GW - 361

REPORTS

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TEPPCO 2005

COPY

SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION

Property at:

HOBBS STATION
Off County Road 61
Hobbs, Lea County, New Mexico

October 7, 2005
Project No. 0105013

Prepared for:

TEPPCO, L.P.
2929 Allen Parkway, Suite 3200
Houston, Texas 77019
Attention: Mr. David Smith, P.G.

Prepared by:

B. Chris Mitchell, P.G.
Principal Geoscientist

Rusty Simpson, P.G., C.P.G.
Senior Technical Review

Southwest GEOSCIENCE
3030 LBJ Freeway, Suite 700
Dallas, Texas 75234
Ph: (214) 722-7531
Fax: (214) 722-7632

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SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION

HOBBS STATION
Off County Road 61
Hobbs, Lea County, New Mexico
SWG Project No. 0105013

EXECUTIVE SUMMARY

The TEPPCO Hobbs Station is located off County Road (CR) 61, south-southwest of Hobbs, New Mexico, referred to hereinafter as the "site" or "subject site". The site consists of approximately 35 acres developed as a crude oil storage facility associated with crude oil pipeline operations.

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 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.

Petroleum hydrocarbon constituent concentrations identified in on-site soils during the ALPHA Environmental Site Investigation (ESI) dated May 23, 2003, which exceed the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division's (OCD's) *Remediation Action Levels* were limited to the TPH DRO concentration of 621 mg/Kg associated with the soil sample collected from soil boring MW-2. The TPH DRO concentration was resubmitted for polynuclear aromatic hydrocarbon (PAH) analysis. The identified PAH constituent concentrations do not exceed the New Mexico Environment Department (NMED) *Tier 1 Soil Concentrations Protective Of Groundwater.*

X DNA

Petroleum hydrocarbon constituent concentrations identified in on-site groundwater during the ALPHA ESI dated May 23, 2003, which exceed the New Mexico Water Quality Commission (NMWQC) *Ground Water Standards* were limited to the benzene concentration of 0.0637 mg/L associated with the groundwater sample collected from monitoring well MW-3(ARCO).

The objective of the Supplemental Environmental Site Investigation (SESI) conducted by Southwest Geoscience (SWG) was to further evaluate the presence of petroleum hydrocarbons in the on-site soil and groundwater in the vicinity of monitoring well MW-3, previously installed under the direction of ARCO. One (1) boring, MW-3R, was advanced at the site and converted to a permanent groundwater monitoring well. Soil boring MW-3R was advanced adjacent to monitoring well MW-3, previously installed by ARCO.

Based on SWG's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the TPH DRO concentration identified in the soil sample collected from soil boring MW-3R exceeds the remediation action level of 100 mg/kg. However, based on the results of the TX 1005/1006 analysis, TPH concentrations were not identified above the laboratory method detection limits.

In addition, SWG compared the identified TPH concentrations to the NMED *TPH Screening Guidelines* dated June 24, 2003. Due to the absence of TPH Screening Values for crude oil in this guidance document, SWG compared the identified TPH concentrations to the lower of the published NMED Screening Guidelines (Residential Direct Exposure) for Diesel #2, #3/#6 Fuel Oil, Kerosene and Jet Fuel. Based on the laboratory analytical results, the TPH DRO concentration identified in the soil sample collected from soil boring MW-3R does not exceed the lower of the published NMED Screening Guidelines (Residential Direct Exposure) for Diesel #2, #3/#6 Fuel Oil, Kerosene and Jet Fuel of 880 mg/kg.

Based on the laboratory analytical results, TPH GRO/DRO concentrations were identified in the groundwater sample collected from monitoring well MW-3R; however, the identified concentrations do not exceed the applicable New Mexico Water Quality Control Commission (WQCC) Human Health Standards for Groundwater[1].

Based on SWG's review of the historic and current laboratory analytical results, the primary lines of evidence with regard to natural attenuation of chemicals of concern (COCs) demonstrate a clear trend of stable of decreasing COC concentrations in groundwater over time and with distance away from potential source(s).

Based on the results of this SESI, SWG presents the following recommendations:

- Report the results of the investigation to the New Mexico Energy, Minerals and Natural Resources Department OCD and coordinate site activities through the OCD;
- Based on the COC concentrations identified in the on-site soil and groundwater, the trend of decreasing COC concentrations in groundwater over time, the absence of beneficial use of groundwater in the vicinity of monitoring well MW-3R, the anticipated future use of the site (crude oil pipeline facility) and the direction of groundwater flow, SWG recommends TEPPCO request regulatory closure from the NMEMNRD OCD in accordance with Section VII of the OCD's *Guidelines for Remediation of Leaks, Spills & Releases* dated August 13, 1993;
- If soils or groundwater located on the site are to be disturbed during future excavations or construction activities, proper procedures should be followed with respect to worker health and safety, and any affected soil or groundwater encountered should be properly characterized,

[1] *Human Health Standards for Groundwater* for groundwater with a total dissolved concentration (TDS) of less than 10,000 mg/L.

treated and/or disposed in accordance with applicable local, state or federal regulations.

1.0 INTRODUCTION

1.1 Site Description

The TEPPCO Hobbs Station is located off County Road (CR) 61, south-southwest of Hobbs, New Mexico, referred to hereinafter as the "site" or "subject site". The site consists of approximately 35 acres developed as a crude oil storage facility associated with crude oil pipeline operations.

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.

1.2 Site Background

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. NO DUE TO RELEASE SPILL

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.

SWG's review of the ALPHA TESTING, INC. Environmental Site Investigation (ESI) dated May 23, 2003, identified the following findings:

> *"Based on the results of the ESI, the on-site soils in the vicinity of soil borings MW-1, MW-2, and B-5 appear to be affected by petroleum hydrocarbons.*
>
> *Based on the results of the ESI, the on-site groundwater in the vicinity of monitor wells MW-1, MW-2, MW-3 and MW-4 appears to be affected by petroleum hydrocarbons.*
>
> *ALPHA compared the identified petroleum hydrocarbon constituent concentrations in on-site soils and groundwater to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division's (OCD's) Remediation Action Levels and the New Mexico Water Quality Commission (NMWQC) Ground Water Standards for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.).*
>
> *Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's Remediation Action Levels, the identified TPH DRO concentrations associated with the soil samples collected from soil borings MW-1 and B-5 and the identified ethylbenzene and TPH GRO concentrations associated with the soil sample collected from soil boring MW-2 do not exceed their respective action levels.*

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's Remediation Action Levels, the identified TPH DRO concentration associated with the soil sample collected from soil boring MW-2 exceeds the remediation action level of 100 mg/kg.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the NMWQC Ground Water Standards, the identified toluene, ethylbenzene, xylenes, TPH DRO/GRO and PAH concentrations associated with the groundwater samples collected from monitor wells MW-1, MW-2, MW-3 and MW-4 do not exceed the respective groundwater standards.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the NMWQC Ground Water Standards, the identified benzene concentration associated with the groundwater sample collected from monitor well MW-3 exceeds the groundwater standard of 10 µg/L."

Due to the exceedance of the OCD's *Remediation Action Level* of 100 mg/Kg for Total Petroleum Hydrocarbons (TPH), ALPHA resubmitted the soil sample for polynuclear aromatic hydrocarbon (PAH) analysis. The OCD does not have published cleanup standards for PAHs; therefore, SWG compared the identified PAH concentrations to the New Mexico Environment Department (NMED) Tier 1 *Soil Concentrations Protective Of Groundwater.* Based on SWG's review, the identified PAH concentrations do not exceed the Tier 1 *Soil Concentrations Protective Of Groundwater.*

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 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.

Location?

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

1.3 Scope of Work

Southwest Geoscience (SWG) has conducted a Supplemental Environmental Site Investigation (SESI) at the Hobbs Station based on the results of the ALPHA ESI dated May 23, 2003. The objective of the SESI was to further evaluate the presence of petroleum hydrocarbons in the on-site soil and groundwater in the vicinity of monitoring well MW-3, previously installed under the direction of ARCO. SWG's SESI was conducted in accordance with SWG's Proposal P01051017 dated April 20, 2005 and authorized on June 9, 2005.

1.4 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.

1.5 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 LSI. 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.

1.6 Reliance

This report has been prepared for the exclusive use of TEPPCO, L.P., 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, L.P. and SWG. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, SESI report, and SWG's Agreement. The limitation of liability defined in the agreement is the aggregate limit of SWG's liability to the client.

2.0 SENSITIVE RECEPTOR SURVEY

During the completion of field activities, a sensitive receptor survey, which included a ½-mile radius search for registered water wells and a 500-foot walking survey for unregistered water wells and potential sensitive human and ecological receptors, was performed in the vicinity of the site.

SWG completed a field inventory of registered and unregistered water wells located within 500 feet of the central portion of the site. Additionally, a records inventory of water wells located within a 0.5 mile of the site was completed and included as Appendix C. The results of the water well search conducted during the investigation activities did not identify the beneficial use of groundwater within a one-half mile radius of the site. X DOZENS OF WWS @ SEO WEBSITE.

During the completion of the 500-foot receptor survey, SWG inspected the site vicinity for dwellings, schools, hospitals, day care centers, nursing homes, businesses and subsurface utilities located within 500 feet of the site. In addition, sensitive receptors such as surface water bodies, parks, recreational areas, wildlife sanctuaries and wetlands areas located within 500 feet of the site were evaluated, if present. The site is located within an agricultural rangeland and oil and gas production and storage setting. SWG did not observe the above referenced sensitive receptors in the vicinity of the site.

3.0 FIELD ACTIVITIES

3.1 Borings and Monitoring Wells

SWG's field activities were conducted on July 25, 2005 by Mr. B. Chris Mitchell, an SWG environmental professional. As part of the approved scope of work, one (1) boring, MW-3R, was advanced at the site and converted to a permanent groundwater monitoring well. Soil boring MW-3R was advanced adjacent to monitoring well MW-3, previously installed by ARCO.

Figure 3 is a site plan which indicates the approximate location of the soil boring/monitoring well in relation to pertinent structures and general site boundaries (Appendix A).

Drilling services were performed under the supervision of a State of New Mexico licensed Water Well Driller using an air-rotary drilling rig. An SWG professional was present to observe the drilling procedures. Soil samples were collected using a one foot core barrel sampler. Drilling equipment was cleaned using a high pressure washer prior to beginning the project and before beginning each soil boring. Sampling equipment was cleaned using an Alconox® wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

Soil samples were collected continuously and observed to document soil lithology, color, moisture content and evidence of petroleum hydrocarbon impact. The soil samples were field-screened using a calibrated photoionization detector (PID) to indicate the presence of volatile organic compounds.

The lithology encountered during the advancement of soil boring MW-3R consisted of a brown silty clay from the surface to a depth of approximately 2 feet below grade surface (bgs). A tan caliche was encountered from a depth of 2 feet bgs to a depth of approximately 18 feet bgs. The tan caliche was underlain by a pale pink caliche from a depth of 18.0 to 33.0 feet bgs. A reddish purple quartzite lens was encountered from a depth of approximately 33 to 34 feet bgs. The quartzite lens was underlain by a reddish tan sand from a depth of 34 to 40.0 feet bgs. The sand was underlain by a red sand with fragmented sandstone from a depth of 40.0 bgs to the terminus of the soil boring at a depth of 48.0 feet bgs. Detailed lithologic descriptions are presented on the soil boring logs included in Appendix D.

Groundwater was encountered at a depth of approximately 37 feet bgs during the advancement of monitoring well MW-3R.

The groundwater flow direction and the depth to shallow groundwater likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater flow direction beneath the site cannot be determined. Based on field observations, the general groundwater flow direction appears to follow topography, which grades toward the southwest.

Petroleum odors and PID readings ranging up to 1,342 parts per million (ppm) were detected in the soil samples collected from soil boring MW-3R. The highest PID reading was observed in the soil sample collected from a depth of 36 to 37 feet bgs (capillary fringe) in soil boring MW-3R. The soil boring log is included in Appendix D.

Subsequent to advancement, soil boring MW-3R was converted to a permanent monitoring well. The monitoring well was completed using the following methodology:

- Installation of 15.0 feet of 2-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap;
- Installation of 33.0 feet of 2-inch diameter, threaded flush joint PVC riser pipe to just above the ground surface;
- Addition of a pre-sieved 20/40 grade annular silica sand pack from the bottom of the boring to at least 0.5-feet above the top of the well screen;
- Addition of a hydrated bentonite seal above the sand pack filter zone;
- Addition of grout to the surface; and,
- Installation of an above grade monitoring well cover with locking well cap.

Monitoring well construction details are presented on the soil boring log for this monitoring well which is included in Appendix D.

The monitoring well was developed by surging and removing groundwater with a new, disposable, polypropylene bailer until the groundwater was relatively free of fine-grained sediment. Approximately twenty-five gallons of groundwater was removed from the monitoring well during the development activities.

3.2 Soil and Groundwater Sampling

SWG's soil sampling program involved submitting one soil sample from the soil boring for laboratory analysis. The soil sample was collected from the zone exhibiting the highest PID reading, which was the capillary fringe zone. Soil sample intervals are presented along with the soil sample analytical results in Table 1 (Appendix B) and included on the boring log in Appendix D.

A groundwater sample was collected from the monitoring well utilizing a dedicated disposable bailer.

Soil and groundwater samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler, which was secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Severn Trent's analytical laboratory in Corpus Christi, Texas for normal turnaround.

4.0 LABORATORY ANALYTICAL METHODS

The soil samples collected from each boring and the groundwater samples collected from the monitoring wells were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 method #8021B and TPH DRO/GRO utilizing EPA method SW-846# 5030B/8015Bmodified. In addition, the soil sample was analyzed utilizing Texas Commission on Environmental Quality (TCEQ) Method TX1005/1006 to speciate the identified petroleum hydrocarbons.

Laboratory results are summarized in the tables included in Appendix B. The executed chain-of-custody form and laboratory data sheets are provided in Appendix E.

5.0 DATA EVALUATION

5.1 Soil Samples

SWG compared the petroleum hydrocarbon constituent concentrations identified in the on-site soils to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division's (OCD's) *Remediation Action Levels* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.) in accordance with the OCD's *Guidelines for Remediation of Leaks, Spills and Releases.*

In addition, SWG analyzed the soil sample utilizing TCEQ Method TX1005/1006 to evaluate the aliphatic and aromatic fractions associated with the identified TPH concentration. The inverse weighted average (TPH Mass Fractions) of the aliphatic and aromatic fractions derived from the TPH Method TX 1006 analysis are typically utilized to establish cleanup values for the complete TPH mixture (i.e., the whole product), for each applicable exposure pathway. However, the TX 1005/1006 analysis did not identify petroleum hydrocarbon concentrations above the laboratory method detection limits.

X DNA

- Not in NM

Based on the laboratory analytical results, benzene, toluene and xylenes concentrations were not identified in the soil sample collected from soil boring MW-3R above the laboratory method detection limits.

Based on SWG's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified ethylbenzene concentration associated with the soil sample collected from soil boring MW-3R does not exceed the remediation action level of 50 mg/kg for Total BTEX.

Based on SWG's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified TPH DRO concentration associated with the soil sample collected from soil boring MW-3R exceeds the remediation action level of 100 mg/kg. However, based on the results of the TX 1005/1006 analysis, TPH concentrations were not identified above the laboratory method detection limits.

In addition, SWG compared the identified TPH concentrations to the New Mexico Environmental Department *TPH Screening Guidelines* dated June 24, 2003. Due to the absence of TPH Screening Values for crude oil, SWG compared the identified TPH concentrations to the lower of the published NMED Screening Guidelines (Residential Direct Exposure) for Diesel #2, #3/#6 Fuel Oil, Kerosene and Jet Fuel. Based on the laboratory analytical results, the TPH DRO concentration identified in the soil sample collected from soil boring MW-3R does not exceed the lower of the published NMED Screening Guidelines (Residential Direct Exposure) for Diesel #2, #3/#6 Fuel Oil, Kerosene and Jet Fuel of 880 mg/kg.

Crude Not Product

The results of the soil sample analyses are summarized in Table 1, included in Appendix B.

5.2 Groundwater Samples

SWG compared the petroleum hydrocarbon constituent concentrations identified in on-site groundwater to the New Mexico Water Quality Commission (NMWQC) *Ground Water Standards* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.) in accordance with the *Guidelines for Remediation of Leaks, Spills and Releases.*

Based on the laboratory analytical results, benzene, toluene, ethylbenzene and/or xylenes concentrations were not identified in the groundwater sample collected from monitoring well MW-3R above the laboratory method detection limits.

Based on the laboratory analytical results, TPH GRO/DRO concentrations were identified in the groundwater sample collected from monitoring well MW-3R; however, the identified concentrations do not exceed the applicable NMWQC Groundwater Water Standards.

The results of the groundwater sample analyses are summarized in Table 2 included in Appendix B.

6.0 MONITORED NATURAL ATTENUATION EVALUATION

X ΔNA

SWG conducted a natural attenuation screening to evaluate the site for remediation by monitored natural attenuation. Natural attenuation of petroleum hydrocarbons is recognized as a viable remedial alternative where favorable subsurface conditions prevail. The ASTM guidance document, Standard Guide for Remediation of Ground Water by Natural Attenuation at Petroleum Release Sites, was utilized as the standard for evaluating natural attenuation.

Natural attenuation is the process by which contaminants in the environment are degraded, or reduced in concentration by various means including volatilization, adsorption, desorption, dispersion, dilution, diffusion, biodegradation, and abiotic degradation. Natural attenuation is achieved when one or more of these processes brings about a reduction in the total mass, toxicity, mobility, volume, or concentration of a contaminant. The presence or absence of key indicator parameters will indicate the degree to which (if any) natural attenuation may occur. Monitored natural attenuation is the measurement or analysis of these key indicator parameters over time to establish trends that document that a reduction in total mass, toxicity, mobility, volume, or concentration of a contaminant is taking place. Several of the indicator parameters such as Oxygen, Conductivity, pH, Temperature, and Oxidation-Reduction Potential can be measured in the field. The remaining indicator parameters such as Alkalinity, Nitrate, Ferrous Iron, Ferric Iron, Carbon Dioxide, Sulfate and Methane are submitted to the laboratory for analysis.

Primary Lines of Evidence
Primary lines of evidence consist of historical groundwater data that demonstrate a clear trend of stable of decreasing COC concentrations in groundwater over time and with distance away from the source at appropriate monitoring or sampling points.

X- SECTION, MAP

Based on SWG's review of the current and historical groundwater data, COC concentrations exhibit a decreasing trend in groundwater samples collected during sample events conducted in 2003 to 2005.

7.0 FINDINGS AND RECOMMENDATIONS

SWG's field activities were conducted on July 25, 2005 by Mr. B. Chris Mitchell, an SWG environmental professional. As part of the approved scope of work, one (1) boring was advanced and converted to a permanent groundwater monitoring well. Boring MW-3R was advanced adjacent to monitoring well MW-3, previously installed by ARCO.

Based on SWG's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified ethylbenzene concentration associated with the soil sample collected from soil boring MW-3R does not exceed the remediation action level of 50 mg/kg for Total BTEX.

Based on SWG's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified TPH DRO concentration associated with the soil sample collected from soil boring MW-3R exceeds the remediation action level of 100 mg/kg. However, based on the results of the TX 1005/1006 analysis, TPH concentrations were not identified above the laboratory method detection limits.

In addition, SWG compared the identified TPH concentrations to the New Mexico Environmental Department *TPH Screening Guidelines* dated June 24, 2003. Due to the absence of TPH Screening Values for crude oil, SWG compared the identified TPH concentrations to the lower of the published NMED Screening Guidelines (Residential Direct Exposure) for Diesel #2, #3/#6 Fuel Oil, Kerosene and Jet Fuel. Based on the laboratory analytical results, the TPH DRO concentration identified in the soil sample collected from soil boring MW-3R does not exceed the lower of the published NMED Screening Guidelines (Residential Direct Exposure) for Diesel #2, #3/#6 Fuel Oil, Kerosene and Jet Fuel of 880 mg/kg.

Based on the laboratory analytical results, TPH GRO/DRO concentrations were identified in the groundwater sample collected from monitoring well MW-3R; however, the identified concentrations do not exceed the applicable NMWQC Groundwater Water Standards.

Based on SWG's review of the historic and current laboratory analytical results, the primary lines of evidence with regard to natural attenuation of chemicals of concern (COCs) demonstrate a clear trend of stable of decreasing COC concentrations in groundwater over time and with distance away from potential source(s).

Based on the results of this SESI, SWG presents the following recommendations:

- Report the results of the investigation to the New Mexico Energy, Minerals and Natural Resources Department OCD and coordinate site activities through the OCD;

- Based on the COC concentrations identified in the on-site soil and groundwater, the trend of decreasing COC concentrations in groundwater over time, the absence of beneficial use of groundwater in the vicinity of monitoring well MW-3R, the anticipated future use of the site (crude oil pipeline facility) and the direction of groundwater flow, SWG recommends TEPPCO request regulatory closure from the NMEMNRD OCD in accordance with Section VII of the OCD's *Guidelines for Remediation of Leaks, Spills & Releases* dated August 13, 1993;

- If soils or groundwater located on the site are to be disturbed during future excavations or construction activities, proper procedures should be followed with respect to worker health and safety, and any affected soil or groundwater encountered should be properly characterized, treated and/or disposed in accordance with applicable local, state or federal regulations.

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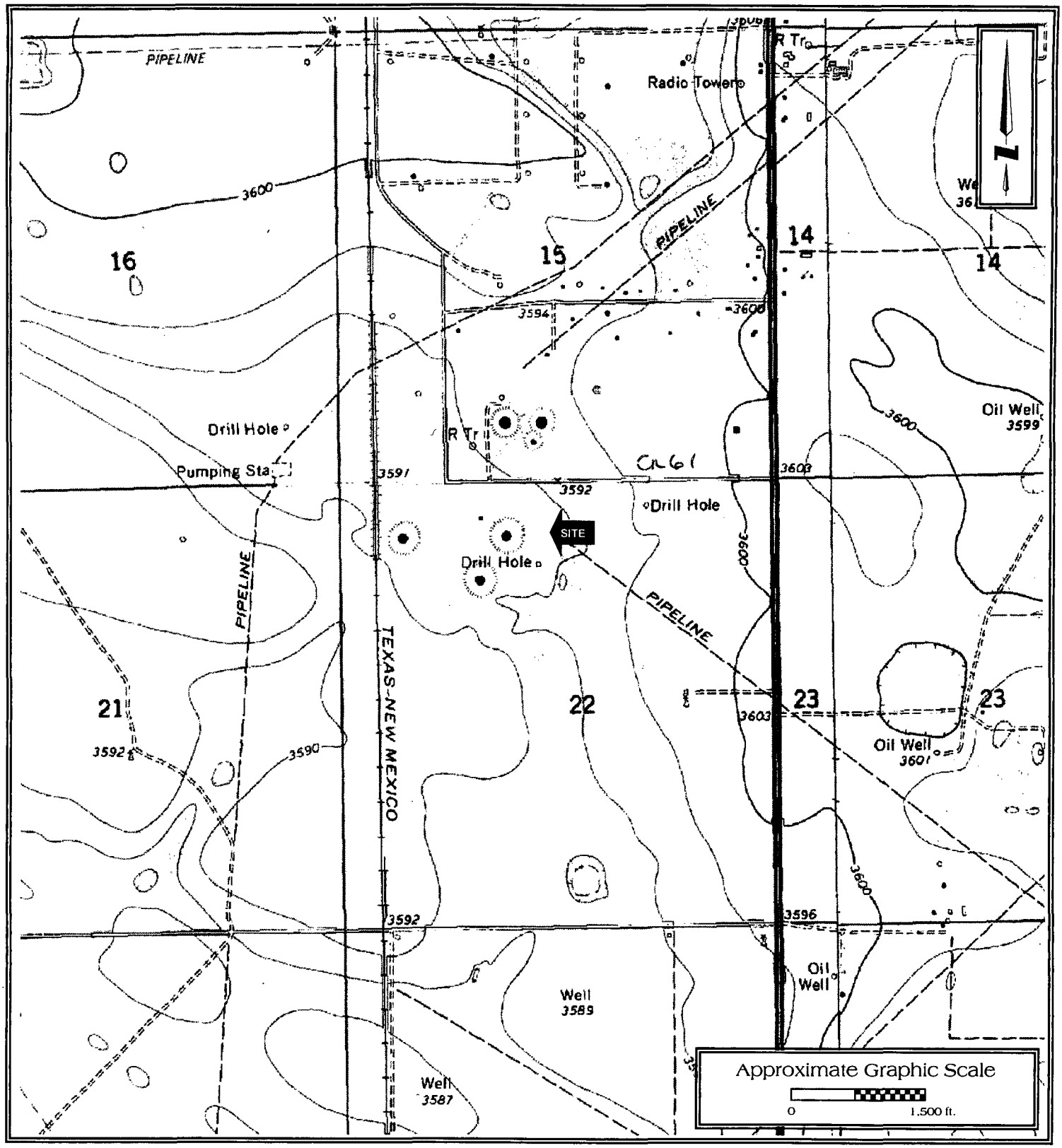
APPENDIX A

Figures



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

SWG Project No. 0105013

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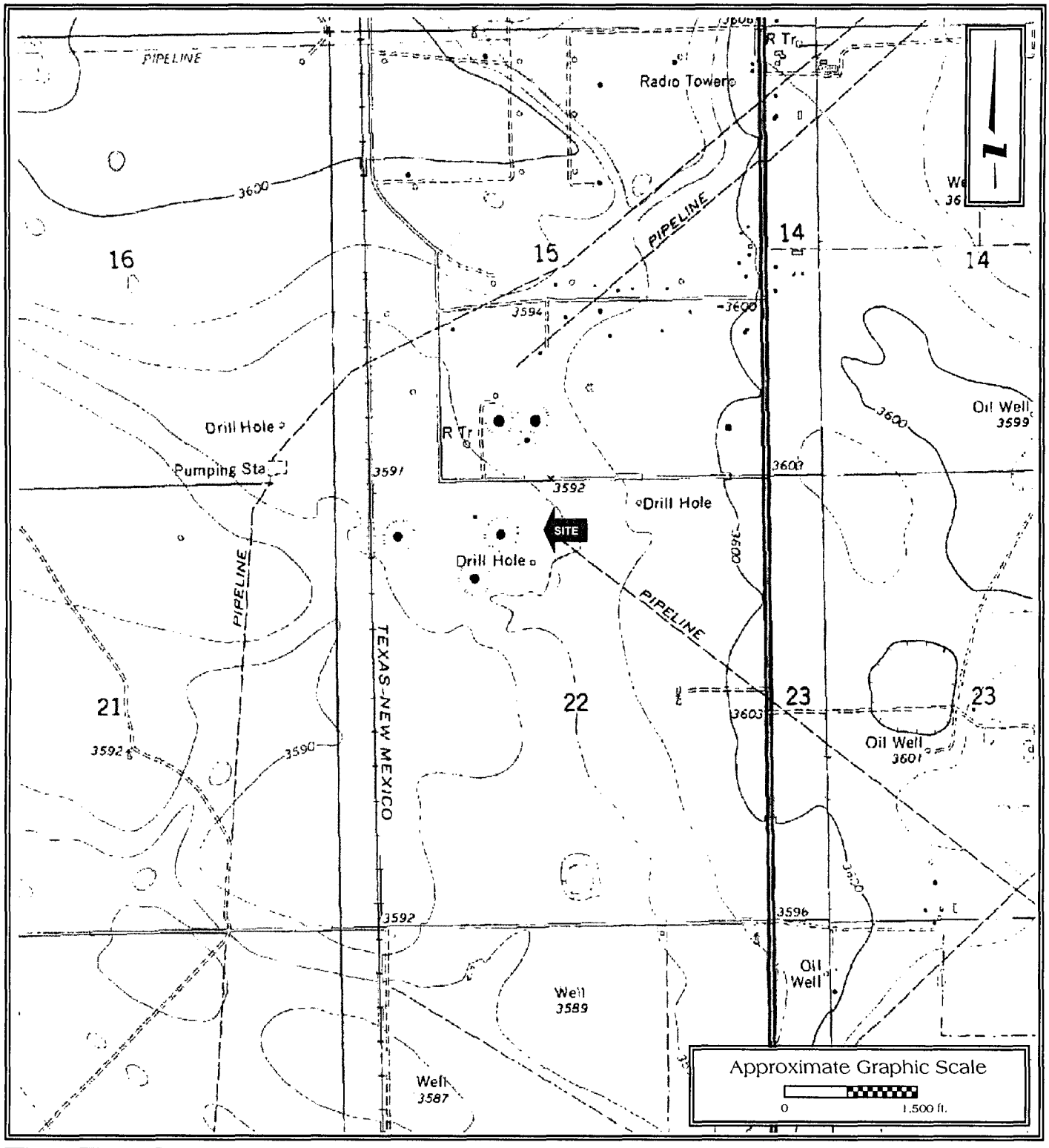
FIGURE 1
Topographic Map
Hobbs, NM Quadrangle
Contour Interval - 10 Feet
1979



Supplemental LSI
TEPPCO Hobbs Station
Off County Road 61
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Hobbs, Lea County, New Mexico

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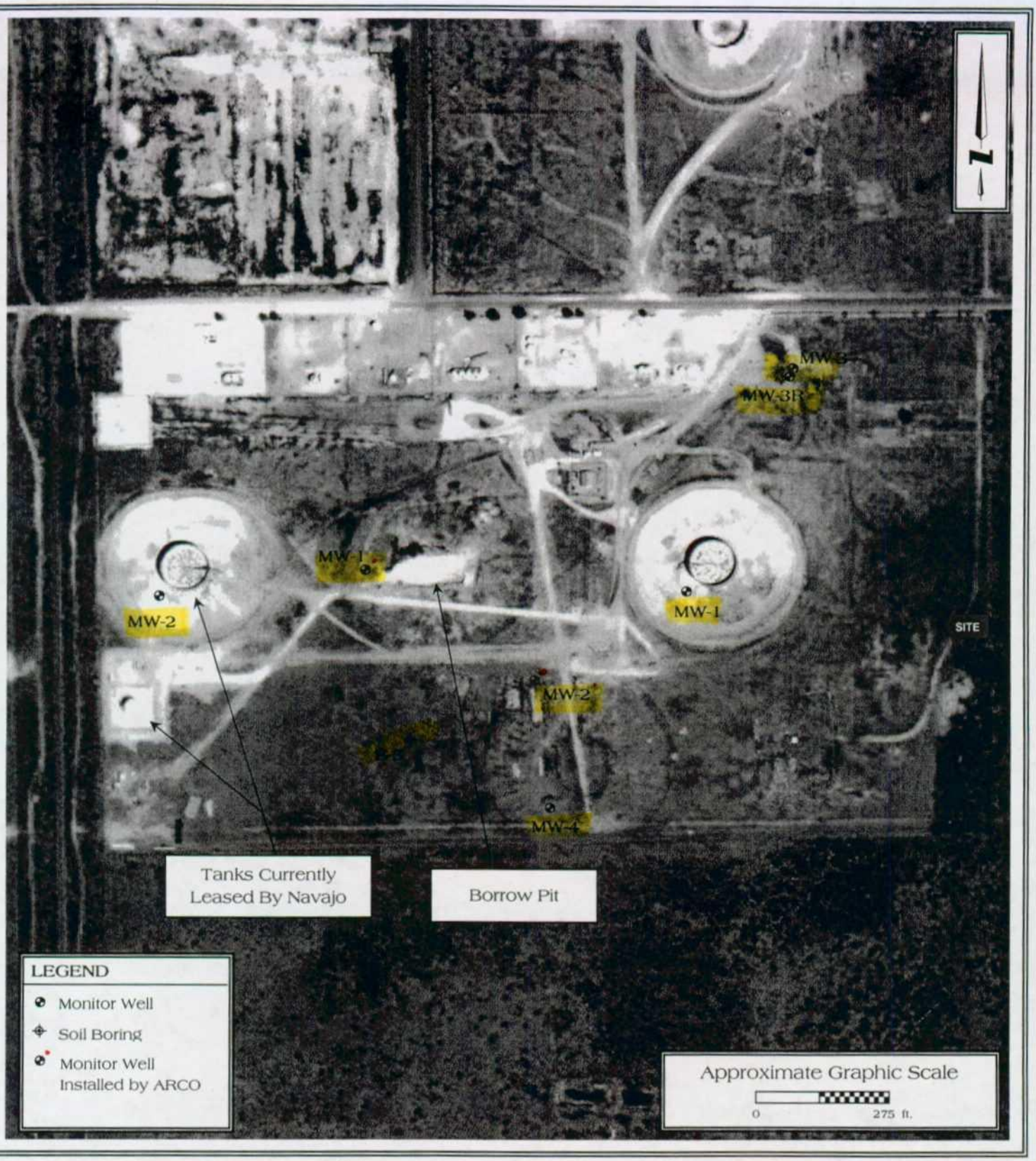
Southwest

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



Supplemental LSI

TEPPCO Hobbs Station

Off County Road 61

N 32° 39.135'; W 103° 8.373'

Hobbs, Lea County, New Mexico

SWG Project No. 0105013

NEED BASE-MAP IN ADDITION TO PHOTO

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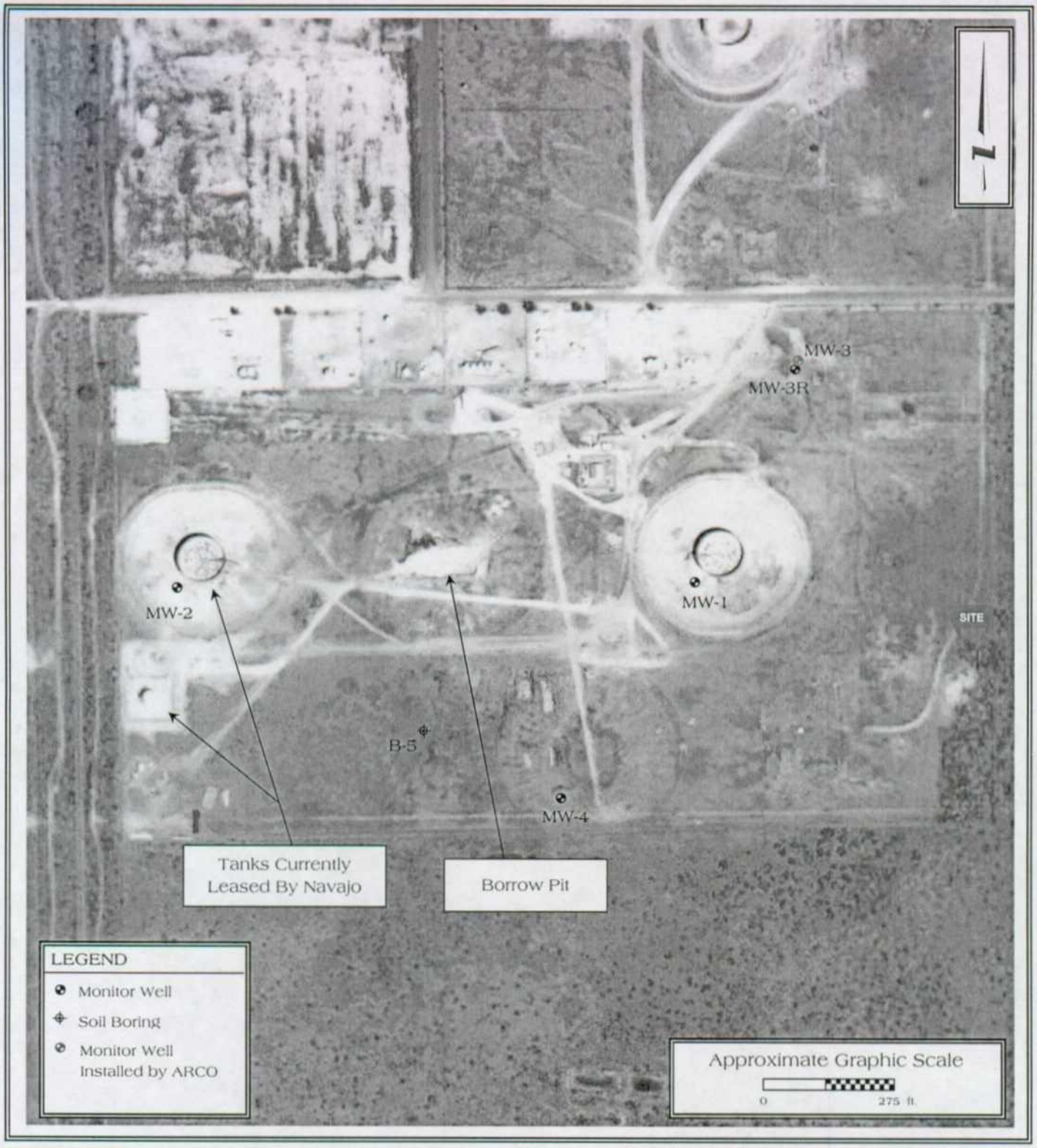
FIGURE 2

Site Vicinity Map

2002 Aerial Photograph

Source: USGS



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TEPPCO Hobbs Station
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N 32° 39.135'; W 103° 8.373'
Hobbs, Lea County, New Mexico

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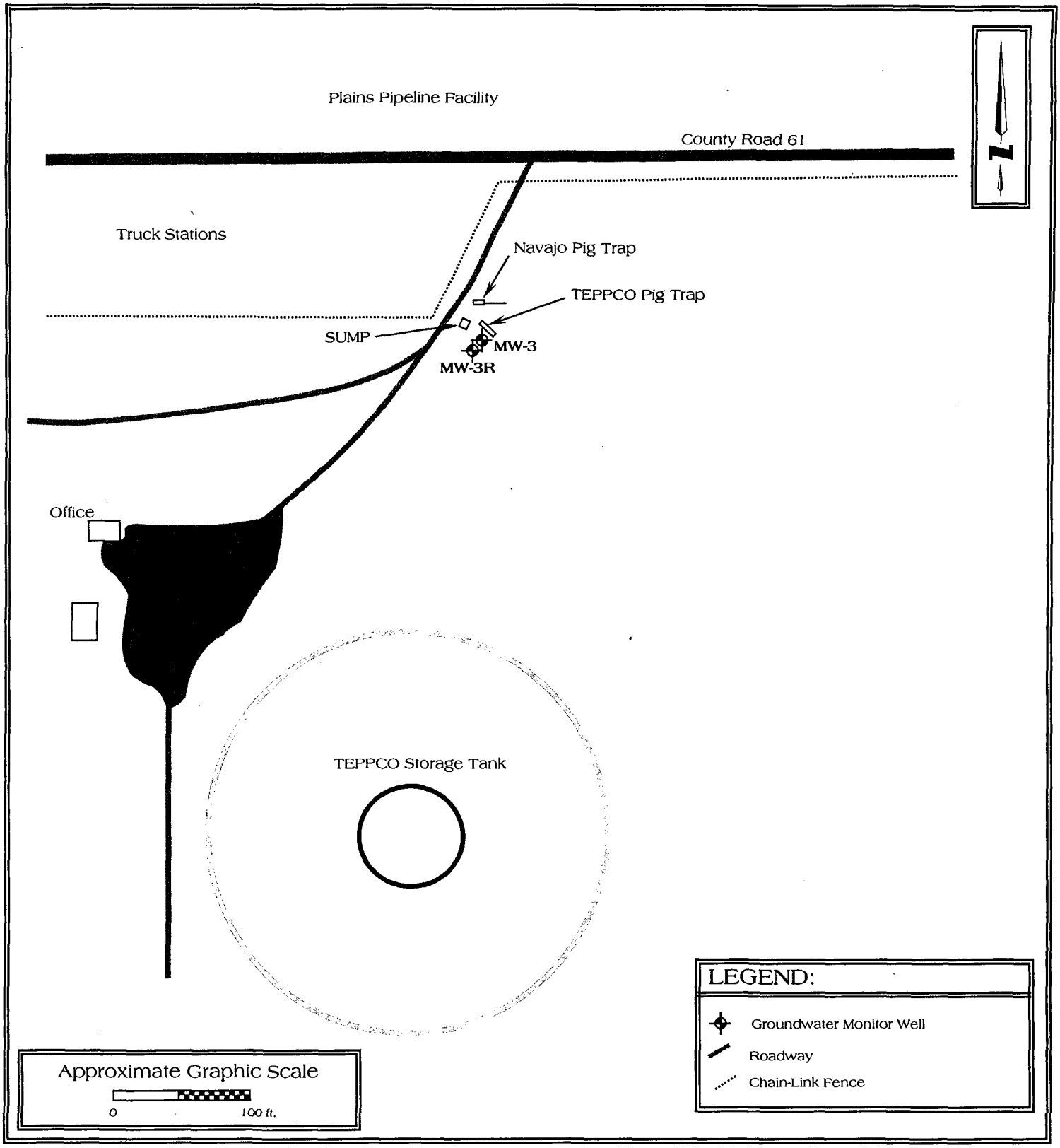
FIGURE 2
Site Vicinity Map
2002 Aerial Photograph
Source: USGS



Supplemental LSI

TEPPCO Hobbs Station

Off County Road 61

N 32° 39.135'; W 103° 8.373'

Hobbs, Lea County, New Mexico

SWG Project No. 0105013

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FIGURE 3

Site Plan

ENVIRONMENTAL SITE INVESTIGATION
on
HOBBS STATION
Off County Road 61
Hobbs, New Mexico

ALPHA Project No. E03211
May 23, 2003

Prepared for:

TEPPCO Crude Oil, LP
c/o TEPPCO, LP
2929 Allen Parkway
Houston, Texas 77019

PREPARED BY:

B. Chris Mitchell, P.G.
Environmental Department Manager

Jim L. Hillhouse
Senior Technical Review

ALPHA TESTING, INC.
2209 Wisconsin St., Suite 100
Dallas, Texas 75229
Phone: (972) 620-8911
Fax: (972) 620-1302

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EXECUTIVE SUMMARY

ALPHA TESTING, INC. (ALPHA) has conducted an Environmental Site Investigation (ESI) at the site located south of County Road 61 to the west of State Highway 18 in Hobbs, New Mexico. ALPHA's scope of work is based on the Modified Environmental Site Assessment conducted by HBC Engineering, Inc. (HBC) and the information provided by TEPPCO Crude Oil, LP (TEPPCO).

The objective of the ESI 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.

ALPHA's ESI was conducted on March 19 and 20, 2003, by an ALPHA environmental professional. Four soil borings (MW-1, MW-2, MW-4 & B-5) were advanced on-site during the completion of this ESI. Monitor well MW-3 had been previously installed by others at the station under the direction of ARCO. Soil boring MW-1was advanced in a topographically down-gradient position to the southwest of the 55,000 bbls. crude oil storage tank currently operated by TEPPCO. Soil boring MW-2 was advanced in a topographically down-gradient position to the southwest of the 55,000 bbls. crude oil storage tank currently operated by Navajo Pipeline Company. Soil boring MW-4 was advanced on the southern portion of the site in the vicinity of the former on-site 55,000 bbls. crude oil storage tank, and soil boring B-5 was advanced in the vicinity of the small volume storage tank formerly located in the central portion of the Site.

Based on the results of the ESI, the on-site soils in the vicinity of soil borings MW-1, MW-2, and B-5 appear to be affected by petroleum hydrocarbons.

Based on the results of the ESI, the on-site groundwater in the vicinity of monitor wells MW-1, MW-2, MW-3 and MW-4 appears to be affected by petroleum hydrocarbons.

ALPHA compared the identified petroleum hydrocarbon constituent concentrations in on-site soils and groundwater to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division's (OCD's) *Remediation Action Levels* and the New Mexico Water Quality Commission (NMWQC) *Ground Water Standards* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.).

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified TPH DRO concentrations associated with the soil samples collected from soil borings MW-1 and B-5 and the identified ethylbenzene and TPH GRO concentrations associated with the soil sample collected from soil boring MW-2 do not exceed their respective action levels.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified TPH DRO concentration associated with the soil sample collected from soil boring MW-2 exceeds the remediation action level of 100 mg/kg.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the NMWQC *Ground Water Standards*, the identified toluene, ethylbenzene, xylenes, TPH DRO/GRO and PAH concentrations associated with the groundwater samples collected from monitor wells MW-1, MW-2, MW-3 and MW-4 do not exceed the respective groundwater standards.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the NMWQC *Ground Water Standards*, the identified benzene concentration associated with the groundwater sample collected from monitor well MW-3 exceeds the groundwater standard of 10 µg/kg.

ALPHA recommends that additional subsurface investigation activities be conducted to further evaluate the magnitude and extent of petroleum hydrocarbon affected soil and groundwater at the site.

The release of oilfield wastes or products should be reported to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division in accordance with Section 116 of 19.15.3 NMAC.

Based on the laboratory results of the ESI, the soil cuttings and/or groundwater generated during the installation and sampling of soil borings/monitor wells MW-1, MW-2, MW-3, MW-4 and B-5 should be characterized, treated and/or disposed in accordance with applicable municipal, state, and federal regulations.

If affected soil located on the site is to be disturbed during future excavations, proper procedures should be followed with respect to worker health and safety, and any affected soil encountered should be properly handled and/or disposed in accordance with local and state regulations.

ENVIRONMENTAL SITE INVESITGATION
Hobbs Station
Off County Road 61
Hobbs, New Mexico

1.0 INTRODUCTION AND BACKGROUND

ALPHA TESTING, INC. (ALPHA) has conducted an Environmental Site Investigation (ESI) at the site located south of County Road 61 to the west of State Highway 18 in Hobbs, New Mexico. ALPHA's scope of work is based on the Modified Environmental Site Assessment conducted by HBC Engineering, Inc. (HBC) and the information provided by TEPPCO Crude Oil, LP (TEPPCO).

The TEPPCO Hobbs Station consists of approximately 35 acres. The Hobbs Station is developed as a crude oil storage facility associated with crude oil pipeline operations. An existing monitor well labeled MW-3 was identified during the completion of the Modified Environmental Site Assessment conducted by HBC on the northeastern portion of the facility. As a result of the Modified Environmental Site Assessment completed by HBC, potential areas of concern included each of the two current on-site crude oil storage tanks owned by TEPPCO and the three former crude oil storage tank locations historically associated with the facility.

The objective of the ESI 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 identified potential areas of concern associated with the Site.

ALPHA has observed the degree of care and skill generally exercised by the profession under similar circumstances and conditions in performing this environmental exploration. Observations and findings developed by ALPHA must be considered as opinions and conclusions based solely on the conditions which were observed during the site investigation. No warranties or representations, expressed or implied, are made as to the condition of the site beyond that observed by ALPHA during its site investigation.

This study and report have been prepared on behalf of and for the reliance of TEPPCO Crude Oil, LP solely for use in an environmental evaluation of the site and limited to the scope of work outlined in this report. The scope of services performed in execution of this study may not be appropriate to satisfy the needs of other users, and any use or re-use of this document regarding the findings, conclusions, or recommendations will be at the risk of the said user.

2.0 FIELD EXPLORATION

2.1 Advancement Of Soil Borings

ALPHA's ESI was conducted on March 19 and 20, 2003, by an ALPHA environmental professional. Four soil borings (MW-1, MW-2, MW-4 & B-5) were advanced on-site during the completion of this ESI. Monitor well MW-3 had been previously installed at the station by others under the direction of ARCO. Soil boring MW-1was advanced in a topographically down-gradient position to the southwest of the 55,000 bbls. crude oil storage tank currently operated by TEPPCO. Soil boring MW-2 was advanced in a topographically down-gradient position to the southwest of the 55,000 bbls. crude oil storage tank currently operated by Navajo Pipeline Company. Soil boring MW-4 was advanced on the southern portion of the site in the vicinity of the former on-site 55,000 bbls. crude oil storage tank, and soil boring B-5 was advanced in the vicinity of the small volume storage tank formerly located in the central portion of the site. Figure 1 shows the boundaries of the site and surface topography on the USGS topographic quadrangle map of Hobbs, New Mexico. Figure 2 is a site plan which indicates the location of the soil borings advanced on-site in relation to the pertinent structures and site boundaries.

Each of the soil borings were advanced using a truck-mounted air rotary drilling rig under the supervision of a State of New Mexico licensed water well driller. Soil samples were collected continuously utilizing a core barrel sampler. Sampling and drilling equipment were decontaminated by high pressure cleaning prior to commencement of the project and between the advancement of each soil boring.

The lithology encountered during the advancement of soil boring MW-1 consisted of clayey sand with caliche from the surface to a depth of 3.0 feet below grade surface (bgs). A pale pinkish white caliche was encountered from a depth of 3.0 to 30.0 feet bgs. A brownish red sand was encountered from a depth of 30.0 to 35.0 feet bgs. The sand was underlain by a brownish red sand with fragmented sandstone from a depth of 35.0 bgs to the terminus of the soil boring at a depth of 45.0 feet bgs. The lithologies encountered during the completion of soil borings MW-2, MW-4 and B-5 were similar to that encountered during the installation of soil boring MW-1, with the exception of quartzite encountered in soil borings MW-2 and MW-4.

2.2 Field Screening of Soil Borings

During the advancement of soil borings on-site, soil samples were collected continuously and examined to document lithology, color, moisture content and visual or olfactory evidence of impairment. In addition, headspace analyses was conducted by placing a composite soil

sample collected from each one-foot interval into a plastic ziplock bag. The plastic bag was sealed and then placed in a warm area to promote volatilization. The air above the sample, the headspace, was then evaluated using a photoionization detector (PID) capable of detecting volatile organic compounds.

ALPHA did detect olfactory evidence indicating the presence of VOCs in association with the soil samples collected from soil boring MW-2. Results of the headspace analyses for the soil samples collected from soil boring MW-2 ranged from non-detect to 38 parts per million (ppm). The highest headspace reading from MW-2 was identified in the soil sample collected from the vadose zone at a depth of 34 to 35 feet bgs. The headspace results should be considered a qualitative field measurement and should not be interpreted as a quantitative analysis. The boring logs providing soil descriptions and headspace analyses readings are presented in Appendix A.

2.3 Installation of Monitor Wells

During the completion of ESI activities, groundwater was encountered at an approximate depth of 36 feet bgs during the installation of soil boring MW-1, 35 feet bgs during the installation of soil boring MW-2, and 37 feet bgs during the installation of soil boring MW-4. Subsequent to advancement, soil borings MW-1, MW-2 and MW-4 were converted to groundwater monitor wells. The monitor wells were completed using the following methodology:

- Installation of approximately 15.0 feet of 2-inch inside diameter, 0.010-inch machine slotted polyvinyl chloride (PVC) well screen assembly with a threaded bottom cap;
- Installation of 2-inch inside diameter, threaded, flush joint PVC riser pipe to the surface;
- Addition of a graded 20/40 annular sand pack from the bottom of the boring to approximately 2 feet above the top of the well screen;
- Addition of 2.5 feet of bentonite seal;
- Addition of cement grout to the annular space to the ground surface; and,
- Installation of an 8-inch diameter circular, flush mount or above grade monitor well cover with locking well cap.

Construction details associated with each of the monitor wells are presented on the soil boring logs for monitor wells MW-1, MW-2 and MW-4 which are included in Appendix A.

Subsequent to completion, each monitor well was developed by surging and removing groundwater utilizing a dedicated disposable bailer until fluids were generally free of fine-grained sediment.

Soil cuttings and groundwater generated during the advancement of the on-site soil borings, the development of monitor wells MW-1, MW-2 and MW-4 and the purging of monitor well MW-3 were contained within DOT approved, labeled 55-gallon drums. The soil cuttings and development water were stored temporarily on-site pending receipt of laboratory analyses.

2.4 Soil & Groundwater Sampling Program

ALPHA's soil and groundwater sampling program consisted of the following:

Soil borings/Monitor Wells MW-1, MW-2, MW-4

- Collection of one soil sample from each of the soil borings from the zone exhibiting the highest concentration of VOCs based on visual, olfactory or PID evidence, from the capillary fringe zone, from a change in lithology or from the bottom of the boring; and,

- Collection of one groundwater sample utilizing a dedicated disposable bailer and/or low-flow sampling equipment, subsequent to purging activities.

Monitor Well MW-3

- Collection of one groundwater sample utilizing a dedicated disposable bailer and/or low-flow sampling equipment, subsequent to purging activities of the existing on-site monitor well.

Soil boring B-5

- Collection of one soil sample from the soil boring from the zone exhibiting the highest concentration of VOCs based on visual, olfactory or PID evidence, from the capillary fringe zone, from a change in lithology or from the bottom of the boring.

Soil and groundwater samples were collected in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler which was secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to ERMI Environmental Laboratories, Inc. in Allen, Texas.

3.0 LABORATORY ANALYTICAL PROGRAM AND RESULTS

3.1 Soil

The soil samples collected from the soil borings were analyzed for total petroleum hydrocarbons (TPH) utilizing EPA Method SW-846 #0015 Diesel Range Organics (DRO)/Gasoline Range Organics (GRO) and benzene, toluene, ethylbenzene and xylenes (BTEX) utilizing EPA Method SW-846 #8021. In addition, the soil sample which exhibited the highest concentration of TPH was analyzed for polynuclear aromatic hydrocarbons (PAHs) utilizing EPA Method SW-846 #8310.

Laboratory results associated with the soil sample collected from the Site are summarized in the tables below:

TABLE 3.1A
SOIL SAMPLE ANALYSES

Sample I.D.	Date	Sample Depth (feet)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl benzene (µg/kg)	Xylenes (µg/kg)	TOTAL BTEX (µg/kg)	TPH DRO (mg/kg)	TPH GRO (mg/kg)
New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10,000	-	-	-	50,000	100	100
MW-1	March 19, 2003	35-36	<10.0	<10.0	<10.0	<30.0	<60.0	5.13	<1.0
MW-2	March 19, 2003	34-35	<10.0	<10.0	57.9	<10.0	57.9	**621**	12.6
MW-4	March 20, 2003	36-37	<10.0	<10.0	<10.0	<30.0	<60.0	<2.9	<1.0
B-5	March 19, 2003	14-15	<10.0	<10.0	<10.0	<30.0	<60.0	5.77	<1.0

µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram

TABLE 3.1B
SOIL SAMPLE ANALYSES

Sample I.D.	Date	PAH	Observed Concentration (µg/kg)
MW-2 (34-35)	March 19, 2003	Acenaphthene	489
		Acenaphthylene	291
		Anthracene	193
		Benzo(a)anthracene	<41.7
		Benzo(a)pyrene	<41.7
		Benzo(b)fluoranthene	51.2
		Benzo(g,h,i)perylene	48.3
		Benzo(k)fluoranthene	105
		Chrysene	102
		Dibenzo(a,h)anthracene	28.8
		Fluoranthene	570
		Fluorene	<8.33
		Indeno(1,2,3-cd)pyrene	244
		Naphthalene	<41.7
		Phenanthrene	296
		Pyrene	23.0

µg/kg = micrograms per kilogram

3.2 Groundwater

The groundwater samples collected from the monitor wells were analyzed for total petroleum hydrocarbons (TPH) utilizing EPA Method SW-846 #0015 DRO/GRO and BTEX utilizing EPA Method SW-846 #8021. In addition, the groundwater sample which exhibited the highest concentration of TPH was analyzed for PAHs utilizing EPA Method SW-846 #8310.

Laboratory results associated with the groundwater samples collected from the site are summarized in the tables below:

TABLE 3.2A
GROUNDWATER SAMPLE ANALYSES

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Xylenes (µg/L)	TPH DRO (mg/L)	TPH GRO (mg/L)
New Mexico Water Quality Control Commission Ground Water Standards		10	750	750	620	-	-
MW-1	March 20, 2003	<1.0	<1.0	<1.0	<3.0	2.44	<0.05
MW-2	March 20, 2003	<1.0	<1.0	<1.0	<3.0	0.493	<0.05
MW-3	March 20, 2003	**63.7**	2.49	197	6.23	18.0	1.95
MW-4	March 20, 2003	<1.0	<1.0	<1.0	<3.0	0.829	<0.05

µg/L = micrograms per liter
mg/L = milligrams per liter

TABLE 3.2B
GROUNDWATER SAMPLE ANALYSES

Sample I.D.	Date	PAH	Observed Concentration (µg/L)	New Mexico Water Quality Control Commission Ground Water Standards
MW-3	March 20, 2003	Acenaphthene	<2.5	-
		Acenaphthylene	4.85	-
		Anthracene	15.0	-
		Benzo(a)anthracene	0.290	-
		Benzo(a)pyrene	0.394	0.7
		Benzo(b)fluoranthene	<0.01	-
		Benzo(g,h,i)perylene	0.545	-
		Benzo(k)fluoranthene	1.32	-
		Chrysene	1.7	-
		Dibenzo(a,h)anthracene	0.623	-
		Fluoranthene	16.1	-
		Fluorene	9.18	-
		Indeno(1,2,3-cd)pyrene	2.1	-
		Naphthalene	29.0	30
		Phenanthrene	7.67	-
		Pyrene	0.506	-

µg/L = micrograms per liter

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Data Evaluation

4.1.1 Soil

The laboratory analyses of the soil sample collected from soil boring MW-1 did not indicate BTEX or TPH GRO concentrations above the method detection limits; however, the laboratory analysis did indicate a TPH DRO concentration of 5.13 mg/kg.

The laboratory analyses of the soil sample collected from soil boring MW-2 did not indicate benzene, toluene or xylenes concentrations above the method detection limits; however, the laboratory analysis did indicate a ethylbenzene concentration of 57.9 µg/kg, a TPH DRO concentration of 621 mg/kg and a TPH GRO concentration of 12.6 mg/kg. In addition, the laboratory analysis of the soil sample collected from soil boring MW-2 exhibited PAHs including an acenaphthene concentration of 489 µg/kg, an acenaphthylene concentration of 291 µg/kg, an anthracene concentration of 193 µg/kg, a benzo(b)fluoranthene concentration of 51.2 µg/kg, a benzo(g,h,i)perylene concentration of 48.3 µg/kg, a benzo(k)fluoranthene concentration of 105 µg/kg, a chrysene concentration of 102 µg/kg, a dibenzo(a,h)anthracene concentration of 28.8 µg/kg, a fluoranthene concentration of 570 µg/kg, an indeno(1,2,3-cd)pyrene concentration of 244 µg/kg, a phenanthrene concentration of 296 µg/kg and a pyrene concentration of 23.0 µg/kg.

The laboratory analyses of the soil sample collected from soil boring MW-4 did not indicate BTEX or TPH DRO/GRO concentrations above the method detection limits.

The laboratory analyses of the soil sample collected from soil boring B-5 did not indicate BTEX or TPH GRO concentrations above the detection limits of the laboratory equipment; however, the laboratory analysis did indicate a TPH DRO concentration of 5.77 mg/kg.

Based on the results of the ESI, the on-site soils in the vicinity of soil borings MW-1, MW-2, and B-5 appear to be affected by petroleum hydrocarbons.

ALPHA compared the identified petroleum hydrocarbon constituent concentrations in on-site soils to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division's (OCD's) *Remediation Action Levels* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.).

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified TPH DRO

concentrations associated with the soil samples collected from soil borings MW-1 and B-5 and the identified ethylbenzene and TPH GRO concentrations associated with the soil sample collected from soil boring MW-2 do not exceed their respective action levels.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the OCD's *Remediation Action Levels*, the identified TPH DRO concentration associated with the soil sample collected from soil boring MW-2 exceeds the remediation action level of 100 mg/kg.

4.1.2 Groundwater

The laboratory analyses of the groundwater sample collected from monitor well MW-1 did not indicate BTEX or TPH GRO concentrations above the method detection limits; however, the laboratory analysis did indicate a TPH DRO concentration of 2.44 mg/L.

The laboratory analyses of the groundwater sample collected from monitor well MW-2 did not indicate BTEX or TPH GRO concentrations above the method detection limits; however, the laboratory analysis did indicate a TPH DRO concentration of 0.493 mg/L.

The laboratory analyses of the groundwater sample collected from monitor well MW-3 indicated a benzene concentration of 63.7 µg/L, a toluene concentration of 2.49 µg/L, a ethylbenzene concentration of 197 µg/L, a xylenes concentration of 6.23 µg/L, a TPH DRO concentration of 18 mg/L and a TPH GRO concentration of 1.95 mg/L. In addition, the laboratory analysis of the groundwater sample collected from monitor well MW-3 exhibited PAHs including an acenaphthylene concentration of 4.85 µg/L, an anthracene concentration of 15.0 µg/L, a benzo(a)anthracene concentration of 0.29 µg/L, a benzo(b)pyrene concentration of 0.394 µg/L, a benzo(g,h,i)perylene concentration of 0.545 µg/L, a benzo(k)fluoranthene concentration of 1.32 µg/L, a chrysene concentration of 1.7 µg/L, a dibenzo(a,h)anthracene concentration of 0.623 µg/L, a fluoranthene concentration of 16.1 µg/L, a fluorene concentration of 9.18 µg/L an indeno(1,2,3-cd)pyrene concentration of 2.1 µg/L, a naphthalene concentration of 29.0 µg/L a phenanthrene concentration of 7.67 µg/L and a pyrene concentration of 0.506 µg/L.

The laboratory analyses of the groundwater sample collected from monitor well MW-4 did not indicate BTEX or TPH GRO concentrations above the method detection limits; however, the laboratory analysis did indicate a TPH DRO concentration of 0.829 mg/L.

Based on the results of the ESI, the on-site groundwater in the vicinity of monitor wells MW-1, MW-2, MW-3 and MW-4 appears to be affected by petroleum hydrocarbons.

ALPHA compared the identified petroleum hydrocarbon constituent concentrations in on-site

groundwater to the New Mexico Water Quality Commission (NMWQC) *Ground Water Standards* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.).

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the NMWQC *Ground Water Standards*, the identified toluene, ethylbenzene, xylenes, TPH DRO/GRO and PAH concentrations associated with the groundwater samples collected from monitor wells MW-1, MW-2, MW-3 and MW-4 do not exceed the respective groundwater standards.

Based on ALPHA's comparison of the identified petroleum hydrocarbon constituent concentrations to the NMWQC *Ground Water Standards*, the identified benzene concentration associated with the groundwater sample collected from monitor well MW-3 exceeds the groundwater standard of 10 µg/kg.

4.2 Recommendations

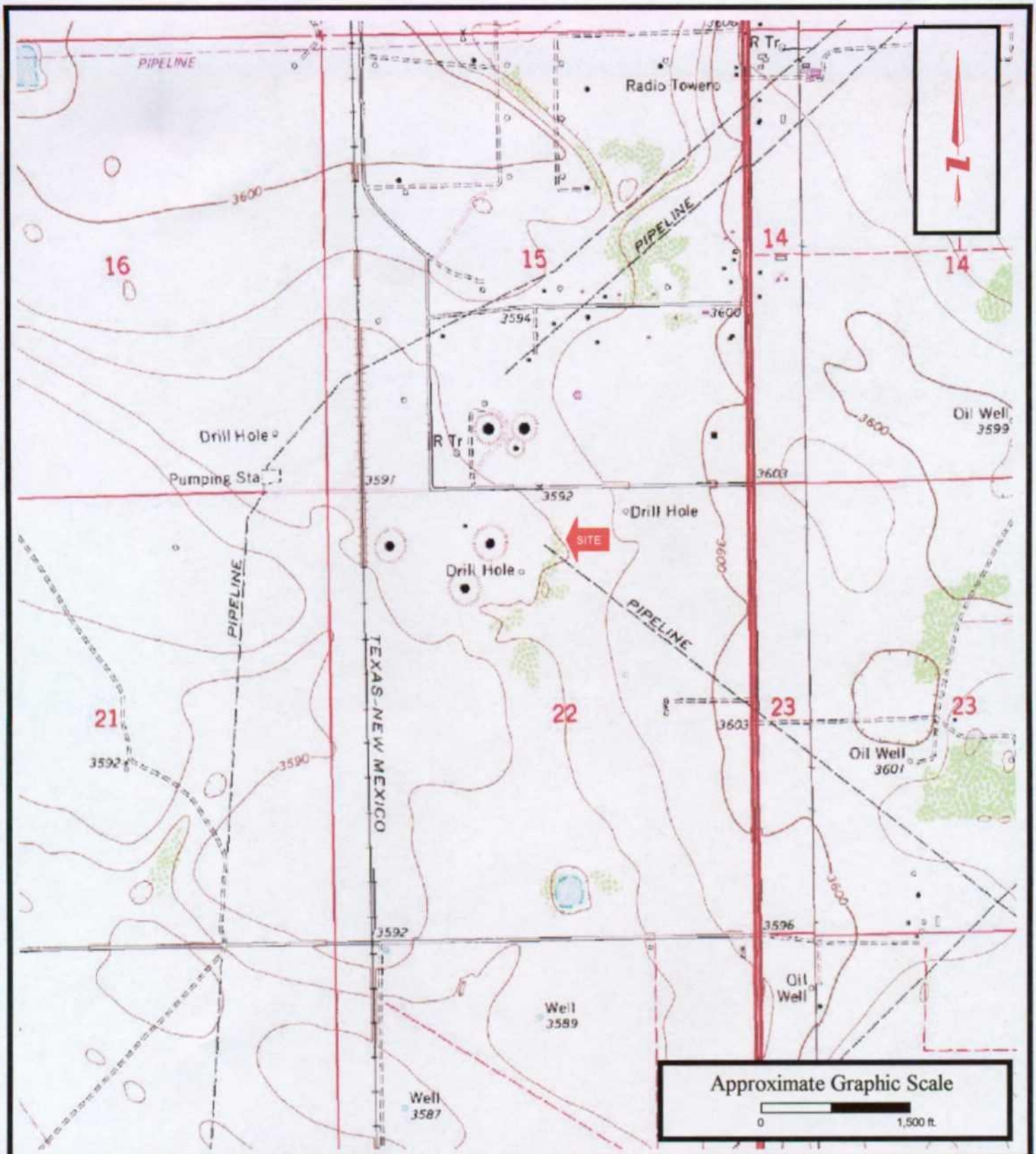
ALPHA recommends that additional subsurface investigation activities be conducted to further evaluate the magnitude and extent of petroleum hydrocarbon affected groundwater at the site.

The release of oilfield wastes or products should be reported to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division in accordance Section 116 of 19.15.3 NMAC.

Based on the laboratory results of the ESI, the soil cuttings and/or groundwater generated during the installation and sampling of soil borings/monitor wells MW-1, MW-2, MW-3, MW-4 and B-5 should be characterized, treated and/or disposed in accordance with applicable municipal, state, and federal regulations.

If affected soil located on the site is to be disturbed during future excavations, proper procedures should be followed with respect to worker health and safety, and any affected soil encountered should be properly handled and/or disposed in accordance with local and state regulations.

FIGURES



Environmental Site Investigation

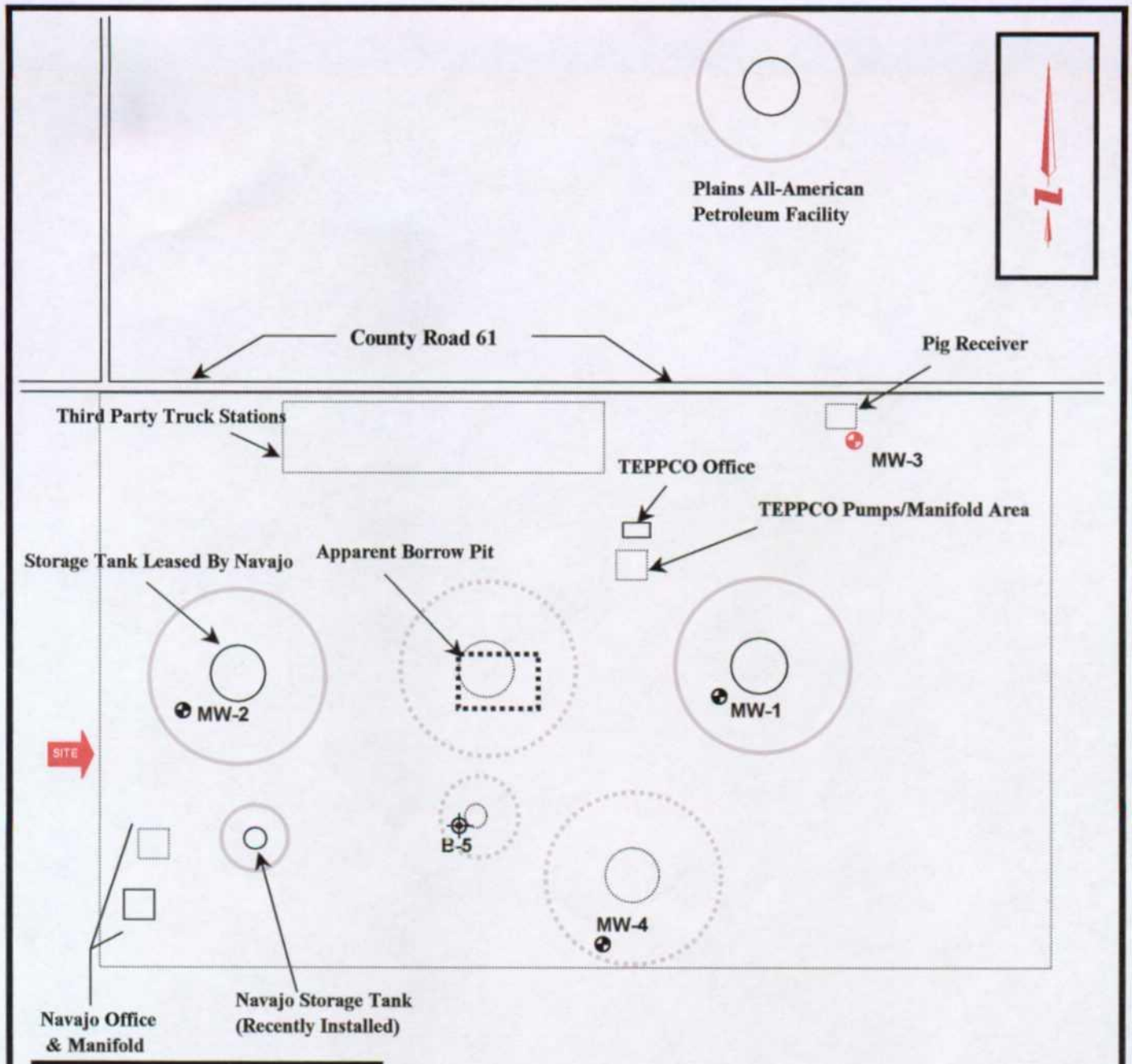
Hobbs Station
CR 61 & Hwy 18
Hobbs, New Mexico

ALPHA Proposal No. 10580

ALPHA TESTING, INC.

FIGURE 1

Topographic Map
Hobbs, New Mexico Quadrangle
Contour Interval - 10 Feet
Photorevised: 1979

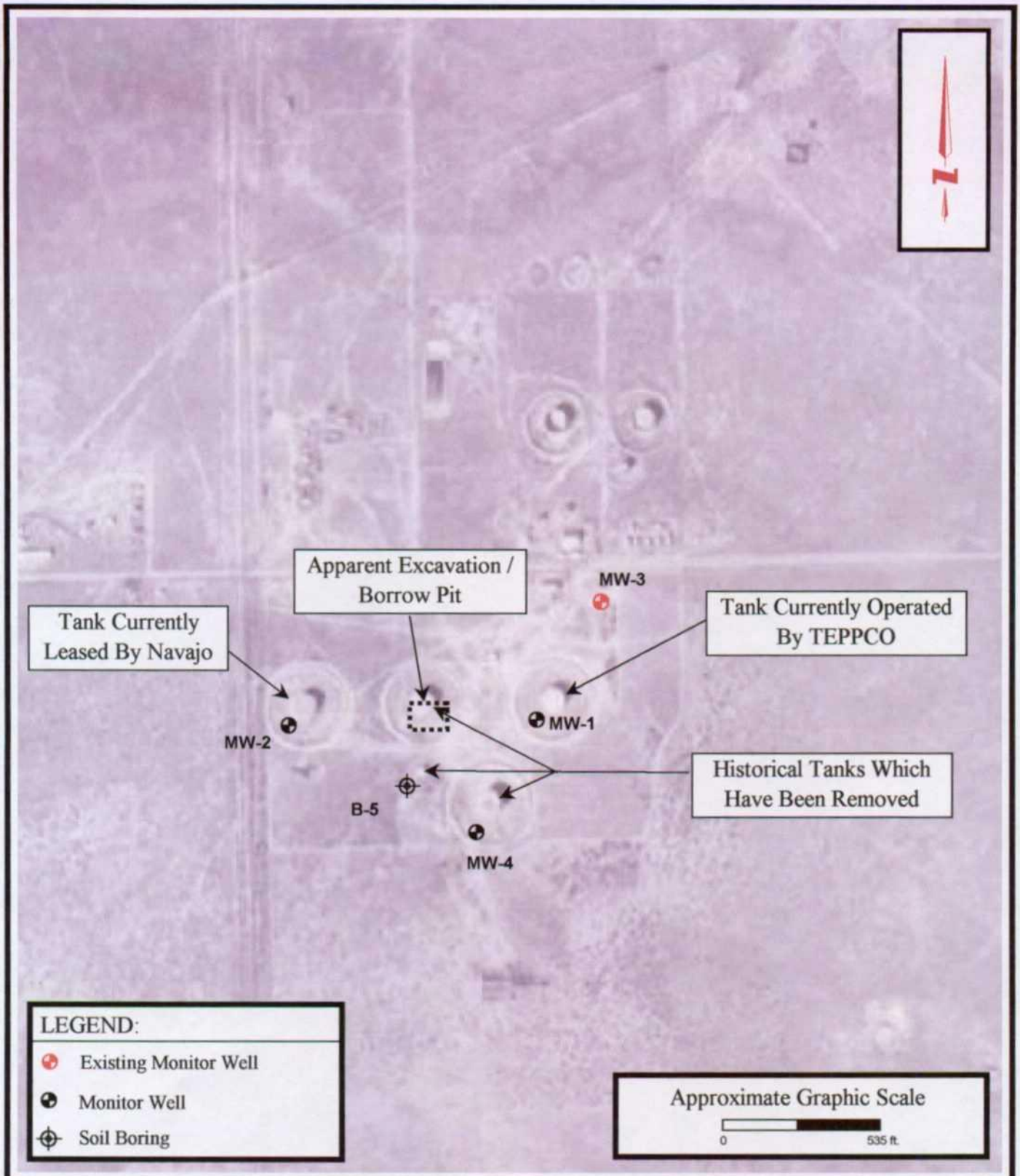


Environmental Site Investigation

TEPPCO - Hobbs Station
CR 61 & Hwy 18
Hobbs, New Mexico

ALPHA TESTING, INC.

FIGURE 2
Site Plan



Environmental Site Investigation

TEPPCO - Hobbs Station
CR 61 & Hwy 18
Hobbs, New Mexico

ALPHA TESTING, INC.

FIGURE 3
Site Vicinity Map

1949 Aerial Photograph

APPENDIX A

SOIL BORING LOGS

ALPHA TESTING, INC.

RECORD OF SUBSURFACE EXPLORATION

Client: TEPPCO, LP
Soil Boring / Well Number: MW-1
Project Name: Hobbs Station
Project #: E03211
Project Location: County Road 61 & Highway 18, Hobbs, New Mexico
Drawn By: BCM
Project Manager: BCM
Aprroved By: BCM

DRILLING & SAMPLING INFORMAITON

Date Started: March 19, 2003
Hammer Wt. N/A
Date Completed: March 19, 2003
Hammer Drop: N/A
Drilling Company: Straub Corporation
Sampler OD: 4"
Driller: Martin Straub
Bore Hole Dia: 6"
Geologist: BCM
Boring Method: Air Rotary

Monitor Well Detail	SOIL CLASSIFICATION SURFACE ELEVATION:	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	Clayey Sand w/ Caliche, Pale Reddish Brown, Dry, No Odor							0	
	Caliche, Pale Pinkish White, Dry, No Odor		5					0	
			10					0	
			15					0	
			20					0	
			25					0	
	Sand, Brownish Red, Dry to Moist, No Odor		30					0	
	Sand w/ Sandstone, Brownish Red, Wet, No Odor		35	MW-1(35-38)			▽	0	
			40				▼	0	

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
▽ AT COMPLETION
▼ AT WELL STABILIZATION

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE

ALPHA TESTING, INC.

RECORD OF SUBSURFACE EXPLORATION

Client: TEPPCO, LP
Soil Boring / Well Number: MW-2
Project Name: Hobbs Station
Project #: E03211
Project Location: County Road 61 & Highway 18, Hobbs, New Mexico
Drawn By: BCM
Project Manager: BCM
Aprroved By: BCM

DRILLING & SAMPLING INFORMAITON

Date Started: March 19, 2003
Hammer Wt. N/A
Date Completed: March 19, 2003
Hammer Drop: N/A
Drilling Company: Straub Corporation
Sampler OD: 4"
Driller: Martin Straub
Bore Hole Dia: 6"
Geologist: BCM
Boring Method: Air Rotary

Monitor Well Detail	SOIL CLASSIFICATION SURFACE ELEVATION:	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	Clayey Sand w/ Caliche, Pale Reddish Brown, Dry, No Odor							0	
	Caliche, Pale Pinkish White, Dry, No Odor		5					0	
			10					0	
			15					0	
			20					0	
			25					0	
	Quartzite w/ Sand, Dark Reddish Brown & Pink, Dry, No Odor		30					0	
	Sand w/ Gravel, Pale Tan, Dry to Moist, Slight Petroleum Odor			MW-2(34-35)				38	Gray Petroleum Hydrocarbon Staining
	Sand, Brownish Red, Moist to Wet, No Odor		35				▽	10	
								0	
			40				▽	0	
								0	
								0	
								0	
								0	

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
▽ AT COMPLETION
▽ AT WELL STABILIZATION

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE

ALPHA TESTING, INC.

RECORD OF SUBSURFACE EXPLORATION

Client: TEPPCO, LP
Soil Boring / Well Number: MW-4
Project Name: Hobbs Station
Project #: E03211
Project Location: County Road 61 & Highway 18, Hobbs, New Mexico
Drawn By: BCM
Project Manager: BCM
Aprroved By: BCM

DRILLING & SAMPLING INFORMAITON

Date Started: March 20, 2003
Hammer Wt. N/A
Date Completed: March 20, 2003
Hammer Drop: N/A
Drilling Company: Straub Corporation
Sampler OD: 4"
Driller: Martin Straub
Bore Hole Dia: 6"
Geologist: BCM
Boring Method: Air Rotary

Monitor Well Detail	SOIL CLASSIFICATION SURFACE ELEVATION:	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	Clayey Sand, Pale Reddish Brown, Dry, No Odor							0	
	Caliche, Pale Pinkish White, Dry, No Odor		5					0	
			10					0	
	Caliche w/ Interbedded Quartizite, Pale Pinkish White & Tan, Dry No Odor							0	
	Caliche, Pale Pinkish White, Dry, No Odor		15					0	
			20					0	
			25					0	
			30					0	
	Sand, Light Tan to Reddish Brown, Dry to Wet, No Odor							0	
			35	MW-4(36-37)				0	
							▽	0	
			40				▽	0	
								0	
								0	
								0	
								0	

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
▽ AT COMPLETION
▽ AT WELL STABILIZATION

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE

ALPHA TESTING, INC.

RECORD OF SUBSURFACE EXPLORATION

Client: TEPPCO, LP
Soil Boring / Well Number: B-5
Project Name: Hobbs Station
Project #: E03211
Project Location: County Road 61 & Highway 18, Hobbs, New Mexico
Drawn By: BCM
Project Manager: BCM
Aprroved By: BCM

DRILLING & SAMPLING INFORMAITON

Date Started: March 19, 2003
Hammer Wt. N/A
Date Completed: March 19, 2003
Hammer Drop: N/A
Drilling Company: Straub Corporation
Sampler OD: 4"
Driller: Martin Straub
Bore Hole Dia: 6"
Geologist: BCM
Boring Method: Air Rotary

Monitor Well Detail	SOIL CLASSIFICATION SURFACE ELEVATION:	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	Clayey Sand, Tan, Dry, No Odor							0	
								0	
								0	
								0	
								0	
			5					0	
								0	
								0	
								0	
								0	
			10					0	
								0	
								0	
								0	
								0	
	Caliche, Pale Pinkish White, Dry, No Odor							0	
			15	B-5(14-15)					
							▽		
							▽		
			20						
			25						
			30						

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
▽ AT COMPLETION
▽ AT WELL STABILIZATION

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE

APPENDIX B

LABORATORY ANALYTICAL DATA &
CHAIN-OF-CUSTODY DOCUMENTATION

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

Louisiana: 02007
Kansas: E-10288
Florida: E-87681

Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Page: Page 1 of 10
Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/28/03 1421

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.

Sample Identification

Laboratory ID #	Client Sample ID	Matrix	Sampled Date/Time	Received Date/Time
0303634-01	MW-1 (35-36)	Solid	03/19/03 1205	03/21/03 1030
0303634-02	MW-2 (34-35)	Solid	03/19/03 1525	03/21/03 1030
0303634-03	MW-4 (36-37)	Solid	03/20/03 0910	03/21/03 1030
0303634-04	B-5 (14-15)	Solid	03/19/03 1700	03/21/03 1030

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

*Sample Reporting Limit **Method Reporting Limit

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Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303634-01	Grab	Solid	B. Chris Mitchell	

Sample Description: MW-1 (35-36)
Sample Date/Time: 03/19/03 1205

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								
TPH Diesel	**5.13**	2.90	2.90	mg/kg	EPA 8015B mod	03/26/03 1915	PMS	
Surrogate: a-Pinene		*33 %*	*40-130*		EPA 8015B mod	03/26/03 1915	PMS	Q-03
Surrogate: Triacontane		*84 %*	*70-130*		EPA 8015B mod	03/26/03 1915	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**ND**	1.00	1.00	mg/kg	EPA 8015B mod	03/26/03 2022	SW	
Surrogate: 4-Bromofluorobenzene		*107 %*	*70-130*		EPA 8015B mod	03/26/03 2022	SW	
BTEX								
Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2022	SW	
Ethyl Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2022	SW	
Toluene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2022	SW	
Xylenes (total)	**ND**	30.0	3.00	ug/kg	EPA 8021B	03/26/03 2022	SW	
Surrogate: 4-Bromofluorobenzene		*107 %*	*70-130*		EPA 8021B	03/26/03 2022	SW	

*Sample Reporting Limit **Method Reporting Limit
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Project: Hobbs Station
Project #: E03211
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Laboratory ID #:	Sample Type	Matrix	Sample Collected By	
0303634-02	Grab	Solid	B. Chris Mitchell	Customer

Sample Description: MW-2 (34-35)
Sample Date/Time: 03/19/03 1525

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								**R-01**
TPH Diesel	**621**	29.0	2.90	mg/kg	EPA 8015B mod	03/26/03 1859	PMS	
Surrogate: a-Pinene		*16 %*	*40-130*		EPA 8015B mod	03/26/03 1859	PMS	Q-03
Surrogate: Triacontane		*40 %*	*70-130*		EPA 8015B mod	03/26/03 1859	PMS	Q-03
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**12.6**	1.00	1.00	mg/kg	EPA 8015B mod	03/26/03 2050	SW	
Surrogate: 4-Bromofluorobenzene		*127 %*	*70-130*		EPA 8015B mod	03/26/03 2050	SW	
BTEX								
Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2050	SW	
Ethyl Benzene	**57.9**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2050	SW	
Toluene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2050	SW	
Xylenes (total)	**ND**	30.0	3.00	ug/kg	EPA 8021B	03/26/03 2050	SW	
Surrogate: 4-Bromofluorobenzene		*127 %*	*70-130*		EPA 8021B	03/26/03 2050	SW	

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Page: Page 4 of 10
Project: Hobbs Station
Project #: E03211
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Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303634-03	Grab	Solid	B. Chris Mitchell	

Sample Description: MW-4 (36-37)
Sample Date/Time: 03/20/03 0910

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								
TPH Diesel	**ND**	2.90	2.90	mg/kg	EPA 8015B mod	03/26/03 1921	PMS	
Surrogate: a-Pinene		*47 %*	*40-130*		EPA 8015B mod	03/26/03 1921	PMS	
Surrogate: Triacontane		*85 %*	*70-130*		EPA 8015B mod	03/26/03 1921	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**ND**	1.00	1.00	mg/kg	EPA 8015B mod	03/26/03 2118	SW	
Surrogate: 4-Bromofluorobenzene		*107 %*	*70-130*		EPA 8015B mod	03/26/03 2118	SW	
BTEX								
Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2118	SW	
Ethyl Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2118	SW	
Toluene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2118	SW	
Xylenes (total)	**ND**	30.0	3.00	ug/kg	EPA 8021B	03/26/03 2118	SW	
Surrogate: 4-Bromofluorobenzene		*107 %*	*70-130*		EPA 8021B	03/26/03 2118	SW	

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Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/28/03 1421

Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303634-04	Grab	Solid	B. Chris Mitchell	

Sample Description: B-5 (14-15)
Sample Date/Time: 03/19/03 1700

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								
TPH Diesel	**5.77**	2.90	2.90	mg/kg	EPA 8015B mod	03/26/03 1927	PMS	
Surrogate: a-Pinene		*50 %*	*40-130*		EPA 8015B mod	03/26/03 1927	PMS	
Surrogate: Triacontane		*86 %*	*70-130*		EPA 8015B mod	03/26/03 1927	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**ND**	1.00	1.00	mg/kg	EPA 8015B mod	03/26/03 2146	SW	
Surrogate: 4-Bromofluorobenzene		*103 %*	*70-130*		EPA 8015B mod	03/26/03 2146	SW	
BTEX								
Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2146	SW	
Ethyl Benzene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2146	SW	
Toluene	**ND**	10.0	1.00	ug/kg	EPA 8021B	03/26/03 2146	SW	
Xylenes (total)	**ND**	30.0	3.00	ug/kg	EPA 8021B	03/26/03 2146	SW	
Surrogate: 4-Bromofluorobenzene		*103 %*	*70-130*		EPA 8021B	03/26/03 2146	SW	

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Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/28/03 1421

Total Petroleum Hydrocarbons - DRO - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C24026 - EPA 3550B Sonication Extraction										
Blank (3C24026-BLK1) Prepared: 03/24/03 1500 Analyzed: 03/24/03 2134										
TPH Diesel	**ND**	2.90	mg/kg							
Surrogate: a-Pinene	**1.42**		mg/kg	2.86		50	40-130			
Surrogate: Triacontane	**2.83**		mg/kg	2.86		99	70-130			
Laboratory Control Sample (3C24026-BS1) Prepared: 03/24/03 1500 Analyzed: 03/24/03 2140										
TPH Diesel	**29.8**	2.90	mg/kg	28.6		104	60-140			
Surrogate: a-Pinene	**1.98**		mg/kg	2.86		69	40-130			
Surrogate: Triacontane	**2.67**		mg/kg	2.86		93	70-130			
Laboratory Control Sample Duplicate (3C24026-BSD1) Prepared: 03/24/03 1500 Analyzed: 03/24/03 2145										
TPH Diesel	**30.2**	2.90	mg/kg	28.6		106	60-140	1	30	
Surrogate: a-Pinene	**1.88**		mg/kg	2.86		66	40-130			
Surrogate: Triacontane	**2.75**		mg/kg	2.86		96	70-130			
Matrix Spike (3C24026-MS1) Prepared: 03/24/03 1500 Analyzed: 03/26/03 2017					**Source: 0303589-01**					
TPH Diesel	**269**	14.5	mg/kg	28.6	178	318	70-130			Q-02
Surrogate: a-Pinene	**1.40**		mg/kg	2.86		49	40-130			
Surrogate: Triacontane	**2.26**		mg/kg	2.86		79	70-130			
Matrix Spike Duplicate (3C24026-MSD1) Prepared: 03/24/03 1500 Analyzed: 03/26/03 2022					**Source: 0303589-01**					
TPH Diesel	**210**	14.5	mg/kg	28.6	178	112	70-130	25	30	
Surrogate: a-Pinene	**1.13**		mg/kg	2.86		40	40-130			
Surrogate: Triacontane	**1.86**		mg/kg	2.86		65	70-130			Q-03

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Report of Sample Analysis

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2209 Wisconsin Street, Suite 100
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ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/28/03 1421

Total Petroleum Hydrocarbons - GRO - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C26033 - EPA 5035 Purge-and-Trap and Extraction-VOCs in Soil										
Blank (3C26033-BLK1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1743										
TPH Gasoline	**ND**	0.100	mg/kg							
Surrogate: 4-Bromofluorobenzene	**0.0565**		mg/kg	0.0500		113	70-130			
Laboratory Control Sample (3C26033-BS1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1828										
TPH Gasoline	**0.467**	0.100	mg/kg	0.500		93	70-130			
Surrogate: 4-Bromofluorobenzene	**0.0506**		mg/kg	0.0500		101	70-130			
Laboratory Control Sample Duplicate (3C26033-BSD1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1857										
TPH Gasoline	**0.471**	0.100	mg/kg	0.500		94	70-130	0	20	
Surrogate: 4-Bromofluorobenzene	**0.0513**		mg/kg	0.0500		103	70-130			
Matrix Spike (3C26033-MS1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1925					**Source: 0303634-01**					
TPH Gasoline	**0.472**	0.100	mg/kg	0.500	ND	94	70-130			
Surrogate: 4-Bromofluorobenzene	**0.0537**		mg/kg	0.0500		107	70-130			
Matrix Spike Duplicate (3C26033-MSD1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1953					**Source: 0303634-01**					
TPH Gasoline	**0.452**	0.100	mg/kg	0.500	ND	90	70-130	4	20	
Surrogate: 4-Bromofluorobenzene	**0.0554**		mg/kg	0.0500		111	70-130			

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BTEX - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C26033 - EPA 5035 Purge-and-Trap and Extraction-VOCs in Soil										
Blank (3C26033-BLK1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1743										
Benzene	**ND**	1.00	ug/kg							
Ethyl Benzene	**ND**	1.00	ug/kg							
Toluene	**ND**	1.00	ug/kg							
Xylenes (total)	**ND**	3.00	ug/kg							
Surrogate: 4-Bromofluorobenzene	**56.5**		ug/kg	50.0		113	70-130			
Laboratory Control Sample (3C26033-BS1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1828										
Benzene	**52.2**	1.00	ug/kg	50.0		104	70-130			
Ethyl Benzene	**53.8**	1.00	ug/kg	50.0		108	70-130			
Toluene	**55.7**	1.00	ug/kg	50.0		111	70-130			
Xylenes (total)	**161**	3.00	ug/kg	150		107	70-130			
Surrogate: 4-Bromofluorobenzene	**50.6**		ug/kg	50.0		101	70-130			
Laboratory Control Sample Duplicate (3C26033-BSD1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1857										
Benzene	**50.8**	1.00	ug/kg	50.0		102	70-130	3	20	
Ethyl Benzene	**52.0**	1.00	ug/kg	50.0		104	70-130	3	20	
Toluene	**53.7**	1.00	ug/kg	50.0		107	70-130	4	20	
Xylenes (total)	**156**	3.00	ug/kg	150		104	70-130	3	20	
Surrogate: 4-Bromofluorobenzene	**51.3**		ug/kg	50.0		103	70-130			
Matrix Spike (3C26033-MS1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1925					**Source: 0303634-01**					
Benzene	**50.6**	1.00	ug/kg	50.0	ND	101	70-130			
Ethyl Benzene	**52.5**	1.00	ug/kg	50.0	ND	105	70-130			
Toluene	**53.7**	1.00	ug/kg	50.0	ND	107	70-130			
Xylenes (total)	**156**	3.00	ug/kg	150	ND	104	70-130			
Surrogate: 4-Bromofluorobenzene	**53.7**		ug/kg	50.0		107	70-130			

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Report of Sample Analysis

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2209 Wisconsin Street, Suite 100
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Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/28/03 1421

BTEX - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C26033 - EPA 5035 Purge-and-Trap and Extraction-VOCs in Soil (continued)										
Matrix Spike Duplicate (3C26033-MSD1) Prepared: 03/26/03 1730 Analyzed: 03/26/03 1953					**Source: 0303634-01**					
Benzene	**51.8**	1.00	ug/kg	50.0	ND	104	70-130	2	20	
Ethyl Benzene	**53.7**	1.00	ug/kg	50.0	ND	107	70-130	2	20	
Toluene	**54.8**	1.00	ug/kg	50.0	ND	110	70-130	2	20	
Xylenes (total)	**160**	3.00	ug/kg	150	ND	107	70-130	3	20	
Surrogate: 4-Bromofluorobenzene	**55.4**		ug/kg	50.0		111	70-130			

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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-02	The recovery of an analyte(s) in the MSs was outside the acceptable range due to interference, large dilutions required for analysis or a combination of these factors. The recovery of this analyte(s) in the LCSs was within the required limits.
Q-03	The recovery of the surrogate(s) were outside of the acceptable range due to matrix interferences and/or large dilutions required for the analysis of this sample. The results presented should, therefore, be considered an estimated concentration(s).
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.

*Sample Reporting Limit **Method Reporting Limit

Chain-of-Custody

ERMI
Bethany Tech Center
400 W. Bethany, Suite 190
Allen, Texas 75013
972- 727-1123 (Local) * 800- 228-ERMI (Long Distance)
972- 727-1175 (Fax)

196980
TEMP Rec. @ 0.8°C

Company Name: ALPHA TESTING, INC. ❶			Comments:
Contact: CHRIS MITCHELL			
Address: 2209 WISCONSIN ST. SUITE 100			
City: DALLAS	State: TX	Zip Code: 75229	TAT: Normal ☒ Expedite ☐ (Call for Pricing)
Telephone: (972) 620-8911		Fax Number: (972) 620-1302	
Billing Name: ❷			
Billing Address (if different):			
City:	State:	Zip Code:	
Telephone:		Fax Number:	
Purchase Order Number: ❸			
Project Name: HOBBS STATION ❹		Project Number: E03211 ❺	
Address: CR 61 & Hwy 18			
City: HOBBS	State: NM	Zip Code:	
Sampler: B. CHRIS MITCHELL	Signature: B. Celin ❻		

ERMI Use Only	Field Sample I.D.	Sample Date ❽	Sample Time ❾	Matrix	# of Bottles	Preservative	Sample Type Comp.	Sample Type Grab	TPH (8015 DRO/GRO)	BTEX (SW846 #8021)
0303603401	MW-1 (35-36)	3-19-03	1205	SOIL	1	4°C		X	/	/
0303603402	MW-2 (34-35)	3-19-03	1525	SOIL	2	4°C		X	/	/
0303603403	MW-4 (36-37)	3-20-03	910	SOIL	1	4°C		X	/	/
0303603404	B-5 (14-15)	3-19-03	1700	SOIL	1	4°C		X	/	/
	MW-1	3-20-03	1115	H_2O	6	4°C/HCl		X	/	/
	MW-2	3-20-03	945	H_2O	7	4°C/HCl		X	/	/
	MW-3	3-20-03	1035	H_2O	7	4°C/HCl		X	/	/
	MW-4	3-20-03	1205	H_2O	5	4°C/HCl		X	/	/

N/A Bottle

Relinquished By: B. Celin ❿	Date: 3-21-3	Time: 0905	Received By: George L	Date: 3-21-3	Time: 0905
Relinquished By: George L	Date: 3-21-3	Time: 1030	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Method of Shipment:	Date:		Received for ERMI By: Michael Riddle	Date: 3/21/03	Time: 1030

See Reverse for Terms and Conditions

Revised 10/09/96

WHITE: Original to be returned with Report; YELLOW: ERMI copy; PINK: Customer Copy

Lab Number(s): 0303634

ERMI

Sample Preservation Documentation *

On Ice (Circle One): YES OR NO (Check if sent with 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 4° C	Glass or Plastic	
Semivolatiles,, Pesticides, PCBs, Herbicides			Cool 4° C	**Glass only with Teflon lid**	
VOA (BTEX, MTBE, 624, 8260, TPH-GRO)			Cool 4° C, pH < 2 Zero Head Space	40 ml VOA vial	DO NOT OPEN
VOA (TPH-1005)			Cool 4° C, pH < 2 Zero Head Space Please check if collected in pre-weighed vials_____	40 ml VOA vial	DO NOT OPEN
Phos., NO_3/NO_2, NH_3N, COD, TKN, TOC			Cool 4° C , pH < 2	Glass or Plastic	pH < 2
TDS, BOD,CBOD, Cond, pH, TSS, F, SO_4, Cr^{6+},Cl,Alk, Sulfite			Cool 4° C	**Glass or Plastic, Plastic only if F**	
Oil & Grease, TPH, Phenols			Cool 4° C , pH < 2	**Glass only with Teflon lid**	pH < 2
Cyanide			Cool 4° C , pH > 12	Glass or Plastic	pH > 12
Sulfide			Cool 4° C , pH > 9	Glass or Plastic	pH > 9
Bacteria			Cool 4° C	Plastic Sterile Cup	
~~Soil, Sludge, Solid,~~ Oil, Liquid	5	8oz HA	Cool 4° C Note: please check if collected in pre-weighed vials_____		

OR

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. Make a notation of any samples not received on ice. Note any incorrect sample containers or preservation on chain-of-custody.

Preservation Checked By Valerie Foster 3/21/13 1532

Date Time

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Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Page: Page 1 of 10
Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

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.

Sample Identification

Laboratory ID #	Client Sample ID	Matrix	Sampled Date/Time	Received Date/Time
0303635-01	MW-1	Aqueous	03/20/03 1115	03/21/03 1030
0303635-02	MW-2	Aqueous	03/20/03 0945	03/21/03 1030
0303635-03	MW-3	Aqueous	03/20/03 1035	03/21/03 1030
0303635-04	MW-4	Aqueous	03/20/03 1205	03/21/03 1030

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

*Sample Reporting Limit **Method Reporting Limit
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2209 Wisconsin Street, Suite 100
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ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

Laboratory ID #:	Sample Type	Matrix	Sample Collected By	
0303635-01	Grab	Aqueous	B. Chris Mitchell	Customer

Sample Description: MW-1
Sample Date/Time: 03/20/03 1115

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								
TPH Diesel	**2.44**	0.100	0.100	mg/l	EPA 8015B mod	03/26/03 1826	PMS	
Surrogate: a-Pinene		*65 %*	*40-130*		EPA 8015B mod	03/26/03 1826	PMS	
Surrogate: Triacontane		*90 %*	*70-130*		EPA 8015B mod	03/26/03 1826	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**ND**	0.0500	0.0500	mg/l	EPA 8015B mod	03/25/03 1417	SW	
Surrogate: 4-Bromofluorobenzene		*95 %*	*70-130*		EPA 8015B mod	03/25/03 1417	SW	
BTEX								
Benzene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1417	SW	
Ethyl Benzene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1417	SW	
Toluene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1417	SW	
Xylenes (total)	**ND**	3.00	3.00	ug/l	EPA 8021B	03/25/03 1417	SW	
Surrogate: 4-Bromofluorobenzene		*95 %*	*70-130*		EPA 8021B	03/25/03 1417	SW	

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Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303635-02	Grab	Aqueous	B. Chris Mitchell	

Sample Description: MW-2
Sample Date/Time: 03/20/03 0945

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								
TPH Diesel	**0.493**	0.100	0.100	mg/l	EPA 8015B mod	03/26/03 1820	PMS	
Surrogate: a-Pinene		*68 %*	*40-130*		EPA 8015B mod	03/26/03 1820	PMS	
Surrogate: Triacontane		*102 %*	*70-130*		EPA 8015B mod	03/26/03 1820	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**ND**	0.0500	0.0500	mg/l	EPA 8015B mod	03/25/03 1349	SW	
Surrogate: 4-Bromofluorobenzene		*100 %*	*70-130*		EPA 8015B mod	03/25/03 1349	SW	
BTEX								
Benzene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1349	SW	
Ethyl Benzene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1349	SW	
Toluene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1349	SW	
Xylenes (total)	**ND**	3.00	3.00	ug/l	EPA 8021B	03/25/03 1349	SW	
Surrogate: 4-Bromofluorobenzene		*100 %*	*70-130*		EPA 8021B	03/25/03 1349	SW	

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ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303635-03	Grab	Aqueous	B. Chris Mitchell	

Sample Description: MW-3
Sample Date/Time: 03/20/03 1035

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								R-01
TPH Diesel	**18.0**	1.00	0.100	mg/l	EPA 8015B mod	03/27/03 1048	PMS	
Surrogate: a-Pinene		*98 %*	*40-130*		EPA 8015B mod	03/27/03 1048	PMS	
Surrogate: Triacontane		*75 %*	*70-130*		EPA 8015B mod	03/27/03 1048	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**1.95**	0.100	0.0500	mg/l	EPA 8015B mod	03/25/03 1605	SW	R-01
Surrogate: 4-Bromofluorobenzene		*124 %*	*70-130*		EPA 8015B mod	03/25/03 1605	SW	
BTEX								
Benzene	**63.7**	2.00	1.00	ug/l	EPA 8021B	03/25/03 1605	SW	R-01
Ethyl Benzene	**197**	2.00	1.00	ug/l	EPA 8021B	03/25/03 1605	SW	R-01
Toluene	**2.49**	2.00	1.00	ug/l	EPA 8021B	03/25/03 1605	SW	R-01
Xylenes (total)	**6.23**	6.00	3.00	ug/l	EPA 8021B	03/25/03 1605	SW	R-01
Surrogate: 4-Bromofluorobenzene		*124 %*	*70-130*		EPA 8021B	03/25/03 1605	SW	

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Report of Sample Analysis

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ATTN: Chris Mitchell

Page: Page 5 of 10
Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

Laboratory ID #: 0303635-04
Sample Type: Grab
Matrix: Aqueous
Sample Collected By: B. Chris Mitchell
Customer
Sample Description: MW-4
Sample Date/Time: 03/20/03 1205

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Total Petroleum Hydrocarbons - DRO								
TPH Diesel	**0.829**	0.100	0.100	mg/l	EPA 8015B mod	03/26/03 1814	PMS	
Surrogate: a-Pinene		*66 %*	*40-130*		EPA 8015B mod	03/26/03 1814	PMS	
Surrogate: Triacontane		*107 %*	*70-130*		EPA 8015B mod	03/26/03 1814	PMS	
Total Petroleum Hydrocarbons - GRO								
TPH Gasoline	**ND**	0.0500	0.0500	mg/l	EPA 8015B mod	03/25/03 1514	SW	
Surrogate: 4-Bromofluorobenzene		*106 %*	*70-130*		EPA 8015B mod	03/25/03 1514	SW	
BTEX								
Benzene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1514	SW	
Ethyl Benzene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1514	SW	
Toluene	**ND**	1.00	1.00	ug/l	EPA 8021B	03/25/03 1514	SW	
Xylenes (total)	**ND**	3.00	3.00	ug/l	EPA 8021B	03/25/03 1514	SW	
Surrogate: 4-Bromofluorobenzene		*106 %*	*70-130*		EPA 8021B	03/25/03 1514	SW	

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Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

Total Petroleum Hydrocarbons - DRO - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C25046 - EPA 3510C Separatory Funnel Extraction										
Blank (3C25046-BLK1) Prepared: 03/25/03 1610 Analyzed: 03/26/03 1741										
TPH Diesel	**ND**	0.100	mg/l							
Surrogate: a-Pinene	**0.0550**		mg/l	0.100		55	40-130			
Surrogate: Triacontane	**0.0912**		mg/l	0.100		91	70-130			
Laboratory Control Sample (3C25046-BS1) Prepared: 03/25/03 1610 Analyzed: 03/26/03 1747										
TPH Diesel	**0.991**	0.100	mg/l	1.00		99	80-120			
Surrogate: a-Pinene	**0.0689**		mg/l	0.100		69	40-130			
Surrogate: Triacontane	**0.0913**		mg/l	0.100		91	70-130			
Laboratory Control Sample Duplicate (3C25046-BSD1) Prepared: 03/25/03 1610 Analyzed: 03/26/03 1752										
TPH Diesel	**1.02**	0.100	mg/l	1.00		102	80-120	3	30	
Surrogate: a-Pinene	**0.0692**		mg/l	0.100		69	40-130			
Surrogate: Triacontane	**0.0940**		mg/l	0.100		94	70-130			
Matrix Spike (3C25046-MS1) Prepared: 03/25/03 1610 Analyzed: 03/26/03 1758					**Source: 0303432-07**					
TPH Diesel	**1.01**	0.100	mg/l	1.00	ND	101	70-130			
Surrogate: a-Pinene	**0.0606**		mg/l	0.100		61	40-130			
Surrogate: Triacontane	**0.0953**		mg/l	0.100		95	70-130			
Matrix Spike Duplicate (3C25046-MSD1) Prepared: 03/25/03 1610 Analyzed: 03/26/03 1803					**Source: 0303432-07**					
TPH Diesel	**0.975**	0.100	mg/l	1.00	ND	98	70-130	4	30	
Surrogate: a-Pinene	**0.0550**		mg/l	0.100		55	40-130			
Surrogate: Triacontane	**0.0966**		mg/l	0.100		97	70-130			

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Report of Sample Analysis

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ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

Total Petroleum Hydrocarbons - GRO - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C25016 - EPA 5030B Purge-and-Trap for Aqueous Samples										
Blank (3C25016-BLK1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1117										
TPH Gasoline	**ND**	0.0500	mg/l							
Surrogate: 4-Bromofluorobenzene	**0.0539**		mg/l	0.0500		108	70-130			
Laboratory Control Sample (3C25016-BS1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1146										
TPH Gasoline	**0.518**	0.0500	mg/l	0.500		104	70-130			
Surrogate: 4-Bromofluorobenzene	**0.0566**		mg/l	0.0500		113	70-130			
Laboratory Control Sample Duplicate (3C25016-BSD1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1215										
TPH Gasoline	**0.529**	0.0500	mg/l	0.500		106	70-130	2	20	
Surrogate: 4-Bromofluorobenzene	**0.0527**		mg/l	0.0500		105	70-130			
Matrix Spike (3C25016-MS1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1252					**Source: 0303635-02**					
TPH Gasoline	**0.544**	0.0500	mg/l	0.500	ND	109	70-130			
Surrogate: 4-Bromofluorobenzene	**0.0556**		mg/l	0.0500		111	70-130			
Matrix Spike Duplicate (3C25016-MSD1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1320					**Source: 0303635-02**					
TPH Gasoline	**0.538**	0.0500	mg/l	0.500	ND	108	70-130	1	20	
Surrogate: 4-Bromofluorobenzene	**0.0539**		mg/l	0.0500		108	70-130			

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BTEX - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C25016 - EPA 5030B Purge-and-Trap for Aqueous Samples										
Blank (3C25016-BLK1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1117										
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	**53.9**		ug/l	50.0		108	70-130			
Laboratory Control Sample (3C25016-BS1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1146										
Benzene	**48.9**	1.00	ug/l	50.0		98	70-130			
Ethyl Benzene	**50.2**	1.00	ug/l	50.0		100	70-130			
Toluene	**52.1**	1.00	ug/l	50.0		104	70-130			
Xylenes (total)	**151**	3.00	ug/l	150		101	70-130			
Surrogate: 4-Bromofluorobenzene	**56.6**		ug/l	50.0		113	70-130			
Laboratory Control Sample Duplicate (3C25016-BSD1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1215										
Benzene	**49.8**	1.00	ug/l	50.0		100	70-130	2	20	
Ethyl Benzene	**51.0**	1.00	ug/l	50.0		102	70-130	2	20	
Toluene	**53.0**	1.00	ug/l	50.0		106	70-130	2	20	
Xylenes (total)	**154**	3.00	ug/l	150		103	70-130	2	20	
Surrogate: 4-Bromofluorobenzene	**52.7**		ug/l	50.0		105	70-130			
Matrix Spike (3C25016-MS1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1252					**Source: 0303635-02**					
Benzene	**50.6**	1.00	ug/l	50.0	ND	101	70-130			
Ethyl Benzene	**52.0**	1.00	ug/l	50.0	ND	104	70-130			
Toluene	**53.7**	1.00	ug/l	50.0	ND	107	70-130			
Xylenes (total)	**156**	3.00	ug/l	150	ND	104	70-130			
Surrogate: 4-Bromofluorobenzene	**55.6**		ug/l	50.0		111	70-130			

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Report of Sample Analysis

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Project: Hobbs Station
Project #: E03211
Print Date/Time: 03/27/03 1446

BTEX - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C25016 - EPA 5030B Purge-and-Trap for Aqueous Samples (continued)										
Matrix Spike Duplicate (3C25016-MSD1) Prepared: 03/25/03 1048 Analyzed: 03/25/03 1320					**Source: 0303635-02**					
Benzene	**48.4**	1.00	ug/l	50.0	ND	97	70-130	4	20	
Ethyl Benzene	**51.6**	1.00	ug/l	50.0	ND	103	70-130	0	20	
Toluene	**52.1**	1.00	ug/l	50.0	ND	104	70-130	3	20	
Xylenes (total)	**155**	3.00	ug/l	150	ND	103	70-130	0	20	
Surrogate: 4-Bromofluorobenzene	**53.9**		ug/l	50.0		108	70-130			

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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.

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.

*Sample Reporting Limit **Method Reporting Limit

Chain-of-Custody

ERMI
Bethany Tech Center
400 W. Bethany, Suite 190
Allen, Texas 75013
972-727-1123 (Local) * 800-228-ERMI (Long Distance)
972-727-1175 (Fax)

196980
Temp Rec. @ 0.8°C.

Company Name: Alpha Testing, Inc.
Contact: Chris Mitchell
Address: 2209 Wisconsin St. Suite 100
City: Dallas State: TX Zip Code: 75229
Telephone: (972) 620-8911 Fax Number: (972) 620-1302

Comments:

TAT: Normal ☒ Expedite ☐ (Call for Pricing)

Billing Name:
Billing Address (if different):
City: State: Zip Code:
Telephone: Fax Number:
Purchase Order Number:

Project Name: Hobbs Station Project Number: E03211
Address: CR 61 & Hwy 18
City: Hobbs State: NM Zip Code:
Sampler: B. Chris Mitchell Signature: B. C. [signature]

ERMI Use Only	Field Sample I.D.	Sample Date	Sample Time	Matrix	# of Bottles	Preservative	Sample Type Comp.	Sample Type Grab	TPH (8015 DRO/GRO)	BTEX (SW-846 #8021)						
	MW-1 (35-36)	3.19.03	1205	Soil	1	4°C		X	/	/						
	MW-2 (34-35)	3.19.03	1525	Soil	2	4°C		X	/	/						
	MW-4 (36-37)	3.20.03	910	Soil	1	4°C		X	/	/						
	B-5 (14-15)	3.19.03	1700	Soil	1	4°C		X	/	/						
0303635-01	MW-1	3.20.03	1115	H_2O	6	4°C/HCl		X	/	/						
0303635-02	MW-2	3.20.03	945	H_2O	7	4°C/HCl		X	/	/						
0303635-03	MW-3	3.20.03	1035	H_2O	7	4°C/HCl		X	/	/						
0303635-04	MW-4	3.20.03	1205	H_2O	5	4°C/HCl		X	/	/						
	~~[signature]~~															

Relinquished By: [signature]	Date: 3-21-3	Time: 0905	Received By: [signature]	Date: 3-21-3	Time: 0905
Relinquished By: [signature]	Date: 3-21-3	Time: 1030	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Method of Shipment:	Date:		Received for ERMI By: [signature]	Date: 3/21/03	Time: [illegible]

See Reverse for Terms and Conditions

Revised 10/09/96

WHITE: Original to be returned with Report; YELLOW: ERMI copy; PINK: Customer Copy

Lab Number(s): 0303635

ERMI

Sample Preservation Documentation *

On Ice (Circle One): YES OR NO (Check if sent with 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 4° C	Glass or Plastic	
~~Semivolatiles,~~ Pesticides, PCBs, Herbicides	5	1HR Amber	Cool 4° C	**Glass only with Teflon lid**	
~~VOA (BTEX,~~ MTBE, 624, 8260, TPH-GRO)	6	40 ml	Cool 4° C, pH < 2 Zero Head Space	~~40 ml VOA~~ vial	DO NOT OPEN
VOA (TPH-1005)			Cool 4° C, pH < 2 Zero Head Space Please check if collected in pre-weighed vials____	40 ml VOA vial	DO NOT OPEN
Phos., NO_3/NO_2, NH_3N, COD, TKN, TOC			Cool 4° C , pH < 2	Glass or Plastic	pH < 2
TDS, BOD,CBOD, Cond, pH, TSS, F, SO_4, Cr^{6+},Cl,Alk, Sulfite			Cool 4° C	**Glass or Plastic, Plastic only if F**	
Oil & Grease, ~~TPH,~~ Phenols	8	1HR Amber	Cool 4° C , pH < 2	**Glass only with Teflon lid**	pH < 2
Cyanide			Cool 4° C , pH > 12	Glass or Plastic	pH > 12
Sulfide			Cool 4° C , pH > 9	Glass or Plastic	pH > 9
Bacteria			Cool 4° C	Plastic Sterile Cup	
Soil, Sludge, Solid, Oil, Liquid			Cool 4° C Note: please check if collected in pre-weighed vials_____		

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. Make a notation of any samples not received on ice. Note any incorrect sample containers or preservation on chain-of-custody.

Preservation Checked By Valerie Foster 3/1/3 (Date) 15:23 (Time)

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

Louisiana: 02007
Kansas: E-10288
Florida: E-87681

Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

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.

Sample Identification

Laboratory ID #	Client Sample ID	Matrix	Sampled Date/Time	Received Date/Time
0303847-01	MW-2 (34-35)	Solid	03/19/03 1525	03/31/03 0815

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

*Sample Reporting Limit **Method Reporting Limit
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Environmental Laboratories
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Report of Sample Analysis

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ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

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Sample Identification

Laboratory ID #	Client Sample ID	Matrix	Sampled Date/Time	Received Date/Time
0303847-01	MW-2 (34-35)	Solid	03/19/03 1525	03/31/03 0815

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President

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Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303847-01	Grab	Solid	B. Chris Mitchell	

Sample Description: MW-2 (34-35)
Sample Date/Time: 03/19/03 1525

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Semivolatile Polynuclear Aromatic Hydrocarbons								
Acenaphthene	**489**	16.7	16.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Acenaphthylene	**291**	41.7	41.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Anthracene	**193**	16.7	16.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Benzo(a)anthracene	**ND**	41.7	41.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Benzo(a)pyrene	**ND**	41.7	41.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Benzo(b)fluoranthene	**51.2**	6.66	6.66	ug/kg	EPA 8310	04/11/03 0623	SW	
Benzo(g,h,i)perylene	**48.3**	6.66	6.66	ug/kg	EPA 8310	04/11/03 0623	SW	
Benzo(k)fluoranthene	**105**	1.66	1.66	ug/kg	EPA 8310	04/11/03 0623	SW	
Chrysene	**102**	0.833	0.833	ug/kg	EPA 8310	04/11/03 0623	SW	
Dibenz(a,h)anthracene	**28.8**	3.33	3.33	ug/kg	EPA 8310	04/11/03 0623	SW	
Fluoranthene	**570**	16.7	16.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Fluorene	**ND**	8.33	8.33	ug/kg	EPA 8310	04/11/03 0623	SW	
Indeno(1,2,3-cd)pyrene	**244**	4.16	4.16	ug/kg	EPA 8310	04/11/03 0623	SW	
Naphthalene	**ND**	41.7	41.7	ug/kg	EPA 8310	04/11/03 0623	SW	
Phenanthrene	**296**	3.73	3.73	ug/kg	EPA 8310	04/11/03 0623	SW	
Pyrene	**23.0**	8.33	8.33	ug/kg	EPA 8310	04/11/03 0623	SW	
Surrogate: Nitrobenzene		*116 %*	*40-130*		EPA 8310	04/11/03 0623	SW	

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nelap
Louisiana: 02007
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Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

Semivolatile Polynuclear Aromatic Hydrocarbons - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3D01026 - EPA 3550B Sonication Extraction										
Blank (3D01026-BLK1) Prepared: 04/01/03 1335 Analyzed: 04/11/03 0311										
Acenaphthene	ND	16.7	ug/kg							
Acenaphthylene	ND	41.7	ug/kg							
Anthracene	ND	16.7	ug/kg							
Benzo(a)anthracene	ND	41.7	ug/kg							
Benzo(a)pyrene	ND	41.7	ug/kg							
Benzo(b)fluoranthene	ND	6.66	ug/kg							
Benzo(g,h,i)perylene	ND	6.66	ug/kg							
Benzo(k)fluoranthene	ND	1.66	ug/kg							
Chrysene	ND	0.833	ug/kg							
Dibenz(a,h)anthracene	ND	3.33	ug/kg							
Fluoranthene	ND	16.7	ug/kg							
Fluorene	ND	8.33	ug/kg							
Indeno(1,2,3-cd)pyrene	ND	4.16	ug/kg							
Naphthalene	ND	41.7	ug/kg							
Phenanthrene	ND	3.73	ug/kg							
Pyrene	ND	8.33	ug/kg							
Surrogate: Decafluorobiphenyl	225		ug/kg	333		68	40-130			
Surrogate: Nitrobenzene	323		ug/kg	333		97	40-130			
Laboratory Control Sample (3D01026-BS1) Prepared: 04/01/03 1335 Analyzed: 04/11/03 0349										
Acenaphthene	465	16.7	ug/kg	667		70	1-124			
Acenaphthylene	255	41.7	ug/kg	333		77	1-139			
Anthracene	ND	16.7	ug/kg	13.3		68	1-126			
Benzo(a)anthracene	ND	41.7	ug/kg	33.3		91	12-135			
Benzo(a)pyrene	ND	41.7	ug/kg	33.3		78	1-128			
Benzo(b)fluoranthene	12.3	6.66	ug/kg	13.3		92	6-150			
Benzo(g,h,i)perylene	47.7	6.66	ug/kg	53.3		89	1-116			
Benzo(k)fluoranthene	11.6	1.66	ug/kg	13.3		87	1-159			
Chrysene	31.7	0.833	ug/kg	33.3		95	1-199			
Dibenz(a,h)anthracene	122	3.33	ug/kg	133		92	1-110			
Fluoranthene	29.8	16.7	ug/kg	33.3		89	14-123			
Fluorene	58.9	8.33	ug/kg	66.7		88	1-142			
Indeno(1,2,3-cd)pyrene	30.1	4.16	ug/kg	33.3		90	1-116			
Naphthalene	312	41.7	ug/kg	333		94	1-122			
Phenanthrene	25.7	3.73	ug/kg	26.7		96	1-155			
Pyrene	64.4	8.33	ug/kg	66.7		97	1-140			
Surrogate: Decafluorobiphenyl	212		ug/kg	333		64	40-130			
Surrogate: Nitrobenzene	340		ug/kg	333		102	40-130			

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Bethany Tech Center • Suite 190
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nelap
Louisiana: 02007
Kansas: E-10288
Florida: E-87681

Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

Semivolatile Polynuclear Aromatic Hydrocarbons - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3D01026 - EPA 3550B Sonication Extraction (continued)										
Laboratory Control Sample Duplicate (3D01026-BSD1) Prepared: 04/01/03 1335 Analyzed: 04/11/03 0428										
Acenaphthene	**440**	16.7	ug/kg	667		66	1-124	6	20	
Acenaphthylene	**280**	41.7	ug/kg	333		84	1-139	9	20	
Anthracene	**ND**	16.7	ug/kg	13.3		73	1-126	7	20	
Benzo(a)anthracene	**ND**	41.7	ug/kg	33.3		93	12-135	3	20	
Benzo(a)pyrene	**ND**	41.7	ug/kg	33.3		68	1-128	13	20	
Benzo(b)fluoranthene	**13.0**	6.66	ug/kg	13.3		98	6-150	6	20	
Benzo(g,h,i)perylene	**49.6**	6.66	ug/kg	53.3		93	1-116	4	20	
Benzo(k)fluoranthene	**12.2**	1.66	ug/kg	13.3		92	1-159	5	20	
Chrysene	**32.9**	0.833	ug/kg	33.3		99	1-199	4	20	
Dibenz(a,h)anthracene	**128**	3.33	ug/kg	133		96	1-110	5	20	
Fluoranthene	**31.4**	16.7	ug/kg	33.3		94	14-123	5	20	
Fluorene	**59.6**	8.33	ug/kg	66.7		89	1-142	1	20	
Indeno(1,2,3-cd)pyrene	**32.7**	4.16	ug/kg	33.3		98	1-116	8	20	
Naphthalene	**313**	41.7	ug/kg	333		94	1-122	0	20	
Phenanthrene	**25.8**	3.73	ug/kg	26.7		97	1-155	0	20	
Pyrene	**64.6**	8.33	ug/kg	66.7		97	1-140	0	20	
Surrogate: Decafluorobiphenyl	**200**		ug/kg	333		60	40-130			
Surrogate: Nitrobenzene	**325**		ug/kg	333		98	40-130			
Matrix Spike (3D01026-MS1) Prepared: 04/01/03 1335 Analyzed: 04/11/03 0506					**Source: 0303847-01**					
Acenaphthene	**362**	16.7	ug/kg	667	489	0	1-124			Q-02
Acenaphthylene	**324**	41.7	ug/kg	333	291	10	1-139			
Anthracene	**215**	16.7	ug/kg	13.3	193	165	1-126			Q-02
Benzo(a)anthracene	**51.4**	41.7	ug/kg	33.3	ND	102	12-135			
Benzo(a)pyrene	**61.1**	41.7	ug/kg	33.3	ND	183	1-128			Q-02
Benzo(b)fluoranthene	**45.7**	6.66	ug/kg	13.3	51.2	0	6-150			Q-02
Benzo(g,h,i)perylene	**159**	6.66	ug/kg	53.3	48.3	208	1-116			Q-02
Benzo(k)fluoranthene	**123**	1.66	ug/kg	13.3	105	135	1-159			
Chrysene	**63.9**	0.833	ug/kg	33.3	102	0	1-199			Q-02
Dibenz(a,h)anthracene	**190**	3.33	ug/kg	133	28.8	121	1-110			Q-02
Fluoranthene	**525**	16.7	ug/kg	33.3	570	0	14-123			Q-02
Fluorene	**118**	8.33	ug/kg	66.7	ND	177	1-142			Q-02
Indeno(1,2,3-cd)pyrene	**134**	4.16	ug/kg	33.3	244	0	1-116			Q-02
Naphthalene	**263**	41.7	ug/kg	333	ND	79	1-122			
Phenanthrene	**330**	3.73	ug/kg	26.7	296	127	1-155			
Pyrene	**92.6**	8.33	ug/kg	66.7	23.0	104	1-140			
Surrogate: Nitrobenzene	**302**		ug/kg	333		91	40-130			

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Environmental Laboratories
Bethany Tech Center • Suite 190
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Louisiana: 02007
Kansas: E-10288
Florida: E-87681

Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

Semivolatile Polynuclear Aromatic Hydrocarbons - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3D01026 - EPA 3550B Sonication Extraction (continued)										
Matrix Spike Duplicate (3D01026-MSD1) Prepared: 04/01/03 1335 Analyzed: 04/11/03 0544					**Source: 0303847-01**					
Acenaphthene	**369**	16.7	ug/kg	667	489	0	1-124	2	20	Q-02
Acenaphthylene	**371**	41.7	ug/kg	333	291	24	1-139	14	20	
Anthracene	**249**	16.7	ug/kg	13.3	193	421	1-126	15	20	Q-02
Benzo(a)anthracene	**54.8**	41.7	ug/kg	33.3	ND	112	12-135	6	20	
Benzo(a)pyrene	**67.9**	41.7	ug/kg	33.3	ND	204	1-128	11	20	Q-02
Benzo(b)fluoranthene	**86.3**	6.66	ug/kg	13.3	51.2	264	6-150	62	20	Q-02,Q-04
Benzo(g,h,i)perylene	**139**	6.66	ug/kg	53.3	48.3	170	1-116	13	20	Q-02
Benzo(k)fluoranthene	**143**	1.66	ug/kg	13.3	105	286	1-159	15	20	Q-02
Chrysene	**66.2**	0.833	ug/kg	33.3	102	0	1-199	4	20	Q-02
Dibenz(a,h)anthracene	**200**	3.33	ug/kg	133	28.8	129	1-110	5	20	Q-02
Fluoranthene	**618**	16.7	ug/kg	33.3	570	144	14-123	16	20	Q-02
Fluorene	**130**	8.33	ug/kg	66.7	ND	195	1-142	10	20	Q-02
Indeno(1,2,3-cd)pyrene	**369**	4.16	ug/kg	33.3	244	375	1-116	93	20	Q-02,Q-04
Naphthalene	**272**	41.7	ug/kg	333	ND	82	1-122	3	20	
Phenanthrene	**370**	3.73	ug/kg	26.7	296	277	1-155	11	20	Q-02
Pyrene	**99.4**	8.33	ug/kg	66.7	23.0	115	1-140	7	20	
Surrogate: Nitrobenzene	**322**		ug/kg	333		97	40-130			

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nelap
Louisiana: 02007
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Florida: E-87681

Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/16/03 1740

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-02	The recovery of an analyte(s) in the MSs was outside the acceptable range due to interference, large dilutions required for analysis or a combination of these factors. The recovery of this analyte(s) in the LCSs was within the required limits.
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.

*Sample Reporting Limit **Method Reporting Limit

Chain-of-Custody

Page 1 of 2

ERMI
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400 W. Bethany, Suite 190
Allen, Texas 75013
972-727-1123 (Local) * 800-228-ERMI (Long Distance)
972-727-1175 (Fax)

196980
TMP Rec. @ 0.8°C

Company Name: ALPHA TESTING, INC. ❶			Comments:
Contact: CHRIS MITCHELL			
Address: 2323 WISCONSIN ST SUITE 100			
City: IRVING	State: TX	Zip Code: 75062	TAT: Normal ☒ Expedite ☐ (Call for Pricing)
Telephone: (972) 726-8911		Fax Number: (972) 726-7102	
Billing Name: ❷			REQUESTED ANALYSES ❼
Billing Address (if different):			
City:	State:	Zip Code:	
Telephone:		Fax Number:	
Purchase Order Number: ❸			
Project Name: HOBBS STATION ❹		Project Number: 60211 ❺	
Address: CR 61 & Hwy 18			
City: HOBBS	State: NM	Zip Code:	
Sampler: CHRIS MITCHELL	Signature:	❻	

ERMI Use Only	Field Sample I.D.	Sample Date ❽	Sample Time ❾	Matrix	# of Bottles	Preservative	Sample Type Comp.	Sample Type Grab	TPH (8015 DRO/GRO)	BTEX (8021 & 8015)
0303603401	MW-1 (25-30)	3-19-03	1205	SOIL	1	4°C		X	✓	✓
0303603402	MW-2 (30-35)	3-19-03	1525	SOIL	2	4°C		X	✓	✓
0303603403	MW-4 (30-35)	3-20-03	910	SOIL	1	4°C		X	✓	✓
0303603404	T-5 (10-15)	3-20-03	1110	SOIL	1	4°C		X	✓	✓
	MW-1	3-20-03	1115	H_2O	6	4°C/HCl		X	✓	✓
	MW-2	3-20-03	945	H_2O	7	4°C/HCl		X	✓	✓
	MW-3	3-20-03	1035	H_2O	7	4°C/HCl		X	✓	✓
	MW-4	3-20-03	1205	H_2O	5	4°C/HCl		X	✓	✓

Relinquished By: ❿	Date: 3-21-03	Time: 0900	Received By:	Date: 3-21-03	Time: 0905
Relinquished By:	Date: 3-21-03	Time: 1630	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Method of Shipment:	Date:		Received for ERMI By:	Date: 3/21/03	Time: 1700

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Florida: E-87681

Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/15/03 1623

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.

Sample Identification

Laboratory ID #	Client Sample ID	Matrix	Sampled Date/Time	Received Date/Time
0303755-01	MW-3	Aqueous	03/20/03 1035	03/26/03 1645

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

*Sample Reporting Limit **Method Reporting Limit
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Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/15/03 1623

Laboratory ID #:	Sample Type	Matrix	Sample Collected By	Customer
0303755-01	Grab	Aqueous	B. Chris Mitchell	

Sample Description: MW-3
Sample Date/Time: 03/20/03 1035

Analyte(s)	Result	*SRL	**MRL	Units	Method #	Analysis Date/Time	Analyst	Flag
Semivolatile Polynuclear Aromatic Hydrocarbons								
Acenaphthene	**ND**	2.50	2.50	ug/l	EPA 8310	04/10/03 0924	SW	
Acenaphthylene	**4.85**	1.25	1.25	ug/l	EPA 8310	04/10/03 0924	SW	
Anthracene	**15.0**	5.00	0.500	ug/l	EPA 8310	04/10/03 0729	SW	R-01
Benzo(a)anthracene	**0.290**	0.0250	0.0250	ug/l	EPA 8310	04/10/03 0924	SW	
Benzo(a)pyrene	**0.394**	0.0250	0.0250	ug/l	EPA 8310	04/10/03 0924	SW	
Benzo(b)fluoranthene	**ND**	0.0100	0.0100	ug/l	EPA 8310	04/10/03 0924	SW	
Benzo(g,h,i)perylene	**0.545**	0.200	0.200	ug/l	EPA 8310	04/10/03 0924	SW	
Benzo(k)fluoranthene	**1.32**	0.0100	0.0100	ug/l	EPA 8310	04/10/03 0924	SW	
Chrysene	**1.70**	0.0250	0.0250	ug/l	EPA 8310	04/10/03 0924	SW	
Dibenz(a,h)anthracene	**0.623**	0.100	0.100	ug/l	EPA 8310	04/10/03 0924	SW	
Fluoranthene	**16.1**	0.125	0.125	ug/l	EPA 8310	04/10/03 0924	SW	
Fluorene	**9.18**	0.250	0.250	ug/l	EPA 8310	04/10/03 0924	SW	
Indeno(1,2,3-cd)pyrene	**2.10**	0.125	0.125	ug/l	EPA 8310	04/10/03 0924	SW	
Naphthalene	**29.0**	1.25	1.25	ug/l	EPA 8310	04/10/03 0924	SW	
Phenanthrene	**7.67**	0.100	0.100	ug/l	EPA 8310	04/10/03 0924	SW	
Pyrene	**0.506**	0.0500	0.0500	ug/l	EPA 8310	04/10/03 0924	SW	
Surrogate: Nitrobenzene		*92 %*	*40-130*		EPA 8310	04/10/03 0924	SW	

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Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/15/03 1623

Semivolatile Polynuclear Aromatic Hydrocarbons - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C27034 - EPA 3510C Separatory Funnel Extraction										
Blank (3C27034-BLK1) Prepared: 03/27/03 1015 Analyzed: 04/13/03 1447										
Acenaphthene	ND	2.50	ug/l							
Acenaphthylene	ND	1.25	ug/l							
Anthracene	ND	0.500	ug/l							
Benzo(a)anthracene	ND	0.0250	ug/l							
Benzo(a)pyrene	ND	0.0250	ug/l							
Benzo(b)fluoranthene	ND	0.0100	ug/l							
Benzo(g,h,i)perylene	ND	0.200	ug/l							
Benzo(k)fluoranthene	ND	0.0100	ug/l							
Chrysene	ND	0.0250	ug/l							
Dibenz(a,h)anthracene	ND	0.100	ug/l							
Fluoranthene	ND	0.125	ug/l							
Fluorene	ND	0.250	ug/l							
Indeno(1,2,3-cd)pyrene	ND	0.125	ug/l							
Naphthalene	ND	1.25	ug/l							
Phenanthrene	ND	0.100	ug/l							
Pyrene	ND	0.0500	ug/l							
Surrogate: Nitrobenzene	**10.7**		ug/l	10.0		107	40-130			
Laboratory Control Sample (3C27034-BS1) Prepared: 03/27/03 1015 Analyzed: 04/10/03 0221										
Acenaphthene	**18.9**	2.50	ug/l	20.0		94	1-124			
Acenaphthylene	**10.4**	1.25	ug/l	10.0		104	1-139			
Anthracene	ND	0.500	ug/l	0.400		84	1-126			
Benzo(a)anthracene	**1.18**	0.0250	ug/l	1.00		118	12-135			
Benzo(a)pyrene	**1.04**	0.0250	ug/l	1.00		104	1-128			
Benzo(b)fluoranthene	**0.477**	0.0100	ug/l	0.400		119	6-150			
Benzo(g,h,i)perylene	**1.75**	0.200	ug/l	1.60		109	1-116			
Benzo(k)fluoranthene	**0.461**	0.0100	ug/l	0.400		115	1-159			
Chrysene	**1.21**	0.0250	ug/l	1.00		121	1-199			
Dibenz(a,h)anthracene	**3.60**	0.100	ug/l	4.00		90	1-110			
Fluoranthene	**1.12**	0.125	ug/l	1.00		112	14-123			
Fluorene	**2.27**	0.250	ug/l	2.00		114	1-142			
Indeno(1,2,3-cd)pyrene	**1.15**	0.125	ug/l	1.00		115	1-116			
Naphthalene	**11.2**	1.25	ug/l	10.0		112	1-122			
Phenanthrene	**0.933**	0.100	ug/l	0.800		117	1-155			
Pyrene	**2.24**	0.0500	ug/l	2.00		112	1-140			
Surrogate: Decafluorobiphenyl	**7.41**		ug/l	10.0		74	40-130			
Surrogate: Nitrobenzene	**8.97**		ug/l	10.0		90	40-130			

*Sample Reporting Limit **Method Reporting Limit

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Report of Sample Analysis

Alpha Testing, Inc.
2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/15/03 1623

Semivolatile Polynuclear Aromatic Hydrocarbons - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C27034 - EPA 3510C Separatory Funnel Extraction (continued)										
Laboratory Control Sample Duplicate (3C27034-BSD1) Prepared: 03/27/03 1015 Analyzed: 04/10/03 0300										
Acenaphthene	**14.7**	2.50	ug/l	20.0		74	1-124	25	20	C-01
Acenaphthylene	**8.06**	1.25	ug/l	10.0		81	1-139	25	20	C-01
Anthracene	**ND**	0.500	ug/l	0.400		74	1-126	13	20	
Benzo(a)anthracene	**1.00**	0.0250	ug/l	1.00		100	12-135	17	20	
Benzo(a)pyrene	**0.915**	0.0250	ug/l	1.00		92	1-128	13	20	
Benzo(b)fluoranthene	**0.407**	0.0100	ug/l	0.400		102	6-150	16	20	
Benzo(g,h,i)perylene	**1.53**	0.200	ug/l	1.60		96	1-116	13	20	
Benzo(k)fluoranthene	**0.388**	0.0100	ug/l	0.400		97	1-159	17	20	
Chrysene	**1.04**	0.0250	ug/l	1.00		104	1-199	15	20	
Dibenz(a,h)anthracene	**2.97**	0.100	ug/l	4.00		74	1-110	19	20	
Fluoranthene	**0.990**	0.125	ug/l	1.00		99	14-123	12	20	
Fluorene	**1.72**	0.250	ug/l	2.00		86	1-142	28	20	C-01
Indeno(1,2,3-cd)pyrene	**1.04**	0.125	ug/l	1.00		104	1-116	10	20	
Naphthalene	**8.32**	1.25	ug/l	10.0		83	1-122	30	20	C-01
Phenanthrene	**0.766**	0.100	ug/l	0.800		96	1-155	20	20	
Pyrene	**1.87**	0.0500	ug/l	2.00		94	1-140	18	20	
Surrogate: Decafluorobiphenyl	**5.07**		ug/l	10.0		51	40-130			
Surrogate: Nitrobenzene	**6.48**		ug/l	10.0		65	40-130			
Matrix Spike (3C27034-MS1) Prepared: 03/27/03 1015 Analyzed: 04/10/03 0338					**Source: 0302588-02**					
Acenaphthene	**15.9**	2.50	ug/l	20.0	ND	80	1-124			
Acenaphthylene	**7.91**	1.25	ug/l	10.0	ND	79	1-139			
Anthracene	**ND**	0.500	ug/l	0.400	ND	71	1-126			
Benzo(a)anthracene	**1.05**	0.0250	ug/l	1.00	ND	105	12-135			
Benzo(a)pyrene	**1.04**	0.0250	ug/l	1.00	0.0344	101	1-128			
Benzo(b)fluoranthene	**0.507**	0.0100	ug/l	0.400	0.119	97	6-150			
Benzo(g,h,i)perylene	**1.76**	0.200	ug/l	1.60	0.218	96	1-116			
Benzo(k)fluoranthene	**0.499**	0.0100	ug/l	0.400	0.102	99	1-159			
Chrysene	**1.08**	0.0250	ug/l	1.00	0.0631	102	1-199			
Dibenz(a,h)anthracene	**3.57**	0.100	ug/l	4.00	ND	89	1-110			
Fluoranthene	**1.36**	0.125	ug/l	1.00	ND	136	14-123			C-02
Fluorene	**2.55**	0.250	ug/l	2.00	0.447	105	1-142			
Indeno(1,2,3-cd)pyrene	**1.18**	0.125	ug/l	1.00	0.195	98	1-116			
Naphthalene	**11.2**	1.25	ug/l	10.0	ND	112	1-122			
Phenanthrene	**0.898**	0.100	ug/l	0.800	0.195	88	1-155			
Pyrene	**1.97**	0.0500	ug/l	2.00	ND	98	1-140			
Surrogate: Decafluorobiphenyl	**4.56**		ug/l	10.0		46	40-130			
Surrogate: Nitrobenzene	**6.14**		ug/l	10.0		61	40-130			

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Report of Sample Analysis

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2209 Wisconsin Street, Suite 100
Dallas TX, 75229
ATTN: Chris Mitchell

Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/15/03 1623

Semivolatile Polynuclear Aromatic Hydrocarbons - Quality Control

Analyte(s)	Result	*SRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3C27034 - EPA 3510C Separatory Funnel Extraction (continued)										
Matrix Spike Duplicate (3C27034-MSD1) Prepared: 03/27/03 1015 Analyzed: 04/10/03 0417					**Source: 0302588-02**					
Acenaphthene	**14.5**	2.50	ug/l	20.0	ND	72	1-124	9	20	
Acenaphthylene	**6.68**	1.25	ug/l	10.0	ND	67	1-139	17	20	
Anthracene	**ND**	0.500	ug/l	0.400	ND	72	1-126	1	20	
Benzo(a)anthracene	**1.08**	0.0250	ug/l	1.00	ND	108	12-135	3	20	
Benzo(a)pyrene	**1.11**	0.0250	ug/l	1.00	0.0344	108	1-128	7	20	
Benzo(b)fluoranthene	**0.519**	0.0100	ug/l	0.400	0.119	100	6-150	2	20	
Benzo(g,h,i)perylene	**1.84**	0.200	ug/l	1.60	0.218	101	1-116	4	20	
Benzo(k)fluoranthene	**0.511**	0.0100	ug/l	0.400	0.102	102	1-159	2	20	
Chrysene	**1.10**	0.0250	ug/l	1.00	0.0631	104	1-199	2	20	
Dibenz(a,h)anthracene	**3.86**	0.100	ug/l	4.00	ND	96	1-110	8	20	
Fluoranthene	**1.41**	0.125	ug/l	1.00	ND	141	14-123	4	20	C-02
Fluorene	**2.31**	0.250	ug/l	2.00	0.447	93	1-142	10	20	
Indeno(1,2,3-cd)pyrene	**1.22**	0.125	ug/l	1.00	0.195	102	1-116	3	20	
Naphthalene	**10.4**	1.25	ug/l	10.0	ND	104	1-122	7	20	
Phenanthrene	**0.909**	0.100	ug/l	0.800	0.195	89	1-155	1	20	
Pyrene	**2.11**	0.0500	ug/l	2.00	ND	106	1-140	7	20	
Surrogate: Nitrobenzene	**4.74**		ug/l	10.0		47	40-130			

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Project: Hobbs Station
Project #: E03211
Print Date/Time: 04/15/03 1623

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	The RPD was greater than expected.
C-02	The recovery was greater than expected
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.

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Chain-of-Custody

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196980
TEMP Rec. @ 0.8°C

Company Name: ALPHA TESTING, INC. ❶			Comments:
Contact: CHRIS MITCHELL			
Address: 2209 WISCONSIN ST. SUITE 100			
City: DALLAS	State: TX	Zip Code: 75229	TAT: Normal ☒ Expedite ☐ (Call for Pricing)
Telephone: (972) 620-8911		Fax Number: (972) 620-1302	
Billing Name: ❷			REQUESTED ANALYSES ❼
Billing Address (if different):			
City:	State:	Zip Code:	
Telephone:		Fax Number:	
Purchase Order Number: ❸			
Project Name: HOBBS STATION ❹		Project Number: E03211 ❺	
Address: CR 61 & HWY 18			
City: HOBBS	State: NM	Zip Code:	
Sampler: B. CHRIS MITCHELL Signature: B. Cel ❻			

ERMI Use Only	Field Sample I.D.	Sample Date ❽	Sample Time ❾	Matrix	# of Bottles	Preservative	Sample Type Comp.	Sample Type Grab	TPH (8015 DRO/GRO)	BTEX (SW-846 # 8021)
	MW-1 (35-36)	3-19-03	1205	SOIL	1	4°C		X	/	/
	MW-2 (34-35)	3-19-03	1525	SOIL	2	4°C		X	/	/
	MW-4 (36-37)	3.20.03	910	SOIL	1	4°C		X	/	/
	B-5 (14-15)	3-19-03	1700	SOIL	1	4°C		X	/	/
0303635-01	MW-1	3.20.03	1115	H_2O	6	4°C/HCl		X	/	/
0303635-02	MW-2	3.20.03	945	H_2O	7	4°C/HCl		X	/	/
3.25.03 ~~0303635-03~~	MW-3	3.20.03	1035	H_2O	7	4°C/HCl		X	/	/
0303635-04	MW-4	3.20.03	1205	H_2O	5	4°C/HCl		X	/	/

Relinquished By: B Cel ❿	Date: 3-21-3	Time: 0905	Received By: [illegible]	Date: 3-21-3	Time: 0905
Relinquished By: [illegible]	Date: 3-21-3	Time: 1030	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Method of Shipment:	Date:	Received for ERMI By: [illegible]		Date: 3/21/03	Time: [illegible]

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