: VOLATILES

Client ID: PBW Batch ID: R10753 RunNo: 10753 Prep Date: Analysis Date: 5/20/2013 SeqNo: 303979 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene ND 1.0 ND Toluene 1.0 Ethylbenzene ND 1.0 Methyl tert-butyl ether (MTBE) ND 1.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 ND 4.0 2-Methylnaphthalene Acetone ND 10 ND 1.0 Bromobenzene Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 ND Chloroform 1.0 Chloromethane ND 3.0 2-Chlorotoluene ND 1.0 4-Chlorotoluene ND 1.0 ND cis-1.2-DCE 1.0 cis-1,3-Dichloropropene ND 1.0 1,2-Dibromo-3-chloropropane ND 2.0 Dibromochloromethane ND 1.0 Dibromomethane ND 1.0 ND 1.0 1,2-Dichlorobenzene ND 1.0 1,3-Dichlorobenzene

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ml rb	SampT	уре: М	BLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R10753			F	RunNo: 10753					
Prep Date:	Analysis D	ate: 5/	20/2013	S	SeqNo: 3	03979	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	69.5	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1305715**

31-May-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 100ng Ics	SampType: LCS TestCode: EPA Method						d 8260B: VOLATILES				
Client ID: LCSW	Batch	Batch ID: R10753 RunNo: 10753									
Prep Date:	Analysis D	Analysis Date: 5/20/2013			SeqNo: 3	03981	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	21	1.0	20.00	0	105	70	130				
Toluene	20	1.0	20.00	0	99.5	80	120				
Chlorobenzene	19	1.0	20.00	0	96.0	70	130				
1,1-Dichloroethene	19	1.0	20.00	0	96.5	85.8	133				
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130				
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.3	70	130				
Surr: 4-Bromofluorobenzene	10		10.00		102	69.5	130				
Surr: Dibromofluoromethane	11		10.00		110	70	130				
Surr: Toluene-d8	9.6		10.00		96.4	70	130				

Sample ID 1305764-001a ms	SampType: MS TestCode: EPA Method 8260B: VOLATILES									
Client ID: BatchQC	Batch	n ID: R1	0753	R	tunNo: 1	0753				
Prep Date:	Analysis D	ate: 5/	20/2013	S	SeqNo: 3	03997	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	98.8	68.5	128			
Chlorobenzene	19	1.0	20.00	0	96.3	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	61.3	102			S
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	69.5	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID 1305764-001a msd	sd SampType: MSD TestCode: EPA Method 8260B: VOLATILES									
Client ID: BatchQC	Batch	ID: R1	0753	R	RunNo: 10753					
Prep Date:	Analysis D	ate: 5/	20/2013	S	SeqNo: 3	03998	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130	0.803	20	
Toluene	19	1.0	20.00	0	96.2	68.5	128	2.70	20	
Chlorobenzene	19	1.0	20.00	0	94.1	70	130	2.27	20	
1,1-Dichloroethene	20	1.0	20.00	0	98.2	70	130	3.34	20	
Trichloroethene (TCE)	21	1.0	20.00	0	104	61.3	102	2.06	20	S
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	69.5	130	0	0	
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		94.9	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

Spike Recovery outside accepted recovery limits

- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

LABORATORY	Website: www.h				
Client Name: CYP	Work Order Number	r: 1305715	·	RcptNo: 1	
Received by/date: Logged By: Lindsay Mangin	05/17/13 5/17/2013 9:50:00 AN	А	Smaky Alberty D		
Completed By: Lindsay Mangin	5/17/2013 10:48:39 A	м	Simely Albania		
Deviewed By	05/17/2013		0 3		
<u></u>	טופון וון נט				
Chain of Custody		V	No :	Not Present ✓	
 Custody seals intact on sample bottles? Is Chain of Custody complete? 		Yes ✓	No '	Not Present	
3. How was the sample delivered?			110	HOLL TOOSIN	
3. How was the sample delivered?		<u>UPS</u>			
<u>Log In</u>					
4. Was an attempt made to cool the samp	iles?	Yes 🗸	No	NA	
Were all samples received at a tempera	ture of >0° C to 6.0°C	Yes ✓ :	No 🙏	NA :	
6. Sample(s) in proper container(s)?		Yes ✔	No :		
7. Sufficient sample volume for indicated to	est(s)?	Yes 🗸	No		
8. Are samples (except VOA and ONG) pr	operly preserved?	Yes	No V		
9. Was preservative added to bottles?		Yes	No V	NA .	1 , 1
ACIDED O. LIML HA 10. VOA vials have zero headspace?	103 to -000	Yes V	CICCEP?	LOIOIE P 「 No VOA Vials	1. CA
11. Were any sample containers received to	roken?	Yes	No .✔:	140 0071 01010	05 M-
The state and campio salkamene reserved a	TOROT.	100		# of preserved bottles checked	
12. Does paperwork match bottle labels?		Yes 🗸	No	for pH:	2
(Note discrepancies on chain of custody	•			Adjusted?	>12 unless noted)
13. Are matrices correctly identified on Chai	-	Yes ✓	No '	Aujusteu :	400
14. Is it clear what analyses were requested 15. Were all holding times able to be met?	. ?	Yes ✔	No	Checked by:	D 05/1-
(If no, notify customer for authorization.)	I	163		•	' () '
pecial Handling (if applicable)					
16. Was client notified of all discrepancies v	vith this order?	Yes	No .	NA 🗸	
Person Notified:	Date:	***************************************			
By Whom:	Via:	•	Phone Fax	In Person	
Regarding:	THE RESIDENCE OF THE PARTY OF T			**************************************	
Client Instructions:					
17. Additional remarks:					
Filtered from	unpres Int	-0 a \$2	5mr fo	r diss Me	etals.
18. Cooler Information Cooler No Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By		2/17/13
1 1.8 Good	Yes		Signou By	0	A1. 11.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request		This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Chain-of-Custody Record Cliedi: Cliedi: Project Name: Project Name: Project Name: Project Name: Project Name: Project #: May 2013 Phone #: 261, 797, 3420 Sampling Add S. May 2013	Time Matrix Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Request ID Type and # Type Sample Time IDate	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this part of the



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

June 27, 2013

George Robinson Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1306739

Dear George Robinson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1306739**

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Pre-Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 6/17/2013 9:30:00 AM

 Lab ID:
 1306739-001
 Matrix: AQUEOUS
 Received Date: 6/18/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analys	st: NSB
Benzene	2500	100	μg/L	100 6/20/2013 7:15:49 PM	R11460
Toluene	4500	100	μg/L	100 6/20/2013 7:15:49 PM	R11460
Ethylbenzene	260	100	μg/L	100 6/20/2013 7:15:49 PM	R11460
Xylenes, Total	2500	200	μg/L	100 6/20/2013 7:15:49 PM	R11460
Surr: 4-Bromofluorobenzene	99.5	69.4-129	%REC	100 6/20/2013 7:15:49 PM	R11460

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1306739

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Project: TWP Roswell Station 9

Lab ID: 1306739-002

Client Sample ID: Post-Air Stripper

Collection Date: 6/17/2013 9:30:00 AM **Received Date:** 6/18/2013 9:55:00 AM

Analyses	Result RL Qual Unit		al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	5.0	μg/L	5	6/20/2013 10:47:54 P	M R11460
Toluene	ND	5.0	μg/L	5	6/20/2013 10:47:54 P	M R11460
Ethylbenzene	ND	5.0	μg/L	5	6/20/2013 10:47:54 P	M R11460
Xylenes, Total	ND	10	μg/L	5	6/20/2013 10:47:54 P	M R11460
Surr: 4-Bromofluorobenzene	103	69.4-129	%REC	5	6/20/2013 10:47:54 P	M R11460

Matrix: AQUEOUS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306739**

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Project: TWP Roswell Station 9

Lab ID: 1306739-003

Client Sample ID: Between GAC's

Collection Date: 6/17/2013 9:30:00 AM

Matrix: AQUEOUS Received Date: 6/18/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				An	alyst: NSB
Benzene	4.0	1.0	μg/L	1 6/20/2013 11:18:0	7 PM R11460
Toluene	ND	1.0	μg/L	1 6/20/2013 11:18:0	7 PM R11460
Ethylbenzene	ND	1.0	μg/L	1 6/20/2013 11:18:0	7 PM R11460
Xylenes, Total	ND	2.0	μg/L	1 6/20/2013 11:18:0	7 PM R11460
Surr: 4-Bromofluorobenzene	106	69.4-129	%REC	1 6/20/2013 11:18:0	7 PM R11460

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 3 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306739**

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Post-Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 6/17/2013 9:30:00 AM

 Lab ID:
 1306739-004
 Matrix: AQUEOUS
 Received Date: 6/18/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed B	Batch
EPA METHOD 300.0: ANIONS				Analyst: J	JRR
Fluoride	5.4	2.0	* mg/L	20 6/25/2013 2:24:01 AM F	R11535
Chloride	340	25	mg/L	50 6/19/2013 10:02:12 PM F	R11437
Nitrogen, Nitrite (As N)	ND	0.10	mg/L	1 6/18/2013 11:02:41 PM F	R11399
Bromide	0.47	0.10	mg/L	1 6/18/2013 11:02:41 PM F	R11399
Nitrogen, Nitrate (As N)	ND	0.10	mg/L	1 6/18/2013 11:02:41 PM F	R11399
Phosphorus, Orthophosphate (As P)	ND	10	mg/L	20 6/18/2013 11:15:05 PM F	R11399
Sulfate	1000	25	mg/L	50 6/19/2013 10:02:12 PM F	R11437
EPA METHOD 200.7: DISSOLVED ME	ETALS			Analyst: J	JLF
Calcium	460	5.0	mg/L	5 6/19/2013 5:06:00 PM F	R11414
Magnesium	130	5.0	mg/L	5 6/19/2013 5:06:00 PM F	R11414
Potassium	5.6	1.0	mg/L	1 6/19/2013 5:03:29 PM F	R11414
Sodium	230	5.0	mg/L	5 6/19/2013 5:06:00 PM F	R11414
EPA METHOD 8260B: VOLATILES				Analyst: D	DAM
Benzene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Toluene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Ethylbenzene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Naphthalene	ND	2.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
1-Methylnaphthalene	ND	4.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
2-Methylnaphthalene	ND	4.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Acetone	66	10	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Bromobenzene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Bromodichloromethane	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Bromoform	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Bromomethane	ND	3.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
2-Butanone	ND	10	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Carbon disulfide	ND	10	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Carbon Tetrachloride	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Chlorobenzene	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Chloroethane	ND	2.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
Chloroform	ND	1.0	μg/L		R11382
Chloromethane	ND	3.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382
2-Chlorotoluene	ND	1.0	μg/L		R11382
4-Chlorotoluene	ND	1.0	μg/L		R11382
cis-1,2-DCE	ND	1.0	μg/L	1 6/19/2013 1:40:01 AM F	R11382

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 4 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306739**

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: Post-Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 6/17/2013 9:30:00 AM

 Lab ID:
 1306739-004
 Matrix: AQUEOUS
 Received Date: 6/18/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: DAM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Dibromochloromethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Dibromomethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,2-Dichlorobenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,3-Dichlorobenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,4-Dichlorobenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Dichlorodifluoromethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1-Dichloroethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1-Dichloroethene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,2-Dichloropropane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,3-Dichloropropane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
2,2-Dichloropropane	ND	2.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1-Dichloropropene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Hexachlorobutadiene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
2-Hexanone	ND	10	μg/L	1	6/19/2013 1:40:01 AM	R11382
Isopropylbenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
4-Isopropyltoluene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
4-Methyl-2-pentanone	ND	10	μg/L	1	6/19/2013 1:40:01 AM	R11382
Methylene Chloride	ND	3.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
n-Butylbenzene	ND	3.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
n-Propylbenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
sec-Butylbenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Styrene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
tert-Butylbenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
trans-1,2-DCE	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1,1-Trichloroethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,1,2-Trichloroethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Trichloroethene (TCE)	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Trichlorofluoromethane	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
1,2,3-Trichloropropane	ND	2.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Vinyl chloride	ND	1.0	μg/L	1	6/19/2013 1:40:01 AM	R11382
Xylenes, Total	ND	1.5	μg/L	1	6/19/2013 1:40:01 AM	R11382
Surr: 1,2-Dichloroethane-d4	85.9	70-130	%REC	1	6/19/2013 1:40:01 AM	R11382

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 5 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306739**

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: Post-Treatment

Project: TWP Roswell Station 9

Collection Date: 6/17/2013 9:30:00 AM

Lab ID: 1306739-004

Matrix: AQUEOUS Received I

Received Date: 6/18/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	t: DAM
Surr: 4-Bromofluorobenzene	91.8	69.5-130	%REC	1	6/19/2013 1:40:01 AM	R11382
Surr: Dibromofluoromethane	91.1	70-130	%REC	1	6/19/2013 1:40:01 AM	R11382
Surr: Toluene-d8	91.6	70-130	%REC	1	6/19/2013 1:40:01 AM	R11382

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 6 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306739**

Date Reported: 6/27/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1306739-005 **Matrix:** TRIP BLANK **Received Date:** 6/18/2013 9:55:00 AM

Analyses	Result	RL Qua	al Units	DF Dat	te Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	t: DAM
Benzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Toluene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Ethylbenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Naphthalene	ND	2.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1-Methylnaphthalene	ND	4.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
2-Methylnaphthalene	ND	4.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Acetone	ND	10	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Bromobenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Bromodichloromethane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Bromoform	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Bromomethane	ND	3.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
2-Butanone	ND	10	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Carbon disulfide	ND	10	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Carbon Tetrachloride	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Chlorobenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Chloroethane	ND	2.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Chloroform	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Chloromethane	ND	3.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
2-Chlorotoluene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
4-Chlorotoluene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
cis-1,2-DCE	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Dibromochloromethane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Dibromomethane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,2-Dichlorobenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,3-Dichlorobenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,4-Dichlorobenzene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
Dichlorodifluoromethane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,1-Dichloroethane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,1-Dichloroethene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,2-Dichloropropane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,3-Dichloropropane	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
2,2-Dichloropropane	ND	2.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382
1,1-Dichloropropene	ND	1.0	μg/L	1 6/1	9/2013 2:08:15 AM	R11382

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 7 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1306739**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/27/2013

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1306739-005 **Matrix:** TRIP BLANK **Received Date:** 6/18/2013 9:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: DAM
Hexachlorobutadiene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
2-Hexanone	ND	10	μg/L	1	6/19/2013 2:08:15 AM	R11382
Isopropylbenzene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
4-Isopropyltoluene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
4-Methyl-2-pentanone	ND	10	μg/L	1	6/19/2013 2:08:15 AM	R11382
Methylene Chloride	ND	3.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
n-Butylbenzene	ND	3.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
n-Propylbenzene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
sec-Butylbenzene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
Styrene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
tert-Butylbenzene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
trans-1,2-DCE	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,1,1-Trichloroethane	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,1,2-Trichloroethane	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
Trichloroethene (TCE)	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
Trichlorofluoromethane	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
1,2,3-Trichloropropane	ND	2.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
Vinyl chloride	ND	1.0	μg/L	1	6/19/2013 2:08:15 AM	R11382
Xylenes, Total	ND	1.5	μg/L	1	6/19/2013 2:08:15 AM	R11382
Surr: 1,2-Dichloroethane-d4	85.4	70-130	%REC	1	6/19/2013 2:08:15 AM	R11382
Surr: 4-Bromofluorobenzene	92.0	69.5-130	%REC	1	6/19/2013 2:08:15 AM	R11382
Surr: Dibromofluoromethane	89.4	70-130	%REC	1	6/19/2013 2:08:15 AM	R11382
Surr: Toluene-d8	91.7	70-130	%REC	1	6/19/2013 2:08:15 AM	R11382

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 8 of 19
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Client:

Hall Environmental Analysis Laboratory, Inc.

Cypress Engineering

WO#: 1306739

27-Jun-13

Project:		swell Statio										
Sample ID	MB	SampTy	/pe: M I	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls		
Client ID:	PBW	Batch	ID: R1	1414	F	RunNo: 1	1414					
Prep Date:		Analysis Da	ate: 6 /	/19/2013	5	SeqNo: 3	22566	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium		ND	1.0									
Magnesium		ND	1.0									
Potassium		ND	1.0									
Sample ID	LCS	SampTy	/pe: LC	s	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls		
Client ID:	LCSW	Batch	ID: R1	1414	F	RunNo: 11414						
Prep Date:		Analysis Da	ate: 6 /	/19/2013	Ş	SeqNo: 3	22567	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium		52	1.0	50.00	0	104	85	115				
Magnesium		52	1.0	50.00	0	105	85	115				
Potassium		52	1.0	50.00	0	104	85	115				
Sample ID	МВ	SampTy	/pe: M I	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls		
Client ID:	PBW	Batch	Batch ID: R11414			RunNo: 11414						
Prep Date:		Analysis Da	ate: 6	/19/2013	5	SeqNo: 3	22584	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium		ND	1.0									
Magnesium		ND	1.0									
Potassium		ND	1.0									
Sodium		ND	1.0									
Sample ID	LCS	SampTy	/pe: LC	cs	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls		
Client ID:	LCSW	Batch	ID: R1	1414	F	RunNo: 1	1414					
Prep Date:		Analysis Da	ate: 6	/19/2013	Ş	SeqNo: 3	22585	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium		51	1.0	50.00	0	102	85	115				
Magnesium		51	1.0	50.00	0	102	85	115				
Potassium		50 50	1.0		0	100	85 85	115				
Sodium		50	1.0	50.00	0	100	85	115				
Sample ID	1306515-001CMS				Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls		
Client ID:	BatchQC	Batch	ID: R1	1414	F	RunNo: 11414						
Prep Date:		Analysis Da	ate: 6	/19/2013	\$	SeqNo: 3	22880	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

Magnesium

Value exceeds Maximum Contaminant Level.

1.0

Е Value above quantitation range

Analyte detected below quantitation limits

RSD is greater than RSDlimit \mathbf{O}

RPD outside accepted recovery limits

Analyte detected in the associated Method Blank

Η Holding times for preparation or analysis exceeded

70

130

Not Detected at the Reporting Limit

102

P Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

50.00

8.228

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1306739

27-Jun-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 1306515-001CMSD SampType: MSD TestCode: EPA Method 200.7: Dissolved Metals

Client ID: **BatchQC** Batch ID: R11414 RunNo: 11414

Prep Date: Analysis Date: 6/19/2013 SeqNo: 322881 Units: mg/L

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

1.18 Magnesium 59 50.00 8.228 70 130 20 1.0 101

Sample ID 1306515-001CMS SampType: MS TestCode: EPA Method 200.7: Dissolved Metals

Client ID: **BatchQC** Batch ID: R11414 RunNo: 11414

Prep Date: Analysis Date: 6/19/2013 SeqNo: 322883 Units: mg/L

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

Calcium 310 5.0 250.0 48.29 106 70 130

Sample ID 1306515-001CMSD SampType: MSD TestCode: EPA Method 200.7: Dissolved Metals

Client ID: **BatchQC** Batch ID: R11414 RunNo: 11414

Prep Date: Analysis Date: 6/19/2013 SeqNo: 322884 Units: mg/L

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

Calcium 310 5.0 250.0 48.29 105 70 130 0.678 20

Qualifiers:

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

RPD outside accepted recovery limits

В Analyte detected in the associated Method Blank

Η Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1306739**

27-Jun-13

Client:	Cypress Engineering
Project:	TWP Roswell Station 9

Sample ID 1306712-001CMS	SampT	уре: МЅ	3	TestCode: EPA Method 300.0: Anions						
Client ID: BatchQC	Batch	1399	F	RunNo: 1	1399					
Prep Date:	Analysis D	oate: 6/	18/2013	9	SeqNo: 3	22251	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.78	0.10	1.000	0	77.6	84.3	102			S
Bromide	3.0	0.10	2.500	0	121	92	104			S
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.8	93	113			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.1	73.9	120			

Sample ID 1306712-001CMS	SD SampType: MSD TestCode: EPA Method 300.0: Anions									
Client ID: BatchQC	Batch	n ID: R1	1399	F	RunNo: 11399					
Prep Date:	Analysis D	Date: 6/	18/2013	5	SeqNo: 3	22252	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.77	0.10	1.000	0	77.3	84.3	102	0.323	20	S
Bromide	3.0	0.10	2.500	0	121	92	104	0.212	20	S
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.6	93	113	0.201	20	
Phosphorus Orthophosphate (As P	4.5	0.50	5.000	0	90.7	73.9	120	3.74	20	

Sample ID MB	SampType: MBLK			Tes	tCode: El					
Client ID: PBW	Batch ID: R11399			R	RunNo: 1	1399				
Prep Date:	Analysis D	ate: 6/	18/2013	S	SeqNo: 3	22279	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID LCS	SampT	ype: LC	s	Tes	tCode: El	S				
Client ID: LCSW	Batch	1D: R1	1399	R	RunNo: 1	1399				
Prep Date:	Analysis D	ate: 6/	18/2013	S	SeqNo: 3	22280	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.0	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			

Sample ID 130	06710-001AMS	SampTy	pe: MS	3	TestCode: EPA Method 300.0: Anions				;		
Client ID: Bat	atchQC	Batch	ID: R1	1399	R	unNo: 1	1399				
Prep Date:		Analysis Da	te: 6/	18/2013	S	eqNo: 3	22286	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide		2.6	0.10	2.500	0.1965	96.7	92	104	•		•

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1306739

27-Jun-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 1306710-001AMSD SampType: MSD TestCode: EPA Method 300.0: Anions Client ID: **BatchQC** Batch ID: R11399 RunNo: 11399 Units: mg/L Prep Date: Analysis Date: 6/18/2013 SeqNo: 322287

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Bromide 2.6 0.10 2.500 0.1965 95.6 92 104 1.11 20

Sample ID MB SampType: MBLK TestCode: EPA Method 300.0: Anions Client ID: PBW Batch ID: R11399 RunNo: 11399 Prep Date: Analysis Date: 6/18/2013 SeqNo: 322313 Units: mg/L SPK value SPK Ref Val %REC LowLimit **RPDLimit** Analyte Result **PQL** HighLimit %RPD Qual Nitrogen, Nitrite (As N) ND 0.10 Bromide ND 0.10

ND Nitrogen, Nitrate (As N) 0.10 Phosphorus, Orthophosphate (As P ND 0.50 Sample ID LCS SampType: LCS

TestCode: EPA Method 300.0: Anions Client ID: LCSW Batch ID: R11399 RunNo: 11399 Prep Date: Analysis Date: 6/19/2013 SeqNo: 322314 Units: mg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Nitrogen, Nitrite (As N) 0.96 0.10 1.000 96.3 90 110 0 Bromide 2.4 0.10 2.500 0 97.1 90 110 Nitrogen, Nitrate (As N) 2.5 0.10 2.500 0 101 90 110 5.000 0 102 90 Phosphorus, Orthophosphate (As P 5.1 0.50 110

Sample ID 1306727-002AMS TestCode: EPA Method 300.0: Anions SampType: MS Client ID: **BatchQC** Batch ID: R11399 RunNo: 11399 Prep Date: Analysis Date: 6/19/2013 SeqNo: 322325 Units: mg/L Analyte SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Result **PQL** Qual Nitrogen, Nitrite (As N) 0.99 0.10 1.000 98.6 84.3 102 0.3548 Bromide 2.8 2.500 96.9 92 104 0.10 Nitrogen, Nitrate (As N) 8.4 0.10 2.500 5.589 112 93 113 Phosphorus, Orthophosphate (As P 5.4 0.50 5.000 0.3555 100 73.9 120

Sample ID 1306727-002AMSD SampType: MSD TestCode: EPA Method 300.0: Anions Client ID: **BatchQC** Batch ID: R11399 RunNo: 11399 Prep Date: Analysis Date: 6/19/2013 SeqNo: 322326 Units: mg/L %REC Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit %RPD **RPDLimit** Qual Nitrogen, Nitrite (As N) 0.99 0.10 1.000 99.0 84.3 0.425 20 102 Bromide 2.9 0.10 2.500 0.3548 100 92 104 3.05 20 Nitrogen, Nitrate (As N) 8.4 0.10 2.500 5.589 112 93 113 0.00238 20 0.50 5.000 0.3555 98.7 20 Phosphorus, Orthophosphate (As P 5.3 73.9 120 1.26

Qualifiers:

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

RPD outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

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Client:

Hall Environmental Analysis Laboratory, Inc.

Cypress Engineering

WO#: **1306739**

27-Jun-13

Project:		swell Static									
Sample ID	MB	SampTy	/pe: M I	BLK	Tes	tCode: El	PA Method	300.0: Anions	S		
Client ID:	PBW	Batch	ID: R1	11437	F	RunNo: 1	1437				
Prep Date:		Analysis Da	ate: 6	/19/2013	5	SeqNo: 3	23319	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	0.50								
Sulfate		ND	0.50								
Sample ID	LCS	SampTy	/pe: L(cs	Tes	tCode: El	PA Method	300.0: Anions	S		
Client ID:	LCSW	Batch	ID: R1	11437	F	RunNo: 1	1437				
Prep Date:		Analysis Da	ate: 6	/19/2013	5	SeqNo: 3	23320	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		4.6	0.50	5.000	0	92.4	90	110			
Sulfate		9.4	0.50	10.00	0	93.9	90	110			
Sample ID	МВ	SampT	/pe: M I	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	PBW	Batch	ID: R1	11535	F	RunNo: 1	1535				
Prep Date:		Analysis Da	ate: 6	/24/2013	5	SeqNo: 3	26679	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		ND	0.10								
Sample ID	LCS-b	SampTy	/pe: L(cs	Tes	tCode: El	PA Method	300.0: Anions	S		
Client ID:	LCSW	Batch	ID: R1	11535	F	RunNo: 1	1535				
Prep Date:		Analysis Da	ate: 6	/24/2013	5	SeqNo: 3	26681	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.48	0.10	0.5000	0	95.9	90	110			
Sample ID	1306964-001AMS	SampTy	/pe: M :	s	Tes	tCode: El	PA Method	300.0: Anions	S		
Client ID:	BatchQC	Batch	ID: R1	11535	F	RunNo: 1	1535				
Prep Date:		Analysis Da	ate: 6	/24/2013	5	SeqNo: 3	26698	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.62	0.10	0.5000	0.1368	96.1	76.9	114			
Sample ID	1306964-001AMS	D SampTy	/pe: M :	SD	Tes	tCode: El	PA Method	300.0: Anions	s		
Client ID:	BatchQC	Batch	ID: R1	11535	F	RunNo: 1	1535				
Prep Date:		Analysis Da	ate: 6	/24/2013	5	SeqNo: 3	26699	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

Fluoride

* Value exceeds Maximum Contaminant Level.

0.62

0.10

0.5000

0.1368

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

76.9

114

1.02

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

97.4

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1306739

27-Jun-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 1306944-001AMS SampType: MS TestCode: EPA Method 300.0: Anions

Client ID: **BatchQC** Batch ID: R11535 RunNo: 11535

Prep Date: Analysis Date: 6/25/2013 SeqNo: 326732 Units: mg/L

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

Fluoride 1.1 0.10 0.5000 0.5777 95.0 76.9 114

Sample ID 1306944-001AMSD SampType: MSD TestCode: EPA Method 300.0: Anions

Client ID: BatchQC Batch ID: R11535 RunNo: 11535

0.10

1.1

Prep Date: Analysis Date: 6/25/2013 SeqNo: 326733 Units: mg/L

0.5000

Analyte Result SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** PQL LowLimit Qual 0.5777

96.4

76.9

114

0.691

20

Qualifiers:

Fluoride

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

RPD outside accepted recovery limits

В Analyte detected in the associated Method Blank

Η Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1306739**

27-Jun-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles PBW Client ID: Batch ID: R11460 RunNo: 11460 Prep Date: Analysis Date: 6/20/2013 SeqNo: 324109 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene ND 1.0 ND Toluene 1.0 ND Ethylbenzene 1.0 ND Xylenes, Total 2.0 Surr: 4-Bromofluorobenzene 21 20.00 105 69.4 129

Sample ID 100NG BTEX LO	CS SampT	Гуре: LC	S	Tes						
Client ID: LCSW	Batch	h ID: R1	1460	F	RunNo: 1	1460				
Prep Date:	Analysis D)ate: 6/	/20/2013	S	SeqNo: 3	24111	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.0	80	120			
Toluene	19	1.0	20.00	0	96.0	80	120			
Ethylbenzene	19	1.0	20.00	0	96.2	80	120			
Xylenes, Total	61	2.0	60.00	0	101	80	120			
m,p-Xylene	41	1.0	40.00	0	103	80	120			
o-Xylene	20	1.0	20.00	0	98.2	80	120			
Surry A-Bromofluorobenzene	21		20.00		104	69.4	129			

Sample ID 1306739-001AM	S Samp1	ype: MS	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: Pre-Treatment	Batc	n ID: R1	1460	F	RunNo: 1	1460				
Prep Date:	Analysis [Date: 6/	20/2013	8	SeqNo: 3	24116	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4400	100	2000	2490	96.4	80	120			
Toluene	6400	100	2000	4518	96.3	80	120			
Ethylbenzene	2200	100	2000	263.6	95.7	80	120			
Xylenes, Total	8500	200	6000	2476	100	80	120			
m,p-Xylene	5900	100	4000	0	148	37.9	179			
o-Xylene	2600	100	2000	0	128	67.5	138			
Surr: 4-Bromofluorobenzene	2100		2000		106	69.4	129			

Sample ID 1	1306739-001AMSD) SampTy	SampType: MSD TestCode: EPA Method 8021B: Volatiles								
Client ID: F	Pre-Treatment	Batch	ID: R1	1460	R						
Prep Date:		Analysis Da	ate: 6/ 2	20/2013	٤	SeqNo: 32	24117	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	_	4500	100	2000	2490	101	80	120	1.89	20	
Toluene		6400	100	2000	4518	96.4	80	120	0.0372	20	
Ethylbenzene		2200	100	2000	263.6	98.7	80	120	2.77	20	
Xylenes, Total		8600	200	6000	2476	101	80	120	0.673	20	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1306739**

27-Jun-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1306739-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: **Pre-Treatment** Batch ID: R11460 RunNo: 11460 Analysis Date: 6/20/2013 SeqNo: 324117 Prep Date: Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual m,p-Xylene 6000 100 4000 0 149 37.9 179 20 0 o-Xylene 2600 100 2000 0 129 67.5 0 20 138 Surr: 4-Bromofluorobenzene 2200 2000 108 69.4 129 0 0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1306739**

27-Jun-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

TestCode: EPA Method 8260B: VOLATILES Sample ID 5ml rb SampType: MBLK **PBW** Client ID: Batch ID: R11382 RunNo: 11382 Prep Date: Analysis Date: 6/18/2013 SeqNo: 321684 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene ND 1.0 ND Toluene 1.0 ND Ethylbenzene 1.0 Methyl tert-butyl ether (MTBE) ND 1.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 ND 1-Methylnaphthalene 4.0 2-Methylnaphthalene ND 4.0 ND 10 Acetone ND 1.0 Bromobenzene Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 ND Chloromethane 3.0 2-Chlorotoluene ND 1.0 4-Chlorotoluene ND 1.0 cis-1,2-DCE ND 1.0 cis-1,3-Dichloropropene ND 1.0 1,2-Dibromo-3-chloropropane ND 2.0 Dibromochloromethane ND 1.0 ND Dibromomethane 1.0 ND 1.2-Dichlorobenzene 1.0 1,3-Dichlorobenzene ND 1.0 1.4-Dichlorobenzene ND 1.0 Dichlorodifluoromethane ND 1.0 1,1-Dichloroethane ND 1.0 1,1-Dichloroethene ND 1.0 ND 1,2-Dichloropropane 1.0 1,3-Dichloropropane ND 1.0 2,2-Dichloropropane ND 2.0 ND 1.0 1,1-Dichloropropene

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1306739**

27-Jun-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ml rb	SampType: MBLK TestCode: EPA Method 8260B: VOLATILES									
Client ID: PBW	Batch	1D: R1	1382	R	RunNo: 1	1382				
Prep Date:	Analysis D	ate: 6/	18/2013	S	SeqNo: 3	21684	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	69.5	130			
Surr: Dibromofluoromethane	8.8		10.00		88.3	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Sample ID 100ng lcs	SampT	SampType: LCS TestCode: EPA Method						ATILES		
Client ID: LCSW	Batch	1D: R1	1382	R	RunNo: 1					
Prep Date:	Analysis D	ate: 6/	18/2013	S	SeqNo: 321686 Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	85.8	133			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1306739**

27-Jun-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 100ng lcs SampType: LCS TestCode: EPA Method 8260B: VOLATILES LCSW Client ID: Batch ID: R11382 RunNo: 11382 Prep Date: Analysis Date: 6/18/2013 SeqNo: 321686 Units: µg/L Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: 1,2-Dichloroethane-d4 9.1 90.5 70 10.00 130 97.5 Surr: 4-Bromofluorobenzene 9.7 10.00 69.5 130 93.7 Surr: Dibromofluoromethane 9.4 10.00 70 130 Surr: Toluene-d8 9.3 10.00 92.5 70 130

Sample ID 1306682-001a ms TestCode: EPA Method 8260B: VOLATILES SampType: MS Client ID: **BatchQC** Batch ID: R11382 RunNo: 11382 Prep Date: Analysis Date: 6/18/2013 SeqNo: 321692 Units: µg/L PQL SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result SPK value LowLimit Qual Analyte Benzene 22 1.0 20.00 0 109 70 130 23 20.00 0 68.5 Toluene 1.0 113 128 Chlorobenzene 21 1.0 20.00 0 105 70 130 1,1-Dichloroethene 20 20.00 0 102 70 1.0 130 20 98.5 Trichloroethene (TCE) 1.0 20.00 0 61.3 102 88.6 Surr: 1,2-Dichloroethane-d4 8.9 10.00 70 130 Surr: 4-Bromofluorobenzene 9.7 10.00 96.8 69.5 130 Surr: Dibromofluoromethane 9.2 10.00 91.7 70 130 Surr: Toluene-d8 10.00 70 9.1 91.1 130

Sample ID 1306682-001a ms	d SampT	ype: MS	SD	Tes	tCode: El	PA Method	8260B: VOL	ATILES	•	
Client ID: BatchQC	Batch	n ID: R1	1382	R	RunNo: 1	1382				
Prep Date:	Analysis D	ate: 6/	18/2013	S	SeqNo: 3	21702	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130	4.38	20	
Toluene	22	1.0	20.00	0	111	68.5	128	1.83	20	
Chlorobenzene	21	1.0	20.00	0	103	70	130	1.75	20	
1,1-Dichloroethene	20	1.0	20.00	0	98.1	70	130	3.89	20	
Trichloroethene (TCE)	19	1.0	20.00	0	94.6	61.3	102	4.06	20	
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	69.5	130	0	0	
Surr: Dibromofluoromethane	9.0		10.00		90.0	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		96.3	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 19 of 19



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com CYP Client Name: Work Order Number: 1306739 RcptNo: 1 Received by/date: 06/18 Logged By: 6/18/2013 9:55:00 AM Lindsay Mangin Completed By: Lindsay Mangin 6/18/2013 1:07:57 PM 06/18/13 Reviewed By: Chain of Custody No ... Not Present 1 Custody seals intact on sample bottles? Yes 🗌 No 🗌 Yes 🗹 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? **UPS** Log In No 🔲 NA 🗌 Yes 🗹 4. Was an attempt made to cool the samples? No \square NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🔽 Yes 🗸 No 🗌 Sample(s) in proper container(s)? No 🗆 7. Sufficient sample volume for indicated test(s)? No 🗆 8. Are samples (except VOA and ONG) properly preserved? Yes 🗹 9. Was preservative added to bottles? Yes 🗌 No 🔽 NA 🗀 10.VOA vials have zero headspace? Yes 🔽 No 🗌 No VOA Vials No 🔽 11. Were any sample containers received broken? # of preserved bottles checked No 🗌 for pH: 12. Does paperwork match bottle labels? Yes 🔽 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? Checked by: No 🗌 Yes 🔽 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 NA 🗹 16. Was client notified of all discrepancies with this order? No L Person Notified: Date: By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By

2.7

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Yes

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Chain-of-Custody Record Client press Frusineering Servic ATIN: George Robinson of Mailing Address 15 huza, 6 North Surte 102 Houston X 770 Phone #: 251, 797, 3420		RAIL.	1 + 1 >	Relinguished Relinguished amples submit
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

July 31, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1307905

Dear George Robinson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/19/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1307905**

100 7/23/2013 7:39:27 PM

100 7/23/2013 7:39:27 PM

R12136

R12136

Date Reported: 7/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Pre-Treatment

100

103

 Project:
 TWP Roswell Station 9
 Collection Date: 7/17/2013 10:45:00 AM

 Lab ID:
 1307905-001
 Matrix: AQUEOUS
 Received Date: 7/19/2013 10:00:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: **DAM** 100 7/23/2013 7:39:27 PM Methyl tert-butyl ether (MTBE) ND 250 μg/L R12136 Benzene 3000 100 μg/L 100 7/23/2013 7:39:27 PM R12136 Toluene 5300 100 R12136 μg/L 100 7/23/2013 7:39:27 PM Ethylbenzene 270 100 μg/L 100 7/23/2013 7:39:27 PM R12136 Xylenes, Total 2600 200 μg/L 100 7/23/2013 7:39:27 PM R12136 1,2,4-Trimethylbenzene 170 100 μg/L 100 7/23/2013 7:39:27 PM R12136

100

69.4-129

μg/L

%REC

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

1,3,5-Trimethylbenzene

Surr: 4-Bromofluorobenzene

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1307905**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/31/2013

CLIENT: Cypress Engineering Client Sample ID: Post Air Stripper

Project: TWP Roswell Station 9 Collection Date: 7/17/2013 10:45:00 AM

Lab ID: 1307905-002 **Matrix:** AQUEOUS **Received Date:** 7/19/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	: DAM
Methyl tert-butyl ether (MTBE)	ND	12	μg/L	5	7/23/2013 8:09:40 PM	R12136
Benzene	ND	5.0	μg/L	5	7/23/2013 8:09:40 PM	R12136
Toluene	ND	5.0	μg/L	5	7/23/2013 8:09:40 PM	R12136
Ethylbenzene	ND	5.0	μg/L	5	7/23/2013 8:09:40 PM	R12136
Xylenes, Total	ND	10	μg/L	5	7/23/2013 8:09:40 PM	R12136
1,2,4-Trimethylbenzene	ND	5.0	μg/L	5	7/23/2013 8:09:40 PM	R12136
1,3,5-Trimethylbenzene	ND	5.0	μg/L	5	7/23/2013 8:09:40 PM	R12136
Surr: 4-Bromofluorobenzene	104	69.4-129	%REC	5	7/23/2013 8:09:40 PM	R12136

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1307905**

Date Reported: 7/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Between GAC's

 Project:
 TWP Roswell Station 9
 Collection Date: 7/17/2013 10:45:00 AM

 Lab ID:
 1307905-003
 Matrix: AQUEOUS
 Received Date: 7/19/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	7/23/2013 8:39:47 PM	R12136
Benzene	3.2	1.0	μg/L	1	7/23/2013 8:39:47 PM	R12136
Toluene	1.8	1.0	μg/L	1	7/23/2013 8:39:47 PM	R12136
Ethylbenzene	ND	1.0	μg/L	1	7/23/2013 8:39:47 PM	R12136
Xylenes, Total	ND	2.0	μg/L	1	7/23/2013 8:39:47 PM	R12136
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	7/23/2013 8:39:47 PM	R12136
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	7/23/2013 8:39:47 PM	R12136
Surr: 4-Bromofluorobenzene	105	69.4-129	%REC	1	7/23/2013 8:39:47 PM	R12136

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 3 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1307905

Date Reported: 7/31/2013

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: Post-Treatment

CLIENT: Cypress Engineering **Project:** TWP Roswell Station 9 Collection Date: 7/17/2013 10:45:00 AM

1307905-004 Lab ID: Matrix: AQUEOUS Received Date: 7/19/2013 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	1.2	0.50	mg/L	5	7/22/2013 8:10:56 PM	R12117
Chloride	380	25	mg/L	50	7/24/2013 4:30:52 AM	R12143
Bromide	ND	0.50	mg/L	5	7/22/2013 8:10:56 PM	R12117
Phosphorus, Orthophosphate (As P)	ND	2.5	H mg/L	5	7/22/2013 8:10:56 PM	R12117
Sulfate	1100	25	mg/L	50	7/24/2013 4:30:52 AM	R12143
Nitrate+Nitrite as N	ND	1.0	mg/L	5	7/23/2013 8:26:48 AM	R12143
EPA METHOD 200.7: DISSOLVED ME	ETALS				Analyst	: JLF
Calcium	480	5.0	mg/L	5	7/26/2013 5:13:11 PM	R12216
Magnesium	130	5.0	mg/L	5	7/26/2013 5:13:11 PM	R12216
Potassium	2.8	1.0	mg/L	1	7/26/2013 5:10:23 PM	R12216
Sodium	200	5.0	mg/L	5	7/29/2013 2:08:43 PM	R12249
EPA METHOD 8260B: VOLATILES					Analyst	: cws
Benzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Toluene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Ethylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Naphthalene	ND	2.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1-Methylnaphthalene	ND	4.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
2-Methylnaphthalene	ND	4.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Acetone	74	10	μg/L	1	7/22/2013 4:08:41 PM	R12108
Bromobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Bromodichloromethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Bromoform	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Bromomethane	ND	3.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
2-Butanone	17	10	μg/L	1	7/22/2013 4:08:41 PM	R12108
Carbon disulfide	ND	10	μg/L	1	7/22/2013 4:08:41 PM	R12108
Carbon Tetrachloride	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Chlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Chloroethane	ND	2.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Chloroform	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Chloromethane	ND	3.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
2-Chlorotoluene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
4-Chlorotoluene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
cis-1,2-DCE	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit O
- RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 4 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1307905**

Date Reported: 7/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Post-Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 7/17/2013 10:45:00 AM

 Lab ID:
 1307905-004
 Matrix: AQUEOUS
 Received Date: 7/19/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	cws
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Dibromochloromethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Dibromomethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2-Dichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,3-Dichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,4-Dichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Dichlorodifluoromethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1-Dichloroethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1-Dichloroethene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2-Dichloropropane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,3-Dichloropropane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
2,2-Dichloropropane	ND	2.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1-Dichloropropene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Hexachlorobutadiene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
2-Hexanone	ND	10	μg/L	1	7/22/2013 4:08:41 PM	R12108
Isopropylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
4-Isopropyltoluene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
4-Methyl-2-pentanone	ND	10	μg/L	1	7/22/2013 4:08:41 PM	R12108
Methylene Chloride	ND	3.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
n-Butylbenzene	ND	3.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
n-Propylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
sec-Butylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Styrene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
tert-Butylbenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
trans-1,2-DCE	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1,1-Trichloroethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,1,2-Trichloroethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Trichloroethene (TCE)	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
Trichlorofluoromethane	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R12108
1,2,3-Trichloropropane	ND	2.0	μg/L	1	7/22/2013 4:08:41 PM	R1210
Vinyl chloride	ND	1.0	μg/L	1	7/22/2013 4:08:41 PM	R1210
Xylenes, Total	ND	1.5	μg/L	1	7/22/2013 4:08:41 PM	R12108
Surr: 1,2-Dichloroethane-d4	99.4	70-130	%REC	1	7/22/2013 4:08:41 PM	R12108
Surr: 4-Bromofluorobenzene	95.6	70-130	%REC	1	7/22/2013 4:08:41 PM	R12108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 5 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1307905**

Date Reported: 7/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Post-Treatment

 Project:
 TWP Roswell Station 9
 Collection Date: 7/17/2013 10:45:00 AM

 Lab ID:
 1307905-004
 Matrix: AQUEOUS
 Received Date: 7/19/2013 10:00:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8260B: VOLATILES** Analyst: CWS 7/22/2013 4:08:41 PM Surr: Dibromofluoromethane 102 70-130 %REC R12108 Surr: Toluene-d8 100 70-130 %REC 7/22/2013 4:08:41 PM R12108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 6 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1307905**

Date Reported: 7/31/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 Collection Date:

Lab ID: 1307905-005 **Matrix:** TRIP BLANK **Received Date:** 7/19/2013 10:00:00 AM

Analyses	Result	RL Qua	al Units	DF Date An	ılyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	cws
Benzene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Toluene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Ethylbenzene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Naphthalene	ND	2.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
1-Methylnaphthalene	ND	4.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
2-Methylnaphthalene	ND	4.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Acetone	ND	10	μg/L	1 7/22/2013	4:37:38 PM	R12108
Bromobenzene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Bromodichloromethane	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Bromoform	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Bromomethane	ND	3.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
2-Butanone	ND	10	μg/L	1 7/22/2013	4:37:38 PM	R12108
Carbon disulfide	ND	10	μg/L	1 7/22/2013	4:37:38 PM	R12108
Carbon Tetrachloride	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Chlorobenzene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Chloroethane	ND	2.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Chloroform	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
Chloromethane	ND	3.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
2-Chlorotoluene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
4-Chlorotoluene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
cis-1,2-DCE	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
cis-1,3-Dichloropropene	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
Dibromochloromethane	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
Dibromomethane	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,2-Dichlorobenzene	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,3-Dichlorobenzene	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,4-Dichlorobenzene	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
Dichlorodifluoromethane	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,1-Dichloroethane	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,1-Dichloroethene	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,2-Dichloropropane	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
1,3-Dichloropropane	ND	1.0	μg/L	1 7/22/2013	3 4:37:38 PM	R12108
2,2-Dichloropropane	ND	2.0	μg/L	1 7/22/2013	4:37:38 PM	R12108
1,1-Dichloropropene	ND	1.0	μg/L	1 7/22/2013	4:37:38 PM	R12108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 7 of 17
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1307905

Hall Environmental Analysis Laboratory, Inc. Date Reported: 7/31/2013

CLIENT: Cypress Engineering Client Sample ID: Trip Blank

Project: TWP Roswell Station 9 **Collection Date:**

1307905-005 Lab ID: Matrix: TRIP BLANK Received Date: 7/19/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	cws
Hexachlorobutadiene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
2-Hexanone	ND	10	μg/L	1	7/22/2013 4:37:38 PM	R12108
Isopropylbenzene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
4-Isopropyltoluene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
4-Methyl-2-pentanone	ND	10	μg/L	1	7/22/2013 4:37:38 PM	R12108
Methylene Chloride	ND	3.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
n-Butylbenzene	ND	3.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
n-Propylbenzene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
sec-Butylbenzene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
Styrene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
tert-Butylbenzene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
trans-1,2-DCE	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,1,1-Trichloroethane	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,1,2-Trichloroethane	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
Trichloroethene (TCE)	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
Trichlorofluoromethane	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
1,2,3-Trichloropropane	ND	2.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
Vinyl chloride	ND	1.0	μg/L	1	7/22/2013 4:37:38 PM	R12108
Xylenes, Total	ND	1.5	μg/L	1	7/22/2013 4:37:38 PM	R12108
Surr: 1,2-Dichloroethane-d4	99.1	70-130	%REC	1	7/22/2013 4:37:38 PM	R12108
Surr: 4-Bromofluorobenzene	98.8	70-130	%REC	1	7/22/2013 4:37:38 PM	R12108
Surr: Dibromofluoromethane	97.4	70-130	%REC	1	7/22/2013 4:37:38 PM	R12108
Surr: Toluene-d8	102	70-130	%REC	1	7/22/2013 4:37:38 PM	R12108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit O
- RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 8 of 17 P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Client:

Hall Environmental Analysis Laboratory, Inc.

Cypress Engineering

WO#: **1307905**

31-Jul-13

Project:	TWP Ro	swell Statio	n 9								
Sample ID	МВ	SampTy	pe: MI	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	
Client ID:	PBW	Batch	ID: R1	12216	F	RunNo: 1	2216				
Prep Date:		Analysis Da	ate: 7 /	/26/2013	9	SeqNo: 3	47829	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0								
Magnesium		ND	1.0								
Potassium		ND	1.0								
Sample ID	LCS	SampTy	/pe: LC	cs	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	
Client ID:	LCSW	Batch	ID: R1	12216	F	RunNo: 1	2216				
Prep Date:		Analysis Da	ate: 7 /	/26/2013	9	SeqNo: 3	47830	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		49	1.0	50.00	0	98.3	85	115			
Magnesium		50	1.0	50.00	0	101	85	115			
Potassium		49	1.0	50.00	0	99.0	85	115			
Sample ID	МВ	SampTy	/pe: M I	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	
Client ID:	PBW	Batch	Batch ID: R12249			RunNo: 1	2249				
Prep Date:		Analysis Da	ate: 7 /	/29/2013	9	SeqNo: 3	48395	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		ND	1.0								
Sample ID	LCS	SampTy	/pe: LC	cs	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	
Client ID:	LCSW	Batch	ID: R1	12249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: 7 /	/29/2013	9	SeqNo: 3	48396	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		50	1.0	50.00	0	101	85	115			
Sample ID	1307C06-002AMS	SampTy	/pe: M \$	s	Tes	tCode: E	PA Method	200.7: Dissol	ved Metal	ls	
Client ID:	BatchQC	Batch	ID: R1	12249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: 7 /	/29/2013	9	SeqNo: 3	48606	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		89	1.0	50.00	39.96	97.3	70	130			
Sample ID	1307C06-002AMS	SD SampTy	/pe: M \$	SD	Tes	tCode: E	PA Method	200.7: Dissol	ved Metal	ls	
Client ID:	BatchQC		ID: R1			RunNo: 1					
I								l loitor man/l			
Prep Date:		Analysis Da	ate: 7 /	/29/2013	٤	SeqNo: 3	4860 <i>7</i>	Units: mg/L			
Prep Date: Analyte		Analysis Da Result	ate: 7 / PQL		SPK Ref Val	%REC	48607 LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

Page 9 of 17

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307905**

31-Jul-13

Client:	Cypress Engineering
Project:	TWP Roswell Station 9

Sample ID MB	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	300.0: Anion	TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch	n ID: R1	2117	F	RunNo: 1	2117								
Prep Date:	Analysis D	Date: 7/	22/2013	9	SeqNo: 3	44641	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Fluoride	ND	0.10												
Bromide	ND	0.10												
Phosphorus, Orthophosphate (As P	ND	0.50												

Sample ID LCS	Sampl	ype: LC	S	les	TestCode: EPA Method 300.0: Anions					
Client ID: LCSW	Batch	n ID: R1	2117	F	RunNo: 1	2117				
Prep Date:	Analysis D	oate: 7/	22/2013	8	SeqNo: 3	44644	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Bromide	2.5	0.10	2.500	0	98.3	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	90	110			

Sample ID 1307979-001DMS	Samp	SampType: MS TestCode: EPA Metho						s		
Client ID: BatchQC	Bato	h ID: R1	2117	F	RunNo: 1	2117				
Prep Date:	Analysis [Date: 7/	22/2013	9	SeqNo: 3	44649	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.1457	101	76.9	114			
Bromide	2.7	0.10	2.500	0.1063	102	92	104			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	103	73.9	120			

Sample ID 1307979-001DMS	D Samp1	SampType: MSD TestCode: EPA Method 300.0: Anions								
Client ID: BatchQC	Batcl	n ID: R1	2117	R	tunNo: 1	2117				
Prep Date:	Analysis D	Date: 7/	22/2013	S	SeqNo: 3	44650	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.1457	101	76.9	114	0.123	20	
Bromide	2.7	0.10	2.500	0.1063	103	92	104	0.244	20	
Phosphorus, Orthophosphate (As P	5.2	0.50	5.000	0	104	73.9	120	0.946	20	

Sample ID 1307961-001BMS	Samp	Туре: М	S	Tes	tCode: El	PA Method				
Client ID: BatchQC	Bato	h ID: R1	2117	F	RunNo: 1	2117				
Prep Date:	Analysis I	Date: 7 /	/22/2013	8	SeqNo: 3	44659	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.5274	99.6	76.9	114			
Bromide	2.6	0.10	2.500	0.06210	100	92	104			
Phosphorus, Orthophosphate (As P	5.3	0.50	5.000	0	105	73.9	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

Page 10 of 17

Client:

Project:

Phosphorus, Orthophosphate (As P

Hall Environmental Analysis Laboratory, Inc.

5.4

0.50

5.000

Cypress Engineering

TWP Roswell Station 9

WO#: **1307905**

20

31-Jul-13

Sample ID	1307961-001BMSD	SampT	ype: MS	SD	TestCode: EPA Method 300.0: Anions				s		
Client ID:	BatchQC	Batch	ID: R1	2117	R	2117					
Prep Date:		Analysis Date: 7/22/2013			SeqNo: 344660			Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		1.0	0.10	0.5000	0.5274	101	76.9	114	0.864	20	
Bromide		2.6	0.10	2.500	0.06210	102	92	104	1.75	20	

0

107

73.9

120

1.92

Sample ID MB SampType: MBLK TestCode: EPA Method 300.0: Anions Client ID: **PBW** Batch ID: R12143 RunNo: 12143 Prep Date: Analysis Date: 7/23/2013 SeqNo: 345438 Units: mg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.50 Chloride ND Sulfate ND 0.50 ND 0.20 Nitrate+Nitrite as N

Sample ID LCS TestCode: EPA Method 300.0: Anions SampType: LCS Client ID: LCSW Batch ID: R12143 RunNo: 12143 Prep Date: Analysis Date: 7/23/2013 SeqNo: 345439 Units: mg/L SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result **PQL** HighLimit Qual Chloride 4.9 0.50 5.000 0 98.2 90 110 Sulfate 10 0.50 10.00 0 100 90 110 Nitrate+Nitrite as N 0.20 0 102 3.6 3.500 90 110

Sample ID 1307996-001BMS TestCode: EPA Method 300.0: Anions SampType: MS Client ID: **BatchQC** Batch ID: R12143 RunNo: 12143 Prep Date: Analysis Date: 7/23/2013 SeqNo: 345441 Units: mg/L Analyte SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Result **PQL** HighLimit Qual Sulfate 0.50 22.21 10.00 111 90.1 116 Nitrate+Nitrite as N 4.8 0.20 1.180 102 90 3.500 110

Sample ID 1307996-001BMSD SampType: MSD TestCode: EPA Method 300.0: Anions Client ID: BatchQC Batch ID: R12143 RunNo: 12143 Prep Date: Analysis Date: 7/23/2013 SeqNo: 345442 Units: mq/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Sulfate 33 0.50 10.00 22.21 107 90.1 116 1.24 20 Nitrate+Nitrite as N 4.6 0.20 3.500 1.180 98.9 90 110 2.54 20

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

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Client:

Hall Environmental Analysis Laboratory, Inc.

Cypress Engineering

WO#: **1307905**

31-Jul-13

Project:	TWP Ros	well Statio	on 9									
Sample ID	1307967-001AMS				TestCode: EPA Method 300.0: Anions							
Client ID:	BatchQC	Batch ID: R12143			R	RunNo: 12	2143					
Prep Date:		Analysis Date: 7/23/2013			SeqNo: 345453			Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Nitrate+Nitrite	as N	18	1.0	17.50	1.064	98.9	90	110	70111 2			
Sample ID	1307967-001AMSE) SamnTı	vne. MS	SD.	Tes	tCode: FI	PA Method	300 0: Anion	•			
•					TestCode: EPA Method 300.0: Anions RunNo: 12143							
Prep Date:	Batongo	Analysis Date: 7/23/2013				45454						
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	Units: mg/L HighLimit	%RPD	RPDLimit	Qual	
Nitrate+Nitrite	as N	18	1.0	17.50	1.064	97.6	90	110	1.19	20	Quai	
Committee	MD.	O				10 a d - 1 = 1	DA 84.41		_			
Sample ID		SampT						300.0: Anion	S			
Client ID:	PBW					RunNo: 12143						
Prep Date:		Analysis Date: 7/23/2013				SeqNo: 34	45478	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride Sulfate		ND ND	0.50 0.50									
Nitrate+Nitrite	as N	ND	0.20									
Sample ID	LCS	SampTy	vne: LC	:S	Tes	tCode: El	PA Method	300.0: Anion	<u> </u>			
Sample ID								300.0: Anion	S			
Client ID:		Batch	ID: R1	2143	R	RunNo: 1	2143		s			
Client ID: Prep Date:		Batch Analysis D	ID: R1 ate: 7 /	2143 23/2013	R	RunNo: 12 SeqNo: 34	2143 45479	Units: mg/L		PPDI imit	Qual	
Client ID:		Batch	ID: R1	2143 23/2013	R	RunNo: 1	2143		s %RPD	RPDLimit	Qual	
Client ID: Prep Date: Analyte		Batch Analysis Da Result	ID: R1 ate: 7 /	2143 23/2013 SPK value	R S SPK Ref Val	RunNo: 12 SeqNo: 34 %REC	2143 45479 LowLimit	Units: mg/L HighLimit		RPDLimit	Qual	
Client ID: Prep Date: Analyte Chloride	LCSW	Batch Analysis Da Result 4.8	ID: R1 ate: 7 / PQL 0.50	2143 23/2013 SPK value 5.000	SPK Ref Val	RunNo: 12 SeqNo: 34 %REC 95.3	2143 45479 LowLimit 90	Units: mg/L HighLimit		RPDLimit	Qual	
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite	LCSW	Batch Analysis Da Result 4.8 9.7	ID: R1 ate: 7/ PQL 0.50 0.50 0.20	2143 23/2013 SPK value 5.000 10.00 3.500	SPK Ref Val 0 0 0	RunNo: 12 SeqNo: 34 %REC 95.3 97.5 99.1	2143 45479 LowLimit 90 90 90	Units: mg/L HighLimit 110 110	%RPD	RPDLimit	Qual	
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite	LCSW as N	Batch Analysis Da Result 4.8 9.7 3.5 SampT	ID: R1 ate: 7/ PQL 0.50 0.50 0.20	2143 23/2013 SPK value 5.000 10.00 3.500	SPK Ref Val 0 0 0 Tes	RunNo: 12 SeqNo: 34 %REC 95.3 97.5 99.1	2143 45479 LowLimit 90 90 90	Units: mg/L HighLimit 110 110 110	%RPD	RPDLimit	Qual	
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite: Sample ID	as N 1307A06-001BMS	Batch Analysis Da Result 4.8 9.7 3.5 SampT	PQL 0.50 0.20 0.20 Uppe: MS	2143 23/2013 SPK value 5.000 10.00 3.500	SPK Ref Val 0 0 0 Tes	RunNo: 13 SeqNo: 34 %REC 95.3 97.5 99.1	2143 45479 LowLimit 90 90 90 PA Method 2143	Units: mg/L HighLimit 110 110 110	%RPD	RPDLimit	Qual	
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite Sample ID Client ID:	as N 1307A06-001BMS	Batch Analysis Da Result 4.8 9.7 3.5 SampTy Batch	PQL 0.50 0.20 0.20 Uppe: MS	2143 23/2013 SPK value 5.000 10.00 3.500 3.2013	SPK Ref Val 0 0 0 Tes	RunNo: 1: SeqNo: 3- %REC 95.3 97.5 99.1 tCode: EF	2143 45479 LowLimit 90 90 90 PA Method 2143	Units: mg/L HighLimit 110 110 110 300.0: Anions	%RPD	RPDLimit RPDLimit	Qual	
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite: Sample ID Client ID: Prep Date:	as N 1307A06-001BMS BatchQC	Batch Analysis Da Result 4.8 9.7 3.5 SampTy Batch Analysis Da	PQL 0.50 0.50 0.20 Uppe: MS	2143 23/2013 SPK value 5.000 10.00 3.500 3.2013	SPK Ref Val 0 0 0 Tes	RunNo: 12 SeqNo: 34 %REC 95.3 97.5 99.1 tCode: EF	2143 45479 LowLimit 90 90 90 PA Method 2143 45481	Units: mg/L HighLimit 110 110 110 300.0: Anions Units: mg/L	%RPD			
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite: Sample ID Client ID: Prep Date: Analyte Nitrate+Nitrite:	as N 1307A06-001BMS BatchQC	Batch Analysis Da Result 4.8 9.7 3.5 SampTy Batch Analysis Da Result 4.5	PQL 0.50 0.20 Uppe: MS ID: R1 PQL 0.20	2143 23/2013 SPK value 5.000 10.00 3.500 6 2143 23/2013 SPK value 3.500	SPK Ref Val 0 0 0 Tes: SPK Ref Val 0 0	RunNo: 1: SeqNo: 3- %REC 95.3 97.5 99.1 Code: EF RunNo: 1: SeqNo: 3- %REC 100	2143 45479 LowLimit 90 90 90 PA Method 2143 45481 LowLimit 90	Units: mg/L HighLimit 110 110 110 300.0: Anions Units: mg/L HighLimit	%RPD			
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite: Sample ID Client ID: Prep Date: Analyte Nitrate+Nitrite:	as N 1307A06-001BMS BatchQC as N 1307A06-001BMS	Batch Analysis Da Result 4.8 9.7 3.5 SampTy Batch Analysis Da Result 4.5 D SampTy	PQL 0.50 0.20 Uppe: MS ID: R1 PQL 0.20	2143 23/2013 SPK value 5.000 10.00 3.500 S 2143 23/2013 SPK value 3.500	SPK Ref Val 0 0 0 Tes: R S SPK Ref Val 0.9612	RunNo: 1: SeqNo: 3- %REC 95.3 97.5 99.1 Code: EF RunNo: 1: SeqNo: 3- %REC 100	2143 45479 LowLimit 90 90 90 PA Method 2143 45481 LowLimit 90 PA Method	Units: mg/L HighLimit 110 110 300.0: Anions Units: mg/L HighLimit 110	%RPD			
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite: Sample ID Client ID: Prep Date: Analyte Nitrate+Nitrite: Sample ID	as N 1307A06-001BMS BatchQC as N 1307A06-001BMS	Batch Analysis Da Result 4.8 9.7 3.5 SampTy Batch Analysis Da Result 4.5 D SampTy	PQL 0.50 0.20 vype: MS ID: R1 0.20 vype: MS ID: R1 0.20 vype: MS ID: R1 0.20 vype: MS ID: R1 ID: R1	2143 23/2013 SPK value 5.000 10.00 3.500 S 2143 23/2013 SPK value 3.500 SD 2143	SPK Ref Val 0 0 0 Tes: SPK Ref Val 0.9612 Tes:	RunNo: 1: SeqNo: 34 %REC 95.3 97.5 99.1 tCode: Eff RunNo: 1: SeqNo: 34 %REC 100	2143 45479 LowLimit 90 90 90 PA Method 2143 45481 LowLimit 90 PA Method 2143	Units: mg/L HighLimit 110 110 300.0: Anions Units: mg/L HighLimit 110	%RPD			
Client ID: Prep Date: Analyte Chloride Sulfate Nitrate+Nitrite: Sample ID Client ID: Prep Date: Analyte Nitrate+Nitrite: Sample ID Client ID: Client ID:	as N 1307A06-001BMS BatchQC as N 1307A06-001BMS	Batch Analysis Da Result 4.8 9.7 3.5 SampTy Batch Analysis Da Result 4.5 D SampTy Batch	PQL 0.50 0.20 vype: MS ID: R1 0.20 vype: MS ID: R1 0.20 vype: MS ID: R1 0.20 vype: MS ID: R1 ID: R1	2143 23/2013 SPK value 5.000 10.00 3.500 S 2143 23/2013 SPK value 3.500 6D 2143 23/2013	SPK Ref Val 0 0 0 Tes: SPK Ref Val 0.9612 Tes:	RunNo: 1: SeqNo: 34 %REC 95.3 97.5 99.1 tCode: EF RunNo: 1: SeqNo: 34 **REC 100 tCode: EF RunNo: 1: SeqNo: 34	2143 45479 LowLimit 90 90 90 PA Method 2143 45481 LowLimit 90 PA Method 2143	Units: mg/L HighLimit 110 110 110 300.0: Anions Units: mg/L HighLimit 110 300.0: Anions	%RPD			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

Page 12 of 17

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307905**

31-Jul-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 1307A05-002BMS SampType: MS TestCode: EPA Method 300.0: Anions

Client ID: BatchQC Batch ID: R12143 RunNo: 12143

Prep Date: Analysis Date: 7/23/2013 SeqNo: 345487 Units: mg/L

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

Nitrate+Nitrite as N 3.3 0.20 3.500 0 94.0 90 110

Sample ID 1307A05-002BMSD SampType: MSD TestCode: EPA Method 300.0: Anions

Client ID: BatchQC Batch ID: R12143 RunNo: 12143

Prep Date: Analysis Date: 7/23/2013 SeqNo: 345488 Units: mg/L

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

Nitrate+Nitrite as N 3.3 0.20 3.500 0 95.2 90 110 1.33 20

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 13 of 17

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307905**

31-Jul-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles PBW Client ID: Batch ID: R12136 RunNo: 12136 Prep Date: Analysis Date: 7/23/2013 SeqNo: 345169 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Methyl tert-butyl ether (MTBE) ND 2.5 ND Benzene 1.0 Toluene ND 1.0 ND Ethylbenzene 1.0 Xylenes, Total ND 2.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 Surr: 4-Bromofluorobenzene 20.00 104 69.4 129 21

Sample ID 100NG BTEX LCS	SampT	ype: LC	s	Tes	tCode: El					
Client ID: LCSW	Batch ID: R12136 Analysis Date: 7/23/2013			RunNo: 12136						
Prep Date:				SeqNo: 345170			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20	2.5	20.00	0	100	76.8	124			
Benzene	19	1.0	20.00	0	96.4	80	120			
Toluene	20	1.0	20.00	0	98.1	80	120			
Ethylbenzene	19	1.0	20.00	0	97.0	80	120			
Xylenes, Total	59	2.0	60.00	0	98.5	80	120			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	96.6	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	99.8	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	69.4	129			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307905**

31-Jul-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 5ml rb	SampT	уре: М	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batcl	n ID: R1	2108	F	RunNo: 1	2108				
Prep Date:	Analysis D	oate: 7/	22/2013	\$	SeqNo: 3	344377	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 15 of 17

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307905

31-Jul-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 5ml rb	SampT	уре: МЕ	BLK	Test	Code: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	h ID: R1	2108	R	tunNo: 1	2108				
Prep Date:	Analysis D	Date: 7/ 5	22/2013	S	SeqNo: 3	44377	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			
Sample ID 100ng Ics	SampT	ype: LC	s	Test	tCode: EI	PA Method	8260B: VOL	ATILES		
1								-		

Qualifiers:

Client ID: LCSW

Prep Date:

Chlorobenzene

1,1-Dichloroethene Trichloroethene (TCE)

Analyte

Benzene

Toluene

Value exceeds Maximum Contaminant Level.

Batch ID: R12108

PQL

1.0

1.0

1.0

1.0

1.0

SPK value SPK Ref Val

0

0

0

0

0

20.00

20.00

20.00

20.00

20.00

Analysis Date: 7/22/2013

Result

20

19

18

24

19

- Е Value above quantitation range
- Analyte detected below quantitation limits
- \mathbf{O} RSD is greater than RSDlimit
- RPD outside accepted recovery limits

- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit

RunNo: 12108

SeqNo: 344379

%REC

102

93.2

91.2

118

95.2

Units: µg/L

HighLimit

130

120

130

133

130

%RPD

- Sample pH greater than 2 for VOA and TOC only. P
- Reporting Detection Limit

LowLimit

70

80

70

70

85.8

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RPDLimit

Qual

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307905**

31-Jul-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID 100ng lcs SampType: LCS TestCode: EPA Method 8260B: VOLATILES LCSW Client ID: Batch ID: R12108 RunNo: 12108 Prep Date: Analysis Date: 7/22/2013 SeqNo: 344379 Units: µg/L Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: 1,2-Dichloroethane-d4 9.9 98.8 70 10.00 130 102 70 Surr: 4-Bromofluorobenzene 10 10.00 130 Surr: Dibromofluoromethane 97.7 70 9.8 10.00 130 Surr: Toluene-d8 10 10.00 101 70 130

Sample ID 1307688-006a ms TestCode: EPA Method 8260B: VOLATILES SampType: MS Client ID: **BatchQC** Batch ID: R12108 RunNo: 12108 Prep Date: Analysis Date: 7/22/2013 SeqNo: 344384 Units: µg/L PQL SPK value %REC HighLimit %RPD **RPDLimit** Result SPK Ref Val LowLimit Qual Analyte Benzene 560 20 400.0 152.6 102 67.9 137 430 20 400.0 29.30 101 77 127 Toluene Chlorobenzene 400 20 400.0 0 99.2 70 130 1,1-Dichloroethene 460 20 400.0 0 115 66.5 131 103 66.3 Trichloroethene (TCE) 410 20 400.0 0 134 220 200.0 108 Surr: 1,2-Dichloroethane-d4 70 130 Surr: 4-Bromofluorobenzene 160 200.0 81.5 70 130 Surr: Dibromofluoromethane 200 200.0 100 70 130 Surr: Toluene-d8 200 200.0 99.3 70 130

Sample ID 1307688-006a m	sd SampT	ype: MS	SD	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: BatchQC	Batch	n ID: R1	2108	F	RunNo: 1	2108				
Prep Date:	Analysis D	ate: 7/	22/2013	8	SeqNo: 3	44385	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	520	20	400.0	152.6	91.2	67.9	137	8.07	20	
Toluene	420	20	400.0	29.30	98.8	77	127	2.36	20	
Chlorobenzene	390	20	400.0	0	98.5	70	130	0.744	20	
1,1-Dichloroethene	430	20	400.0	0	106	66.5	131	7.80	20	
Trichloroethene (TCE)	360	20	400.0	0	90.6	66.3	134	12.4	20	
Surr: 1,2-Dichloroethane-d4	200		200.0		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	170		200.0		82.9	70	130	0	0	
Surr: Dibromofluoromethane	190		200.0		93.4	70	130	0	0	
Surr: Toluene-d8	200		200.0		99.7	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

RcptNo: 1 Work Order Number: 1307905 Client Name: CYP Received by/date: 7/19/2013 10:00:00 AM Logged By: Ashley Gallegos 7/19/2013 1:27:39 PM **Ashley Gallegos** Completed By: 07/12/13 Reviewed By: ICO Chain of Custody Nο Not Present ✓ Yes 1 Custody seals intact on sample bottles? No Not Present Yes V 2. Is Chain of Custody complete? 3. How was the sample delivered? <u>UPS</u> Log In Nο NΑ Yes 🗸 4. Was an attempt made to cool the samples? No : NA 5. Were all samples received at a temperature of >0° C to 6.0°C Nο Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? Yes No 🗸 NA 9. Was preservative added to bottles? Yes Yes No 🗆 No VOA Vials 🗸 10.VOA vials have zero headspace? No ▼ 11. Were any sample containers received broken? # of preserved bottles checked No i for pH: 12. Does paperwork match bottle labels? Yes 🗸 2 unless noted) (Note discrepancies on chain of custody) Adjusted? No Yes 🗸 13 Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? No Checked by Nο 15. Were all holding times able to be met? Yes 🗸 (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA 🗸 Person Notified: Date: In Person By Whom: Via: eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No | Good Not Present

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Appendix E
PSH Disposal Manifest

GANDY CORPORATION

OILFIELD SERVICES
P.O. BOX 2140
LOVINGTON, NEW MEXICO 88260
(575) 396-4948

DATE 8/23/13 OPERATOR Tros Custon TIME OIL TOP SEAL OFF H₂0 TOP TIME SEAL ON TICKET # BBL. TRUCK _ 387 DRIVER Mortin DIOZ J. DESTINATION

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24-HOUR SERVICE, CALL LOVINGTON 396-4948 TATUM 398-4960

GANDY CORPORATION

KILL TRUCKS - VACUUM TRUCKS - WINCH TRUCKS TANK CLEANING - ROUSTABOUTING PRC #14225 P.O. BOX 2140 LOVINGTON, NEW MEXICO 88260 503302

Date_8/23/13 Truck No. 382. Purchase Purchase Order No. _ Invoice Company Trans wiston Number From Station # 9 _____ Rig No.____ Location To Lease _____ Well No._____ Location A.M. TIME RATE A.M. AMOUNT Time Out P.M. Time In P.M. 6.50 Diesel Brine Water Fresh Water HO Was Bbis. Hauled ____ Stude Oil Salt Water Acid Driver, Operator or Pusher Helper Helper Helper Other Charges Description of Work: tank bhb. Un dont Sub Total Sales Tax Authorized by: TOTAL. Superior Printing Service, Inc. - 101

Appendix F

Documentation of MPE Well Installation

As discussed in the May 2013 Amended Remediation Work Plan (RWP), four Multi-Phase Extraction (MPE) wells were installed within the Project Area between August 7 and August 8, 2013. Installation of these wells was conducted in conjunction with other monitoring well installation and monitoring/recovery well plug and abandon (P&A) activities conducted within the Project Area between August 6 and August 16, 2013. These other activities were documented in a December 2013 Investigation Report.

Drilling and recovery well installation activities were conducted under the supervision of a New Mexico-licensed driller from Talon LPE of Amarillo, TX (under contract to Transwestern). Well drilling/installation oversight, well logging and environmental sampling were provided by Clay Barnhill, P.G. (New Mexico) of CMB Environmental & Geological Services, Inc. of Roswell, NM, under subcontract to Cypress Engineering Services, Inc. of Houston, TX (a Transwestern environmental consultant).

The activities described below were conducted per the methodologies described in the March 2013 Amended Investigation Work Plan (IWP) and the May 2013 RWP, and under a site-specific Health and Safety Plan (HSP) for the project.

Ms. Catherine Goetz with the State of New Mexico's Office of the State Engineer (OSE), was also present on Wednesday August 7, 2013 to observe the field activities.

F1 IMPLEMENTATION OF FIELD ACTIVITIES

F1.1 Scope of Activities

In accordance with the May 2013 RWP, the following activities were implemented:

- Processing of applications for new recovery well installations with the State of New Mexico's Office of the State Engineer;
- Conducting One-Call Notifications;
- Installation of four, 75-foot deep soil borings within Circuits B, C and D of the existing remediation system, and conversion to recovery wells (see location in Figure 1-5 of the report);
- Collection of soil samples from the capillary fringe in two of the soil borings for analysis
 of volatile organic compounds (VOCs);
- Collection of samples from soil cuttings generated during recovery well installation for waste characterization; and,

• Survey of new well locations.

F1.2 Application Processing

In accordance with State of New Mexico regulations, an "application for permit to drill a well with no consumptive use of water" for the proposed installation of recovery wells MPE-38 through MPE-41 was submitted on July 15, 2013 to the OSE; the application was approved on July 30, 2013.

F1.3 Soil Boring and Sampling

Soil borings for the installation of the proposed recovery wells were advanced using a REICHdrill T-650 W air rotary drilling rig; the borings were 8 inches in diameter and advanced to total depths of approximately 75 feet below ground surface (ft bgs); (see **Table F-1**). The soil borings were generally installed at the proposed locations, with the exception of the boring for recovery well MPE-39. The original location (re-named SB-MPE39A) was found to be dry, thus a second boring was advanced approximately 100 ft to the south-southwest. The new location and the plan for P&A the original location were approved in the field by Ms. Goetz of the OSE. Location SB-MPE39A was plugged using bentonite in the bottom of the borehole from 70 – 75 ft bgs, and cement from just below surface to 70 ft bgs.

During the installation of the soil boring for the new MPEs potable water was added during drilling through the unsaturated zone to allow for the recovery of soil cuttings; the volumes added are noted in the well construction logs included in **Attachment F1**. Potable water was obtained from the City of Roswell public water supply.

The locations were direct-bored from surface to 50 ft bgs; starting at this depth, 2-ft long split-spoons were used to collect soil cores every 5 ft. The soil material was field-screened with a calibrated, hand-held photo-ionization detector (PID) to assess the presence of volatile organic compounds (via head-space vapor method), and was visually inspected and classified by the field geologist; this information is also presented in the well construction logs included in **Attachment F1**. The drilling equipment was decontaminated before drilling the first location, and before starting each subsequent location. The split-spoons were decontaminated between each discrete sampling interval.

One soil sample was collected from the soil-water interface from the borings at the MPE-38 and MPE-40 locations, which indicated the greatest visual and highest PID readings indicating the

potential for hydrocarbon presence. The soil material was collected from the split-spoon using clean disposable scoops, and transferred into clean, laboratory-provided containers. These soil samples were labeled, packed for shipping, placed in an ice-filled chest, and shipped under chain-of-custody documentation to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis of volatile organic compounds via EPA method SW846-8260B and metals via EPA methods SW846-6010B/7471. Analytical results are discussed below in **Section F2.3**.

F1.4 Monitoring Well Construction

The water-bearing soil borings were converted into recovery wells after cleaning out the boreholes with the drilling rig. The recovery wells were constructed using 4-inch diameter, schedule 40, flush-threaded PVC riser pipe and 0.010-inch machine-slotted PVC screen (20 ft in length); centralizers were placed at 20 and 45 ft bgs (20 and 50 ft bgs for MW-42) to help maintain the wells' vertical alignment. A 12-20 silica sand filter pack was placed around the screened interval and was extended up to 3 ft above the screen; a 2 to 3 ft-thick layer of hydrated bentonite was placed on top of the sand, and a bentonite grout was used to fill the annulus space up to 2 ft bgs. The top two feet were filled with neat cement to serve as surface seal. The wells were covered with temporary caps provided with welded protective bollards. The final surface completion will be installed once construction work for piping installation is complete. **Table F-1** summarizes well construction details. MPE well development will be conducted prior to commencing recovery well operation.

MPE well construction logs and associated OSE's "well record and log" forms are presented in **Attachment F1**.

F1.5 New Recovery Well Survey

Following recovery well installation, the surface coordinates, the top of each new monitoring well casing, and the ground surface at each new recovery well location were surveyed by a registered New Mexico professional land surveyor, with respect to the State Plane Coordinate System (NMSA 1978 47-1-49-56 (Repl. Pamp. 1993)). Horizontal positions were measured to the nearest 0.1 ft, and vertical elevations were measured to the nearest 0.01 ft. Surveyed locations are shown in **Figure 1-5** of the report, and top-of-casing (TOC) elevations for the new recovery wells are shown in **Table 4-2** of the report.

F1.7 Management of Investigation-Derived Waste

In accordance with the March 2013 *IWP* and May 2013 *RWP*, investigation-derived wastes were disposed as follows:

- Soil Cuttings from new recovery well installation: Cuttings from the 0 to 50 ft bgs depth interval and those from the 50 ft bgs to total drilling depth were drummed separately, sampled for characterization, and later transported for off-site disposal as non-hazardous, exempt waste (see Section F2.4).
- Equipment decontamination water was collected in drums and transferred to the recovery system's surge tank for processing via the air stripper and discharge through the irrigation system.
- Disposable sampling materials (including gloves, rags, etc.) were bagged for disposal along with Facility trash.

F2 FIELD INVESTIGATION AND DATA EVALUATION FINDINGS

F2.1 Soil and Groundwater Conditions

As described in the well construction logs included in **Attachment F1**, soils consist of the typical interbedded layers of gravel, sand, silt, and clay observed at other areas previously investigated. A noted exception was the original location for recovery well MPE-39 where a higher proportion of clays was encountered below 35 ft bgs, including an approximately 3-foot layer of fat clay in the 57 to 60 ft bgs interval, resulting in a dry location. As expected, elevated PID readings were measured, especially in the saturated portion of the soil column.

Depth to water measurements collected on August 16, 2013 indicate that groundwater was found at depths ranging from 60.45 feet below top of casing (TOC; at MPE-39) to 68.88 feet TOC (at MPE-38). Groundwater elevation data for the new MPE wells are presented in **Table 4-2** of the report.

F2.2 Regulatory Criteria

Analytical data from the soil and waste characterization samples collected from the newly-installed recovery wells were evaluated per the regulatory criteria identified below.

Appendix F Documentation of MPE Wells Installation Page 5 of 5

In accordance with Section VI₁- of the March 2013 SO for the site, soil cleanup criteria were identified as follows:

Soil Clean Up Levels were identified for the target COCs using the February 2012 NMED
Risk Assessment Guidance for Site Investigation and Remediation; if a COC was not
included in that guidance, the EPA Region 6 Screening Levels were used.

The RCRA maximum concentration levels established in 40 CFR §261.24 were used to assess the Toxicity Characteristic Leaching Procedure (TCLP) results from waste characterization samples collected for decision-making regarding disposal.

F2.3 Soil Data Evaluation

Analytical results for the soil samples collected from the soil borings for MPE-38 and MPE-40 are summarized in **Table F-2**, including soil clean up levels. Analytical data packages are presented in **Attachment F2**.

Data indicate that several VOCs and metals were reported as detected. Exceedances of BTEX, 1,2,4-Trimethylbenzene and Chromium were observed in samples from both MPEs, and a Naphthalene exceedance was also observed in the sample from MPE-40. These results are consistent with the fact that the wells are located in areas where recoverable PSH is present.

F2.4 Waste Characterization Data Evaluation

Composite samples of soil cuttings generated during installation of the soil borings for MPE installation were analyzed for total petroleum hydrocarbons (THP) in the gasoline and diesel rage organics (GRO and DRO) via EPA method 8015D, for BTEX via EPA method 8021B, and for the VOCs regulated under 40 CFR §261.24 via the Toxic Characteristic Leaching Procedure (TCLP).

The analytical data package included in **Attachment F2** indicates that VOC/TCLP results were reported as not detected above the laboratory reporting limits, which are lower than the corresponding maximum concentration levels. Detections of THP GRO, TPH ORO, Ethylbenzene and Xylenes were reported at relatively low concentrations, with the exception of one TPH GRO value of 15,000 mg/Kg. Based on these analytical results, the soil cuttings generated from MPE installation were transported off-site as non-hazardous, exempt, hydrocarbon-contaminated soils for disposal at Gandy Marley, Inc.'s Contaminated Soil Landfill in Roswell, New Mexico. The corresponding shipment manifest and load inspection form are also included in **Attachment F2**.

TABLES

ATTACHMENT F1

MPE well construction logs and associated OSE's "well record and log" forms

ATTACHMENT F2

Analytical Data Packages and Waste Disposal Documentation

Note: Analytical data for monitoring wells installed/sampled in August 2013 was addressed in the December 2013 *Investigation Report*

TABLE F-1 MONITORING WELL INSTALLATION DETAILS TRANSWESTERN COMPRESSOR STATION No. 9 ROSWELL, CHAVES COUNTY, NEW MEXICO

Well ID	Date Drilled	Total Depth (ft gbs)	Riser Placement (ft bgs)	Centralizer Placement (ft bgs)	Screen Placement (ft bgs)	Cement Bentonite Grout Placement (ft bgs)	Bentonite Seal Placement (ft bgs)	Sand Pack Filter Placement (ft bgs)
MPE-38	08/07/13	75	0 to 55	20 and 45	55 to 75	0.5 to 50	50 to 53	53 to 75
MPE-39	08/08/13	75	0 to 55	20 and 45	55 to 75	0.5 to 50	50 to 53	53 to 75
MPE-40	08/08/13	75	0 to 55	20 and 45	55 to 75	0.5 to 50	50 to 53	53 to 75
MPE-41	08/07/13	75	0 to 55	20 and 45	55 to 75	0.5 to 50	50 to 53	53 to 75

ft bgs: feet below ground surface

Casing Material: Polyvinyl Chloride (PVC) 4 inch diameter schedule 40; 0.010 inch slotted screen

Sand Pack Material: 12/20 sand

Bentonite Seal Material: 3/8 inch pellets

March 2014

Project No. 02.20120037.00

TABLE F-2 SUMMARY OF SOIL ANALYTICAL RESULTS TRANSWESTERN COMPRESSOR STATION No. 9 - ROSWELL, CHAVES COUNTY, NEW MEXICO

	NMED *	NMED ** SSL	EPA Region 6	Client Sample ID	MPE-38 65'-67'	MPE-40 60'-62'
Analyte	Residential SSL	for DAF of 20	Resident Soil	Lab ID	1308626-001	1308626-002
Analyte	(mg/Kg)	(mg/Kg)	Screening Level	Collection Date	8/6/2013	8/5/2013
	(1119/119)	(1119/119)	(mg/kg)	Units	Result	Result
Mercury	1.56E+01	6.54E-01		mg/Kg	<0.033	<0.033
Arsenic	3.90E+00	2.61E-01		mg/Kg	<2.5	<5
Barium	1.56E+04	6.03E+03		mg/Kg	62	71
Cadmium	7.03E+00	2.75E+01		mg/Kg	<0.10	<0.20
Chromium	1.17E+05	1.66E-01		mg/Kg	3.9	6.9
Lead	4.00E+02	N/A		mg/Kg	1.7	2.9
Selenium	3.91E+02	1.93E+01		mg/Kg	<2.5	<5
Silver	3.91E+02	3.13E+01		mg/Kg	<0.25	<0.50
Benzene	1.54E+01	3.45E-02		mg/Kg	11	1.1
Toluene	5.27E+03	2.53E+01		mg/Kg	45	30
Ethylbenzene	6.84E+01	2.60E-01		mg/Kg	8.9	3.9
Methyl tert-butyl ether (MTBE)	9.01E+02	5.18E-01		mg/Kg	< 2.4	< 0.047
1,2,4-Trimethylbenzene			6.20E+00	mg/Kg	9.5	8.0
1,3,5-Trimethylbenzene			7.80E+01	mg/Kg	6.1	3.5
1,2-Dichloroethane (EDC)	7.89E+00	7.11E-03		mg/Kg	< 2.4	< 0.047
1,2-Dibromoethane (EDB)	5.88E-01	3.08E-04		mg/Kg	< 2.4	< 0.047
Naphthalene	4.30E+01	7.13E-02		mg/Kg	< 4.8	0.36
1-Methylnaphthalene			1.60E+02	mg/Kg	<9.5	0.56
2-Methylnaphthalene			2.30E+01	mg/Kg	<9.5	0.97
Acetone	6.66E+04	7.71E+01		mg/Kg	< 36	< 0.71
Bromobenzene			3.00E+01	mg/Kg	< 2.4	< 0.047
Bromodichloromethane	5.41E+00	1.16E-02		mg/Kg	< 2.4	< 0.047
Bromoform			6.20E+02	mg/Kg	< 2.4	< 0.047
Bromomethane	1.65E+01	3.60E-02		mg/Kg	< 7.1	< 0.14
2-Butanone	3.71E+04	5.21E+01		mg/Kg	< 24	< 0.47
Carbon disulfide	1.53E+03	4.33E+00		mg/Kg	< 24	< 0.47
Carbon tetrachloride	1.08E+01	2.10E-02		mg/Kg	< 4.8	< 0.095

TABLE F-2
SUMMARY OF SOIL ANALYTICAL RESULTS
TRANSWESTERN COMPRESSOR STATION No. 9 - ROSWELL, CHAVES COUNTY, NEW MEXICO

	NMED *	NMED ** SSL	EPA Region 6	Client Sample ID	MPE-38 65'-67'	MPE-40 60'-62'
Analyta	Residential SSL	for DAF of 20	Resident Soil	Lab ID	1308626-001	1308626-002
Analyte	(mg/Kg)	(mg/Kg)	Screening Level	Collection Date	8/6/2013	8/5/2013
	(ilig/Kg)	(mg/Kg)	(mg/kg)	Units	Result	Result
Chlorobenzene	3.76E+02	9.84E-01		mg/Kg	< 4.8	< 0.095
Chloroethane			1.50E+03	mg/Kg	< 4.8	< 0.095
Chloroform	5.86E+00	9.18E-03		mg/Kg	< 2.4	< 0.047
Chloromethane			1.20E+01	mg/Kg	< 7.1	< 0.14
2-Chlorotoluene	1.56E+03	1.12E+01		mg/Kg	< 2.4	< 0.047
4-Chlorotoluene			1.60E+02	mg/Kg	< 2.4	< 0.047
cis-1,2-DCE	1.56E+02	3.67E-01		mg/Kg	< 2.4	< 0.047
cis-1,3-Dichloropropene	N/A		N/A	mg/Kg	< 2.4	< 0.047
1,2-Dibromo-3-chloropropane	1.86E+00	2.20E-05		mg/Kg	< 4.8	< 0.095
Dibromochloromethane	1.21E+01	6.61E-03		mg/Kg	< 2.4	< 0.047
Dibromomethane (Methylene bromide)	5.16E+01	3.08E-04		mg/Kg	< 4.8	< 0.095
1,2-Dichlorobenzene	2.31E+03	5.60E+00		mg/Kg	< 2.4	< 0.047
1,3-Dichlorobenzene	N/A		N/A	mg/Kg	< 2.4	< 0.047
1,4-Dichlorobenzene	3.17E+01	6.39E-02		mg/Kg	< 2.4	< 0.047
Dichlorodifluoromethane	1.68E+02	7.43E+00		mg/Kg	< 2.4	< 0.047
1,1-Dichloroethane	6.45E+01	1.20E-01		mg/Kg	< 4.8	< 0.095
1,1-Dichloroethene (1,1-Dichloroethylene)	4.49E+02	3.67E-01		mg/Kg	< 2.4	< 0.047
1,2-Dichloropropane	1.52E+01	2.14E-02		mg/Kg	< 2.4	< 0.047
1,3-Dichloropropane		2.48E-02	1.60E+02	mg/Kg	< 2.4	< 0.047
2,2-Dichloropropane	N/A		N/A	mg/Kg	< 4.8	< 0.095
1,1-Dichloropropene	N/A		N/A	mg/Kg	< 4.8	< 0.095
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	6.11E+01	2.57E-01		mg/Kg	< 4.8	< 0.095
2-Hexanone			2.10E+01	mg/Kg	< 24	< 0.47
Isopropylbenzene (Cumene)	2.43E+03	1.73E+01		mg/Kg	< 2.4	0.69
4-Isopropyltoluene	N/A		N/A	mg/Kg	< 2.4	0.28
4-Methyl-2-pentanone			5.30E+02	mg/Kg	< 24	< 0.47
Methylene chloride	4.09E+02	8.24E-01		mg/Kg	< 7.1	< 0.14
n-Butylbenzene			3.90E+02	mg/Kg	< 7.1	0.46
n-Propylbenzene (Propylbenzene)			3.40E+02	mg/Kg	< 2.4	1.1

TABLE F-2 SUMMARY OF SOIL ANALYTICAL RESULTS TRANSWESTERN COMPRESSOR STATION No. 9 - ROSWELL, CHAVES COUNTY, NEW MEXICO

Analyte	NMED * Residential SSL	NMED ** SSL for DAF of 20	EPA Region 6 Resident Soil Screening Level	Client Sample ID Lab ID Collection Date	MPE-38 65'-67' 1308626-001 8/6/2013	MPE-40 60'-62' 1308626-002 8/5/2013
	(mg/Kg)	(mg/Kg)	(mg/kg)	Units	Result	Result
sec-Butylbenzene			7.80E+02	mg/Kg	< 2.4	0.31
Styrene	7.28E+03	2.77E+01		mg/Kg	< 2.4	< 0.047
tert-Butylbenzene			7.80E+02	mg/Kg	< 2.4	< 0.047
1,1,1,2-Tetrachloroethane	2.91E+01	3.29E-02		mg/Kg	< 2.4	< 0.047
1,1,2,2-Tetrachloroethane	8.02E+00	4.26E-03		mg/Kg	< 2.4	< 0.047
Tetrachloroethene (Tetrachloroethylene)	7.02E+00	8.61E-03		mg/Kg	< 2.4	< 0.047
trans-1,2-DCE (trans-1,2-Dichloroethylene)	2.70E+02	5.38E-01		mg/Kg	< 2.4	< 0.047
trans-1,3-Dichloropropene	N/A		N/A	mg/Kg	< 2.4	< 0.047
1,2,3-Trichlorobenzene	N/A		N/A	mg/Kg	< 4.8	< 0.095
1,2,4-Trichlorobenzene	7.30E+01	1.83E-01		mg/Kg	< 2.4	< 0.047
1,1,1-Trichloroethane	1.56E+04	5.82E+01		mg/Kg	< 2.4	< 0.047
1,1,2-Trichloroethane	2.81E+00	2.23E-03		mg/Kg	< 2.4	< 0.047
Trichloroethene (Trichloroethylene)	8.77E+00	2.11E-02		mg/Kg	< 2.4	< 0.047
Trichlorofluoromethane	1.41E+03	1.78E+01		mg/Kg	< 2.4	< 0.047
1,2,3-Trichloropropane	4.97E-02	5.00E-05		mg/Kg	< 4.8	< 0.095
Vinyl chloride	7.28E-01	1.08E-03		mg/Kg	< 2.4	< 0.047
Xylenes	8.14E+02	3.13E+00		mg/Kg	64	45

Analyte synonym provided in italics

NMED: February 2012 New Mexico Environmental Department Risk Assessment Guidance for Site Investigation and Remediation

EPA: United States Environmental Protection Agency

<: Indicates analyte was not detected above the shown laboratory reporting limit

N/A: not available

Bold font indicates exceedance of the lower standard shown

^{*} Residential Soil Screening Level

^{**} Risk-Based Screening Level for a Dilution Attenuation Factor of 20; represents migration to groundwater pathway

Cypress Engineering Services Inc. TWP Roswell Station # 9 New Monitor Well Installation 2013 6381 North Main Street Roswell, NM 88201

FIELD BOREHOLE LOG

2' Split Spoon

BOREHOLE NO.: MPE-38

TOTAL DEPTH: 75'

PROJECT INFORMATION DRILLING INFORMATION

PROJECT: New 4" MPE Well DRILLING CO.: Talon LPE

SITE LOCATION: TWP Roswell Station 9 DRILLER: Jose Salas

JOB NO.: 02.2012.0037.00 RIG TYPE: ReichDrill T650 WDII

LOGGED BY: CM Barnhill, PG METHOD OF DRILLING: Air Rotary 8"

DATES DRILLED: 08/07/13 HAMMER WT./DROP Direct Push with Rig

SAMPLING METHODS:

George Robinson, PE

PROJECT MANAGER:

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE	Rec. /ft.	PID VOC PPM	BORING COMPLETION	WELL DESCRIPTION
5111			GM: Tan, Sand, Silt., Silty Gravel, Gravel to 3". 2.5 YR 8/1-8/2. No odor or staining.	0'-10'	Drill Cuttings	0.2		
15		GM	out of starring.	10'-20'	Drill Cuttings	0.2		
25 -			GP: Tan 5 YR 8/3, Gravel, Sand, silt	20'-30'	Drill Cuttings	0.2		— CEMENT BENTONITE GROUT:0.5'-50'
35 -		GP	mixture. Gravel to 1", smooth, rounded, river channel gravel. Added 60 gallons of water to help with drilling. No	30'-40'	Drill Cuttings	0.3		Estimated = 98.38 gallors Actual = 100 gallors 4" PVC RISER /
45	0 0 0 0 0 0 0		odor or staining. SC: 2.5 YR 4/6 Brown	40'-50'	Drill Cuttings	0.2		CASING 0'-55' STAINLESS STEEL CENTRALIZERS @ 20' & 45'
50 -		Ì	to reddish brown clayey sand. @ 55'	50'-52'	2.0'	25.8	7377	3/8 " BENTONITE
55 -			BGS slight odor. @ 60' BGS Strong Odor and	55'-57'	1.9'	108.3		SEAL: 50'-53' Estimated= 1.08 bags Actual = 3 bags
60 -		SC	green/gray staining of soil. Saturated at 66.4"	60'-62'	2.0'	4402		bogs //cital / 5 bogs
₩ 55 70			BGS with strong odor no scheen. PsH @	65'-67'	2.0'	204.6		SAND PACK: 12/20 Sand Filter Pack 53'-
70 -			63.85' TOC, Water @ 68.88' TOC 08/16/13	70'-72'	1.0'	1670		75' Estimated = 10.27 bags Actual = 30 bags
75 -	/:/:/:/:/:/	CH	CH: Brown 2.5 YR 4/6 Fat Clay @ 76.1' BGS.	75'-77'	2.0'	896.5		4" SCREEN: 0.010 Slot Screen 55'-75'
E 08			Aquitard?	-				SAND PACK: Below Well

Cypress Engineering Services Inc. TWP Roswell Station # 9 New Monitor Well Installation 2013 6381 North Main Street Roswell, NM 88201

FIELD BOREHOLE LOG

Talon LPE

BOREHOLE NO.: MPE-39

TOTAL DEPTH: 75'

PROJECT INFORMATION DRILLING INFORMATION

PROJECT: New 4" MPE Well DRILLING CO.:

SITE LOCATION: TWP Roswell Station 9 DRILLER: Jose Salas

JOB NO.: 02.2012.0037.00 RIG TYPE: ReichDrill T650 WDII

LOGGED BY: CM Barnhill, PG METHOD OF DRILLING: Air Rotary 8"

PROJECT MANAGER: George Robinson, PE SAMPLING METHODS: 2' Split Spoon

DATES DRILLED: 08/08/13 HAMMER WT./DROP Direct Push with Rig

■ Water level during drilling
 ■ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE	Rec. /ft.	PID VOC PPM	BORING COMPLETION	WELL DESCRIPTION
5-1	2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 4 3 4 3 3 5 4 4 3 4 6 4 4 4 4 7 4 4 4 4 8 4 4 4 4 9 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 4 4 4 4 10 5 4 4 4 10 6 4 4 4 4 10 6 4 4 4 4 10 6 4 4 4 4	GM	GM: Tan, Sand, Silt,, Silty Gravel, Gravel to 3". 2.5 YR 8/1-8/2. No odor or staining.	0'-10'	Drill Cuttings	2.0		
15			GP: Tan 5 YR 8/3, Gravel, Sand, silt mixture. Gravel to 1",	10'-20'	Drill Cuttings	2.0		
25 -		GP	smooth, rounded, river channel gravel. Added 60 gallons of water to help with drilling. No	20'-30'	Drill Cuttings	2.0		- CEMENT BENTONITE GROUT:0.5'-50'
35	0 0 0		odor or staining. SC: Gray Green GLE Y2 6/1 clayey sand.	30'-40'	Drill Cuttings	650		Estimated = 98.38 Actual = 100 gallons 4" PVC RISER / CASING 0'-55'
45			Srong Odor and green/gray staining of soil. @ 40 ' BGS added 60 gallons of	40'-50'	Drill Cuttings	87		STAINLESS STEEL CENTRALIZERS @ 20' & 45'
55		SC	water to help with drilling. @ 40' Light brown clayey sand, 2.5	50'-52' 55'-57'	2.0'	4496 730		- 3/8 " BENTONITE SEAL: 50'-53' Estimated = 1.08
▼ -			YR 4/6 to red brown clayey sand. Strong hydrocarbon odor,	60'-62'	2.0'	233.5		bags Actual = 3 bags
65 - 70 -			sulfur like, weathered hydrocarbon smell. @ 60' BGS gray black	65'-67'	2.0'	912.1		 SAND PACK: 12/20 Sand Filter Pack 53'- 75' Estimated = 10.27 bags Actual =
75	<u> </u>		lenses of stained red clayey sand. Strong Mercaptin smell.	70'-72'	1.0'	646.6 1629		14 bags 4" SCREEN: 0.010
E 08		1	Water @ 60.45' TOC 08/16/13					Slot Screen 55'-75' SAND PACK: Below Well

Cypress Engineering Services Inc. TWP Roswell Station # 9 New Monitor Well Installation 2013 6381 North Main Street

FIELD BOREHOLE LOG

BOREHOLE NO.: MPE-40

TOTAL DEPTH: 75'

Roswell, NM 88201 PROJECT INFORMATION DRILLING INFORMATION PROJECT: DRILLING CO .: New 4" MPE Well Talon LPE SITE LOCATION: DRILLER: TWP Roswell Station 9 Jose Salas JOB NO.: RIG TYPE: 02.2012.0037.00 ReichDrill T650 WDII LOGGED BY: CM Barnhill, PG METHOD OF DRILLING: Air Rotary 8" PROJECT MANAGER: George Robinson, PE SAMPLING METHODS: 2' Split Spoon DATES DRILLED: HAMMER WT./DROP 08/08/13 Direct Push with Rig Water level during drilling Water level in completed well PID VOC SOIL Rec. BORING WELL DEPTH USCS SOIL DESCRIPTION SAMPLE SYMBOLS PPM / ft. COMPLETION DESCRIPTION GM: GM; Tan, Sand, 8 0 8 8 8 Drill 5-Silt., Silty Gravel, 0'-10' 8 в Cuttings 8 8 Ø 0.2 Gravel to 3". 2.5 YR Ø Ø 0 0 ø 8/1-8/2.Added 60 10 GM 8 8 8 0 8 gallon os water to help Drill with drilling. No odor or 15 10'-20" 8 8 8 8 8 Cuttings 0.2 staining. **2** 2 8 8 8 20 GP: GP: Tan 5 YR 8/3. Ю Ю. Ø 11 Drill · : 🔞 . Gravel, Sand, silt ø GP 20'-30' 25 CEMENT 0 ... 0 ... 0 mixture. Gravel to 1", Cuttings 0.2 BENTONITE : 0 smooth, rounded, river GROUT:0.5'-50' 30 channel gravel. No Estimated = 98.38 Drill gallors Actual = 100 odor or staining. 35 SP 30'-40" gallors Cuttings 0.0 SP: 2.5 YR Brown 4" PVC RISER / 40 Clayey Sand to gray **CASING 0'-55'** /green stained sand STAINLESS STEEL Drill 45 40'-50" CENTRALIZERS @ with strong odor. Cuttings 195 20' & 45' 96 SC: 2.5 YR 4/6 Brown 1.8 50'-52' 1753 3/8 " BENTONITE to reddish brown SEAL: 50'-53' 55 clayey sand. @ 55' Estimated = 1.08 55'-57' 1.0 3525 SC BGS strong odor poor Bags Actual = 3 sample recovery. 60'-62' 2.01 4203 Saturated at 50' BGS SAND PACK: 12/20 65 @ 60' BGS Strong 65'-67' 1.0 Sand Filter Pack 53'-1272 Odor and black/gray 75' Estimated = 70 staining of soil. Strong 10.27 Actual = 10 70'-72' 1.4 679.3

75'-77'

1.0

244.8

CH

75

80

Mercaptin Odor.

Saturated at 60' BGS

scheen. PsH @ 61.52"

TOC, Water @ 61.95' TOC 08/16/13

CH: Brown 2.5 YR 4/8 Fat Clay @ 76.7' BGS.

Aquitard?

with strong odor no

Bags

4" SCREEN: 0.010

Slot Screen 55'-75'

SAND PACK: Below

Cypress Engineering Services Inc. TWP Roswell Station # 9 New Monitor Well Installation 2013 6381 North Main Street Roswell, NM 88201

FIELD BOREHOLE LOG

BOREHOLE NO.: MPE-41
TOTAL DEPTH: 75'

PROJE	CT INFORMATION	DRILLIN	IG INFORMATION
PROJECT:	New 4" MPE Well	DRILLING CO.:	Talon LPE

SITE LOCATION: TWP Roswell Station 9 DRILLER: Jose Salas

JOB NO.: 02.2012.0037.00 RIG TYPE: ReichDrill T650 WDII

LOGGED BY: CM Barnhill, PG METHOD OF DRILLING: Air Rotary 8"
PROJECT MANAGER: George Robinson, PE SAMPLING METHODS: 2' Split Spoon

DATES DRILLED: 08/07/13 HAMMER WT./DROP Direct Push with Rig

■ Water level during drilling
 ■ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE	Rec. /ft.	PID VOC PPM	BORING COMPLETION	WELL DESCRIPTION
0 15 1		GM GP SC CH SW	GM: GM; Tan, Sand, Silt., Silty Gravel, Gravel to 3". 2.5 YR 8/1-8/3. Added 60 gallon os water to help with drilling. No odor or staining. GP: GP: Tan 5 YR 8/3, Gravel, Sand, silt mixture. Gravel to 1", smooth, rounded, river channel gravel. No odor or staining. Added 70 gallons of water to help with drilling SP: 2.5 YR Brown Clayey Sand to gray /green stained sand with strong odor. SC: 2.5 YR 5/8 Brown to reddish clayey sand. @ 55"-61"BGS strong odor Black stained soil. 55.8"-60" Gypsum 1".No scheen. PsH @ 60.40" TOC, Water @ 60.90" TOC 08/16/13 CH: Brown 2.5 YR 4/8 Fat Clay SW: 2.5 YR 5/6 Tan Brown Clean, Med. gr., will sorted sand	0'-10' 10'-20' 20'-30' 30'-40' 40'-50' 50'-52' 55'-57' 60'-62' 70'-72' 75'-77'		0.2 0.2 0.2		DESCRIPTION CEMENT BENTONITE GROUT.0.5'-50' Estimated = 98.38 gallors Actual = 100 gallors 4" PVC RISER / CASING 0'-55' STAINLESS STEEL CENTRALIZERS @ 20' & 45' 3/8 " BENTONITE SEAL: 50'-53' Estimated = 1.08 Bags Actual = 2 Bags SAND PACK: 12/20 Sand Filter Pack 53'-75' Estimated = 10.27 Bags Actual = 18 Bags 4" SCREEN: 0.010 Slot Screen 55'-75' SAND PACK: Below Well
			with strong odor. Black stains to 3mm.					

Cypress Engineering Services Inc. TWP Roswell Station # 9 New Monitor Well Installation 2013 6381 North Main Street Roswell, NM 88201

FIELD BOREHOLE LOG

BOREHOLE NO.: SB-MPE39A

TOTAL DEPTH: 75'

Rec PID VOC BORING

PROJECTI	NFORMATION	DRILLING INFORMATION				
PROJECT:	New MPE Well	DRILLING CO.:	Talon LPE			
SITE LOCATION:	TWP Roswell Station 9	DRILLER:	Jose Salas			
JOB NO.:	02.2012.0037.00	RIG TYPE:	ReichDrill T650 WDII			
LOGGED BY:	CM Barnhill, PG	METHOD OF DRILLING:	Air Rotary 8"			
PROJECT MANAGER:	George Robinson, PE	SAMPLING METHODS:	2' Split Spoon			
DATES DRILLED:	08/07/13	HAMMER WT./DROP	Direct Push with Rig			

SOIL

■ Water level in completed well

DEPTH	SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE	/ft.	PPM	COMPLETION	DESCRIPTION
511		GM	GM: Light Brown, Sand, Silt, Silty Gravel 2 5 YR 8/2. No odor or staining.	0'-10'	Drill Cuttings	0.1		
15				10'-20'	Drill Cuttings	0.1		
20 =			GP: Brown, 2.5 YR 8/2Gravel sand					
25		GP	mixture. No Odor or stain.	20'-30'	Drill Cuttings	0.10		
35 -		SW	SW: 2.5 YR 7/1 Tan Brown,Clean med.grained sand,	30'-40'	Drill Cuttings	270.6		- CEMENT/ BENTONITE
40 -		SC	Strong hydrocarbon odor SC: 2.5 YR 6/1, Tan Clayey Sand, silt	40'-50'	Drill Cuttings	0		GROUT 0.5'-70' BGS Estimted = 137.73 gallons Actual = 145 gallons
50		9	mixture. Added 40 gallons of water to hole	50'-52'	2.0'	609.9		
55 -	<u> </u>	СН	to help with drilling. No odor or staining.	55'-57'	2.0'	335.2		
60	7.57.57.57.57.57.57.57.57.57.57.57.57.57	OIT		60'-62'	2.0'	71.7		
65 -		SC	CH: Brown 2.5 YR 5/6 Fat Clay, No scheen,	65'-67'	1.0'	60		
70 -		Š	strong odor.	70'-72'	1.6'	30.5		- HYDRATED
75 -	////.		SC: Red 2 YR 4/8 Clayey Sand, Strong odor, No scheen. No	75'-77'	1.0'	0.0	-	BENTONITE 70'-75' Estimated= 1.8 bags Actual = 2 bags

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FOR OSE INTERNAL USE

FILE NUMBER

LOCATION

NC	OSE POD NU	MBER (WE	ELL NUMBER)			OSE FILE NUM	MBER(S)			
CATIC	WELL OWNE	ER NAME(S	3)			PHONE (OPTIO	ONAL)			
GENERAL AND WELL LOCATION	WELL OWNE	ER MAILIN	G ADDRESS			CITY		STATE	ZIP	
D V			DEGRE	ES MINUTES SECOND	S					
AN	WELL LOCATION	NT.				* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND		
ERAL	(FROM GP	S) LA	ATITUDE ONGITUDE	 :	W	* DATUM REQUIRED: WGS 84				
1. GEN	DESCRIPTION	RELATING	WELL LOCATION TO STR	EET ADDRESS AND COMMON LANDMARKS - PLS	S (SECTION, T	OWNSHJIP, RANG	E) WHERE AVAILABLE			
	LICENSE NU	MBER	NAME OF LICENSE	D DRILLER			NAME OF WELL DR	ILLING COMPANY		
	DRILLING ST	ΓARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)			
						STATIC WATER LEVEL IN COMPLETED WELL (FT)			ELL (FT)	
NO	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)					51111E W.1121C22		<i>EEE</i> (11)		
ATI(DRILLING FLUID: O AIR O MUD ADDITIVES – SPECIFY:			ECIFY:						
RM	DRILLING METHOD: O ROTARY O HAMMER O CABLE TOOL OT			О отне	ER – SPECIFY:					
IFOR	DEPTH ((feet hgl)	DODE HOLE	CASING MATERIAL AND/OR			GAGDIG			
CASING INFORMATION	FROM	TO	BORE HOLE DIAM (inches)	GRADE (include each casing string, and note sections of screen)	CON	ASING NECTION YPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
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DRILLING										
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	DEPTH ((feet bgl)	BORE HOLE	LIST ANNULAR SEAL MA			AMOUNT	METHO		
IAL	FROM	TO	DIAM. (inches	GRAVEL PACK SIZE-RANG	E BY INTE	RVAL	(cubic feet)	PLACE	MENT	
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POD NUMBER

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TRN NUMBER

	DEPTH (feet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED YIELD FOR
	FROM	ТО	THICKNESS (feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	WATER- BEARING ZONES (gpm)
					OY ON	
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					OY ON	
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T					$O_A O_N$	
WEI					$O_A O_N$	
OF					$O_{A} O_{N}$	
907					$O^{Y} O^{N}$	
JIC I					$O^{Y}O^{N}$	
0070					$O^{Y} O^{N}$	
4. HYDROGEOLOGIC LOG OF WELL					$O^{Y} O^{N}$	
DRO					$O^{Y} O^{N}$	
HX					$O^{Y} O^{N}$	
4					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					O Y O N	
	METHODI	GED TO E	THE VIEW D	OF WATER DEADING CERATA O DUMP	O Y O N	
					OTAL ESTIMATED VELL YIELD (gpm):	
	AIR LIF	г О	BAILER O	OTHER – SPECIFY:	(8r).	
NO	WELL TES	T TEST STAR	RESULTS - ATT. T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	DING DISCHARGE THE TESTING PERIO	METHOD, OD.
5. TEST; RIG SUPERVISIO	MISCELLA	NEOUS IN	FORMATION:			
PEF						
S S						
T; RI						
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	HAN LICENSEE:
5.						
	THE UNDE	RSIGNED I	HEREBY CERTIF	IES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF,	THE FOREGOING IS	S A TRUE AND
IRE	CORRECT	RECORD O	F THE ABOVE D	ESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECO 0 DAYS AFTER COMPLETION OF WELL DRILLING:		
SIGNATURE		210,111 110	LDER WITHIN 2	2.1.2.1. TEX COM ELTION OF WELL DIMEDING.		
SIGN						
9.9		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE NAME	DATE	
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FOI	R OSE INTER	NAL USE		WR-20 WELL	RECORD & LOG (Ve	ersion 06/08/2012)

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TRN NUMBER

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FILE NUMBER

LOCATION

FOR OSE INTERNAL USE

FILE NUMBER

LOCATION

NC	OSE POD NU	MBER (WE	ELL NUMBER)			OSE FILE NUM	MBER(S)			
CATIC	WELL OWNE	ER NAME(S	3)			PHONE (OPTIO	ONAL)			
GENERAL AND WELL LOCATION	WELL OWNE	ER MAILIN	G ADDRESS			CITY		STATE	ZIP	
D V			DEGRE	ES MINUTES SECOND	S					
AN	WELL LOCATION	NT.				* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND		
ERAL	(FROM GP	S) LA	ATITUDE ONGITUDE	 :	W	* DATUM REQUIRED: WGS 84				
1. GEN	DESCRIPTION	RELATING	WELL LOCATION TO STR	EET ADDRESS AND COMMON LANDMARKS - PLS	S (SECTION, T	OWNSHJIP, RANG	E) WHERE AVAILABLE			
	LICENSE NU	MBER	NAME OF LICENSE	D DRILLER			NAME OF WELL DR	ILLING COMPANY		
	DRILLING ST	ΓARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)			
						STATIC WATER LEVEL IN COMPLETED WELL (FT)			ELL (FT)	
NO	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)					51111E W.1121C22		<i>EEE</i> (11)		
ATI(DRILLING FLUID: O AIR O MUD ADDITIVES – SPECIFY:			ECIFY:						
RM	DRILLING METHOD: O ROTARY O HAMMER O CABLE TOOL OT			О отне	ER – SPECIFY:					
IFOR	DEPTH ((feet hgl)	DODE HOLE	CASING MATERIAL AND/OR			GAGDIG			
CASING INFORMATION	FROM	TO	BORE HOLE DIAM (inches)	GRADE (include each casing string, and note sections of screen)	CON	ASING NECTION YPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
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DRILLING										
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	DEPTH ((feet bgl)	BORE HOLE	LIST ANNULAR SEAL MA			AMOUNT	METHO		
IAL	FROM	TO	DIAM. (inches	GRAVEL PACK SIZE-RANG	E BY INTE	RVAL	(cubic feet)	PLACE	MENT	
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POD NUMBER

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TRN NUMBER

	DEPTH (feet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED YIELD FOR
	FROM	ТО	THICKNESS (feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	WATER- BEARING ZONES (gpm)
					OY ON	
					OYON	
					OY ON	
					O A O N	
					$O_A O_N$	
T					$O_A O_N$	
WEI					$O_A O_N$	
OF					$O_{A} O_{N}$	
907					$O^{Y} O^{N}$	
JIC I					$O^{Y}O^{N}$	
0070					$O^{Y} O^{N}$	
4. HYDROGEOLOGIC LOG OF WELL					$O^{Y} O^{N}$	
DRO					$O^{Y} O^{N}$	
HX					$O^{Y} O^{N}$	
4					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					O Y O N	
	METHODI	GED TO E	THE VIEW D	OF WATER DEADING CERATA O DUMP	O Y O N	
					OTAL ESTIMATED VELL YIELD (gpm):	
	AIR LIF	г О	BAILER O	OTHER – SPECIFY:	(8r).	
NO	WELL TES	T TEST STAR	RESULTS - ATT. T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	DING DISCHARGE THE TESTING PERIO	METHOD, OD.
5. TEST; RIG SUPERVISIO	MISCELLA	NEOUS IN	FORMATION:			
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S S						
T; RI						
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	HAN LICENSEE:
5.						
	THE UNDE	RSIGNED I	HEREBY CERTIF	IES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF,	THE FOREGOING IS	S A TRUE AND
IRE	CORRECT	RECORD O	F THE ABOVE D	ESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECO 0 DAYS AFTER COMPLETION OF WELL DRILLING:		
SIGNATURE		210,111 110	LDER WITHIN 2	2.1.2.1. TEX COM ELTION OF WELL DIMEDING.		
SIGN						
9.9		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE NAME	DATE	
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FOI	R OSE INTER	NAL USE		WR-20 WELL	RECORD & LOG (Ve	ersion 06/08/2012)

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LOCATION

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FILE NUMBER

LOCATION

NC	OSE POD NU	MBER (WE	ELL NUMBER)			OSE FILE NUM	MBER(S)			
CATIC	WELL OWNE	ER NAME(S	3)			PHONE (OPTIO	ONAL)			
GENERAL AND WELL LOCATION	WELL OWNE	ER MAILIN	G ADDRESS			CITY		STATE	ZIP	
D V			DEGRE	ES MINUTES SECOND	S					
AN	WELL LOCATION	NT.				* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND		
ERAL	(FROM GP	S) LA	ATITUDE ONGITUDE	 :	W	* DATUM REQUIRED: WGS 84				
1. GEN	DESCRIPTION	RELATING	WELL LOCATION TO STR	EET ADDRESS AND COMMON LANDMARKS - PLS	S (SECTION, T	OWNSHJIP, RANG	E) WHERE AVAILABLE			
	LICENSE NU	MBER	NAME OF LICENSE	D DRILLER			NAME OF WELL DR	ILLING COMPANY		
	DRILLING ST	ΓARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)			
						STATIC WATER LEVEL IN COMPLETED WELL (FT)			ELL (FT)	
NO	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)					51111E W.1121C22		<i>EEE</i> (11)		
ATI(DRILLING FLUID: O AIR O MUD ADDITIVES – SPECIFY:			ECIFY:						
RM	DRILLING METHOD: O ROTARY O HAMMER O CABLE TOOL OT			О отне	ER – SPECIFY:					
IFOR	DEPTH ((feet hgl)	DODE HOLE	CASING MATERIAL AND/OR			GAGDIG			
CASING INFORMATION	FROM	TO	BORE HOLE DIAM (inches)	GRADE (include each casing string, and note sections of screen)	CON	ASING NECTION YPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
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DRILLING										
2.]										
	DEPTH ((feet bgl)	BORE HOLE	LIST ANNULAR SEAL MA			AMOUNT	METHO		
IAL	FROM	TO	DIAM. (inches	GRAVEL PACK SIZE-RANG	E BY INTE	RVAL	(cubic feet)	PLACE	MENT	
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TRN NUMBER

	DEPTH (feet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED YIELD FOR
	FROM	ТО	THICKNESS (feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	WATER- BEARING ZONES (gpm)
					OY ON	
					OYON	
					OY ON	
					O A O N	
					$O_A O_N$	
T					$O_A O_N$	
WEI					$O_A O_N$	
OF					$O_{A} O_{N}$	
907					$O^{Y} O^{N}$	
JIC I					$O^{Y}O^{N}$	
000					$O^{Y} O^{N}$	
4. HYDROGEOLOGIC LOG OF WELL					$O^{Y} O^{N}$	
DRO					$O^{Y} O^{N}$	
HX					$O^{Y} O^{N}$	
4					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
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					$O^{Y} O^{N}$	
					O Y O N	
	METHODI	GED TO E	THE VIEW D	OF WATER DEADING CERATA O DUMP	O Y O N	
					OTAL ESTIMATED VELL YIELD (gpm):	
	AIR LIF	г О	BAILER O	OTHER – SPECIFY:	(8r).	
NO	WELL TES	T TEST STAR	RESULTS - ATT. T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	DING DISCHARGE THE TESTING PERIO	METHOD, OD.
5. TEST; RIG SUPERVISIO	MISCELLA	NEOUS IN	FORMATION:			
PEF						
S S						
T; RI						
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	HAN LICENSEE:
5.						
	THE UNDE	RSIGNED I	HEREBY CERTIF	IES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF,	THE FOREGOING IS	S A TRUE AND
IRE	CORRECT	RECORD O	F THE ABOVE D	ESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECO 0 DAYS AFTER COMPLETION OF WELL DRILLING:		
SIGNATURE		210,111 110	LDER WITHIN 2	2.1.2.1. TEX COM ELTION OF WELL DIMEDING.		
SIGN						
9.9		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE NAME	DATE	
	<u> </u>		, 11232			
FOI	R OSE INTER	NAL USE		WR-20 WELL	RECORD & LOG (Ve	ersion 06/08/2012)

POD NUMBER

TRN NUMBER

PAGE 2 OF 2

FILE NUMBER

LOCATION

FOR OSE INTERNAL USE

FILE NUMBER

LOCATION

NC	OSE POD NU	MBER (WE	ELL NUMBER)			OSE FILE NUM	MBER(S)			
CATIC	WELL OWNE	ER NAME(S	3)			PHONE (OPTIO	ONAL)			
GENERAL AND WELL LOCATION	WELL OWNE	ER MAILIN	G ADDRESS			CITY		STATE	ZIP	
D V			DEGRE	ES MINUTES SECOND	S					
AN	WELL LOCATION	NT.				* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND		
ERAL	(FROM GP	S) LA	ATITUDE ONGITUDE	 :	W	* DATUM REQUIRED: WGS 84				
1. GEN	DESCRIPTION	RELATING	WELL LOCATION TO STR	EET ADDRESS AND COMMON LANDMARKS - PLS	S (SECTION, T	OWNSHJIP, RANG	E) WHERE AVAILABLE			
	LICENSE NU	MBER	NAME OF LICENSE	D DRILLER			NAME OF WELL DR	ILLING COMPANY		
	DRILLING ST	ΓARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)			
						STATIC WATER LEVEL IN COMPLETED WELL (FT)			ELL (FT)	
NO	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)					51111E W.1121C22		<i>EEE</i> (11)		
ATI(DRILLING FLUID: O AIR O MUD ADDITIVES – SPECIFY:			ECIFY:						
RM	DRILLING METHOD: O ROTARY O HAMMER O CABLE TOOL OT			О отне	ER – SPECIFY:					
IFOR	DEPTH ((feet hgl)	DODE HOLE	CASING MATERIAL AND/OR			GAGDIG			
CASING INFORMATION	FROM	TO	BORE HOLE DIAM (inches)	GRADE (include each casing string, and note sections of screen)	CON	ASING NECTION YPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
& C										
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rrı										
DRILLING										
2.]										
	DEPTH ((feet bgl)	BORE HOLE	LIST ANNULAR SEAL MA			AMOUNT	METHO		
IAL	FROM	TO	DIAM. (inches	GRAVEL PACK SIZE-RANG	E BY INTE	RVAL	(cubic feet)	PLACE	MENT	
TER										
MA										
AR										
ANNULAR MATERIAL										
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POD NUMBER

WR-20 WELL RECORD & LOG (Version 06/08/2012)

PAGE 1 OF 2

TRN NUMBER

	DEPTH (feet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED YIELD FOR
	FROM	ТО	THICKNESS (feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	WATER- BEARING ZONES (gpm)
					OY ON	
					OYON	
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					O A O N	
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T					$O_A O_N$	
WEI					$O_A O_N$	
OF					$O_A O_N$	
907					$O^{Y} O^{N}$	
JIC I					$O^{Y}O^{N}$	
000					$O^{Y} O^{N}$	
4. HYDROGEOLOGIC LOG OF WELL					$O^{Y} O^{N}$	
DRO					$O^{Y} O^{N}$	
HX					$O^{Y} O^{N}$	
4					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
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					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					O Y O N	
	METHODI	GED TO E	THE VIEW D	OF WATER DEADING CERATA O DUMP	O Y O N	
					OTAL ESTIMATED VELL YIELD (gpm):	
	AIR LIF	г О	BAILER O	OTHER – SPECIFY:	(8r).	
NO	WELL TES	T TEST STAR	RESULTS - ATT. T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	DING DISCHARGE THE TESTING PERIO	METHOD, OD.
5. TEST; RIG SUPERVISIO	MISCELLA	NEOUS IN	FORMATION:			
PEF						
S S						
T; RI						
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	HAN LICENSEE:
5.						
	THE UNDE	RSIGNED I	HEREBY CERTIF	IES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF,	THE FOREGOING IS	S A TRUE AND
IRE	CORRECT	RECORD O	F THE ABOVE D	ESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECO 0 DAYS AFTER COMPLETION OF WELL DRILLING:		
SIGNATURE		210,111 110	LDER WITHIN 2	2.1.2.1. TEX COM ELTION OF WELL DIMEDING.		
SIGN						
9.9		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE NAME	DATE	
	<u> </u>		, 11232			
FOI	R OSE INTER	NAL USE		WR-20 WELL	RECORD & LOG (Ve	ersion 06/08/2012)

POD NUMBER

TRN NUMBER

PAGE 2 OF 2

FILE NUMBER

LOCATION

FOR OSE INTERNAL USE

FILE NUMBER

LOCATION

NC	OSE POD NU	MBER (WE	ELL NUMBER)			OSE FILE NUM	MBER(S)			
CATIC	WELL OWNE	ER NAME(S	3)			PHONE (OPTIO	ONAL)			
GENERAL AND WELL LOCATION	WELL OWNE	ER MAILIN	G ADDRESS			CITY		STATE	ZIP	
D V			DEGRE	ES MINUTES SECOND	S					
AN	WELL LOCATION	NT.				* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND		
ERAL	(FROM GP	S) LA	ATITUDE ONGITUDE	 :	W	* DATUM REQUIRED: WGS 84				
1. GEN	DESCRIPTION	RELATING	WELL LOCATION TO STR	EET ADDRESS AND COMMON LANDMARKS - PLS	S (SECTION, T	OWNSHJIP, RANG	E) WHERE AVAILABLE			
	LICENSE NU	MBER	NAME OF LICENSE	D DRILLER			NAME OF WELL DR	ILLING COMPANY		
	DRILLING ST	ΓARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)			
						STATIC WATER LEVEL IN COMPLETED WELL (FT)			ELL (FT)	
NO	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)					51111E W.1121C22		<i>EEE</i> (11)		
ATI(DRILLING FLUID: O AIR O MUD ADDITIVES – SPECIFY:			ECIFY:						
RM	DRILLING METHOD: O ROTARY O HAMMER O CABLE TOOL OT			О отне	ER – SPECIFY:					
IFOR	DEPTH ((feet hgl)	DODE HOLE	CASING MATERIAL AND/OR			GAGDIG			
CASING INFORMATION	FROM	TO	BORE HOLE DIAM (inches)	GRADE (include each casing string, and note sections of screen)	CON	ASING NECTION YPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
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NG										
rrı										
DRILLING										
2.]										
	DEPTH ((feet bgl)	BORE HOLE	LIST ANNULAR SEAL MA			AMOUNT	METHO		
IAL	FROM	TO	DIAM. (inches	GRAVEL PACK SIZE-RANG	E BY INTE	RVAL	(cubic feet)	PLACE	MENT	
TER										
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ANNULAR MATERIAL										
ж.										

POD NUMBER

WR-20 WELL RECORD & LOG (Version 06/08/2012)

PAGE 1 OF 2

TRN NUMBER

	DEPTH (feet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED YIELD FOR
	FROM	ТО	THICKNESS (feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	WATER- BEARING ZONES (gpm)
					OY ON	
					OYON	
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					O A O N	
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WEI					$O_A O_N$	
OF					$O_{A} O_{N}$	
907					$O^{Y} O^{N}$	
JIC I					$O^{Y}O^{N}$	
000					$O^{Y} O^{N}$	
4. HYDROGEOLOGIC LOG OF WELL					$O^{Y} O^{N}$	
DRO					$O^{Y} O^{N}$	
HX					$O^{Y} O^{N}$	
4					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					$O^{Y} O^{N}$	
					O Y O N	
	METHODI	GED TO E	THE VIEW D	OF WATER DEADING CERATA O DUMP	O Y O N	
					OTAL ESTIMATED VELL YIELD (gpm):	
	AIR LIF	г О	BAILER O	OTHER – SPECIFY:	(8r).	
NO	WELL TES	T TEST STAR	RESULTS - ATT. T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	DING DISCHARGE THE TESTING PERIO	METHOD, OD.
5. TEST; RIG SUPERVISIO	MISCELLA	NEOUS IN	FORMATION:			
PEF						
S S						
T; RI						
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	HAN LICENSEE:
5.						
	THE UNDE	RSIGNED I	HEREBY CERTIF	IES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF,	THE FOREGOING IS	S A TRUE AND
IRE	CORRECT	RECORD O	F THE ABOVE D	ESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECO 0 DAYS AFTER COMPLETION OF WELL DRILLING:		
SIGNATURE		210,111 110	LDER WITHIN 2	2.1.2.1. TEX COM ELTION OF WELL DIMEDING.		
SIGN						
9.9		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE NAME	DATE	
	<u> </u>		, 11232			
FOI	R OSE INTER	NAL USE		WR-20 WELL	RECORD & LOG (Ve	ersion 06/08/2012)

POD NUMBER

TRN NUMBER

PAGE 2 OF 2

FILE NUMBER

LOCATION



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

August 26, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1308626

Dear George Robinson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/14/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: MPE-38 65'-67'

 Project:
 TWP Roswell Station 9
 Collection Date: 8/8/2013 8:10:00 AM

 Lab ID:
 1308626-001
 Matrix: SOIL
 Received Date: 8/14/2013 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY					Analyst	: IDC
Mercury	ND	0.033	mg/kg	1	8/20/2013 1:22:19 PM	8939
EPA METHOD 6010B: SOIL METALS					Analyst	: JLF
Arsenic	ND	2.5	mg/Kg	1	8/21/2013 3:42:11 PM	8910
Barium	62	0.20	mg/Kg	2	8/21/2013 3:45:19 PM	8910
Cadmium	ND	0.10	mg/Kg	1	8/21/2013 3:42:11 PM	8910
Chromium	3.9	0.30	mg/Kg	1	8/21/2013 3:42:11 PM	8910
Lead	1.7	0.25	mg/Kg	1	8/21/2013 3:42:11 PM	8910
Selenium	ND	2.5	mg/Kg	1	8/21/2013 3:42:11 PM	8910
Silver	ND	0.25	mg/Kg	1	8/21/2013 3:42:11 PM	8910
EPA METHOD 8260B: VOLATILES					Analyst	: JMP
Benzene	11	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Toluene	45	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Ethylbenzene	8.9	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Methyl tert-butyl ether (MTBE)	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2,4-Trimethylbenzene	9.5	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,3,5-Trimethylbenzene	6.1	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2-Dichloroethane (EDC)	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2-Dibromoethane (EDB)	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Naphthalene	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1-Methylnaphthalene	ND	9.5	mg/Kg	50	8/17/2013 5:21:30 AM	8879
2-Methylnaphthalene	ND	9.5	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Acetone	ND	36	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Bromobenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Bromodichloromethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Bromoform	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Bromomethane	ND	7.1	mg/Kg	50	8/17/2013 5:21:30 AM	8879
2-Butanone	ND	24	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Carbon disulfide	ND	24	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Carbon tetrachloride	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Chlorobenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Chloroethane	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Chloroform	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Chloromethane	ND	7.1	mg/Kg	50	8/17/2013 5:21:30 AM	8879
2-Chlorotoluene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
4-Chlorotoluene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
cis-1,2-DCE	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
cis-1,3-Dichloropropene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2-Dibromo-3-chloropropane	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1.
- Page 1 of 13
 P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Date Reported: 8/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MPE-38 65'-67'

Project: TWP Roswell Station 9 **Collection Date:** 8/8/2013 8:10:00 AM Lab ID: 1308626-001 Matrix: SOIL **Received Date:** 8/14/2013 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: JMP
Dibromochloromethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Dibromomethane	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2-Dichlorobenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,3-Dichlorobenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,4-Dichlorobenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Dichlorodifluoromethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1-Dichloroethane	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1-Dichloroethene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2-Dichloropropane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,3-Dichloropropane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
2,2-Dichloropropane	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1-Dichloropropene	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Hexachlorobutadiene	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
2-Hexanone	ND	24	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Isopropylbenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
4-Isopropyltoluene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
4-Methyl-2-pentanone	ND	24	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Methylene chloride	ND	7.1	mg/Kg	50	8/17/2013 5:21:30 AM	8879
n-Butylbenzene	ND	7.1	mg/Kg	50	8/17/2013 5:21:30 AM	8879
n-Propylbenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
sec-Butylbenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Styrene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
tert-Butylbenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1,1,2-Tetrachloroethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1,2,2-Tetrachloroethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Tetrachloroethene (PCE)	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
trans-1,2-DCE	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
trans-1,3-Dichloropropene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2,3-Trichlorobenzene	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2,4-Trichlorobenzene	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1,1-Trichloroethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,1,2-Trichloroethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Trichloroethene (TCE)	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Trichlorofluoromethane	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
1,2,3-Trichloropropane	ND	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Vinyl chloride	ND	2.4	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Xylenes, Total	64	4.8	mg/Kg	50	8/17/2013 5:21:30 AM	8879
Surr: 1,2-Dichloroethane-d4	97.2	70-130	%REC	50	8/17/2013 5:21:30 AM	8879
Surr: 4-Bromofluorobenzene	86.1	70-130	%REC	50	8/17/2013 5:21:30 AM	8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 2 of 13 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Analytical Report

Lab Order 1308626

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/26/2013

CLIENT: Cypress Engineering Client Sample ID: MPE-38 65'-67'

Project: TWP Roswell Station 9 **Collection Date:** 8/8/2013 8:10:00 AM 1308626-001 Matrix: SOIL Lab ID: **Received Date:** 8/14/2013 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analy	st: JMP
Surr: Dibromofluoromethane	98.2	70-130	%REC	50	8/17/2013 5:21:30 AM	M 8879
Surr: Toluene-d8	89.6	70-130	%REC	50	8/17/2013 5:21:30 AM	A 8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
 - Sample pH greater than 2 for VOA and TOC only.
 - P
- Reporting Detection Limit

Date Reported: 8/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: MPE-40 60'-62'

Project: TWP Roswell Station 9 **Collection Date:** 8/8/2013 4:55:00 PM

Lab ID: 1308626-002 **Matrix:** SOIL **Received Date:** 8/14/2013 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY					Analyst	: IDC
Mercury	ND	0.033	mg/kg	1	8/20/2013 1:27:39 PM	8939
EPA METHOD 6010B: SOIL METALS					Analyst	t: JLF
Arsenic	ND	5.0	mg/Kg	2	8/21/2013 4:00:30 PM	8910
Barium	71	0.20	mg/Kg	2	8/21/2013 4:00:30 PM	8910
Cadmium	ND	0.20	mg/Kg	2	8/21/2013 4:00:30 PM	8910
Chromium	6.9	0.60	mg/Kg	2	8/21/2013 4:00:30 PM	8910
Lead	2.9	0.50	mg/Kg	2	8/21/2013 4:00:30 PM	8910
Selenium	ND	5.0	mg/Kg	2	8/21/2013 4:00:30 PM	8910
Silver	ND	0.50	mg/Kg	2	8/21/2013 4:00:30 PM	8910
EPA METHOD 8260B: VOLATILES					Analyst	: JMP
Benzene	1.1	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Toluene	30	4.7	mg/Kg	100	8/19/2013 4:13:54 PM	8879
Ethylbenzene	3.9	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Methyl tert-butyl ether (MTBE)	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2,4-Trimethylbenzene	8.0	4.7	mg/Kg	100	8/19/2013 4:13:54 PM	8879
1,3,5-Trimethylbenzene	3.5	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2-Dichloroethane (EDC)	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2-Dibromoethane (EDB)	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Naphthalene	0.36	0.095	mg/Kg	1	8/17/2013 4:24:57 AM	8879
1-Methylnaphthalene	0.56	0.19	mg/Kg	1	8/17/2013 4:24:57 AM	8879
2-Methylnaphthalene	0.97	0.19	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Acetone	ND	0.71	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Bromobenzene	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Bromodichloromethane	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Bromoform	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Bromomethane	ND	0.14	mg/Kg	1	8/17/2013 4:24:57 AM	8879
2-Butanone	ND	0.47	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Carbon disulfide	ND	0.47	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Carbon tetrachloride	ND	0.095	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Chlorobenzene	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Chloroethane	ND	0.095	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Chloroform	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
Chloromethane	ND	0.14	mg/Kg	1	8/17/2013 4:24:57 AM	8879
2-Chlorotoluene	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
4-Chlorotoluene	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
cis-1,2-DCE	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
cis-1,3-Dichloropropene	ND	0.047	mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2-Dibromo-3-chloropropane	ND	0.095	mg/Kg	1	8/17/2013 4:24:57 AM	8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 4
- ND Not Detected at the Reporting Limit Page 4 of 13
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/26/2013

CLIENT: Cypress Engineering Client Sample ID: MPE-40 60'-62'

Project: TWP Roswell Station 9 **Collection Date:** 8/8/2013 4:55:00 PM Matrix: SOIL Lab ID: 1308626-002 **Received Date:** 8/14/2013 9:45:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst	:: ЈМР
Dibromochloromethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Dibromomethane	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2-Dichlorobenzene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,3-Dichlorobenzene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,4-Dichlorobenzene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Dichlorodifluoromethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1-Dichloroethane	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1-Dichloroethene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2-Dichloropropane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,3-Dichloropropane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
2,2-Dichloropropane	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1-Dichloropropene	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Hexachlorobutadiene	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
2-Hexanone	ND	0.47		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Isopropylbenzene	0.69	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
4-Isopropyltoluene	0.28	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
4-Methyl-2-pentanone	ND	0.47		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Methylene chloride	ND	0.14		mg/Kg	1	8/17/2013 4:24:57 AM	8879
n-Butylbenzene	0.46	0.14		mg/Kg	1	8/17/2013 4:24:57 AM	8879
n-Propylbenzene	1.1	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
sec-Butylbenzene	0.31	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Styrene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
tert-Butylbenzene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1,1,2-Tetrachloroethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1,2,2-Tetrachloroethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Tetrachloroethene (PCE)	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
trans-1,2-DCE	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
trans-1,3-Dichloropropene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2,4-Trichlorobenzene	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1,1-Trichloroethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,1,2-Trichloroethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Trichloroethene (TCE)	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Trichlorofluoromethane	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Vinyl chloride	ND	0.047		mg/Kg	1	8/17/2013 4:24:57 AM	8879
Xylenes, Total	45	9.5		mg/Kg	100	8/19/2013 4:13:54 PM	8879
Surr: 1,2-Dichloroethane-d4	58.9	70-130	S	%REC	1	8/17/2013 4:24:57 AM	8879
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	8/17/2013 4:24:57 AM	8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 5 of 13 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Analytical Report

Lab Order 1308626

Date Reported: 8/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: MPE-40 60'-62'

Project: TWP Roswell Station 9 **Collection Date:** 8/8/2013 4:55:00 PM

Lab ID: 1308626-002 Matrix: SOIL **Received Date:** 8/14/2013 9:45:00 AM

Analyses	Result	RL Qua	al Units	DF Date Analyz	ed Batch
EPA METHOD 8260B: VOLATILES					Analyst: JMP
Surr: Dibromofluoromethane	69.9	70-130 S	%REC	1 8/17/2013 4:24	4:57 AM 8879
Surr: Toluene-d8	93.0	70-130	%REC	1 8/17/2013 4:24	4:57 AM 8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/26/2013

CLIENT: Cypress Engineering Client Sample ID: MW-42A 55-57

Project: TWP Roswell Station 9 **Collection Date:** 8/6/2013 10:45:00 AM Lab ID: 1308626-003 Matrix: SOIL Received Date: 8/14/2013 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	:: ЈМР
Benzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Toluene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Methyl tert-butyl ether (MTBE)	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2,4-Trimethylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,3,5-Trimethylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2-Dichloroethane (EDC)	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2-Dibromoethane (EDB)	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Naphthalene	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1-Methylnaphthalene	ND	0.19	mg/Kg	1	8/17/2013 4:53:17 AM	8879
2-Methylnaphthalene	ND	0.19	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Acetone	ND	0.71	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Bromobenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Bromodichloromethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Bromoform	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Bromomethane	ND	0.14	mg/Kg	1	8/17/2013 4:53:17 AM	8879
2-Butanone	ND	0.48	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Carbon disulfide	ND	0.48	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Carbon tetrachloride	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Chlorobenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Chloroethane	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Chloroform	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Chloromethane	ND	0.14	mg/Kg	1	8/17/2013 4:53:17 AM	8879
2-Chlorotoluene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
4-Chlorotoluene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
cis-1,2-DCE	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
cis-1,3-Dichloropropene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2-Dibromo-3-chloropropane	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Dibromochloromethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Dibromomethane	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2-Dichlorobenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,3-Dichlorobenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,4-Dichlorobenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Dichlorodifluoromethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,1-Dichloroethane	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,1-Dichloroethene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2-Dichloropropane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,3-Dichloropropane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
2,2-Dichloropropane	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Page 7 of 13 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Date Reported: 8/26/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering

Client Sample ID: MW-42A 55-57

Project: TWP Roswell Station 9 **Collection Date:** 8/6/2013 10:45:00 AM Lab ID: 1308626-003 Matrix: SOIL Received Date: 8/14/2013 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: JMP
1,1-Dichloropropene	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Hexachlorobutadiene	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
2-Hexanone	ND	0.48	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Isopropylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
4-Isopropyltoluene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
4-Methyl-2-pentanone	ND	0.48	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Methylene chloride	ND	0.14	mg/Kg	1	8/17/2013 4:53:17 AM	8879
n-Butylbenzene	ND	0.14	mg/Kg	1	8/17/2013 4:53:17 AM	8879
n-Propylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
sec-Butylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Styrene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
tert-Butylbenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,1,1,2-Tetrachloroethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,1,2,2-Tetrachloroethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Tetrachloroethene (PCE)	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
trans-1,2-DCE	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
trans-1,3-Dichloropropene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2,3-Trichlorobenzene	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2,4-Trichlorobenzene	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,1,1-Trichloroethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,1,2-Trichloroethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Trichloroethene (TCE)	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Trichlorofluoromethane	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
1,2,3-Trichloropropane	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Vinyl chloride	ND	0.048	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Xylenes, Total	ND	0.095	mg/Kg	1	8/17/2013 4:53:17 AM	8879
Surr: 1,2-Dichloroethane-d4	93.2	70-130	%REC	1	8/17/2013 4:53:17 AM	8879
Surr: 4-Bromofluorobenzene	86.8	70-130	%REC	1	8/17/2013 4:53:17 AM	8879
Surr: Dibromofluoromethane	101	70-130	%REC	1	8/17/2013 4:53:17 AM	8879
Surr: Toluene-d8	95.0	70-130	%REC	1	8/17/2013 4:53:17 AM	8879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
 - Page 8 of 13 P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: **1308626**

26-Aug-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID mb-8879 SampType: MBLK TestCode: EPA Method 8260B: VOLATILES Client ID: **PBS** Batch ID: 8879 RunNo: 12689 Prep Date: 8/15/2013 Analysis Date: 8/17/2013 SeqNo: 361357 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene ND 0.050 Toluene ND 0.050 ND Ethylbenzene 0.050 Methyl tert-butyl ether (MTBE) ND 0.050 1,2,4-Trimethylbenzene ND 0.050 1,3,5-Trimethylbenzene 0.050 ND 1,2-Dichloroethane (EDC) ND 0.050 1,2-Dibromoethane (EDB) ND 0.050 Naphthalene ND 0.10 ND 0.20 1-Methylnaphthalene 2-Methylnaphthalene ND 0.20 ND 0.75 Acetone ND 0.050 Bromobenzene Bromodichloromethane ND 0.050 Bromoform ND 0.050 Bromomethane ND 0.15 2-Butanone ND 0.50 Carbon disulfide ND 0.50 Carbon tetrachloride ND 0.10 Chlorobenzene ND 0.050 Chloroethane ND 0.10 Chloroform ND 0.050 Chloromethane ND 0.15 2-Chlorotoluene ND 0.050 4-Chlorotoluene ND 0.050 cis-1,2-DCE ND 0.050 cis-1,3-Dichloropropene ND 0.050 1,2-Dibromo-3-chloropropane ND 0.10 Dibromochloromethane ND 0.050 ND 0.10 Dibromomethane ND 0.050 1.2-Dichlorobenzene ND 0.050 1,3-Dichlorobenzene 1.4-Dichlorobenzene ND 0.050 Dichlorodifluoromethane ND 0.050 1,1-Dichloroethane ND 0.10 1,1-Dichloroethene ND 0.050 ND 0.050 1,2-Dichloropropane 1,3-Dichloropropane ND 0.050 2,2-Dichloropropane ND 0.10

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 9 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: **1308626**

26-Aug-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID mb-8879	SampT	Гуре: МВ	3LK	Tes	tCode: E	PA Method	1 8260B: VOLA	ATILES		
Client ID: PBS	Batch	h ID: 887	79	F	RunNo: 12	2689				
Prep Date: 8/15/2013	Analysis D)ate: 8/	17/2013	5	SeqNo: 30	61357	Units: mg/K	ζg		ļ
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.0	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.3	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.8	70	130			
Surr: Toluene-d8	0.49		0.5000		98.3	70				
Sample ID Ics-8879	SampT	Гуре: LC :	<u></u> S	Tes	tCode: E	PA Method	1 8260B: VOLA	ATILES		
Client ID: LCSS	Batch	h ID: 887	79	F	RunNo: 12	2689				

Qualifiers:

Chlorobenzene

Prep Date:

Analyte

Benzene

Toluene

* Value exceeds Maximum Contaminant Level.

Analysis Date: 8/17/2013

PQL

0.050

0.050

0.050

Result

0.94

0.89

0.84

SPK value SPK Ref Val

1.000

1.000

1.000

E Value above quantitation range

8/15/2013

- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank

LowLimit

70

70

69.9

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

SeqNo: 361358

%REC

93.8

89.5

84.2

0

0

0

Units: mg/Kg

130

139

130

%RPD

HighLimit

- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 10 of 13

RPDLimit

Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: **1308626**

26-Aug-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID Ics-8879 Client ID: LCSS	SampType: LCS TestCode: EPA Method 82 Batch ID: 8879 RunNo: 12689					8260B: VOL	ATILES			
Prep Date: 8/15/2013	Analysis D		17/2013		SeqNo: 361358 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.0	0.050	1.000	0	104	69.3	131			
Trichloroethene (TCE)	0.87	0.050	1.000	0	87.3	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.6	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.5000		85.9	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		99.3	70	130			
Surr: Toluene-d8	0.50		0.5000		101	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1308626**

26-Aug-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID MB-8939 SampType: MBLK TestCode: EPA Method 7471: Mercury

Client ID: PBS Batch ID: 8939 RunNo: 12748

Prep Date: 8/20/2013 Analysis Date: 8/20/2013 SeqNo: 363107 Units: mg/kg

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

Mercury ND 0.033

Sample ID LCS-8939 SampType: LCS TestCode: EPA Method 7471: Mercury

Client ID: LCSS Batch ID: 8939 RunNo: 12748

Prep Date: 8/20/2013 Analysis Date: 8/20/2013 SeqNo: 363108 Units: mg/kg

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

Mercury 0.16 0.033 0.1667 0 93.5 80 120

Sample ID 1308626-001AMS SampType: ms TestCode: EPA Method 7471: Mercury

Client ID: MPE-38 65'-67' Batch ID: 8939 RunNo: 12748

Prep Date: **8/20/2013** Analysis Date: **8/20/2013** SeqNo: **363110** Units: **mg/kg**

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

Mercury 0.16 0.033 0.1657 0.004432 92.6 75 125

Sample ID 1308626-001AMSD SampType: msd TestCode: EPA Method 7471: Mercury

Client ID: MPE-38 65'-67' Batch ID: 8939 RunNo: 12748

Prep Date: 8/20/2013 Analysis Date: 8/20/2013 SeqNo: 363111 Units: mg/kg

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

Mercury 0.16 0.033 0.1603 0.004432 95.3 75 125 0.379 20

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 12 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: **1308626**

26-Aug-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID MB-8910 SampType: MBLK TestCode: EPA Method 6010B: Soil Metals **PBS** Client ID: Batch ID: 8910 RunNo: 12731 Prep Date: 8/19/2013 Analysis Date: 8/19/2013 SeqNo: 362428 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual ND 2.5 Arsenic ND 0.10 Barium ND Cadmium 0.10 Chromium ND 0.30 Lead ND 0.25 Selenium ND 2.5 Silver ND 0.25

Sample ID LCS-8910	SampT	SampType: LCS TestCode: EPA Method 6010B: Soil Metals								
Client ID: LCSS	Batch	n ID: 89	10	F	RunNo: 1	2731				
Prep Date: 8/19/2013	Analysis D	ate: 8/	19/2013	S	SeqNo: 3	62429	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	100	80	120			
Barium	25	0.10	25.00	0	99.8	80	120			
Cadmium	25	0.10	25.00	0	100	80	120			
Chromium	25	0.30	25.00	0	99.5	80	120			
Lead	24	0.25	25.00	0	96.5	80	120			
Selenium	24	2.5	25.00	0	96.2	80	120			
Silver	4.6	0.25	5.000	0	93.0	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 13 of 13



4901 Hawkins NE Albuquerque, NM 87109 SL: 505-345-3975 FAX: 505-345-4107

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Clien	t Name:	CYP		Work Order Number:	1308626		RcptNo:	1
Recei	ved by/date	= 4	orange	08/14/13		· · · · · · · · · · · · · · · · · · ·		
Logge	ed By:	Lindsay M	angin	8/14/2013 9:45:00 AM		Junely Houges		
	eleted By:	Lindsay M	7	8/15/2013 7:37:23 AM		Annly Alleger		
	wed By:	A.	-1-	08/15/13		000		
	n of Cust	tody	1-40	0011011				J
			ample bottles?		Yes 🗌	No 🗆	Not Present	
		Custody comp			Yes 🗹	No 🗆	Not Present	
3. H	ow was the	sample deliv	vered?		<u>UPS</u>			
Log	<u>In</u>							
4. v	Vas an atte	mpt made to	cool the samples	?	Yes 🗹	No 🗌	na 🗆	
5. W	Vere all san	nples receive	d at a temperatur	e of >0° C to 6.0°C	Yes 🗸	No 🗌	na 🗆	
6. s	Sample(s) ir	n proper conta	ainer(s)?		Yes 🗸	No 🗌		
7. S	ufficient sa	mple volume	for indicated test	(s)?	Yes 🗹	No 🗆		
8. A	re samples	(except VOA	and ONG) prope	rly preserved?	Yes 🗹	No 🗆		
9. v	Vas preserv	ative added f	to bottles?		Yes 🗌	No 🔽	NA 🗆	•
10.V	OA vials ha	ave zero head	ispace?		Yes 🗌	No 🗌	No VOA Vials 🗹	
			ers received brok	en?	Yes	No 🗹 [
	•	•					# of preserved bottles checked	
		work match be			Yes 🗹	No 🗆	for pH:	or >12 unless noted)
			nain of custody)	£ Cuntadu2	Yes 🗹	No 🗆	Adjusted?	or >12 unless noted)
			ntified on Chain overe requested?	i Cusiouy :	Yes 🗹	No 🗆	_	<u> </u>
			le to be met?		Yes ✓	No 🗆	Checked by:	
			authorization.)		100 🖭	[
				•				
<u>Spec</u>	ial Hand	lling (if ap	<u>plicable)</u>					
16. W	Vas client n	otified of all o	liscrepancies with	this order?	Yes 🗌	No 🗆	NA 🗹	•
	Persor	n Notified:		Date:				
	By Wh	nom:		Via:	eMail] Phone [] Fax	In Person	
	Regard	ding:						
	Client	Instructions:						
17.	Additional re	emarks:						
18. <u>c</u>	Cooler Info	ormation .						
-	Cooler N	o Temp ºC		1	Seal Date	Signed By		•
	1	3.6	Good Y	98				

	Œ.	www.hallenvironmental.com	4901 Hawkins NE - Albuquergia NM 87109		Ana		POS ((SWI	ЯО () IS 0	1.4.1 7.28 7.28 (05 10 05 VO.	hod hod off fets (AC, hod incide incide incide	H 8010 H	4T 4T 63 608 608 608 7728	××									S. Any Quetous Meise Call	Grange Robinson a	281.797.3420	Any sub-contracted data will be clearly notated on the analytical report.
lum-Around Time:		Project Name:	KOSWELL SIX 1104 9		02.20120037.03		the house, Pt	180		Mo No No	Derature 5.12) 	Container Preservative HEAL No. X X X Ype and # Type 17 X X X X X X X X X X X X X X X X X X	D NOLO	6/In Nine -00	Kyon None - CC		An NIAC -005						Remarks:	Réceived b/: Date Time		If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Unain-or-Custody Record	Client Straingering Erring Fre	Address	n Texas 7709	MTN. George Robinson, DE	Phone #: 28/, 797, 3420	email or Fax#: Georyc. Topinion a	QA/QC Package; Cymrss Inc. A.S	☐ Level 4 (Full Validation)	uo	□ Other	☐ EDD (Type)		Date Time Matrix Sample Request ID	38/10/10 0810 5.1 MPF-28 15/2171	0010 1000	18/08/13 1625 SOIL MPE-40 60-62"	Odhalla 1045 501 MW- 42 # 56-27	1001					Date: Relinding Kr.	13.12:00 (Milhallight) 26-	Date: Time: Refinquis/led by: Re		If necessary, samples submitted to Hall Environmental may be subcontr



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

September 04, 2013

George Robinson

Cypress Engineering 7171 Highway 6 North Suite 102

Houston, TX 770952422 TEL: (281) 797-3420 FAX (281) 859-1881

RE: TWP Roswell Station 9 OrderNo.: 1308C34

Dear George Robinson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/28/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1308C34 Date Reported: 9/4/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Cypress Engineering Client Sample ID: Comp Soil MW-39 - MW-42 S c

Project: TWP Roswell Station 9 Collection Date: 8/27/2013 10:40:00 AM Lab ID: 1308C34-001 Matrix: SOIL Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: TCLP COMPO	DUNDS				Analyst	: JMP
Benzene	ND	0.50	ppm	10	8/29/2013 6:13:23 PM	9096
1,2-Dichloroethane (EDC)	ND	0.50	ppm	10	8/29/2013 6:13:23 PM	9096
2-Butanone	ND	200	ppm	10	8/29/2013 6:13:23 PM	9096
Carbon tetrachloride	ND	0.50	ppm	10	8/29/2013 6:13:23 PM	9096
Chlorobenzene	ND	100	ppm	10	8/29/2013 6:13:23 PM	9096
Chloroform	ND	6.0	ppm	10	8/29/2013 6:13:23 PM	9096
1,4-Dichlorobenzene	ND	7.5	ppm	10	8/29/2013 6:13:23 PM	9096
1,1-Dichloroethene	ND	0.70	ppm	10	8/29/2013 6:13:23 PM	9096
Tetrachloroethene (PCE)	ND	0.70	ppm	10	8/29/2013 6:13:23 PM	9096
Trichloroethene (TCE)	ND	0.50	ppm	10	8/29/2013 6:13:23 PM	9096
Vinyl chloride	ND	0.20	ppm	10	8/29/2013 6:13:23 PM	9096
Surr: 1,2-Dichloroethane-d4	90.6	70-130	%REC	10	8/29/2013 6:13:23 PM	9096
Surr: 4-Bromofluorobenzene	94.0	70-130	%REC	10	8/29/2013 6:13:23 PM	9096
Surr: Dibromofluoromethane	94.9	70-130	%REC	10	8/29/2013 6:13:23 PM	9096
Surr: Toluene-d8	93.0	70-130	%REC	10	8/29/2013 6:13:23 PM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Date Reported: 9/4/2013

CLIENT: Cypress Engineering Client Sample ID: MPE-39 Composite 50'-75' BGS

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 9:45:00 AM

 Lab ID:
 1308C34-002
 Matrix: SOIL
 Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGI	E ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	15	9.9		mg/Kg	1	8/30/2013 1:10:41 PM	9101
Surr: DNOP	86.9	63-147		%REC	1	8/30/2013 1:10:41 PM	9101
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst:	NSB
Gasoline Range Organics (GRO)	320	50		mg/Kg	10	8/30/2013 11:27:18 AM	9096
Surr: BFB	145	80-120	S	%REC	10	8/30/2013 11:27:18 AM	9096
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.50		mg/Kg	10	8/30/2013 11:27:18 AM	9096
Toluene	ND	0.50		mg/Kg	10	8/30/2013 11:27:18 AM	9096
Ethylbenzene	ND	0.50		mg/Kg	10	8/30/2013 11:27:18 AM	9096
Xylenes, Total	2.6	1.0		mg/Kg	10	8/30/2013 11:27:18 AM	9096
Surr: 4-Bromofluorobenzene	102	80-120		%REC	10	8/30/2013 11:27:18 AM	9096
EPA METHOD 8260B: TCLP COMPOL	JNDS					Analyst	JMP
Benzene	ND	0.50		ppm	10	8/29/2013 11:00:11 PM	9096
1,2-Dichloroethane (EDC)	ND	0.50		ppm	10	8/29/2013 11:00:11 PM	9096
2-Butanone	ND	200		ppm	10	8/29/2013 11:00:11 PM	9096
Carbon tetrachloride	ND	0.50		ppm	10	8/29/2013 11:00:11 PM	9096
Chlorobenzene	ND	100		ppm	10	8/29/2013 11:00:11 PM	9096
Chloroform	ND	6.0		ppm	10	8/29/2013 11:00:11 PM	9096
1,4-Dichlorobenzene	ND	7.5		ppm	10	8/29/2013 11:00:11 PM	9096
1,1-Dichloroethene	ND	0.70		ppm	10	8/29/2013 11:00:11 PM	9096
Tetrachloroethene (PCE)	ND	0.70		ppm	10	8/29/2013 11:00:11 PM	9096
Trichloroethene (TCE)	ND	0.50		ppm	10	8/29/2013 11:00:11 PM	9096
Vinyl chloride	ND	0.20		ppm	10	8/29/2013 11:00:11 PM	9096
Surr: 1,2-Dichloroethane-d4	95.6	70-130		%REC	10	8/29/2013 11:00:11 PM	9096
Surr: 4-Bromofluorobenzene	92.5	70-130		%REC	10	8/29/2013 11:00:11 PM	9096
Surr: Dibromofluoromethane	94.8	70-130		%REC	10	8/29/2013 11:00:11 PM	9096
Surr: Toluene-d8	93.8	70-130		%REC	10	8/29/2013 11:00:11 PM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page
 - Not Detected at the Reporting Limit Page 2 of 12
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Date Reported: 9/4/2013

CLIENT: Cypress Engineering Client Sample ID: MPE-38 Composite 50'-75' BGS

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 9:30:00 AM

 Lab ID:
 1308C34-003
 Matrix: SOIL
 Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst:	BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/30/2013 1:41:47 PM	9101
Surr: DNOP	88.8	63-147		%REC	1	8/30/2013 1:41:47 PM	9101
EPA METHOD 8015D: GASOLINE RAM	NGE					Analyst:	RAA
Gasoline Range Organics (GRO)	16	5.0		mg/Kg	1	9/3/2013 1:50:29 PM	9096
Surr: BFB	147	80-120	S	%REC	1	9/3/2013 1:50:29 PM	9096
EPA METHOD 8021B: VOLATILES						Analyst:	RAA
Benzene	ND	0.050		mg/Kg	1	9/3/2013 1:50:29 PM	9096
Toluene	ND	0.050		mg/Kg	1	9/3/2013 1:50:29 PM	9096
Ethylbenzene	ND	0.050		mg/Kg	1	9/3/2013 1:50:29 PM	9096
Xylenes, Total	ND	0.10		mg/Kg	1	9/3/2013 1:50:29 PM	9096
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	9/3/2013 1:50:29 PM	9096
EPA METHOD 8260B: TCLP COMPOU	INDS					Analyst:	JMP
Benzene	ND	0.50		ppm	10	8/29/2013 10:31:29 PM	9096
1,2-Dichloroethane (EDC)	ND	0.50		ppm	10	8/29/2013 10:31:29 PM	9096
2-Butanone	ND	200		ppm	10	8/29/2013 10:31:29 PM	9096
Carbon tetrachloride	ND	0.50		ppm	10	8/29/2013 10:31:29 PM	9096
Chlorobenzene	ND	100		ppm	10	8/29/2013 10:31:29 PM	9096
Chloroform	ND	6.0		ppm	10	8/29/2013 10:31:29 PM	9096
1,4-Dichlorobenzene	ND	7.5		ppm	10	8/29/2013 10:31:29 PM	9096
1,1-Dichloroethene	ND	0.70		ppm	10	8/29/2013 10:31:29 PM	9096
Tetrachloroethene (PCE)	ND	0.70		ppm	10	8/29/2013 10:31:29 PM	9096
Trichloroethene (TCE)	ND	0.50		ppm	10	8/29/2013 10:31:29 PM	9096
Vinyl chloride	ND	0.20		ppm	10	8/29/2013 10:31:29 PM	9096
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%REC	10	8/29/2013 10:31:29 PM	9096
Surr: 4-Bromofluorobenzene	94.2	70-130		%REC	10	8/29/2013 10:31:29 PM	9096
Surr: Dibromofluoromethane	94.7	70-130		%REC	10	8/29/2013 10:31:29 PM	9096
Surr: Toluene-d8	94.0	70-130		%REC	10	8/29/2013 10:31:29 PM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page
 - Not Detected at the Reporting Limit Page 3 of 12
 - P Sample pH greater than 2 for VOA and TOC only.
 - RL Reporting Detection Limit

Date Reported: 9/4/2013

CLIENT: Cypress Engineering Client Sample ID: MPE 40 Composite 01-50' BGS

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 9:00:00 AM

 Lab ID:
 1308C34-004
 Matrix: SOIL
 Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	JME
Diesel Range Organics (DRO)	15000	990		mg/Kg	100	9/3/2013 12:44:39 PM	9101
Surr: DNOP	0	63-147	S	%REC	100	9/3/2013 12:44:39 PM	9101
EPA METHOD 8015D: GASOLINE RAM	NGE					Analyst	NSB
Gasoline Range Organics (GRO)	190	100		mg/Kg	20	8/30/2013 4:42:38 PM	9096
Surr: BFB	152	80-120	S	%REC	20	8/30/2013 4:42:38 PM	9096
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.50		mg/Kg	20	8/30/2013 4:42:38 PM	9096
Toluene	ND	1.0		mg/Kg	20	8/30/2013 4:42:38 PM	9096
Ethylbenzene	1.3	1.0		mg/Kg	20	8/30/2013 4:42:38 PM	9096
Xylenes, Total	4.3	2.0		mg/Kg	20	8/30/2013 4:42:38 PM	9096
Surr: 4-Bromofluorobenzene	106	80-120		%REC	20	8/30/2013 4:42:38 PM	9096
EPA METHOD 8260B: TCLP COMPOU	INDS					Analyst	JMP
Benzene	ND	0.50		ppm	10	8/29/2013 11:56:51 PM	9096
1,2-Dichloroethane (EDC)	ND	0.50		ppm	10	8/29/2013 11:56:51 PM	9096
2-Butanone	ND	200		ppm	10	8/29/2013 11:56:51 PM	9096
Carbon tetrachloride	ND	0.50		ppm	10	8/29/2013 11:56:51 PM	9096
Chlorobenzene	ND	100		ppm	10	8/29/2013 11:56:51 PM	9096
Chloroform	ND	6.0		ppm	10	8/29/2013 11:56:51 PM	9096
1,4-Dichlorobenzene	ND	7.5		ppm	10	8/29/2013 11:56:51 PM	9096
1,1-Dichloroethene	ND	0.70		ppm	10	8/29/2013 11:56:51 PM	9096
Tetrachloroethene (PCE)	ND	0.70		ppm	10	8/29/2013 11:56:51 PM	9096
Trichloroethene (TCE)	ND	0.50		ppm	10	8/29/2013 11:56:51 PM	9096
Vinyl chloride	ND	0.20		ppm	10	8/29/2013 11:56:51 PM	9096
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%REC	10	8/29/2013 11:56:51 PM	9096
Surr: 4-Bromofluorobenzene	117	70-130		%REC	10	8/29/2013 11:56:51 PM	9096
Surr: Dibromofluoromethane	95.4	70-130		%REC	10	8/29/2013 11:56:51 PM	9096
Surr: Toluene-d8	91.3	70-130		%REC	10	8/29/2013 11:56:51 PM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page /
- ND Not Detected at the Reporting Limit Page 4 of 12
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Date Reported: 9/4/2013

CLIENT: Cypress Engineering Client Sample ID: MPE-40 Composite 50-75' BGS

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 10:10:00 AM

 Lab ID:
 1308C34-005
 Matrix: SOIL
 Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/30/2013 3:15:33 PM	9101
Surr: DNOP	96.6	63-147		%REC	1	8/30/2013 3:15:33 PM	9101
EPA METHOD 8015D: GASOLINE RAI	NGE					Analyst	RAA
Gasoline Range Organics (GRO)	150	25		mg/Kg	5	9/3/2013 3:45:14 PM	9096
Surr: BFB	152	80-120	S	%REC	5	9/3/2013 3:45:14 PM	9096
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.25		mg/Kg	5	9/3/2013 3:45:14 PM	9096
Toluene	ND	0.25		mg/Kg	5	9/3/2013 3:45:14 PM	9096
Ethylbenzene	ND	0.25		mg/Kg	5	9/3/2013 3:45:14 PM	9096
Xylenes, Total	0.82	0.50		mg/Kg	5	9/3/2013 3:45:14 PM	9096
Surr: 4-Bromofluorobenzene	108	80-120		%REC	5	9/3/2013 3:45:14 PM	9096
EPA METHOD 8260B: TCLP COMPOL	INDS					Analyst	JMP
Benzene	ND	0.50		ppm	10	8/30/2013 12:53:32 AM	9096
1,2-Dichloroethane (EDC)	ND	0.50		ppm	10	8/30/2013 12:53:32 AM	9096
2-Butanone	ND	200		ppm	10	8/30/2013 12:53:32 AM	9096
Carbon tetrachloride	ND	0.50		ppm	10	8/30/2013 12:53:32 AM	9096
Chlorobenzene	ND	100		ppm	10	8/30/2013 12:53:32 AM	9096
Chloroform	ND	6.0		ppm	10	8/30/2013 12:53:32 AM	9096
1,4-Dichlorobenzene	ND	7.5		ppm	10	8/30/2013 12:53:32 AM	9096
1,1-Dichloroethene	ND	0.70		ppm	10	8/30/2013 12:53:32 AM	9096
Tetrachloroethene (PCE)	ND	0.70		ppm	10	8/30/2013 12:53:32 AM	9096
Trichloroethene (TCE)	ND	0.50		ppm	10	8/30/2013 12:53:32 AM	9096
Vinyl chloride	ND	0.20		ppm	10	8/30/2013 12:53:32 AM	9096
Surr: 1,2-Dichloroethane-d4	93.5	70-130		%REC	10	8/30/2013 12:53:32 AM	9096
Surr: 4-Bromofluorobenzene	87.9	70-130		%REC	10	8/30/2013 12:53:32 AM	9096
Surr: Dibromofluoromethane	96.7	70-130		%REC	10	8/30/2013 12:53:32 AM	9096
Surr: Toluene-d8	94.3	70-130		%REC	10	8/30/2013 12:53:32 AM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 5
 - ND Not Detected at the Reporting Limit Page 5 of 12
 - P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Date Reported: 9/4/2013

CLIENT: Cypress Engineering Client Sample ID: MPE-41 Composite 50'-75' BGS

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 9:25:00 AM

 Lab ID:
 1308C34-006
 Matrix: SOIL
 Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	80	10		mg/Kg	1	8/30/2013 3:46:44 PM	9101
Surr: DNOP	94.9	63-147		%REC	1	8/30/2013 3:46:44 PM	9101
EPA METHOD 8015D: GASOLINE RAM	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	15	5.0		mg/Kg	1	8/30/2013 6:08:42 PM	9096
Surr: BFB	163	80-120	S	%REC	1	8/30/2013 6:08:42 PM	9096
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.050		mg/Kg	1	8/30/2013 6:08:42 PM	9096
Toluene	ND	0.050		mg/Kg	1	8/30/2013 6:08:42 PM	9096
Ethylbenzene	ND	0.050		mg/Kg	1	8/30/2013 6:08:42 PM	9096
Xylenes, Total	ND	0.10		mg/Kg	1	8/30/2013 6:08:42 PM	9096
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/30/2013 6:08:42 PM	9096
EPA METHOD 8260B: TCLP COMPOU	INDS					Analyst	: JMP
Benzene	ND	0.50		ppm	10	8/29/2013 8:07:02 PM	9096
1,2-Dichloroethane (EDC)	ND	0.50		ppm	10	8/29/2013 8:07:02 PM	9096
2-Butanone	ND	200		ppm	10	8/29/2013 8:07:02 PM	9096
Carbon tetrachloride	ND	0.50		ppm	10	8/29/2013 8:07:02 PM	9096
Chlorobenzene	ND	100		ppm	10	8/29/2013 8:07:02 PM	9096
Chloroform	ND	6.0		ppm	10	8/29/2013 8:07:02 PM	9096
1,4-Dichlorobenzene	ND	7.5		ppm	10	8/29/2013 8:07:02 PM	9096
1,1-Dichloroethene	ND	0.70		ppm	10	8/29/2013 8:07:02 PM	9096
Tetrachloroethene (PCE)	ND	0.70		ppm	10	8/29/2013 8:07:02 PM	9096
Trichloroethene (TCE)	ND	0.50		ppm	10	8/29/2013 8:07:02 PM	9096
Vinyl chloride	ND	0.20		ppm	10	8/29/2013 8:07:02 PM	9096
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	10	8/29/2013 8:07:02 PM	9096
Surr: 4-Bromofluorobenzene	90.5	70-130		%REC	10	8/29/2013 8:07:02 PM	9096
Surr: Dibromofluoromethane	94.5	70-130		%REC	10	8/29/2013 8:07:02 PM	9096
Surr: Toluene-d8	92.1	70-130		%REC	10	8/29/2013 8:07:02 PM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 6
 - Not Detected at the Reporting Limit Page 6 of 12
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Date Reported: 9/4/2013

CLIENT: Cypress Engineering Client Sample ID: MPE Wells 38, 39, 40, 41 Comp

 Project:
 TWP Roswell Station 9
 Collection Date: 8/27/2013 9:15:00 AM

 Lab ID:
 1308C34-007
 Matrix: SOIL
 Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/30/2013 4:18:06 PM	9101
Surr: DNOP	66.3	63-147	%REC	1	8/30/2013 4:18:06 PM	9101
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/30/2013 6:37:25 PM	9096
Surr: BFB	94.1	80-120	%REC	1	8/30/2013 6:37:25 PM	9096
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	8/30/2013 6:37:25 PM	9096
Toluene	ND	0.050	mg/Kg	1	8/30/2013 6:37:25 PM	9096
Ethylbenzene	ND	0.050	mg/Kg	1	8/30/2013 6:37:25 PM	9096
Xylenes, Total	ND	0.10	mg/Kg	1	8/30/2013 6:37:25 PM	9096
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	8/30/2013 6:37:25 PM	9096
EPA METHOD 8260B: TCLP COMPO	UNDS				Analyst	JMP
Benzene	ND	0.50	ppm	10	8/29/2013 8:35:25 PM	9096
1,2-Dichloroethane (EDC)	ND	0.50	ppm	10	8/29/2013 8:35:25 PM	9096
2-Butanone	ND	200	ppm	10	8/29/2013 8:35:25 PM	9096
Carbon tetrachloride	ND	0.50	ppm	10	8/29/2013 8:35:25 PM	9096
Chlorobenzene	ND	100	ppm	10	8/29/2013 8:35:25 PM	9096
Chloroform	ND	6.0	ppm	10	8/29/2013 8:35:25 PM	9096
1,4-Dichlorobenzene	ND	7.5	ppm	10	8/29/2013 8:35:25 PM	9096
1,1-Dichloroethene	ND	0.70	ppm	10	8/29/2013 8:35:25 PM	9096
Tetrachloroethene (PCE)	ND	0.70	ppm	10	8/29/2013 8:35:25 PM	9096
Trichloroethene (TCE)	ND	0.50	ppm	10	8/29/2013 8:35:25 PM	9096
Vinyl chloride	ND	0.20	ppm	10	8/29/2013 8:35:25 PM	9096
Surr: 1,2-Dichloroethane-d4	91.0	70-130	%REC	10	8/29/2013 8:35:25 PM	9096
Surr: 4-Bromofluorobenzene	95.6	70-130	%REC	10	8/29/2013 8:35:25 PM	9096
Surr: Dibromofluoromethane	95.7	70-130	%REC	10	8/29/2013 8:35:25 PM	9096
Surr: Toluene-d8	94.8	70-130	%REC	10	8/29/2013 8:35:25 PM	9096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 7
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: **1308C34**

04-Sep-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID MB-9101 SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics Client ID: **PBS** Batch ID: 9101 RunNo: 12963 Prep Date: 8/29/2013 Analysis Date: 8/29/2013 SeqNo: 370092 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) ND 10 Surr: DNOP 10.00 7.9 78.5 63 147

Sample ID LCS-9101 SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics Client ID: LCSS Batch ID: 9101 RunNo: 12963 Analysis Date: 8/29/2013 SeqNo: 370093 Prep Date: 8/29/2013 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 59 10 50.00 0 119 77.1 128 Surr: DNOP 147 4.1 5.000 82.1 63

Sample ID 1308C34-002AMSD SampType: MSD TestCode: EPA Method 8015D: Diesel Range Organics Client ID: MPE-39 Composite Batch ID: 9101 RunNo: 12997 Prep Date: 8/29/2013 Analysis Date: 8/30/2013 SeqNo: 370991 Units: mg/Kg PQL SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result LowLimit HighLimit Qual Diesel Range Organics (DRO) 10 49.75 15.25 77.1 61.3 138 7.90 20 Surr: DNOP 4.5 4.975 91.0 147 0 63 0

Sample ID 1308C34-002AMS SampType: MS TestCode: EPA Method 8015D: Diesel Range Organics Client ID: **MPE-39 Composite** Batch ID: 9101 RunNo: 12997 Analysis Date: 8/30/2013 Prep Date: 8/29/2013 SeqNo: 370995 Units: mg/Kg %REC Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 50 9.9 49.70 15.25 69.0 61.3 138 Surr: DNOP 4.2 4.970 85.2 63 147

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1308C34 04-Sep-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID MB-9096 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: **PBS** Batch ID: 9096 RunNo: 12996 Prep Date: 8/28/2013 Analysis Date: 8/30/2013 SeqNo: 371539 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 860 1000 85.6 80 120 Sample ID LCS-9096 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 9096 RunNo: 12996 Prep Date: 8/28/2013 Analysis Date: 8/30/2013 SeqNo: 371540 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 107 74.5 126 1000 Surr: BFB 1000 102 80 120 Sample ID MB-9117 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: Batch ID: 9117 RunNo: 13041 Prep Date: 8/30/2013 Analysis Date: 9/3/2013 SeqNo: 372358 Units: %REC PQL **RPDLimit** Result SPK value SPK Ref Val %RPD Analyte %REC LowLimit HighLimit Qual Surr: BFB 920 1000 919 TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-9117 SampType: LCS Client ID: **LCSS** Batch ID: 9117 RunNo: 13041 Analysis Date: 9/3/2013 SeqNo: 372359 Units: %REC Prep Date: 8/30/2013 SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result LowLimit HighLimit Qual 1000 Surr: BFB 1000 100 80 120 Sample ID 1308C34-003AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: **MPE-38 Composite** RunNo: 13041 Batch ID: 9096 Prep Date: 8/28/2013 Analysis Date: 9/3/2013 SeqNo: 372364 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 37 24.98 15.88 84.0 76 5.0 156 S Surr: BFB 1500 999.0 151 80 120 Sample ID 1308C34-003AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: **MPE-38 Composite** Batch ID: 9096 RunNo: 13041 Prep Date: 8/28/2013 Analysis Date: 9/3/2013 SeqNo: 372365 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 38 5.0 24.98 15.88 88.7 76 156 3.09 17.7 1600 999.0 158 80 120 0 S Surr: BFB 0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Client:

Hall Environmental Analysis Laboratory, Inc.

Cypress Engineering

WO#: **1308C34**

04-Sep-13

Project:	TWP	Roswell Statio	on 9								
Sample ID	MB-9096	SampTy	/pe: M E	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batch	ID: 90	96	F	RunNo: 1	2996				
Prep Date:	8/28/2013	Analysis Da	ate: 8/	30/2013	S	SeqNo: 3	71602	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.050								
T - 1		ND	0.050								

 Benzene
 ND
 0.050

 Toluene
 ND
 0.050

 Ethylbenzene
 ND
 0.050

 Xylenes, Total
 ND
 0.10

Surr: 4-Bromofluorobenzene 0.94 1.000 93.6 80 120

Sample ID LCS-9096	Samp1	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	iles		
Client ID: LCSS	Batcl	n ID: 90	96	F	RunNo: 1	2996				
Prep Date: 8/28/2013	Analysis D	Date: 8/	30/2013	8	SeqNo: 3	71603	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	98.1	80	120			
Toluene	0.98	0.050	1.000	0	98.2	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.7	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID MB-9117 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 9117 RunNo: 13041 Prep Date: 8/30/2013 Analysis Date: 9/3/2013 SeqNo: 372398 Units: %REC Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: 4-Bromofluorobenzene 1.0 1.000 103 80 120

Sample ID LCS-9117 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 9117 RunNo: 13041 Prep Date: 8/30/2013 SeqNo: 372399 Analysis Date: 9/3/2013 Units: %REC %RPD **RPDLimit** SPK value SPK Ref Val %REC HighLimit Analyte Result LowLimit Qual Surr: 4-Bromofluorobenzene 1.000 102 80 120 1.0

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1308C34**

04-Sep-13

Client: Cypress Engineering
Project: TWP Roswell Station 9

Sample ID mb-9096	SampType: MBLK TestCode: EPA Method 8260B: TCLP Compounds Batch ID: 9096 RunNo: 12983							nds		
Client ID: PBS	Batc	h ID: 90	96	R	tunNo: 1	2983				
Prep Date: 8/28/2013	Analysis [Date: 8/	29/2013	S	SeqNo: 3	70513	Units: ppm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
2-Butanone	ND	20								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	10								
Chloroform	ND	0.60								
1,4-Dichlorobenzene	ND	0.75								
1,1-Dichloroethene	ND	0.070								
Tetrachloroethene (PCE)	ND	0.070								
Trichloroethene (TCE)	ND	0.050								
Vinyl chloride	ND	0.020								
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.6	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.5	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.1	70	130			
Surr: Toluene-d8	0.49		0.5000		98.2	70	130			

Sample ID LCS-9096	SampType: LCS TestCode: EPA Method 8260B: TCLP Compounds											
Client ID: LCSS	Batcl	n ID: 90	96	F	RunNo: 1	2983						
Prep Date: 8/28/2013	Analysis D	Date: 8/	29/2013	S	SeqNo: 370514 Units: ppm							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.0	0.050	1.000	0	104	70	130					
Chlorobenzene	0.98	0.50	1.000	0	97.8	70	130					
1,1-Dichloroethene	1.3	0.070	1.000	0	133	69.3	131			S		
Trichloroethene (TCE)	1.0	0.050	1.000	0	101	70	130					
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.0	70	130					
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.5	70	130					
Surr: Dibromofluoromethane	0.48		0.5000		96.7	70	130					
Surr: Toluene-d8	0.49		0.5000		97.7	70	130					

Sample ID 1308c34-001ams	SampT	уре: М S	;	TestCode: EPA Method 8260B: TCLP Compounds						
Client ID: Comp Soil MW-3	39 - Batch	ID: 90 9	96	R	RunNo: 1	2983				
Prep Date: 8/28/2013	Analysis Date: 8/29/2013			SeqNo: 370516			Units: ppm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.50	1.000	0	109	65.1	127			
Chlorobenzene	0.88	0.10	1.000	0	88.0	66.8	129			
1,1-Dichloroethene	1.3	0.70	1.000	0.1019	120	44.1	148			
Trichloroethene (TCE)	1.1	0.50	1.000	0.1053	102	63.2	122			
Surr: 1,2-Dichloroethane-d4	4.7		5.000		94.4	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1308C34

04-Sep-13

Client: Cypress Engineering **Project:** TWP Roswell Station 9

Sample ID 1308c34-001ams SampType: MS TestCode: EPA Method 8260B: TCLP Compounds

Client ID: Comp Soil MW-39 -Batch ID: 9096 RunNo: 12983

Analysis Date: 8/29/2013 SeqNo: 370516 Units: ppm Prep Date: 8/28/2013

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: 4-Bromofluorobenzene 4.5 5.000 90.8 70 130 5.000 97.2 70 Surr: Dibromofluoromethane 4.9 130 Surr: Toluene-d8 4.6 5.000 92.9 70 130

Sample ID 1308c34-001amsd SampType: MSD TestCode: EPA Method 8260B: TCLP Compounds

Client ID: Comp Soil MW-39 -Batch ID: 9096 RunNo: 12983

Prep Date: 8/28/2013	Analysis D	lysis Date: 8/29/2013 SeqNo: 370517 Units: ppm				SeqNo: 370517				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.50	1.000	0	105	65.1	127	3.61	20	
Chlorobenzene	0.85	0.10	1.000	0	85.1	66.8	129	3.39	20	
1,1-Dichloroethene	1.2	0.70	1.000	0.1019	112	44.1	148	6.21	20	
Trichloroethene (TCE)	1.1	0.50	1.000	0.1053	94.9	63.2	122	6.44	20	
Surr: 1,2-Dichloroethane-d4	4.6		5.000		92.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	4.6		5.000		92.9	70	130	0	0	
Surr: Dibromofluoromethane	4.8		5.000		96.0	70	130	0	0	
Surr: Toluene-d8	4.8		5.000		95.8	70	130	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Client Name: CYP	Work Order Numbe	r: 1308C34		RcptNo:	1
Received by/date:	0x/28/13				
Logged By: Michelle Garcia	8/28/2013 10:00:00 A	М	Michelle Gar	un	
Completed By: Michelle Garcia	8/28/2013 11:41:15 A	М	Michello Gon Michello Gon	ui.	
Reviewed By:	MALOGIA	7	•		
Chain of Custody	00/28/1	5			
1. Custody seals intact on sample bottles?		Yes	No	Not Present ✔	
2. Is Chain of Custody complete?		Yes 🗸	No	Not Present	
3. How was the sample delivered?		<u>UPS</u>			
<u>Log In</u>					
4. Was an attempt made to cool the samp	les?	Yes 🗸	No	NA :	
5. Were all samples received at a tempera	ture of >0° C to 6.0°C	Yes 🗸	No	NA ·	
6. Sample(s) in proper container(s)?		Yes 🗸	No		
7. Sufficient sample volume for indicated t	est(s)?	Yes 🗸	No		
8. Are samples (except VOA and ONG) pr	operly preserved?	Yes 🗸	No		
9. Was preservative added to bottles?		Yes	No 🗸	NA :	
10.VOA vials have zero headspace?		Yes	No !	No VOA Vials 🗸	
11. Were any sample containers received t	oroken?	Yes	No i ✓	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody	<i>(</i>)	Yes 🗸	No 📒	for pH:	r >12 unless noted)
13. Are matrices correctly identified on Cha		Yes 🗸	No	Adjusted?	
14. Is it clear what analyses were requested	1?	Yes 🗸	No 🗀		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗸	No	Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies	with this order?	Yes	No	NA 🗸	
Person Notified:	Date:				
By Whom:	Via:	eMail	Phone Fax	In Person	
Regarding:					i
Client Instructions:					
17. Additional remarks:					
18. Cooler Information Cooler No Temp °C Condition 1 4.6 Good	Seal Intact Seal No Yes	Seal Date	Signed By		

C	hain-	-of-Cu	ıstody Record	Turn-Around	Time:				١ ١	НΑ		FI	NV	/T 🖸	20	NN	лFI	NTA	ΔI	
Ctient:	PESS I	ENGIN	EERING SERVICES FA	_ <mark>⊘″S</mark> tandard	□ Rush														RY	
			Robinson PE	Project Name	2 Rolled	Station 9				www	w.hal	lenvi	ironr	nent	al.co	m				
Mailing	Address	1611	ay 6 NORTH STEN	2	VISWE//	Starton 1		4901	Hawl	kins N	NE -	Alb	uque	erque	e, NN	vi 87	109			
			x26 77095	Project #: N	EN Monitor	tion 2013		Tel.	505-3	45-3	975	F	ax :	505-:	345-	4107	7			
Phone #	_		97,3420	02.0	20/2.00	37.00		Analysis Request												
emailo	Fax#:	neory	K. robinsone	Project Mana	iger:		_	only)	ONIVI				Q40							
QA/QC F		Cypi	□ Level 4 (Full Validation)	Stacy:	nge Robin Boulting	nsin, PE house, PGETP		1 -			SIMS)		,PO ₄ ,S	PCB's			1/	~		
Accredi		□ Othe	er	Sampler: C	M Barn. M-Yes	hill, P6- □ No	+ TMB	+ TPH	d 418.1)	504.1)	8270		O ₃ ,NO ₂	s / 8082		(Y)	0,	8021B		(IV : 0
□ EDD	(Type)			Sample Tem	perature. L		IBE	MTBE		po	0 0	etals	Ž.	cide	[≩	\ <u>+</u>	0	<i>∞</i>		>
Date	Time	Matrix		Type and #	Preservative Type	HEAL NO. 1308C34	BTEX + MT	+ (S	TPH (Method 418.1)	EDB (Method	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	1721	おイガス		A : . O .: A
8/27/12	10:40	SOIL	Composite Soil Same	2x 407	None	061											X			
<u> </u>	, ,,		Soil Cuttings	3/ 3/																
8/27/13	0945	SOIL	MPE-39 Composite	2×402	None	-002		>	۷_								X)	X _		
			50'-75' BGS																	L
8/27/13	0930	SOIL	50'-75' B63	6/Jun	Nove	-063											$X \rangle$	$\langle \perp \rangle$		
8/27/13	0900	Soil	MPE 40 Composite	24402 6/Jan	None	-004			<u> </u>	<u> </u>							X)	\leq	_	L
8/27/13	1010	SOIL	MPE 40 Composite	6/71a	None	<u>-005</u>				<u> </u>							X)	$\Delta _{-}$!	L
8/20/18	0925	Soil	MPE-41 Composite	6/JAN	None	-006											X)			Ĺ
8/21/13	0915	SOIL	MPE WETS 38,39,40,41	27400	NONE	-007				_	_						\angle	<u>X</u>		L
			0'-50' B65	,	ļ				+	<u> </u>							$\vdash \vdash$	+		Ļ
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Date:	Time: 1500	Relinquish	led by:	Received by	<u> </u>	Date Time	Ren	L_L narks:	AN	y 4	2015	5/1	1111	<u> </u>	Ple	, a SC	<u> </u>	3//	,	上
Date:	Time:	Reingdish	of by:	Received by:	<u> </u>	Date Time		narks:	cor,	ze 28	. K :/.	79	ins 37,	0 a 34	e 42	- D				

	Contaminated Soils Shipment	Manifest	1. Manifest D	ocument 1	No.		2. Page of
	W.C. L. L. V. L.	ti di di	010	6	- 0	1000	
	3. Generator's Name and Mailing Address	MI SUPPLY CAS			4. Ge	enerator Phone No).
	TWP Roswell STation	179					
	NORTH MANSTRONT	-			- Linux	The second second	diament Laurent
	D 11 11 11 1 5 / KE				5. Ge	enerator Contact	per effect
	ROSWELL, NH1 8820	>/					
	6. Transporter 1 Company Name	L person	100 7 (05)(2)(0)	DOM: Y	7. ID	No	the reserved to be the second
	M paragraph				7. ID	NO.	
	A Musky LIC					16171	2486
	8. Transporter 2 Company Name		SD 10	DINE T	9. ID	No.	71010
1					undi -		
					ald be	contract on Lagran	min list
	10. Designated Disposal Facility Name and Site Address	Limit I			11. F	acility Permit Nur	mber
	Gandy Marley, Inc. Contamin	ated Soils Lan	dfarm		for their	mar madgelin	
	7200 East Second	d Street			NA	711-1-	0020
	PO Box 165				12. F	acility Phone No.	
	Roswell, NM 8	88201				(575) 3	98-0107
	ment rathe about got the many see somewhere some		501.00 (10	is a hos	TI TILET	all to amen a	dramma count
	13. Description of Waste			14. Con	tainers	15. Total	16. Unit
G	Tarring threat shows a mind to dulie and pain that parties		IN ID HE	No	Type	Quantity	Wt.Vol.
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	17. Special Handling Instructions and Additional Information		notwolkimel			di min aki	thom 11 2 months
	services and reduction information						
	more since and a super sit and others a second state						
	James at to thiske my state an entropy						
	18. Generator's Certification: I hereby declare that the co	nt to Cal		mala mal	Darm av	when all a	military by
	18. Generator's Certification: I hereby declare that the co are classified, packed, mark	ked, and labeled, a	nment are jully and nd are in all respect	accurated ts in prope	y describ er conditi	ed above by prope on for transport h	er shipping name and
	to applicable federal, state,	and international i	laws.			Jan Manapatro	y mgmay decording
	FURTHER. I represent and	warrant that the w	aste material as des	auibad au	41	:6-4:-:4	
	Conservation and Recovery	v Act of 1976, OR	has been character	ized as ne	on-hazaro	lous material hy	ipi from the Resource
-	laboratory analysis done in	accordance with E	PA-approved testing	methods.		and to be proportion	BETTY COLUMN TO THE TOTAL TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TOTAL TO THE TOTAL TOTAL TOTAL TO THE TOTAL T
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A N	Printed/Typed Name	Signature	-1	/ /	8	Date	
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0	20. Transporter 2 Acknowledgement of Receipt of Materials	1	11/11		/	10	6 2
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	and its requirement on agreemy and introducing the extensi		In each setting	Control of	william.	milita processor por	
	21. Discrepancy Information					A THE STATE OF	niemo.
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M	and to see all thresholds						
I	22 Falling		terror total address.	1.64	16.		and the Table
	22. Facility Owner or Operator Certification of receipt of materia	als described on this	manifest except as	noted in i	tem 21.	The state of the s	
	Printed/Typed Name	Signature	0 /	10.		Date	
	Fot Kilo	A 7	1	Lind	-	116	121211 2
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N.M.E.D. - DP-1041

Gandy Marley, Inc. P.O. BOX 1658 · ROSWELL, NM 88202

LOAD INSPECTION FORM No. 15189

Date of Receipt: AM PM Cell Placement:
Quantity: Description: Description:
Name/Address of Generator: TWP Roswell Station #9
Origin of Materials (if different): ROSWOOD NM, 638/N Main St.
Transporter Name: SCC ID No
Name of Laboratory Performing Sample Analysis:
TCLP (EPA Method 1311) BTEX MTBE TPH Non-Hazardous Exempt
Verification of No Free Liquids Paint Filter Liquids Test Performed
Verification of Property Completed Manifest
As a condition to Gandy Marley, Inc's acceptance of the materials shipped as represented on this Load Inspection Form, Generator represents and warrants that the waste materials shipped herewith is exempt from the Resource Conservation and Recovery Act of 1976, as amended from time to time, 40 U.S.C Section 6901, et seq., The New Mexico Health an Safety Code, section 391.001, et seq., and regulations related thereto, OR has been characterized as non-hazardous material by virtue of appropriate laboratory analysis done accordance with EPA-approved testing methods.
Further, as a condition to Gandy Marley, Inc's acceptance of the materials shipped as represented on this Load Inspection Form, Transporter represents and warrants that only the material delivered by Generator to Transporter to Gandy Marley, Inc.'s facility for disposal.
THIS WILL CERTIFY that the above Transporter loaded the material as represented on this Load Inspection Form at the above described location, and that it was tendered by the above described Generator. THIS WILL CERTIFY that no additional materials were added to this load, and that the material was delivered without incident.
Transporter: Print Name Signature.
GMI Employee: Rod Roll By A Roll
Print Name Signature