

GW-361

REPORT

DATE:

March 2009



GW 361

RECEIVED

2009 APR 6 PM 1 06

March 27, 2009

Return Receipt Requested
7008 1830 0002 4858 6084

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

Re: TEPPCO Hobbs Station, Hobbs, New Mexico

Dear Mr. Von Gonten:

TEPPCO Crude Oil, LLC (TEPPCO) is submitting the enclosed annual groundwater monitoring report for the TEPPCO Hobbs Station. This report documents the results for two semi-annual monitoring events conducted during the 2008 monitoring period. Current site conditions at Hobbs Station are documented in the October 11, 2005 report entitled: *Supplemental Environmental Site Investigation Report*. This report describes the soil and groundwater monitoring results obtained during investigation of the station during 2007 following acquisition of the station from ARCO. TEPPCO is currently monitoring four monitor wells at the station. Groundwater conditions at these locations appear to be stable and constituents are below either laboratory reporting levels or New Mexico Water Quality Commission *Ground Water Standards*. Light non-aqueous phase liquids were not observed in any of the monitor wells.

Please note that a crude oil recovery system is currently in operation at the station. This recovery system is operated by Holly/Navajo Pipeline to recover crude oil due to a release occurring on July 22, 2004 at Holly/Navajo Tank 5201. This tank is located on station property leased to Navajo. Navajo reported this release to the New Mexico Oil Conservation Division (OCD) on October 10, 2004; however, the release has not been delineated and no further reporting has been prepared. TEPPCO has requested updates regarding operation of this recovery system from the OCD and Holly/Navajo and has not received any information other than the initial release report and a summary of recovery volumes provided during 2007.

TEPPCO is currently evaluating a TEPPCO crude oil release that occurred at the station during April 2008. This release was remediated and a report filed with the OCD during October 2008. We are currently preparing to conduct additional soils and groundwater studies at the release to determine if groundwater has been impacted due to the release.



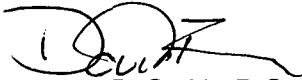
TEPPCO Partners, L.P.
Texas Eastern Products Pipeline Company, LLC, General Partner

P.O. Box 2521
Houston, TX 77252-2521
Office: 713/880-6500
Fax: 713/880-6660

Mr. Glenn Von Gonten
Re: TEPPCO Hobbs Station
March 19, 2009
Page 2

We recommend that groundwater monitoring be continued at the station during 2009 and will evaluate requesting closure of the existing wells at the site if groundwater conditions remain stable. Please do not hesitate to contact me at (713) 381-2286 if you have any questions.

Sincerely,



David R. Smith, P.G.
Sr. Environmental Scientist

/bjm
Enclosure

cc: w/ Enclosure

Dickie Townley
Holly Energy Partners
1602 W. Main
Artesia, New Mexico 88210

Larry Johnson
NM Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240

w/o Enclosure
Chris Mitchell – Southwest Geoscience, Dallas, TX

ANNUAL
GROUNDWATER MONITORING REPORT
TEPPCO Hobbs Station
Off County Road 61
Hobbs, Lea County, New Mexico

SWG Project No. 0105013
March 11, 2009

Prepared for:
TEPPCO Crude Oil, LLC
PO Box 2521
Houston, Texas 77252-2521
Attn: Mr. David Smith, P.G.

PREPARED BY:



Russell D. Howard
Project Scientist



B. Chris Mitchell, P.G.
Senior Technical Review

Southwest
GEOSCIENCE

2351 W. Northwest Hwy., Suite 3321
Dallas, Texas 75220
Ph: (214) 350-5469
Fax: (214) 350-2914

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 SITE DESCRIPTION & HISTORY	1
1.2 SCOPE OF WORK	2
1.3 STANDARD OF CARE	2
1.4 ADDITIONAL LIMITATIONS	2
1.5 RELIANCE	3
2.0 SAMPLING PROGRAM	3
3.0 LABORATORY ANALYTICAL PROGRAM AND RESULTS	4
4.0 GROUNDWATER FLOW DIRECTION	4
5.0 FINDINGS	4
6.0 RECOMMENDATIONS	5

LIST OF APPENDICES

APPENDIX A	Figure 1: Topographic Map Figure 2: Site Vicinity Map Figure 3: Site Plan Figure 4A: Groundwater Gradient Map (February 29, 2008) Figure 4B: Groundwater Gradient Map (August 13, 2008)
APPENDIX B	TABLES
APPENDIX C	LABORATORY ANALYTICAL DATA & CHAIN-OF-CUSTODY DOCUMENTATION

ANNUAL GROUNDWATER MONITORING REPORT
TEPPCO Hobbs Station
Off County Road 61
Hobbs, Lea County, New Mexico

1.0 INTRODUCTION

1.1 Site Description & History

Southwest Geoscience (SWG) has conducted two (2) semi-annual groundwater monitoring events at the TEPPCO Crude Oil, LLC (TEPPCO) Hobbs Station, referred to hereinafter as the "Site" or "subject Site". The Site is located off County Road 61, Hobbs, Lea County, New Mexico. The site consists of approximately 35 acres developed as a crude oil storage facility associated with crude oil pipeline operations located to the south of Hobbs, New Mexico.

A topographic map is included as Figure 1, a site vicinity map is included as Figure 2, and a site plan is included as Figure 3 of Appendix A.

During the completion of due diligence activities during the acquisition of select ARCO assets by TEPPCO, soil borings MW-1, MW-2, MW-4 and B-5 were advanced at the station by ALPHA TESTING, INC. (ALPHA) in March, 2003. Soil borings MW-1, MW-2 and MW-4 were subsequently converted to permanent groundwater monitoring wells. The objective of the due diligence activities was to evaluate the presence of petroleum hydrocarbons in the on-site soil and groundwater as a result of the operations historically associated with the site.

In addition, an existing monitoring well previously installed under the direction of ARCO, labeled MW-3, was identified on the north-northeast portion of the site during the completion of the due diligence activities. No other existing monitoring wells were observed during the 2003 investigation activities.

A groundwater monitoring event was subsequently conducted by ALPHA in May, 2004 to further evaluate the magnitude of petroleum hydrocarbon constituents in the on-site groundwater. During the completion of sampling activities, on-site personnel indicated the location of two (2) additional groundwater monitoring wells previously installed under the direction of ARCO, labeled MW-1 and MW-2. ALPHA sampled monitoring wells MW-1(ARCO), MW-2(ARCO), MW-1, MW-2 and MW-4. However, the groundwater table appeared to have dropped below the total depth of monitoring well MW-3(ARCO); therefore, no groundwater sample was collected.

Due to the absence of chemicals of concern (COCs) above the laboratory method detection limits (MDLs) in groundwater samples collected from MW-1(ARCO) and MW-2(ARCO), these monitoring wells were removed from the semi-annual groundwater monitoring sample program.

Due to the elevation of the groundwater table below the total depth of monitoring well MW-3(ARCO), monitoring well MW-3R was installed adjacent to monitoring well MW-3(ARCO) on July 25, 2005 by SWG.

Analytical tables which include the historical groundwater analytical data are provided in Appendix B.

In addition, according to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division *Release Notification and Correction Action Form* (Form C-141) prepared by Navajo Pipeline (Navajo) and dated October 11, 2004, an unknown volume of crude oil was released on July 22, 2004 as a result of an external corrosion hole in the pipeline which extends from the Navajo truck unloading rack to storage tank no. 5201, which is owned by TEPPCO and leased to Navajo.

Subsequent to the discovery of the leak, the pipeline was isolated, depressurized and clamped to repair the leak. An area approximately 4 feet wide, 20 feet long and 18 feet deep was subsequently excavated, and the excavated soil were disposed off-site.

Based on SWG's review of the Navajo file information, seven (7) soil borings were advanced at the Site in the vicinity of the Navajo pipeline release. Three (3) of the soil borings were subsequently converted to monitoring wells. The soil and groundwater samples collected on behalf of Navajo from the borings/monitoring wells were analyzed for total petroleum hydrocarbons (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) using EPA method SW-846 #8015, benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 #8021, chlorides utilizing EPA method 300 and/or total dissolved solids (TDS) utilizing EPA method 160.1.

Based on SWG's observations in the field, Navajo is currently utilizing a pneumatic recovery system to recover the phase-separated hydrocarbons (PSH) from the initial groundwater-bearing unit. SWG is unaware to the total volume of PSH recovered by the Navajo recovery system to date.

1.2 Scope of Work

The objective of the semi-annual groundwater monitoring events was to evaluate the concentrations of COCs in the on-site groundwater in the vicinity of monitoring wells MW-1, MW-2, MW-3R and MW-4 over time.

1.3 Standard of Care

SWG's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. SWG makes no warranties, express or implied, as to the services performed hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client, as detailed in our proposal.

1.4 Additional Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and

SWG cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this Groundwater Monitoring Event. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. SWG's findings, and recommendations are based solely upon data available to SWG at the time of these services.

1.5 Reliance

This report has been prepared for the exclusive use of TEPPCO, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of TEPPCO and SWG. Any unauthorized distribution or reuse is at the client's sole risk.

2.0 SAMPLING PROGRAM

The groundwater sampling events were conducted on February 29, 2008 and August 13, 2008 by Russell D. Howard, an SWG environmental professional. SWG's groundwater sampling program consisted of the following:

Monitoring Wells MW-1, MW-2, MW-3R and MW-4

- Collection of one groundwater sample from each monitoring well utilizing low-flow sampling techniques.

Prior to sample collection, SWG gauged the depth to fluids in each monitoring well utilizing an interface probe capable of detecting the presence of PSH. PSH was not observed in monitoring wells MW-1, MW-2, MW-3R or MW-4 during sampling activities.

Groundwater samples were collected utilizing low-flow minimal drawdown techniques. Samples were collected utilizing dedicated sampling materials subsequent to the stabilization of Dissolved Oxygen, Conductivity, pH and Temperature.

Low-flow refers to the velocity with which water enters the peristaltic pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system to the extent practical taking into account established site sampling objectives. Flow rates on the order of 0.1 -0.5 L/min were maintained during the sampling activities using dedicated sampling equipment.

The utilization of low-flow minimal drawdown techniques enables the isolation of the screened interval groundwater from the overlying stagnant casing water. The pump intake is placed within the screened interval such that the groundwater pumped is drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

Due to the absence of COCs above the laboratory method detection limits (MDLs) in groundwater samples historically collected from MW-1(ARCO) and MW-2(ARCO), these monitoring wells were removed from the semi-annual groundwater monitoring sample program.

Due to the elevation of the groundwater table below the total depth of monitoring well MW-3(ARCO), monitoring well MW-3R was removed from the semi-annual groundwater monitoring sample program.

Since the monitoring wells installed at the site on behalf of Navajo are strictly related to the Navajo release of crude oil and associated on-going corrective action, the Navajo monitoring wells were not included in the semi-annual groundwater monitoring sample program.

Groundwater samples were collected in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Severn-Trent Laboratories (STL) in Corpus Christi, Texas and ERMI Environmental Laboratories, Inc in Allen, Texas.

3.0 LABORATORY ANALYTICAL PROGRAM AND RESULTS

The groundwater samples collected from the monitoring wells were analyzed for total petroleum hydrocarbons (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) using EPA method SW-846 #8015, and benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 #8021.

Laboratory results are summarized in Table 1, Appendix B. The executed chain-of-custody documentation and laboratory data sheets are provided in Appendix C.

4.0 GROUNDWATER FLOW DIRECTION

The monitoring wells were surveyed for top-of-casing (TOC) elevations relative to an arbitrary on-site benchmark of 100.0 feet. Groundwater measurements collected during each gauging event are presented with TOC elevations in Table 2, Appendix B.

Prior to sample collection, SWG gauged the depth to fluids in each monitoring well. During gauging activities, PSH was not observed in monitoring well MW-1 through MW-4.

Based on the groundwater elevations associated with each of the monitoring wells installed on behalf of TEPPCO, groundwater generally flows to the east-southeast at an average hydraulic gradient of 0.0012 ft./ft.

5.0 FINDINGS

The findings of this investigation are presented as follows:

- The laboratory analyses of the groundwater samples collected from monitoring wells MW-1 and MW-4 did not indicate TPH GRO concentrations above the sample reporting limits (SRLs).
- The laboratory analyses of the groundwater samples collected from monitoring wells MW-1, MW-2 and MW-4 did not indicate benzene, toluene, ethylbenzene or xylenes concentrations above the SRLs.

- The laboratory analyses of the groundwater samples collected from monitoring wells MW-2 and MW-3R did exhibit TPH GRO concentrations ranging from 0.0504 to 0.161 mg/L.
- The laboratory analyses of the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3R, and MW-4 did exhibit TPH DRO concentrations ranging from 0.201 to 4.21 mg/L.
- The laboratory analyses of the groundwater sample collected from monitoring well MW-3R during the August 13, 2008 sampling event did exhibit benzene, toluene, ethylbenzene and xylenes concentrations above the laboratory SRLs; however, the identified concentrations are below the New Mexico Water Quality Commission (NMWQC) Ground Water Standards.
- Prior to sample collection, SWG gauged the depth to fluids in each monitoring well. PSH was not observed in monitoring wells MW-1, MW-2, MW-3R or MW-4 during sampling activities.
- Based on SWG's evaluation of the historic trends in groundwater analytical data, COC concentrations have not been identified in the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3R and MW-4 above the NMWQC Ground Water Standards during the most recent six (6) groundwater sampling events (2006, 2007 and 2008). In addition, COCs appear to generally be stable or declining.

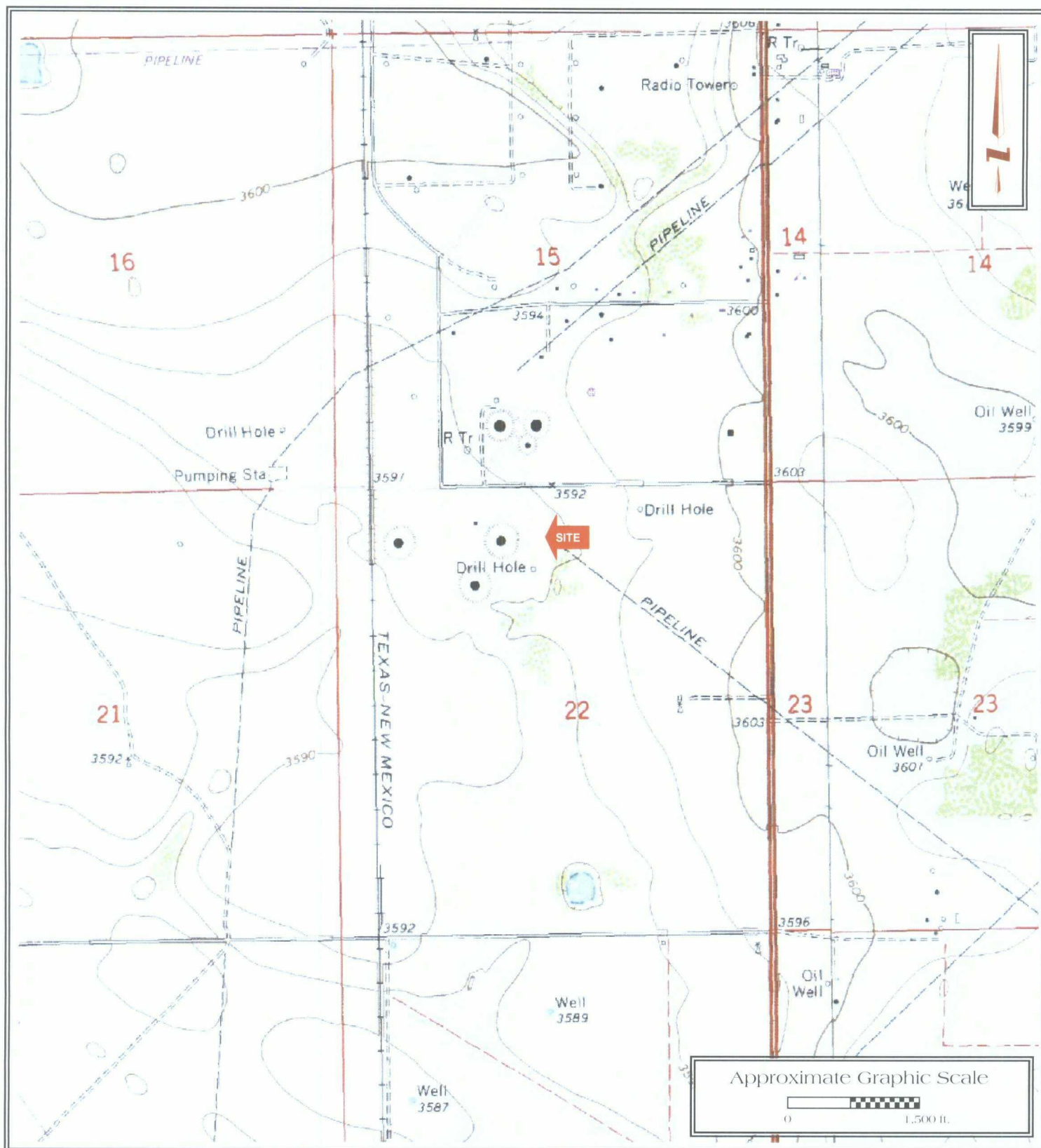
6.0 RECOMMENDATIONS

Based on the geochemistry and subsurface conditions identified at the site, the COC concentrations which have been identified in the on-site groundwater will likely naturally attenuate over time.

Based on the results of the semiannual groundwater monitoring activities and review of the historic groundwater sampling data, SWG recommends TEPPCO request regulatory closure from the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for the historic petroleum hydrocarbon impact to soil and groundwater.

APPENDIX A

Figures



Groundwater Monitoring
TEPPCO Hobbs Station
Off County Road 61
N 32° 39.135'; W 103° 8.373'
Hobbs, Lea County, New Mexico

SWG Project No. 0105013

Southwest
GEOSCIENCE

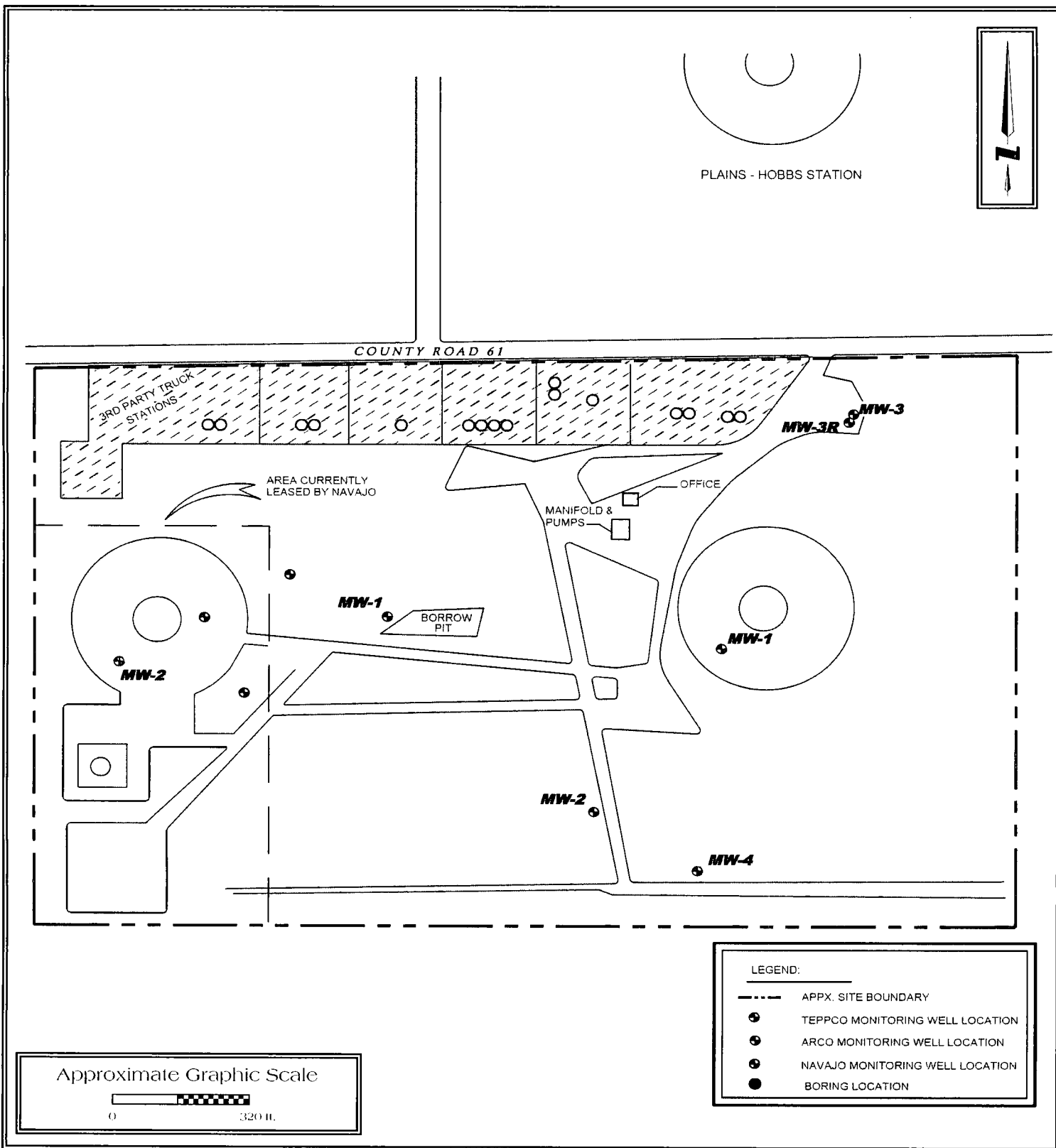
FIGURE 1
Topographic Map
Hobbs, NM Quadrangle
Contour Interval - 10 Feet
1979



Groundwater Monitoring
TEPPCO Hobbs Station
Off County Road 61
N 32° 39.135'; W 103° 8.373'
Hobbs, Lea County, New Mexico
SWG Project No. 0105013

Southwest
GEOSCIENCE

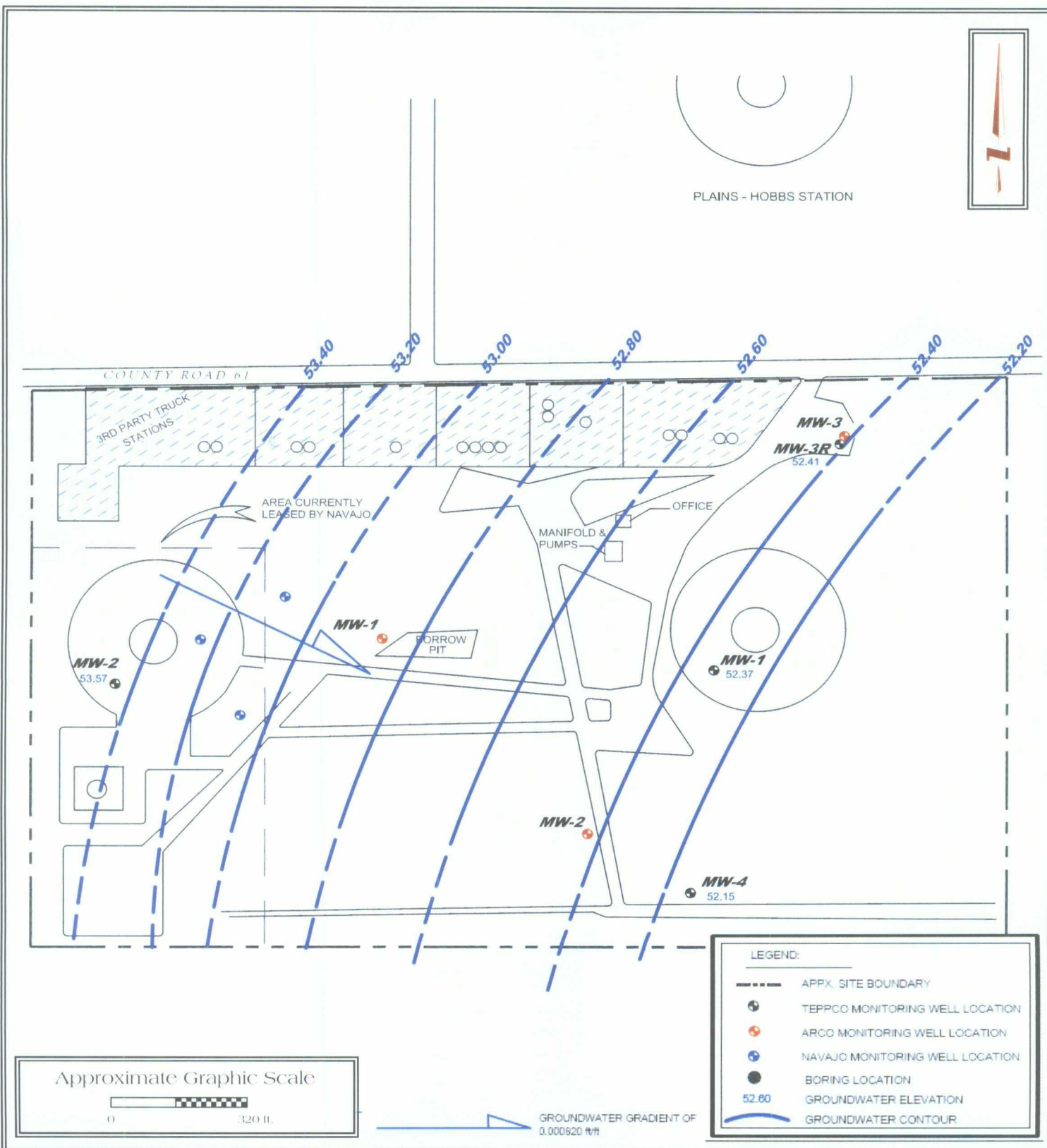
FIGURE 2
Site Vicinity Map
2002 Aerial Photograph
Source: USGS



Groundwater Monitoring
 TEPPCO Hobbs Station
 Off County Road 61
 N 32° 39.135'; W 103° 8.373'
 Hobbs, Lea County, New Mexico
 SWG Project No. 0105013

Southwest
 GEOSCIENCE

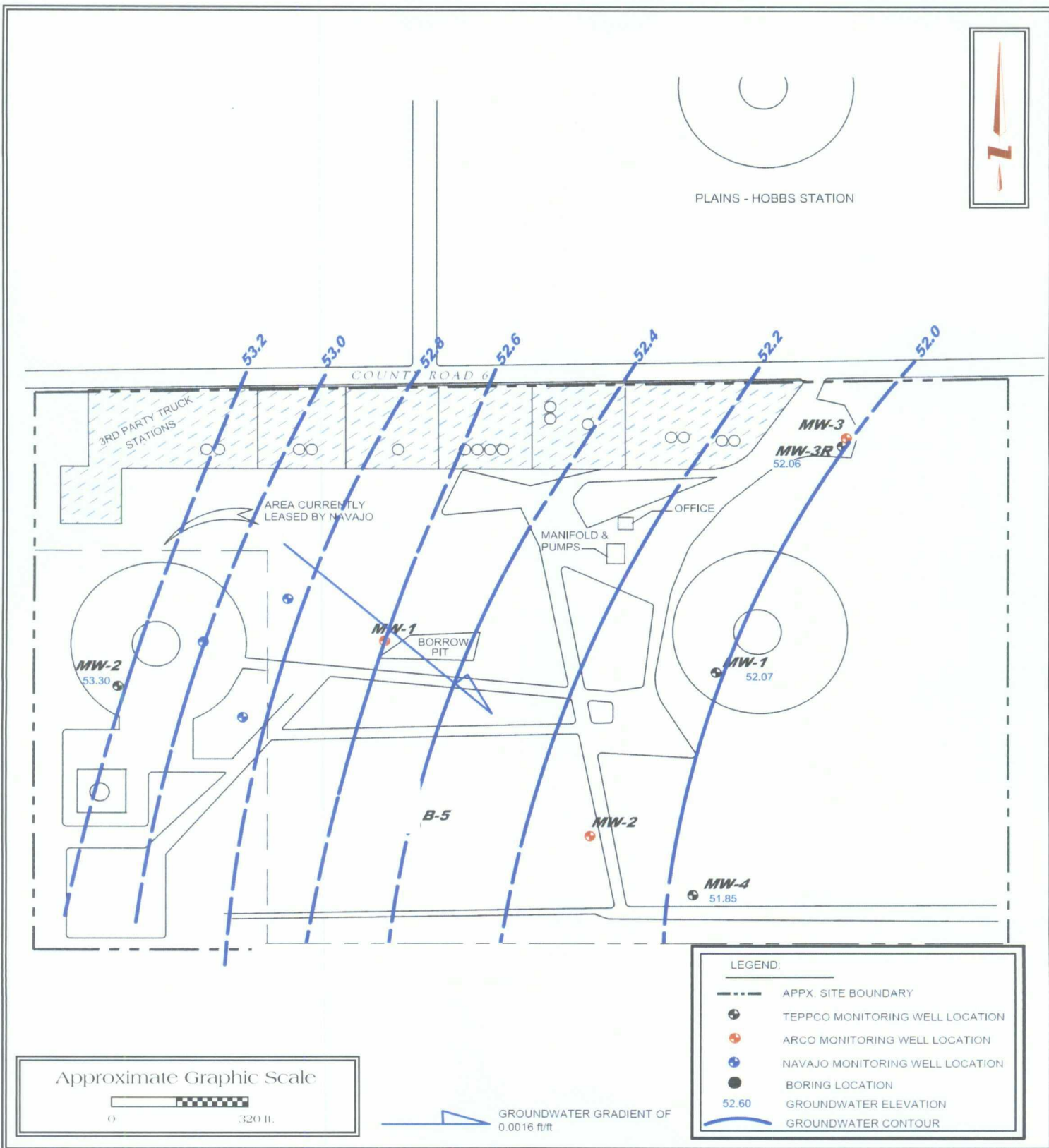
FIGURE 3
 Site Plan



Groundwater Monitoring
TEPPCO Hobbs Station
Off County Road 61
N 32° 39.135'; W 103° 8.373'
Hobbs, Lea County, New Mexico
SWG Project No. 0105013

Southwest
GEOSCIENCE

FIGURE 4A
Groundwater Gradient Map
Gauging Date: February 29, 2008



Groundwater Monitoring
TEPPCO Hobbs Station
Off County Road 61
N 32° 39.135'; W 103° 8.373'
Hobbs, Lea County, New Mexico
SWG Project No. 0105013

Southwest
GEOSCIENCE

FIGURE 4B
Groundwater Gradient Map
Gauging Date: August 13, 2008

APPENDIX B

Tables

TABLE 1
GROUNDWATER ANALYTICAL RESULTS

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)
New Mexico Water Quality Commission (NMWQC) Ground Water Standards		10	750	750	620	NE	NE
Monitoring Wells Installed by ARCO							
MW-1	5.11.04	<1.0	<1.0	<1.0	<3.0	NA	0.124
MW-2	5.11.04	<1.0	<1.0	<1.0	<3.0	NA	<0.10
MW-3	3.20.03	63.7	2.49	197	6.23	1.95	18
	5.11.04	Insufficient Water Volume for Sample Collection					
Monitoring Wells Installed by TERPICO							
MW-1	3.20.03	<1.0	<1.0	<1.0	<3.0	<0.05	2.44
	5.11.04	<1.0	<1.0	<1.0	<3.0	<0.05	1.31
	2.03.06	<2.0	<2.0	<2.0	<6.0	<0.05	<0.5
	8.19.06	<2.0	<2.0	<2.0	<6.0	<0.05	<0.5
	1.31.07	<2.0	<2.0	<2.0	<6.0	<0.15	<0.5
	8.01.07	<1.0	<1.0	<1.0	<3.0	<0.05	0.262
	2.29.08	<1.0	<1.0	<1.0	<3.0	<0.05	0.333
	8.13.08	<1.0	<1.0	<1.0	<3.0	<0.050	**
MW-2	3.20.03	<1.0	<1.0	<1.0	<3.0	<0.05	0.493
	5.11.04	<1.0	<1.0	<1.0	<3.0	<0.05	<0.10
	2.03.06	<2.0	<2.0	<2.0	<6.0	<0.05	<0.5
	8.19.06	2.0	<2.0	<2.0	<6.0	<0.05	<0.5
	1.31.07	<2.0	<2.0	<2.0	<6.0	<0.15	<0.5
	8.01.07	<1.0	<1.0	<1.0	<3.0	<0.05	0.393
	2.29.08	<1.0	<1.0	<1.0	<3.0	<0.05	0.247
	8.13.08	<1.0	<1.0	<1.0	<3.0	0.065	0.848
MW-3R	7.25.05	<2.0	<2.0	<2.0	<6.0	0.074	2.4
	2.03.06	<2.0	<2.0	4.0	<6.0	0.175	1.94
	8.19.06	2.0	<2.0	<2.0	<6.0	0.323	1.97
	1.31.07	<2.0	<2.0	3.1	<6.0	0.209	2.5
	8.01.07	<1.0	<1.0	<1.0	<3.0	0.101	4.06
	2.29.08	<1.0	<1.0	<1.0	<3.0	0.0504	3.75
	8.13.08	1.96	1.53	1.79	<3.0	0.161	4.21
	MW-4	3.20.03	<1.0	<1.0	<1.0	<3.0	<0.05
5.11.04		<1.0	<1.0	<1.0	<3.0	<0.05	<0.10
2.03.06		<2.0	<2.0	<2.0	<6.0	<0.05	<0.5
8.19.06		4.0	5.0	<2.0	<6.0	<0.05	<0.5
1.31.07		<2.0	<2.0	<2.0	<6.0	<0.15	<0.5
8.01.07		<1.0	<1.0	<1.0	<3.0	<0.05	0.129
2.29.08		<1.0	<1.0	<1.0	<3.0	<0.05	0.219
8.13.08		<1.0	<1.0	<1.0	<3.0	<0.05	0.201

NE = Not Established

**Sample was not analyzed due to sample mishandling by the analytical laboratory.

TABLE-2
FLUID LEVEL GAUGING DATA

Well ID	Measurement Date	Ground Surface Elevation (feet)	Top-of-Casing Elevation (feet)	Depth to PSH (feet)	Depth to Water (feet)	PSH Thickness (feet)	Corrected Groundwater Elevation
MW-1	2.3.06	93.5	97.08	None Detected	Not Recorded	0	Not Determined
	8.19.06		97.08	None Detected	44.19	0	52.89
	1.31.07		97.08	None Detected	44.31	0	52.77
	8.01.07		97.08	None Detected	44.91	0	52.17
	2.29.08		97.08	None Detected	44.71	0	52.37
MW-2	8.13.08		97.08	None Detected	45.01	0	52.07
	2.3.06	95.58	99.36	None Detected	44.89	0	54.47
	8.19.06		99.36	None Detected	45.24	0	54.12
	1.31.07		99.36	None Detected	45.35	0	54.01
	8.01.07		99.36	None Detected	45.65	0	53.71
MW-3R	2.29.08		99.36	None Detected	45.79	0	53.57
	8.13.08		99.36	None Detected	46.06	0	53.30
	2.3.06	95.26	98.66	None Detected	45.31	0	53.35
	8.19.06		98.66	None Detected	45.78	0	52.88
	1.31.07		98.66	None Detected	45.82	0	52.84
MW-4	8.01.07		98.66	None Detected	46.07	0	52.59
	2.29.08		98.66	None Detected	46.25	0	52.41
	8.13.08		98.66	None Detected	46.6	0	52.06
	2.3.06	93.63	97.15	None Detected	44.1	0	53.05
	8.19.06		97.15	None Detected	44.52	0	52.63
	1.31.07		97.15	None Detected	44.55	0	52.60
	8.01.07		97.15	None Detected	44.91	0	52.24
	2.29.08		97.15	None Detected	45	0	52.15
	8.13.08		97.15	None Detected	45.3	0	51.85

APPENDIX C

Laboratory Data Reports
& Chain-of-Custody Documentation



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 1 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

Attached is our analytical report for the samples received for your project. Below is a list of your individual sample descriptions with our corresponding laboratory number. We also have enclosed a copy of the Chain of Custody that was received with your samples and a form documenting the condition of your samples upon arrival. Please note any unused portion of the samples may be discarded upon expiration of the EPA holding time for the analysis performed or after 30 days from the above report date, unless you have requested otherwise.

ERMI Environmental Laboratories certifies that all results contained in this report were produced in accordance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) unless otherwise noted. The results presented apply to the samples analyzed in accordance with the chain-of-custody document(s) furnished with the samples. This report is intended for the sole use of the customer for whom the work was performed and must be reproduced, without modification, in its entirety.

Sample Identification

<u>Laboratory ID #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
0803001-01	MW-4	Aqueous	02/29/08 09:10	03/01/08 09:35
0803001-02	MW-1	Aqueous	02/29/08 11:10	03/01/08 09:35
0803001-03	MW-2	Aqueous	02/29/08 12:50	03/01/08 09:35
0803001-04	MW-3R	Aqueous	02/29/08 14:05	03/01/08 09:35

Case Narrative

This project does not require TRRP specifications.



Environmental Laboratories
Bethany Tech Center ♦ Suite 190
400 W. Bethany Rd. ♦ Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 2 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

The analytical data and results contained in this report, as well as their supporting data, conform with Texas Risk Reduction Program (TRRP), 30 TAC, Section 350, requirements and are of sufficient and documented quality to meet both TRRP objectives, TCEQ regulatory guidance No. RG-366/TRRP-13 and the project-based objective of achieving the lowest method detection limit (i.e., the TRRP Critical PCL where reasonably achievable or, if not reasonably achievable, the MQL). All information concerning analytical parameters, methods and protocols that might bear upon or otherwise affect the accuracy of the analytical data in this report have been provided or otherwise disclosed herein. The data were obtained using applicable and appropriate EPA SW-846 or Texas Commission on Environmental Quality approved analytical protocols, methodologies and quality assurance/quality control standards. **ERMI Environmental Laboratories** certifies that its quality control program is substantially and materially consistent with the International Organization for Standardization "Guide 25: General Requirements the Competence of Calibration and Testing Laboratories (ISO 25 3rd Edition, 1990)," as amended or the quality standards outlined in the National Environmental Laboratory Accreditation Program, as amended. The entire analytical data package for this report, including the supporting quality control data, will be retained and maintained for at least five (5) years (or such longer period of time as may be required by TRRP) from the report date at the offices of **ERMI Environmental Laboratories, 400 W. Bethany, Suite 190, Allen, Texas 75013.**

I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Thank you for the opportunity to serve your environmental chemistry analysis needs. If you have any questions or concerns regarding this report please contact our Customer Service Department at the phone number below.

Respectfully submitted,

Kendall K. Brown
President



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications
Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 3 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

<u>Laboratory ID #:</u> 0803001-01	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-4		<u>Sample Date/Time</u> 02/29/08 0910		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8C05009	03/05/08 0903	WC	
TPH Diesel	0.219	0.100	0.100	mg/l	1.00	EPA 8015B mod	8C05009	03/07/08 1208	PMS	
Surrogate: a-Pinene		64 %	0-131			EPA 8015B mod	8C05009	03/07/08 1208	PMS	
Surrogate: Triacontane		92 %	45-156			EPA 8015B mod	8C05009	03/07/08 1208	PMS	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	ND	0.0500	0.0500	mg/l	1.00	EPA 8015B mod	8C02001	03/03/08 1604	TA	
Surrogate: 4-Bromofluorobenzene		103 %	61-130			EPA 8015B mod	8C02001	03/03/08 1604	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1604	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1604	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1604	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1604	TA	
Surrogate: 4-Bromofluorobenzene		105 %	51-139			EPA 8021B	8C02001	03/03/08 1604	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647

Oklahoma: 8727



Louisiana: 02007

Kansas: E-10288

Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 4 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

<u>Laboratory ID #:</u> 0803001-02	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-1		<u>Sample Date/Time</u> 02/29/08 1110		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8C05009	03/05/08 0903	WC	
TPH Diesel	0.333	0.100	0.100	mg/l	1.00	EPA 8015B mod	8C05009	03/07/08 1214	PMS	
Surrogate: a-Pinene		67 %	0-131			EPA 8015B mod	8C05009	03/07/08 1214	PMS	
Surrogate: Triacontane		96 %	45-156			EPA 8015B mod	8C05009	03/07/08 1214	PMS	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	ND	0.0500	0.0500	mg/l	1.00	EPA 8015B mod	8C02001	03/03/08 1631	TA	
Surrogate: 4-Bromofluorobenzene		100 %	61-130			EPA 8015B mod	8C02001	03/03/08 1631	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1631	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1631	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1631	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1631	TA	
Surrogate: 4-Bromofluorobenzene		100 %	51-139			EPA 8021B	8C02001	03/03/08 1631	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 5 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

<u>Laboratory ID #:</u> 0803001-03	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-2		<u>Sample Date/Time</u> 02/29/08 1250		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8C05009	03/05/08 0903	WC	
TPH Diesel	0.247	0.100	0.100	mg/l	1.00	EPA 8015B mod	8C05009	03/07/08 1220	PMS	
Surrogate: a-Pinene		75 %	0-131			EPA 8015B mod	8C05009	03/07/08 1220	PMS	
Surrogate: Triacontane		109 %	45-156			EPA 8015B mod	8C05009	03/07/08 1220	PMS	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	ND	0.0500	0.0500	mg/l	1.00	EPA 8015B mod	8C02001	03/03/08 1656	TA	
Surrogate: 4-Bromofluorobenzene		103 %	61-130			EPA 8015B mod	8C02001	03/03/08 1656	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1656	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1656	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1656	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1656	TA	
Surrogate: 4-Bromofluorobenzene		98 %	51-139			EPA 8021B	8C02001	03/03/08 1656	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications
Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 6 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

<u>Laboratory ID #</u> 0803001-04	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-3R		<u>Sample Date/Time</u> 02/29/08 1405		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8C05009	03/05/08 0903	WC	
TPH Diesel	3.75	0.100	0.100	mg/l	1.00	EPA 8015B mod	8C05009	03/07/08 1306	PMS	
Surrogate: a-Pinene		58 %	0-131			EPA 8015B mod	8C05009	03/07/08 1306	PMS	
Surrogate: Triacontane		86 %	45-156			EPA 8015B mod	8C05009	03/07/08 1306	PMS	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	0.0504	0.0500	0.0500	mg/l	1.00	EPA 8015B mod	8C02001	03/03/08 1750	TA	
Surrogate: 4-Bromofluorobenzene		116 %	61-130			EPA 8015B mod	8C02001	03/03/08 1750	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1750	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1750	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1750	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8C02001	03/03/08 1750	TA	
Surrogate: 4-Bromofluorobenzene		102 %	51-139			EPA 8021B	8C02001	03/03/08 1750	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 7 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

Total Petroleum Hydrocarbons - DRO - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 8C05009 - EPA 3510C Separatory Funnel Extraction										
Blank (8C05009-BLK1)										
Prepared & Analyzed: 03/05/08 09:03										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A							
TPH Diesel	ND	0.100	mg/l							
Surrogate: a-Pinene	0.0800		mg/l	0.104		77	0-131			
Surrogate: Triacantane	0.112		mg/l	0.101		111	45-156			
Laboratory Control Sample (8C05009-BS1)										
Prepared & Analyzed: 03/05/08 09:03										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A				0-0			
TPH Diesel	1.27	0.100	mg/l	1.08		118	60-141			
Surrogate: a-Pinene	0.0782		mg/l	0.104		75	0-131			
Surrogate: Triacantane	0.104		mg/l	0.101		103	45-156			
Laboratory Control Sample Duplicate (8C05009-BSD1)										
Prepared & Analyzed: 03/05/08 09:03										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A				0-0		0	
TPH Diesel	1.32	0.100	mg/l	1.08		122	60-141	4	27	
Surrogate: a-Pinene	0.0810		mg/l	0.104		78	0-131			
Surrogate: Triacantane	0.108		mg/l	0.101		107	45-156			
Matrix Spike (8C05009-MS1)										
Prepared & Analyzed: 03/05/08 09:03										
Source: 0803069-01										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A		ND		0-0			
TPH Diesel	1.39	0.100	mg/l	1.08	0.101	119	63-142			
Surrogate: a-Pinene	0.0812		mg/l	0.104		78	0-131			
Surrogate: Triacantane	0.110		mg/l	0.101		109	45-156			
Matrix Spike Duplicate (8C05009-MSD1)										
Prepared & Analyzed: 03/05/08 09:03										
Source: 0803069-01										
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A		ND		0-0		0	
TPH Diesel	0.899	0.100	mg/l	1.08	0.101	74	63-142	43	30	0-04
Surrogate: a-Pinene	0.0650		mg/l	0.104		62	0-131			
Surrogate: Triacantane	0.0907		mg/l	0.101		90	45-156			



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 8 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

Total Petroleum Hydrocarbons - GRO - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Flag
Batch 8C02001 - EPA 5030B Purge-and-Trap for Aqueous Samples									
Blank (8C02001-BLK1)									
Prepared: 03/02/08 19:42 Analyzed: 03/02/08 21:22									
TPH Gasoline	ND	0.0500	mg/l						
Surrogate: 4-Bromofluorobenzene	0.0518		mg/l	0.0500		104	61-130		
Laboratory Control Sample (8C02001-BS1)									
Prepared: 03/02/08 19:42 Analyzed: 03/02/08 21:48									
TPH Gasoline	0.417	0.0500	mg/l	0.500		83	68-130		
Surrogate: 4-Bromofluorobenzene	0.0542		mg/l	0.0500		108	61-130		
Laboratory Control Sample Duplicate (8C02001-BSD1)									
Prepared: 03/02/08 19:42 Analyzed: 03/02/08 22:14									
TPH Gasoline	0.411	0.0500	mg/l	0.500		82	68-130	1	15
Surrogate: 4-Bromofluorobenzene	0.0580		mg/l	0.0500		116	61-130		
Matrix Spike (8C02001-MS1)									
Prepared: 03/02/08 19:42 Analyzed: 03/02/08 22:40									
TPH Gasoline	0.410	0.0500	mg/l	0.500	ND	82	55-128		
Surrogate: 4-Bromofluorobenzene	0.0571		mg/l	0.0500		114	61-130		
Matrix Spike Duplicate (8C02001-MSD1)									
Prepared: 03/02/08 19:42 Analyzed: 03/02/08 23:06									
TPH Gasoline	0.420	0.0500	mg/l	0.500	ND	84	55-128	2	19
Surrogate: 4-Bromofluorobenzene	0.0527		mg/l	0.0500		105	61-130		



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 9 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

BTEX - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
------------	--------	------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch 8C02001 - EPA 5030B Purge-and-Trap for Aqueous Samples

Blank (8C02001-BLK1)

Prepared: 03/02/08 19:42 Analyzed: 03/02/08 21:22

Benzene	ND	1.00	ug/l							
Ethyl Benzene	ND	1.00	ug/l							
Toluene	ND	1.00	ug/l							
Xylenes (total)	ND	3.00	ug/l							
Surrogate: 4-Bromofluorobenzene	52.2		ug/l	50.0		104	51-139			

Laboratory Control Sample (8C02001-BS1)

Prepared: 03/02/08 19:42 Analyzed: 03/02/08 21:48

Benzene	42.7	1.00	ug/l	50.0		85	77-128			
Ethyl Benzene	46.9	1.00	ug/l	50.0		94	72-125			
Toluene	45.8	1.00	ug/l	50.0		92	68-130			
Xylenes (total)	150	3.00	ug/l	150		100	77-125			
Surrogate: 4-Bromofluorobenzene	53.3		ug/l	50.0		107	51-139			

Laboratory Control Sample Duplicate (8C02001-BSD1)

Prepared: 03/02/08 19:42 Analyzed: 03/02/08 22:14

Benzene	43.0	1.00	ug/l	50.0		86	77-128	0.7	16	
Ethyl Benzene	47.1	1.00	ug/l	50.0		94	72-125	0.4	18	
Toluene	45.4	1.00	ug/l	50.0		91	68-130	0.9	12	
Xylenes (total)	150	3.00	ug/l	150		100	77-125	0	14	
Surrogate: 4-Bromofluorobenzene	53.6		ug/l	50.0		107	51-139			

Matrix Spike (8C02001-MS1)

Prepared: 03/02/08 19:42 Analyzed: 03/02/08 22:40

Source: 0802674-01

Benzene	45.5	1.00	ug/l	50.0	ND	91	39-156			
Ethyl Benzene	48.6	1.00	ug/l	50.0	ND	97	51-142			
Toluene	48.7	1.00	ug/l	50.0	ND	97	46-145			
Xylenes (total)	165	3.00	ug/l	150	ND	110	51-145			
Surrogate: 4-Bromofluorobenzene	54.6		ug/l	50.0		109	51-139			



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 10 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

BTEX - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
------------	--------	------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch 8C02001 - EPA 5030B Purge-and-Trap for Aqueous Samples (continued)

Matrix Spike Duplicate (8C02001-MSD1)

Prepared: 03/02/08 19:42 Analyzed: 03/02/08 23:06

Source: 0802674-01

Benzene	45.6	1.00	ug/l	50.0	ND	91	39-156	0.2	18	
Ethyl Benzene	48.2	1.00	ug/l	50.0	ND	96	51-142	0.8	20	
Toluene	49.4	1.00	ug/l	50.0	ND	99	46-145	1	18	
Xylenes (total)	166	3.00	ug/l	150	ND	111	51-145	0.6	13	
Surrogate: 4-Bromofluorobenzene	51.1		ug/l	50.0		102	51-139			



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications
Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-07-TX

Report of Sample Analysis

Southwest Geoscience
111 Morningside Drive
San Antonio, TX 78209
ATTN: Chris Mitchell

Page: Page 11 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 03/08/08 11:40

Notes and Definitions

The results presented in this report were generated using those methods given in 40 CFR Part 136 for Water and Wastewater samples and in SW-846 for RCRA/Solid Waste samples.

Q-04 The RPD of the target analyte(s) in the MS/MSD is outside of established limits. The RPD of this same analyte(s) in the LCS/LCSD is within acceptable limits. Therefore, the data were reported and are acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

LCS/LCSD Laboratory Control Sample/Laboratory Control Sample Duplicate

MS/MSD Matrix Spike/Matrix Spike Duplicate

RPD Relative Percent Difference

mg/kg milligrams per kilogram

mg/l milligrams per liter

ug/kg micrograms per kilogram

ug/l micrograms per liter

exc Not covered under scope of NELAP accreditation.

F* Calculated factor rounded to 3 significant figures. Concentration factor when <1.00 and dilution factor when >1.00.

Anlst Analyst Initials

SRL Sample Reporting Limit

MRL Method Reporting Limit

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE Environmental & Hydrogeologic Consultants Office Location <u>Dallas, TX</u>		Laboratory: <u>IRMT</u> Address: _____ Contact: _____ Phone: _____ PO/ISO #: _____		ANALYSIS REQUESTED <u>SW-846 #80213</u> <u>TPH + SW-846 #80213</u> <u>DEQ/GP</u>		Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>100</u> 12 3 4 5 Page <u>1</u> of <u>1</u>	
Project Manager <u>B. Chris M. Howell</u> Sampler's Name <u>Russell Howard</u>		Sampler's Signature <u>[Signature]</u> Project Name <u>Hobby Station</u>		No/Type of Containers VOA 1 Lt. 250 ml P/O <u>361</u> <u>61</u>		Lab Sample ID (Lab Use Only) <u>0803001-01</u> <u>0803001-02</u> <u>0803001-03</u> <u>0803001-04</u>	
Proj. No.	Identifying Marks of Sample(s) <u>005013</u> <u>MW-4</u> <u>MW-1</u> <u>MW-2</u> <u>MW-3R</u>			No Further Analysis <u>2/2/00</u>			
Matrix	Date	Time	C o m p	G r a b	Start	Depth	P/O
W	4/29/99	910	X	MW-4	1	361	X
↓	↓	1110	↓	MW-1	↓	↓	↓
↓	↓	1250	↓	MW-2	↓	↓	↓
W	4/29/99	1405	X	MW-3R	1	61	X
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush							
Relinquished by (Signature)		Date: <u>3/1/00</u>		Time: <u>8:35</u>		Received by (Signature)	
[Signature]		[Signature]		[Signature]		Date: <u>3/1/00</u>	
Relinquished by (Signature)		Date: <u>3/1/00</u>		Time: <u>9:35</u>		Received by (Signature)	
[Signature]		[Signature]		[Signature]		Date: <u>3/1/00</u>	
Relinquished by (Signature)		Date: _____		Time: _____		Received by (Signature)	
[Signature]		[Signature]		[Signature]		Date: _____	
Relinquished by (Signature)		Date: _____		Time: _____		Received by (Signature)	
[Signature]		[Signature]		[Signature]		Date: _____	
Matrix Container <u>WW - Wastewater</u> <u>VOA - 40 ml vial</u> W - Water A/G - Amber / Or Glass 1 Liter S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth A - Air Bag C - Charcoal tube P/O - Plastic or other SL - sludge O - Oil							

Custody Seal

3228

Date _____

ERMI

Received by EKMI
D. K. Khaty and P. K. Misra
ERMI

X-484

[illegible]

Lab Number(s): 0803001

ERMI

Sample Preservation Documentation*

On Ice (Circle One): YES OR NO (check if on Dry Ice)

Parameters	Containers # Size	Required Preservation	Sample Container	Circle pH Note any discrepancy
Metals		pH < 2	Glass or Plastic	pH < 2
Dissolved Metals		Unpreserved prior to being filtered, Cool**	Glass or Plastic	
Hexavalent Chromium		CWA - pH 9.3-9.7, Cool; RCRA - Cool	Glass or Plastic	Checked At Analysis
Semivolatiles, Pesticides, PCBs, Herbicides		Cool	Glass only with Teflon lid	Chlorine <input type="checkbox"/> yes <input type="checkbox"/> no
VOA (BTEX, MTBE, 624, 8260, TPH-GRO)	24 40	Cool, pH < 2 Zero Head Space	40 ml VOA vial	DO NOT OPEN
VOA (TPH-1005)		Cool, Zero Head Space Please check if collected in pre-weighed vials	40 ml VOA vial	DO NOT OPEN
Phos., NO ₃ /NO ₂ , NH ₃ N, COD, TKN, TOC		Cool, pH < 2	Glass or Plastic	pH < 2
TDS, BOD, CBOD, Cond, pH, TSS, F, SO ₄ , Cl, Alk, Sulfite		Cool	Glass or Plastic, Plastic only if F	
Phenols, TPH-DRO	4 11	Cool, pH < 2	Glass only Teflon lid <input checked="" type="checkbox"/> Foil lid	pH < 2
Oil & Grease, TPH (by 1664a)		Cool, pH < 2	Glass only Teflon lid Foil lid	DO NOT Check pH
Cyanide		Cool, pH > 12	Glass or Plastic	pH > 12 Chlorine <input type="checkbox"/> yes <input type="checkbox"/> no Sulfide <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> na
Sulfide		Cool, pH > 9	Glass or Plastic	pH > 9
Bacteria		Cool	Plastic Sterile Cup	
Soil, Sludge, Solid, Oil, Liquid		Cool Note: please check if collected in pre-weighed vials		

Metals Preserved By Login ☐ yes ☐ no

COMMENTS: _____

*This form is used to document sample preservation. Circle parameter requested. Fill in number and size of containers received. Check pH (adjust if needed) and note if different from what is required and make a notation of any samples not received on ice. Note any incorrect sample containers or preservation on chain-of-custody.

**Cool means cooled to ≤6°C but not frozen for CWA samples and 4°C ± 2°C for RCRA samples.

Preservation Checked By COJ

Date

3-3-08

Time

1051



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 1 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

Attached is our analytical report for the samples received for your project. Below is a list of your individual sample descriptions with our corresponding laboratory number. We also have enclosed a copy of the Chain of Custody that was received with your samples and a form documenting the condition of your samples upon arrival. Please note any unused portion of the samples may be discarded upon expiration of the EPA holding time for the analysis performed or after 30 days from the above report date, unless you have requested otherwise.

ERMI Environmental Laboratories certifies that all results contained in this report were produced in accordance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) unless otherwise noted. The results presented apply to the samples analyzed in accordance with the chain-of-custody document(s) furnished with the samples. This report is intended for the sole use of the customer for whom the work was performed and must be reproduced, without modification, in its entirety.

Sample Identification

<u>Laboratory ID #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
0808406-01	MW-1	Aqueous	08/13/08 09:35	08/14/08 12:10
0808406-02	MW-2	Aqueous	08/13/08 11:15	08/14/08 12:10
0808406-03	MW-3R	Aqueous	08/13/08 12:35	08/14/08 12:10
0808406-04	MW-4	Aqueous	08/13/08 13:50	08/14/08 12:10

Case Narrative

This project does not require TRRP specifications.



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 2 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

The analytical data and results contained in this report, as well as their supporting data, conform with Texas Risk Reduction Program (TRRP), 30 TAC, Section 350, requirements and are of sufficient and documented quality to meet both TRRP objectives, TCEQ regulatory guidance No. RG-366/TRRP-13 and the project-based objective of achieving the lowest method detection limit (i.e., the TRRP Critical PCL where reasonably achievable or, if not reasonably achievable, the MQL). All information concerning analytical parameters, methods and protocols that might bear upon or otherwise affect the accuracy of the analytical data in this report have been provided or otherwise disclosed herein. The data were obtained using applicable and appropriate EPA SW-846 or Texas Commission on Environmental Quality approved analytical protocols, methodologies and quality assurance/quality control standards. **ERMI Environmental Laboratories** certifies that its quality control program is substantially and materially consistent with the International Organization for Standardization "Guide 25: General Requirements the Competence of Calibration and Testing Laboratories (ISO 25 3rd Edition, 1990)," as amended or the quality standards outlined in the National Environmental Laboratory Accreditation Program, as amended. The entire analytical data package for this report, including the supporting quality control data, will be retained and maintained for at least five (5) years (or such longer period of time as may be required by TRRP) from the report date at the offices of **ERMI Environmental Laboratories, 400 W. Bethany, Suite 190, Allen, Texas 75013.**

I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Thank you for the opportunity to serve your environmental chemistry analysis needs. If you have any questions or concerns regarding this report please contact our Customer Service Department at the phone number below.

Respectfully submitted,

Kendall K. Brown
President

Std Rpt v.2.5-080808

Local: (972) 727-1123

Long Distance: (800) 228-ERMI

FAX: (972) 727-1175



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 3 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

<u>Laboratory ID #:</u> 0808406-01	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-1		<u>Sample Date/Time</u> 08/13/08 0935		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										Q-16
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8H18004	08/18/08 0835	WC	C-01
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	ND	0.050	0.050	mg/l	1.00	EPA 8015B mod	8H15023	08/16/08 0035	TA	
Surrogate: 4-Bromofluorobenzene		105 %	66-131			EPA 8015B mod	8H15023	08/16/08 0035	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0035	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0035	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0035	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0035	TA	
Surrogate: 4-Bromofluorobenzene		106 %	39-148			EPA 8021B	8H15023	08/16/08 0035	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 4 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

<u>Laboratory ID #:</u> 0808406-02	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-2		<u>Sample Date/Time</u> 08/13/08 1115		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										Q-16
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.03	EPA 3510C	8H18004	08/18/08 0835	WC	
TPH Diesel	0.848	0.103	0.100	mg/l	1.03	EPA 8015B mod	8H18004	08/20/08 2013	SMH	
Surrogate: <i>a</i> -Pinene		34 %	18-101			EPA 8015B mod	8H18004	08/20/08 2013	SMH	
Surrogate: Triacontane		123 %	51-151			EPA 8015B mod	8H18004	08/20/08 2013	SMH	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	0.065	0.050	0.050	mg/l	1.00	EPA 8015B mod	8H15023	08/16/08 0111	TA	
Surrogate: 4-Bromofluorobenzene		104 %	66-131			EPA 8015B mod	8H15023	08/16/08 0111	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0111	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0111	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0111	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0111	TA	
Surrogate: 4-Bromofluorobenzene		108 %	39-148			EPA 8021B	8H15023	08/16/08 0111	TA	



Environmental Laboratories
Bethany Tech Center ♦ Suite 190
400 W. Bethany Rd. ♦ Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 5 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

<u>Laboratory ID #:</u> 0808406-03	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MW-3R		<u>Sample Date/Time</u> 08/13/08 1235		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										Q-16, R-01
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8H18004	08/18/08 0835	WC	
TPH Diesel	4.21	0.500	0.100	mg/l	5.00	EPA 8015B mod	8H18004	08/20/08 2019	SMH	
Surrogate: <i>a</i> -Pinene		40 %	18-101			EPA 8015B mod	8H18004	08/20/08 2019	SMH	
Surrogate: Triacotane		102 %	51-151			EPA 8015B mod	8H18004	08/20/08 2019	SMH	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	0.161	0.050	0.050	mg/l	1.00	EPA 8015B mod	8H15023	08/16/08 0146	TA	
Surrogate: 4-Bromofluorobenzene		117 %	66-131			EPA 8015B mod	8H15023	08/16/08 0146	TA	
BTEX										
Benzene	1.96	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0146	TA	
Ethyl Benzene	1.79	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0146	TA	
Toluene	1.53	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0146	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0146	TA	
Surrogate: 4-Bromofluorobenzene		115 %	39-148			EPA 8021B	8H15023	08/16/08 0146	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 6 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

<u>Laboratory ID #:</u> 0808406-04	<u>Sample Type</u> Grab	<u>Matrix</u> Aqueous	<u>Sample Collected By</u> Russell Howard	<u>Customer</u>
<u>Sample Description</u> MVV-4		<u>Sample Date/Time</u> 08/13/08 1350		

Analyte(s)	Result	SRL	MRL	Units	F*	Method	Batch	Analysis Date/Time	Anlst	Flag
Total Petroleum Hydrocarbons - DRO										Q-16
Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A	N/A	1.00	EPA 3510C	8H18004	08/18/08 0835	WC	
TPH Diesel	0.201	0.100	0.100	mg/l	1.00	EPA 8015B mod	8H18004	08/20/08 2036	SMH	
Surrogate: <i>a</i> -Pinene		30 %	18-101			EPA 8015B mod	8H18004	08/20/08 2036	SMH	
Surrogate: Triacontane		98 %	51-151			EPA 8015B mod	8H18004	08/20/08 2036	SMH	
Total Petroleum Hydrocarbons - GRO										
TPH Gasoline	ND	0.050	0.050	mg/l	1.00	EPA 8015B mod	8H15023	08/16/08 0443	TA	
Surrogate: 4-Bromofluorobenzene		111 %	66-131			EPA 8015B mod	8H15023	08/16/08 0443	TA	
BTEX										
Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0443	TA	
Ethyl Benzene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0443	TA	
Toluene	ND	1.00	1.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0443	TA	
Xylenes (total)	ND	3.00	3.00	ug/l	1.00	EPA 8021B	8H15023	08/16/08 0443	TA	
Surrogate: 4-Bromofluorobenzene		105 %	39-148			EPA 8021B	8H15023	08/16/08 0443	TA	



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 7 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

Total Petroleum Hydrocarbons - DRO - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
------------	--------	------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch 8H18004 - EPA 3510C Separatory Funnel Extraction

Blank (8H18004-BLK1)

Prepared & Analyzed: 08/18/08 08:35

Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A							
TPH Diesel	ND	0.100	mg/l							
Surrogate: a-Pinene	0.0431		mg/l	0.102		42	18-101			
Surrogate: Triacotane	0.112		mg/l	0.103		109	51-151			

Laboratory Control Sample (8H18004-BS1)

Prepared & Analyzed: 08/18/08 08:35

Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A				0-0			
TPH Diesel	1.24	0.100	mg/l	1.00		124	49-142			
Surrogate: a-Pinene	0.0419		mg/l	0.102		41	18-101			
Surrogate: Triacotane	0.102		mg/l	0.103		99	51-151			

Laboratory Control Sample Duplicate (8H18004-BSD1)

Prepared & Analyzed: 08/18/08 08:35

Separatory Funnel Liquid-Liquid Extraction	Completed	N/A	N/A				0-0		0	
TPH Diesel	1.22	0.100	mg/l	1.00		122	49-142	2	34	
Surrogate: a-Pinene	0.0395		mg/l	0.102		39	18-101			
Surrogate: Triacotane	0.0987		mg/l	0.103		96	51-151			



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 8 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

Total Petroleum Hydrocarbons - GRO - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Flag
Batch 8H15023 - EPA 5030B Purge-and-Trap for Aqueous Samples									
Blank (8H15023-BLK1)									
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 19:16									
TPH Gasoline	ND	0.050	mg/l						
Surrogate: 4-Bromofluorobenzene	0.0521		mg/l	0.0500		104	66-131		
Laboratory Control Sample (8H15023-BS1)									
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 19:52									
TPH Gasoline	0.473	0.050	mg/l	0.500		95	53-140		
Surrogate: 4-Bromofluorobenzene	0.0540		mg/l	0.0500		108	66-131		
Laboratory Control Sample Duplicate (8H15023-BSD1)									
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 20:27									
TPH Gasoline	0.547	0.050	mg/l	0.500		109	53-140	15	22
Surrogate: 4-Bromofluorobenzene	0.0542		mg/l	0.0500		108	66-131		
Matrix Spike (8H15023-MS1)									
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 21:03									
Source: 0808109-02									
TPH Gasoline	0.754	0.050	mg/l	0.500	0.254	100	38-148		
Surrogate: 4-Bromofluorobenzene	0.0543		mg/l	0.0500		109	66-131		
Matrix Spike Duplicate (8H15023-MSD1)									
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 21:38									
Source: 0808109-02									
TPH Gasoline	0.720	0.050	mg/l	0.500	0.254	93	38-148	5	16
Surrogate: 4-Bromofluorobenzene	0.0532		mg/l	0.0500		106	66-131		



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 9 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

BTEX - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 8H15023 - EPA 5030B Purge-and-Trap for Aqueous Samples										
Blank (8H15023-BLK1)										
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 19:16										
Benzene	ND	1.00	ug/l							
Ethyl Benzene	ND	1.00	ug/l							
Toluene	ND	1.00	ug/l							
Xylenes (total)	ND	3.00	ug/l							
Surrogate: 4-Bromofluorobenzene	53.1		ug/l	50.0		106	39-148			
Laboratory Control Sample (8H15023-BS1)										
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 19:52										
Benzene	50.6	1.00	ug/l	50.0		101	77-119			
Ethyl Benzene	50.1	1.00	ug/l	50.0		100	78-124			
Toluene	50.7	1.00	ug/l	50.0		101	77-122			
Xylenes (total)	160	3.00	ug/l	150		107	75-130			
Surrogate: 4-Bromofluorobenzene	53.0		ug/l	50.0		106	39-148			
Laboratory Control Sample Duplicate (8H15023-BSD1)										
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 20:27										
Benzene	55.1	1.00	ug/l	50.0		110	77-119	9	15	
Ethyl Benzene	54.8	1.00	ug/l	50.0		110	78-124	9	17	
Toluene	55.3	1.00	ug/l	50.0		111	77-122	9	16	
Xylenes (total)	172	3.00	ug/l	150		115	75-130	7	16	
Surrogate: 4-Bromofluorobenzene	52.8		ug/l	50.0		106	39-148			
Matrix Spike (8H15023-MS1)										
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 21:03										
Source: 0808109-02										
Benzene	76.1	1.00	ug/l	50.0	25.9	100	31-157			
Ethyl Benzene	74.8	1.00	ug/l	50.0	24.8	100	58-141			
Toluene	76.3	1.00	ug/l	50.0	25.5	102	21-170			
Xylenes (total)	236	3.00	ug/l	150	80.5	104	54-149			
Surrogate: 4-Bromofluorobenzene	52.5		ug/l	50.0		105	39-148			



Environmental Laboratories
Bethany Tech Center ♦ Suite 190
400 W. Bethany Rd. ♦ Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 10 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

BTEX - Quality Control

Analyte(s)	Result	*SRI	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 8H15023 - EPA 5030B Purge-and-Trap for Aqueous Samples (continued)										
Matrix Spike Duplicate (8H15023-MSD1)										
Prepared: 08/15/08 16:14 Analyzed: 08/15/08 21:38				Source: 0808109-02						
Benzene	73.2	1.00	ug/l	50.0	25.9	95	31-157	4	11	
Ethyl Benzene	71.7	1.00	ug/l	50.0	24.8	94	58-141	4	17	
Toluene	73.2	1.00	ug/l	50.0	25.5	95	21-170	4	14	
Xylenes (total)	226	3.00	ug/l	150	80.5	97	54-149	4	11	
Surrogate: 4-Bromofluorobenzene	52.2		ug/l	50.0		104	39-148			



Environmental Laboratories
Bethany Tech Center • Suite 190
400 W. Bethany Rd. • Allen, Texas 75013

State Certifications

Arkansas: 88-0647
Oklahoma: 8727



Louisiana: 02007
Kansas: E-10288
Texas: T104704232-08C-TX

Report of Sample Analysis

Southwest Geoscience
8620 N. New Braunfels Ave, Suite 531
San Antonio, TX 78217
ATTN: Chris Mitchell

Page: Page 11 of 11
Project: Hobbs Station
Project #: 0105013
Print Date/Time: 09/10/08 16:43

Notes and Definitions

The results presented in this report were generated using those methods given in 40 CFR Part 136 for Water and Wastewater samples and in SW-846 for RCRA/Solid Waste samples.

C-01	This sample was accidentally spiked with DRO during the extraction process, therefore no analysis could be performed to yield accurate results.
Q-16	An insufficient volume or mass of sample was available for matrix spikes.
R-01	The higher reporting limit(s) is due to dilutions required for analysis as a result of a high concentration of target and/or non-target parameters in this sample.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD	Matrix Spike/Matrix Spike Duplicate
RPD	Relative Percent Difference
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
ug/kg	micrograms per kilogram
ug/l	micrograms per liter
exc	Not covered under scope of NELAP accreditation.
F*	Calculated factor rounded to 3 significant figures. Concentration factor when <1.00 and dilution factor when >1.00.
Anlst	Analyst Initials
SRL	Sample Reporting Limit
MRL	Method Reporting Limit
naa	This analysis/parameter is not accreditable under the current NELAP program

CHAIN OF CUSTODY RECORD

<h2 style="margin: 0;">Southwest GEOSCIENCE</h2> <p style="margin: 0; font-size: small;">Environmental & Hydrogeologic Consultants</p>			Laboratory: <u>ELMI</u> Address: <u>Allen, TX</u> Contact: _____ Phone: _____ PO/ISO #: _____			ANALYSIS REQUESTED <u>BTEX 80213</u> <u>TPH GRO/DRO 8015B</u>			Lab use only Due Date: _____ Temp of coolers when received (C°): <u>0, 2</u> 1 2 3 4 5 Page <u>1</u> of <u>1</u>		
Project Manager: <u>B. Chris Mitchell</u> Sampler's Name: <u>Russell Howard</u>			Samples Signature <u>[Signature]</u>								
Project Name: <u>Hobbs Station</u> No/Type of Containers: _____											
Proj. No.	Matrix	Date	Time	Identifying Marks of Sample(s)	Depth	Depth	VOA	A/G	250 ml	P/O	Lab Sample ID (Lab Use Only)
<u>D105013</u>	<u>W</u>	<u>8/13/08</u>	<u>935</u>	<u>MW-1</u>	<u>1</u>	<u>1</u>	<u>6</u>	<u>1</u>			<u>0808400-01</u>
	<u>↓</u>	<u>↓</u>	<u>1115</u>	<u>MW-2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>			<u>0808400-02</u>
	<u>↓</u>	<u>↓</u>	<u>1235</u>	<u>MW-3R</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>			<u>0808400-03</u>
	<u>W</u>	<u>8/13/08</u>	<u>1350</u>	<u>MW-4</u>	<u>1</u>	<u>1</u>	<u>6</u>	<u>1</u>			<u>0808400-04</u>
<u>No Further</u> <u>Entry 8/13/08</u> <u>RDH</u>											
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush											
Relinquished by (Signature) <u>[Signature]</u>			Date: <u>8/14/08</u>			Received by (Signature) <u>[Signature]</u>			Date: <u>8/14/08</u>		
Relinquished by (Signature) <u>[Signature]</u>			Date: <u>8/14/08</u>			Received by (Signature) <u>[Signature]</u>			Date: <u>8/14/08</u>		
Relinquished by (Signature) <u>[Signature]</u>			Date: _____			Received by (Signature) _____			Date: _____		
Relinquished by (Signature) _____			Date: _____			Received by (Signature) _____			Date: _____		
NOTES:											
Matrix Container: <u>WW - Wastewater</u> <u>VOA - 40 ml vial</u>											
W - Water A/G - Amber / Or Glass 1 Liter											
S - Soil 250 ml - Glass wide mouth											
L - Liquid 250 ml - Glass wide mouth											
A - Air Bag P/O - Plastic or other											
C - Charcoal tube SL - sludge O - Oil											



NOTARY SERVICE AVAILABLE

20

[illegible]

Lab Number(s):

0808406

ERMI

Sample Preservation Documentation*

On Ice (Circle One): YES OR NO (check if on Dry Ice _____)

Parameters	Containers #	Size	Required Preservation	Sample Container	Circle pH Note any discrepancy
Metals			pH < 2	Glass or Plastic	pH < 2
Dissolved Metals			Unpreserved prior to being filtered, Cool**	Glass or Plastic	
Hexavalent Chromium			CWA - pH 9.3-9.7, Cool; RCRA - Cool	Glass or Plastic	Checked At Analysis
Semivolatiles, Pesticides, PCBs, Herbicides			Cool	Glass only with Teflon lid	Chlorine <input type="checkbox"/> yes <input type="checkbox"/> no
VOA (BTEX, MTBE, 624, 8260, TPH-GRO)	24	40 ml	Cool, pH < 2 01-B, C, F had Zero Head Space 02-B, C, E, F had space 03-B, C, F 04-C	40 ml VOA vial	DO NOT OPEN
VOA (TPH-1005)			Cool, Zero Head Space Please check if collected in pre-weighed vials	40 ml VOA vial	DO NOT OPEN
Phos., NO ₃ /NO ₂ , NH ₃ N, COD, TKN, TOC			Cool, pH < 2	Glass or Plastic	pH < 2
TDS, BOD, CBOD, Cond, pH, TSS, F, SO ₄ , Cl, Alk, Sulfite			Cool	Glass or Plastic, Plastic only if F	
Phenols, (TPH-DRO)	4	11+	Cool, pH < 2	Glass only Teflon lid ✓ Foil lid	pH > 2
Oil & Grease, TPH (by 1664a)			Cool, pH < 2	Glass only Teflon lid Foil lid	DO NOT Check pH
Cyanide			Cool, pH > 12	Glass or Plastic	pH > 12 Chlorine <input type="checkbox"/> yes <input type="checkbox"/> no Sulfide <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> na
Sulfide			Cool, pH > 9	Glass or Plastic	pH > 9
Bacteria			Cool	Plastic Sterile Cup	
Soil, Sludge, Solid, Oil, Liquid			Cool Note: please check if collected in pre-weighed vials		

Metals Preserved By Login ☐ yes ☐ no

COMMENTS: _____

*This form is used to document sample preservation. Circle parameter requested. Fill in number and size of containers received. Check pH (adjust if needed) and note if different from what is required and make a notation of any samples not received on ice. Note any incorrect sample containers or preservation on chain-of-custody.

**Cool means cooled to ≤ 6°C but not frozen.

Preservation Checked By

CJD

8-14-08

Date

1530

Time

mm

10/10/08