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ADDITIONAL STAGE I ABATEMENT ACTIVITIES

INSTALLATION OF MW-13 THROUGH MW-15
PLUGGING OF MW-7

JAL BASIN STATION
LEA COUNTY, NEW MEXICO

EQUILON PIPELINE COMPANY, LLC

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INSTALLATION OF MW-13 THROUGH MW-15
PLUGGING OF MW-7

JAL BASIN STATION
LEA COUNTY, NEW MEXICO

PREPARED FOR:

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Project Manager

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KEI Job No. 910103-3

January 6, 2000

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PURPOSE AND SCOPE

The purpose of this report is to document additional environmental investigation activities performed in association with the Stage I Ground Water Abatement Plan (AP-4) for the confirmed diesel fuel release at the Jal Basin Station in Lea County, New Mexico. The work was performed in accordance with the New Mexico Oil Conservation Division (OCD) approval letter dated August 18, 1999 and subsequently amended in a letter dated September 28, 1999.

The scope of the work included the installation of monitoring wells MW-13 through MW-15 in OCD approved locations including the collection and laboratory analysis of soil samples, the plugging and abandonment of MW-7 to allow for construction of an electric pump facility, and conducting the 4th quarter 1999 groundwater monitoring event. The approved pilot test for groundwater remediation system was not conducted and is still pending approval of air emissions from the NM Air Quality Bureau.

SITE BACKGROUND

The Equilon Pipeline Company diesel release at Jal Basin Station was confirmed during a Phase II Limited Environmental Subsurface Investigation performed by StanTech Environmental Services in January of 1998. The release site is located in Units O & P, Section 32, Township 25 South, Range 37 East and Unit B, Section 5, Township 26 South, Range 37 East, in Lea County New Mexico. During the Phase II investigation, 2 monitoring wells (MW-1 & MW-2) and 3 borings (B-1 through B-3) were installed. Light Non-Aqueous Phase Liquid (LNAPL) was observed in MW-2 with and approximate thickness of 3 feet. A water sample was collected from the on-site water well utilized as a non-potable water source for the facilities located at this site. This sample had non-detectable results for TPH-DRO, TPH-ORO, and BTEX concentrations; however, a TPH-GRO concentration of 0.088 mg/L was observed.

KEI installed another 10 monitoring wells (MW-3 through MW-12) using air rotary drilling techniques to delineate the horizontal and vertical extent of hydrocarbon impact from the suspected source area. Hydrocarbons were detected in MW-3, MW-4, and MW-6 through MW-9. Monitoring well MW-8 is the most up-gradient well and MW-7 is the most down gradient well. Due to the subsequent detection of hydrocarbons in monitoring wells MW-7 and MW-8, additional delineation was required. Light Non-Aqueous Phase Liquids (LNAPL) were observed on October 26, 1999 in MW-3, MW-4, MW-6, MW-8, and MW-9 with a product thickness ranging from 1.24 feet to 7.47 feet. Results of the previous assessment are presented in the Stage I Abatement Plan prepared by KEI, dated April 8, 1999.

ADDITIONAL STAGE I ABATEMENT ACTIVITIES

As a result of the hydrocarbon plume extending into the down gradient and up gradient monitoring wells (MW-7 & MW-8), the following additional Stage I activities were conducted:

- 3 additional monitoring wells (MW-13 through MW-15) were installed in accordance with OCD requirements to delineate the extent of the hydrocarbon plume,
- soil samples were obtained for field screening and/or laboratory analysis from each boring to determine the vertical and horizontal extent of hydrocarbon impact,

- subsurface soil profile was classified in general accordance with the Unified Soil Classification System by visually observing the soil samples obtained during the assessment
- ground water samples were obtained from all monitoring wells for laboratory analysis to determine the extent and degree of hydrocarbon impact to ground water,
- depth measurements were obtained to determine the ground water elevations, gradient, and flow direction,
- well locations were surveyed by a Professional Land Surveyor registered in the State of New Mexico,
- monitoring well MW-7 was plugged and abandoned using cement grout placed with a tremmie pipe in the well.

Results of the previous Stage I Abatement activities, including the installation of monitoring wells MW-3 through MW-12, soil boring logs, soil and groundwater sampling and analytical results are presented in the Stage I Abatement Plan report prepared by KEI, dated April 8, 1999. Results from the previous report have been duplicated in the Tables section of this report.

SOIL INVESTIGATION

The additional monitoring wells were installed utilizing air rotary drilling techniques. Soil samples were collected at selected intervals from the ground surface to the water-bearing zone of each boring. The soils were classified in the field, soil samples were field screened, and selected samples were prepared and shipped to the laboratory for chemical analysis.

Upon advancement to total depth and collection of soil samples, a 2-inch diameter monitoring well consisting of 15 ft. of 0.010-inch slotted PVC screen and blank riser was placed in the open hole of each boring. The wells were completed with an annular sand pack extending 2 ft. above the slotted screen interval, a 2 ft. thick bentonite clay seal above the sand pack, and a 2 ft. by 2ft. concrete surface pad with a locking steel stick-up cover. The monitoring wells locations were surveyed by a Professional Land Surveyor registered in the State of New Mexico and are presented on FIG. 1.

SOIL DESCRIPTION

The subsurface soil profile was classified in general accordance with the Unified Soil Classification System by visually observing the soil samples obtained during the assessment. In general, 2 soil types were encountered. A general description of the soil, approximate thickness, and head-space sample results for each soil type are as follows:

Soil Type I

This soil type consisted of red to brown colored sand and was encountered in all monitoring well locations. The sand was fine to coarse grained, well graded, loose, contained sparse gravel, and varied from dry to saturated. The observed thickness of this soil type varied from approximately 6 to 48 feet. Head-space readings from samples of this soil type ranged from below instrument detection limits (ND) to 138 ppm.

Soil Type II

This soil type consisted of tan to brown colored sand and was encountered in all monitoring well locations. The sand was fine to medium grained, partially lithified, very calcareous with caliche nodules, medium to very dense, and varied from dry to moist. The observed thickness of this soil type varied from approximately 5 to 25 feet. Head-space readings from samples of this soil type were below instrument detection limits (ND).

Logs indicating the typical subsurface soil profile, depths at which soil samples were obtained, head-space results, laboratory results, and generalized geologic profiles are presented as FIGs. 2 through 4.

SOIL SAMPLING AND ANALYTICAL RESULTS

Soil samples were selected from each boring based on the following criteria:

- the soil sample with the highest PID headspace reading,
- the sample directly above and/or near the groundwater level observed at the time of drilling, and
- the sample at the approximate mid-depth location in the boring.

Selected soil samples were transmitted to the laboratory for analytical testing consisting of the following:

- Nine soil samples from the monitoring wells were tested for benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons diesel range organics (TPH-DRO)
- one soil sample from MW-13 exhibited the highest TPH concentration and was also tested for SPLP volatile organic compounds (VOC), SPLP semi-volatile organic compounds (SVOC), and SPLP TPH concentrations.
- laboratory results for the selected soil samples from monitoring wells MW-13 through MW-15 indicated the following concentration ranges:

CONSTITUENT	CONCENTRATION RANGE
BENZENE	ND
BTEX	ND to 8.38 mg/kg
TPH	ND to 5230 mg/kg
SPLP VOC (total)	ND to 0.026 mg/kg
SPLP SVOC (total)	ND to 0.163 mg/kg
SPLP TPH	1.99 ppm

Soil laboratory results are summarized in TABLES I through III. Soil analytical laboratory reports and chain-of-custody documentation are presented in APPENDIX A. QA/QC procedures are presented as APPENDIX C.

GROUND WATER SAMPLING AND ANALYTICAL RESULTS

Upon completion of drilling, each monitoring well was gauged to determine the depth to ground water and checked for the presence of LNAPL. The depth to ground water measured in the monitoring wells not containing LNAPL on October 19, 1999, and monitoring wells containing LNAPL on October 26, 1999, ranged from 88.14 to 95.25 feet below ground surface. Ground water contours indicate approximate elevations and gradient of 0.003 towards the northwest. Ground water gradient and direction of flow are presented on FIG. 5. LNAPL was observed on ground water in MW-2, MW-3, MW-4, MW-6, MW-8, and MW-9 with a thickness ranging from 1.24 to 7.47 feet. LNAPL thickness is graphically presented on FIG. 6 for October 26, 1999. Ground water measurements are summarized in TABLE IV.

All monitoring wells were gauged and checked for the presence of LNAPL. On October 19, 1999, the wells designated to be sampled were purged of approximately 3 well volumes of water or until the wells were dry using a PVC bailer. Ground water was allowed to recharge and samples were obtained using disposable Teflon samplers. Monitoring wells with a measurable presence of LNAPL were not sampled. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purged water collected during the event was stored on site, in steel drums, pending disposal.

Ground water samples were tested for BTEX, PAH, TPH-DRO, ICP total metals, cations (bicarbonates, carbonates), anions (chlorides, sulfates), and total dissolved solids (TDS). Laboratory results from all monitoring wells indicated the following concentration ranges:

CONSTITUENT	CONCENTRATION RANGE (mg/L)
BENZENE	ND to 0.007
BTEX	ND to 0.017
TPH-DRO	0.077 to 0.481
PAH (Naphthalene)	ND to 0.038
METALS (Chromium)	ND
BICARBONATE	202 to 498
CHLORIDE	4.90 to 159
SULFATE	10.9 to 562
TDS	454 to 2,290

Ground water laboratory results are summarized in TABLES V and VI. BTEX results are graphically presented on FIG. 7. Water analytical laboratory reports and chain-of-custody documentation are presented in APPENDIX B. QA/QC procedures are presented as APPENDIX C.

Two monitoring wells (MW-2 and MW-9) are being utilized for the removal of diesel fuel from the ground water surface. The diesel is being pumped into a 5,000 gallon above ground storage (AST) tank. MW-2 and MW-9 each have a Ferret® pump installed at the diesel and ground water interface. The Ferret® pumps are suited for 2-inch wells. These pumps have a recovery rate of approximately 1/10 gallon per minute. The Ferret® pumps are scheduled for weekly field visits to check operations and perform maintenance.

REGIONAL GEOLOGY AND WATER WELLS

Information pertaining to the regional geology and hydrogeology, including a search of water well records was previously presented in the Stage I Abatement Plan for the site. The report was prepared by KEI and is dated April 8, 1999.

CLOSURE STANDARDS

SOIL

The New Mexico OCD Guidelines for Remediation of Leaks, Spills, and Releases contains the standard criteria for remediation activities. A ranking analysis for the site was performed to determine appropriate soil remediation levels. The ranking analysis is as follows:

Depth to Ground Water	Between 50 and 99 Feet	10 Points
Well Head Protection	Less Than 1000 Feet to Water Source or Less Than 200 Feet to Private Water Source	20 Points
Surface Water Body	Greater Than 1000 Feet	0 Points
	Total Ranking Score	**30 Points**

Based on the total ranking score, the closure objectives for this site for concentrations of benzene, BTEX, and TPH in soil are summarized as follows:

CONSTITUENT	CLOSURE CONCENTRATION (mg/kg)
BENZENE	10
BTEX	50
TPH	100 + Background

GROUND WATER

The OCD requires remediation of impacted ground water to within the New Mexico Water Quality Control Commission (WQCC) Ground Water Standards for natural background water quality. This site exceeds the WQCC standards for several metals as well as chloride, sulfate, and TDS as listed in the following table.

CONSTITUENT	CONCENTRATION RANGE (mg/L)	CLOSURE CONCENTRATION (mg/L)
BENZENE	ND to 0.007	0.01
TOLUENE	ND	0.75
ETHYLBENZENE	ND	0.75
TOTAL XYLENES	ND to 0.010	0.62
TDS	454 to 2,290	1,000
SELENIUM	ND to 0.081	0.05
IRON	0.072 to 5.89	1.0
MANGANESE	ND to 0.581	0.2
BORON	ND to 1.70	0.75

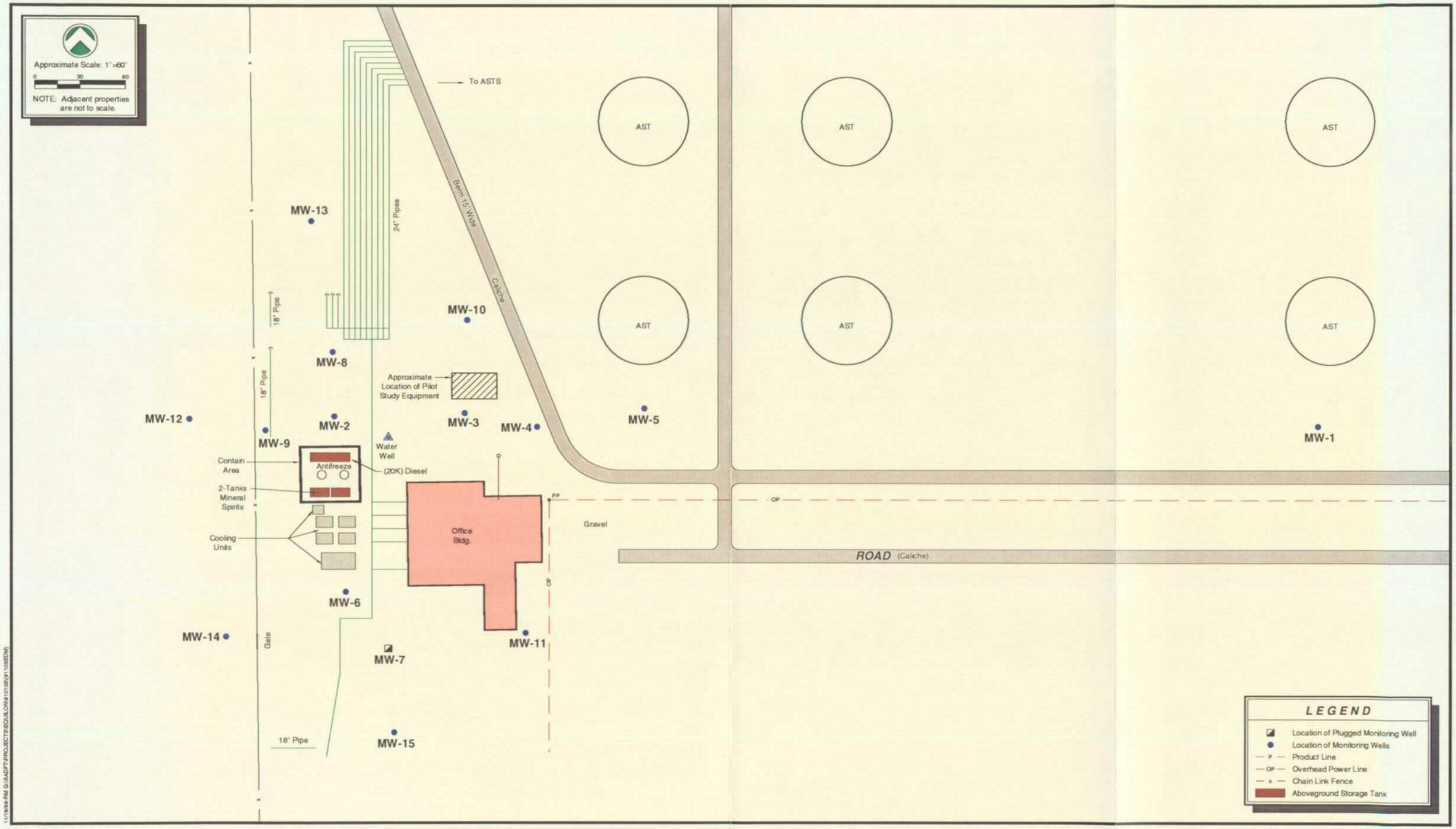
SUMMARY AND RECOMMENDATIONS

Data obtained during the investigation can be summarized in the following statements:

- hydrocarbon impact to soil exceeding OCD closure concentrations for TPH was encountered in MW-13 at 2 to 4 feet below ground surface. Other soil samples from MW-13, MW-14, or MW-15 were not impacted above the OCD closure concentrations.
- apparent hydrocarbon impact to soils from the diesel source has been delineated
- LNAPL is present on ground water in MW-2, MW-3, MW-6, MW-8, and MW-9
- ground water samples obtained from 8 monitoring wells outside the LNAPL plume were not impacted above OCD closure concentrations for constituents of concern
- Although the concentrations of some WQCC metals, chlorides, sulfates, and TDS were detected in groundwater samples above the OCD closure concentrations, these constituents are present in monitoring wells upgradient of the release area and are not typically associated with a release of diesel fuel.

Based on the results of the Stage I Abatement Activities, the following recommendations are provided:

- Continue to operate and maintain LNAPL recovery operations using pneumatic pumps. Expand recovery operations to include MW-2, MW-3, MW-6, MW-8, and MW-9.
- Perform Hi-Vac pilot test, as previously approved by OCD, to evaluate use as a remedial technology for the site.



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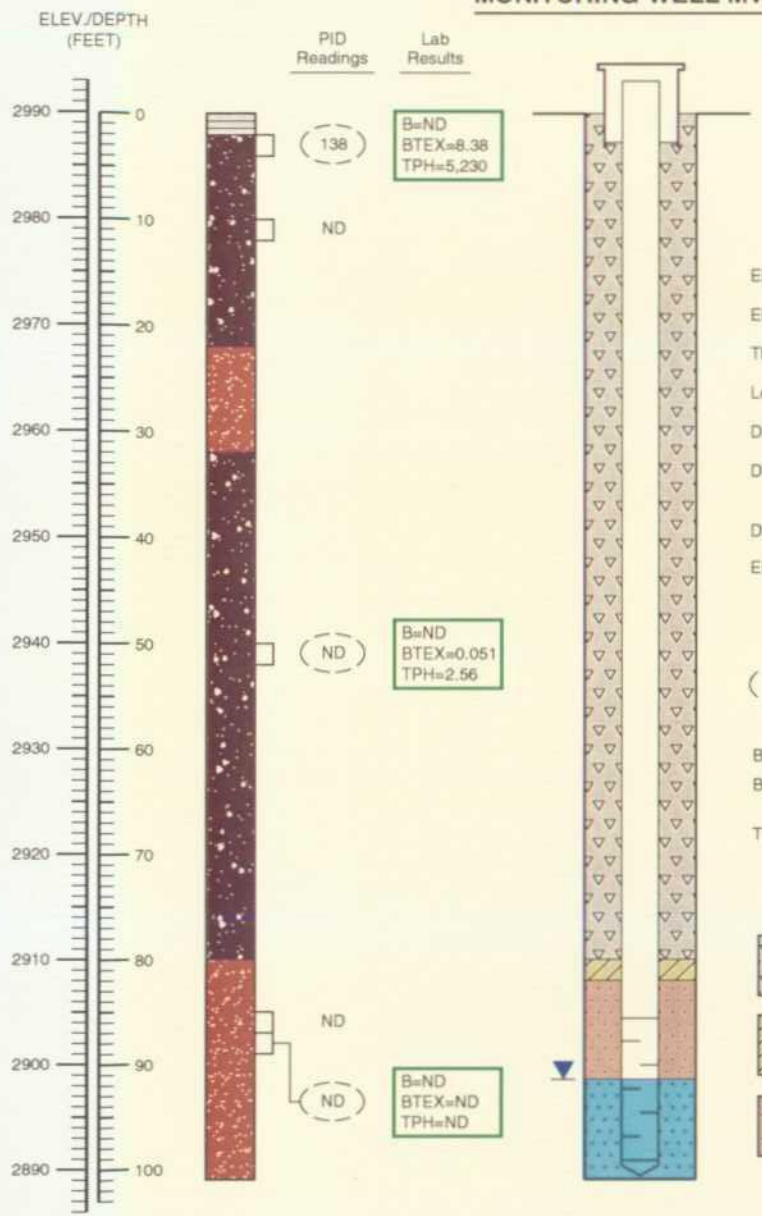
SITE DETAIL MAP

EQUILON PIPELINE COMPANY LLC | JAL BASIN STATION | LEA COUNTY, NEW MEXICO

910103-3-0

FIG 1

MONITORING WELL MW-13



Monitoring Well Details (MW-13)

Elev of Ground Surface	2989.79 ft
Elev Top of PVC Well	2992.97 ft
Thickness of Bentonite Seal	2.00 ft
Length of PVC Well Screen	15.00 ft
Depth of PVC Well	100.65 ft
Depth of Exploratory Hole	101.00 ft
Depth to Ground Water	91.46 ft
Elev of Ground Water	2901.51 ft

Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)

TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

Concrete Surface Seal

Bentonite Pellet Seal

Sand Pack

LEGEND

Road base.

Sand (SW/SM), fine to coarse grained, loose, sparse gravel, red to brown, dry to saturated.

Sand (SM), fine to medium grained, medium to very dense, calcareous, tan to brown, dry to moist.

Indicates the depth from which a soil sample was selected and prepared for field head space and/or laboratory analysis.

Indicates the ground water level measured on October 19, 1999.

PID Head-space readings in ppm obtained with a photo-ionization detector.

ND Indicates the constituent was not detected.

NOTES

1. The monitoring well was installed on October 18, 1999 using air rotary drilling techniques.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a stick up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface.

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LOG AND DETAILS OF MONITORING WELL MW-13

TPLI JAL STATION LEA COUNTY, NEW MEXICO

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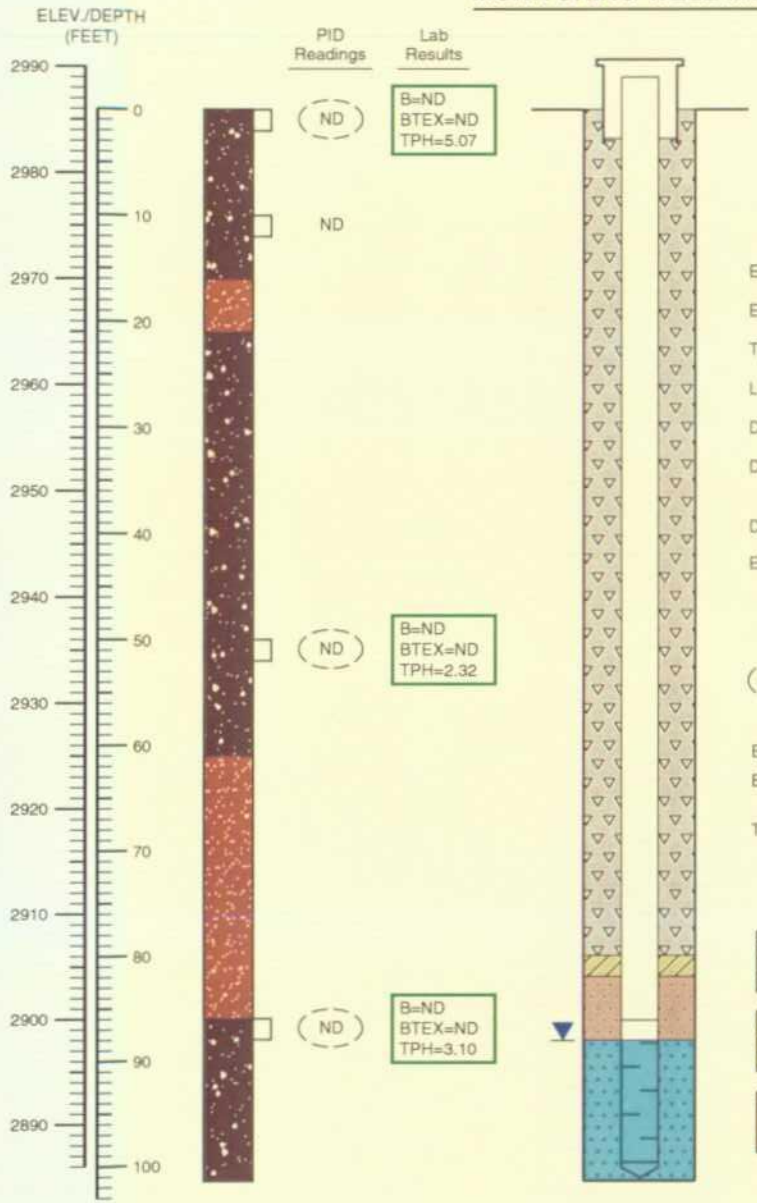
FIG 2

MONITORING WELL MW-14



Monitoring Well Details (MW-14)

Elev of Ground Surface	2986.02 ft
Elev Top of PVC Well	2989.12 ft
Thickness of Bentonite Seal	2.00 ft
Length of PVC Well Screen	15.00 ft
Depth of PVC Well	101.20 ft
Depth of Exploratory Hole	101.50 ft
Depth to Ground Water	88.14 ft
Elev of Ground Water	2900.98 ft

( ) Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)

TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

Concrete Surface Seal

Bentonite Pellet Seal

Sand Pack

LEGEND

Sand (SW/SM), fine to coarse grained, loose, sparse gravel, red to brown, dry to saturated.

Sand (SM), fine to medium grained, medium to very dense, calcareous, tan to brown, dry to moist.

Indicates the depth from which a soil sample was selected and prepared for field head space and/or laboratory analysis.

Indicates the ground water level measured on October 19, 1999.

PID Head-space readings in ppm obtained with a photo-ionization detector.

ND Indicates the constituent was not detected.

NOTES

1. The monitoring well was installed on October 18, 1999 using air rotary drilling techniques.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a stick up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface.

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LOG AND DETAILS OF MONITORING WELL MW-14

TPLI JAL STATION LEA COUNTY, NEW MEXICO

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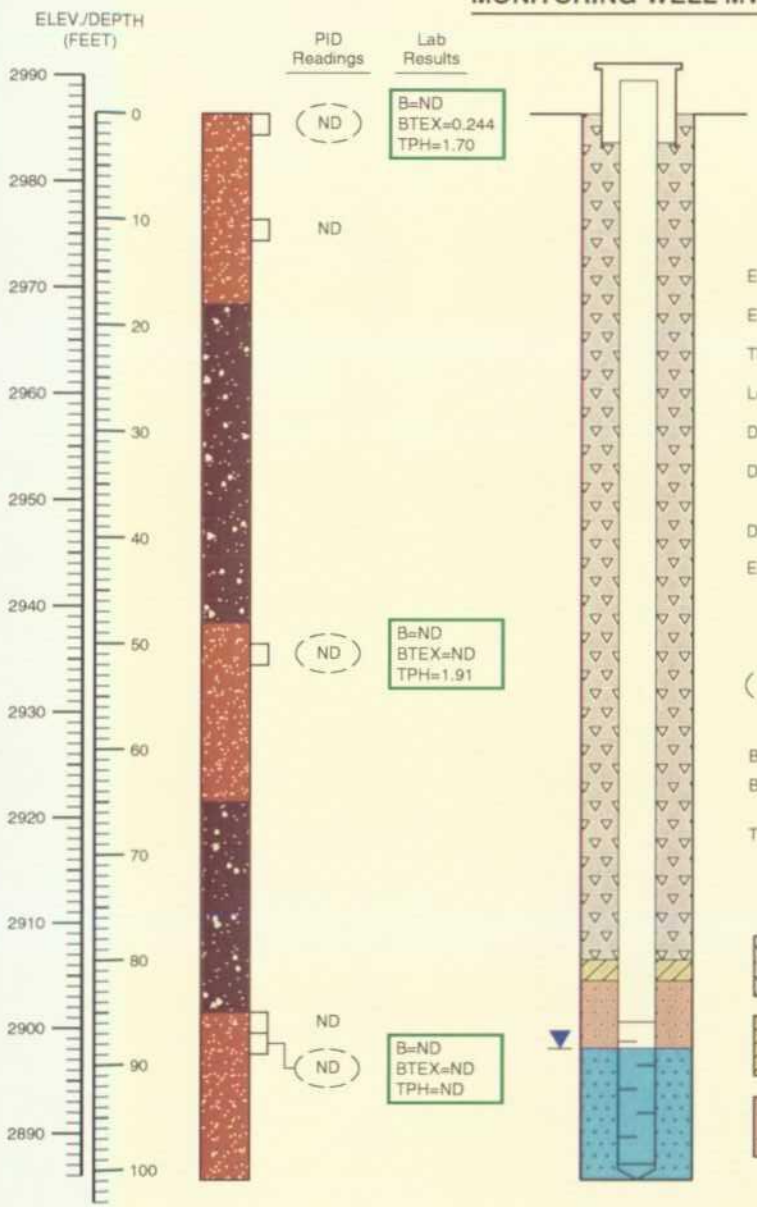
FIG 3

MONITORING WELL MW-15



Monitoring Well Details (MW-15)

Elev of Ground Surface	2986.45 ft
Elev Top of PVC Well	2989.64 ft
Thickness of Bentonite Seal	2.00 ft
Length of PVC Well Screen	15.00 ft
Depth of PVC Well	100.98 ft
Depth of Exploratory Hole	101.00 ft
Depth to Ground Water	88.51 ft
Elev of Ground Water	2901.13 ft

Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)

TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

Concrete Surface Seal

Bentonite Pellet Seal

Sand Pack

LEGEND

Sand (SW/SM), fine to coarse grained, loose, sparse gravel, red to brown, dry to saturated.

Sand (SM), fine to medium grained, medium to very dense, calcareous, tan to brown, dry to moist.

Indicates the depth from which a soil sample was selected and prepared for field head space and/or laboratory analysis.

Indicates the ground water level measured on October 19, 1999.

PID Head-space readings in ppm obtained with a photo-ionization detector.

ND Indicates the constituent was not detected.

NOTES

1. The monitoring well was installed on October 18, 1999 using air rotary drilling techniques.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a stick up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface.

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LOG AND DETAILS OF MONITORING WELL MW-15

TPLI JAL STATION LEA COUNTY, NEW MEXICO

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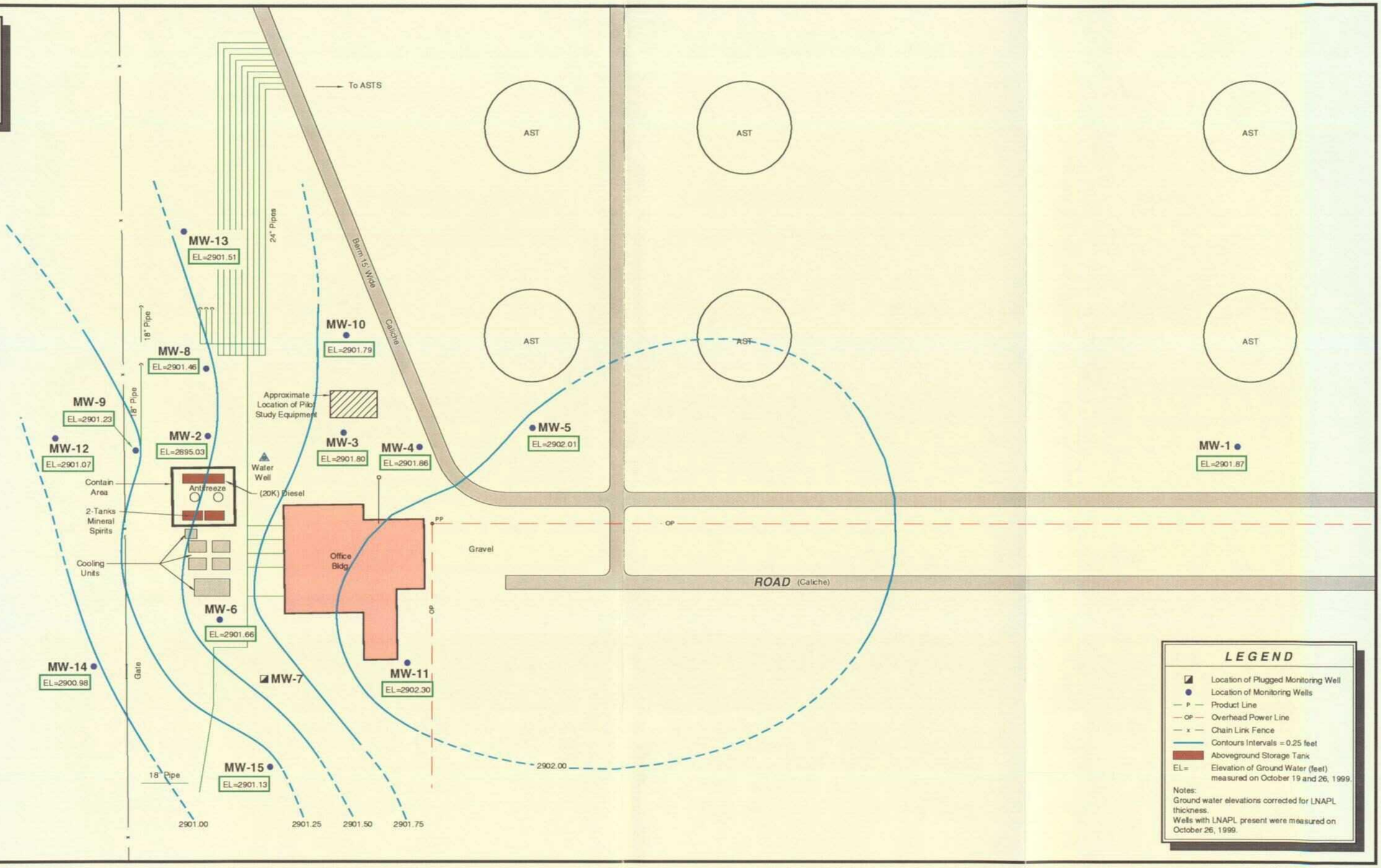
FIG 4

Approximate Scale: 1" =60'

0 30 60

NOTE: Adjacent properties are not to scale.



LEGEND

- Location of Plugged Monitoring Well
- Location of Monitoring Wells
- P — Product Line
- OP — Overhead Power Line
- x — Chain Link Fence
- Contours Intervals = 0.25 feet
- Aboveground Storage Tank
- EL= Elevation of Ground Water (feet) measured on October 19 and 26, 1999.

Notes:
Ground water elevations corrected for LNAPL thickness.
Wells with LNAPL present were measured on October 26, 1999.

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GROUND WATER CONTOUR MAP

EQUILON PIPELINE COMPANY LLC JAL BASIN STATION LEA COUNTY, NEW MEXICO

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FIG 5

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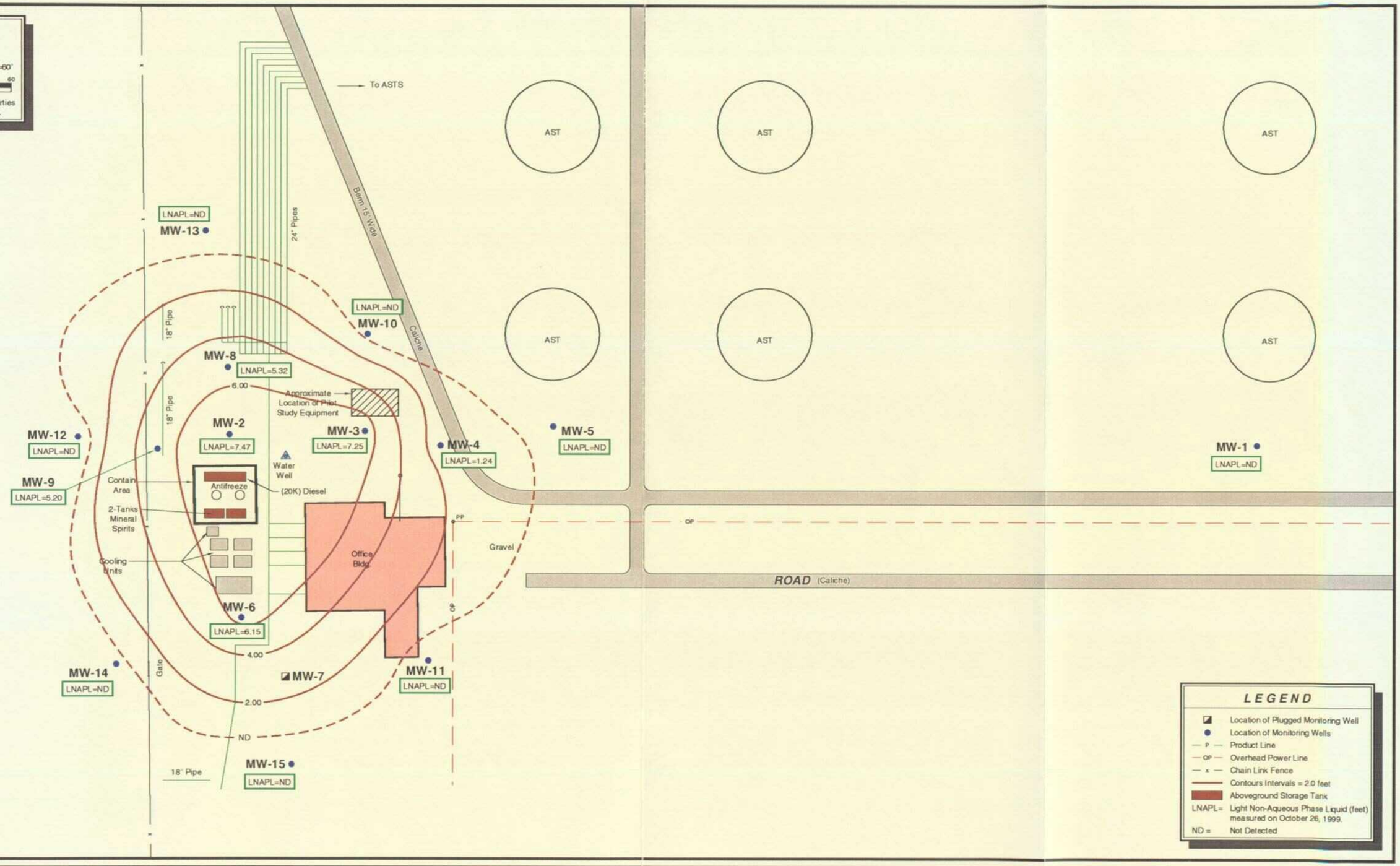
Approximate Scale: 1"=60'

0 30 60

NOTE: Adjacent properties are not to scale.



LEGEND

- Location of Plugged Monitoring Well
- Location of Monitoring Wells
- P — Product Line
- OP — Overhead Power Line
- x — Chain Link Fence
- Contours Intervals = 2.0 feet
- Aboveground Storage Tank
- LNAPL= Light Non-Aqueous Phase Liquid (feet) measured on October 26, 1999.
- ND = Not Detected

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LNAPL THICKNESS MAP - OCTOBER 26, 1999

EQUILON PIPELINE COMPANY LLC JAL BASIN STATION LEA COUNTY, NEW MEXICO

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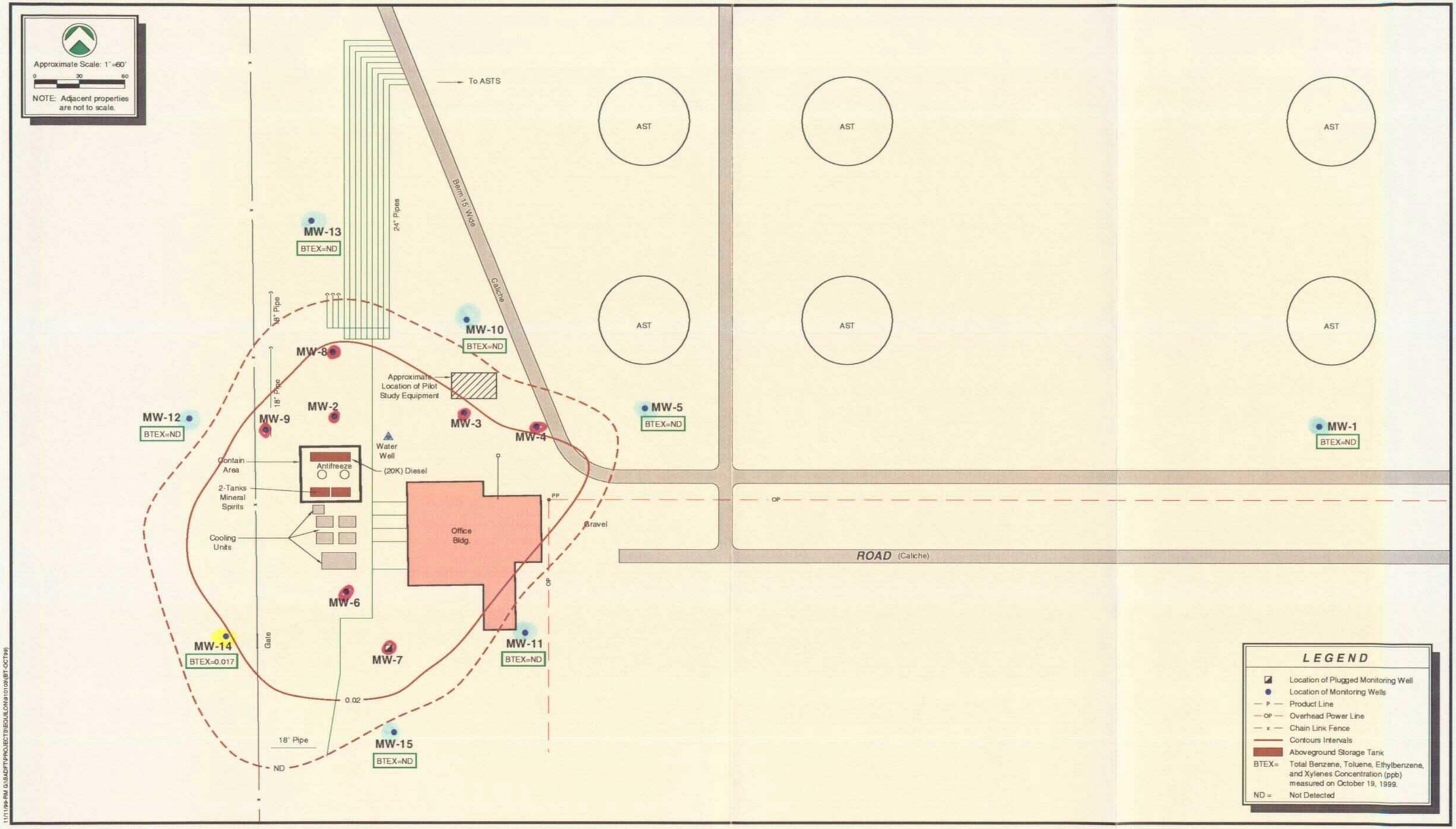
FIG 6

Approximate Scale: 1"=60'

0 30 60

NOTE: Adjacent properties are not to scale.



LEGEND

- Location of Plugged Monitoring Well
- Location of Monitoring Wells
- P — Product Line
- OP — Overhead Power Line
- x — Chain Link Fence
- Contours Intervals
- Aboveground Storage Tank
- BTEX= Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (ppb) measured on October 19, 1999.
- ND = Not Detected

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GROUND WATER BTEX CONCENTRATION MAP

EQUILON PIPELINE COMPANY LLC JAL BASIN STATION LEA COUNTY, NEW MEXICO

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FIG 7

TABLE I

SUMMARY OF SOIL RESULTS - BTEX AND TPH
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE SAMPLED	SAMPLE DEPTH (feet)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
MW-3	01/25/99	10-12'	ND	ND	ND	ND	ND	ND
MW-3	01/25/99	20-22'	ND	ND	ND	ND	ND	ND
MW-3	01/25/99	50-52'	ND	ND	ND	ND	ND	ND
MW-3	01/25/99	85-87'	0.46	6.64	15.80	24.20	47.100	11,500
MW-3	01/25/99	87-89'	ND	ND	0.109	0.121	0.230	917
MW-4	01/25/99	50-52'	ND	ND	ND	ND	ND	15
MW-4	01/25/99	85-87'	ND	ND	ND	ND	ND	1,330
MW-4	01/25/99	87-89'	ND	ND	ND	0.183	0.183	85
MW-5	01/26/99	10-12'	ND	ND	ND	ND	ND	ND
MW-5	01/26/99	20-22'	ND	ND	ND	ND	ND	ND
MW-5	01/26/99	50-52'	ND	ND	ND	ND	ND	12
MW-5	01/26/99	85-87'	ND	ND	ND	ND	ND	ND
MW-5	01/26/99	87-89'	ND	ND	ND	ND	ND	ND
MW-6	01/27/99	0-2'	ND	ND	ND	ND	ND	ND
MW-6	01/27/99	10-12'	ND	ND	ND	ND	ND	ND
MW-6	01/27/99	20-22'	ND	ND	ND	ND	ND	ND
MW-6	01/27/99	50-52'	ND	ND	ND	ND	ND	ND
MW-6	01/27/99	85-87'	0.29	2.34	4.86	15.21	22.700	8,480
MW-6	01/27/99	87-89'	ND	0.112	0.246	1.152	1.510	486
MW-7	01/27/99	50-52'	ND	ND	ND	ND	ND	ND
MW-7	01/27/99	85-87'	ND	ND	ND	ND	ND	435
MW-7	01/27/99	87-89'	ND	ND	ND	ND	ND	14
MW-8	01/28/99	0-2'	ND	ND	0.82	4.48	5.300	5,770
MW-8	01/28/99	10-12'	ND	ND	ND	ND	ND	75
MW-8	01/28/99	MW-8	ND	ND	ND	ND	ND	ND
MW-8	01/28/99	50-52'	ND	ND	ND	ND	ND	ND
MW-8	01/28/99	85-87'	ND	0.078	0.231	2.315	2.624	541
MW-8	01/28/99	87-89'	ND	ND	ND	ND	ND	63
MW-9	01/29/99	10-12'	ND	ND	0.075	ND	0.075	ND
MW-9	01/29/99	20-22'	ND	ND	ND	ND	ND	ND
MW-9	01/29/99	50-55'	ND	ND	ND	ND	ND	ND
MW-9	01/29/99	85-87'	ND	0.140	1.328	2.247	3.715	1,080
MW-9	01/29/99	87-89'	ND	ND	0.272	0.583	0.855	4,370

TABLE I

SUMMARY OF SOIL RESULTS - BTEX AND TPH
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE SAMPLED	SAMPLE DEPTH (feet)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
MW-10	02/03/99	0-2'	ND	ND	ND	ND	ND	ND
MW-10	02/03/99	50-55'	ND	ND	ND	ND	ND	ND
MW-10	02/03/99	85-87'	ND	ND	ND	ND	ND	ND
MW-10	02/03/99	87-89'	ND	ND	ND	ND	ND	ND
MW-11	02/03/99	10-12'	ND	ND	ND	ND	ND	ND
MW-11	02/03/99	20-22'	ND	ND	ND	ND	ND	ND
MW-11	02/03/99	50-52'	ND	ND	ND	ND	ND	ND
MW-11	02/03/99	85-87'	ND	ND	ND	ND	ND	ND
MW-11	02/03/99	87-89'	ND	ND	ND	ND	ND	ND
MW-12	02/04/99	0-2'	ND	ND	ND	ND	ND	ND
MW-12	02/04/99	50-52'	ND	ND	ND	ND	ND	ND
MW-12	02/04/99	85-87'	ND	ND	ND	ND	ND	ND
MW-12	02/04/99	87-89'	ND	ND	ND	ND	ND	ND
MW-13	10/18/99	2-4'	ND	0.187	0.964	7.23	8.38	5230
MW-13	10/18/99	50-52'	ND	ND	0.051	ND	0.051	2.56
MW-13	10/18/99	87-89'	ND	ND	ND	ND	ND	ND
MW-14	10/18/99	0-2'	ND	ND	ND	ND	ND	5.07
MW-14	10/18/99	50-52'	ND	ND	ND	ND	ND	2.32
MW-14	10/18/99	86-88'	ND	ND	ND	ND	ND	3.10
MW-15	10/18/99	0-2'	ND	ND	0.244	ND	0.244	1.70
MW-15	10/18/99	50-52'	ND	ND	0.053	ND	0.053	1.91
MW-15	10/18/99	87-89'	ND	ND	ND	ND	ND	ND

TABLE II

SUMMARY OF SOIL RESULTS - PAH AND OTHER
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE ID	MW-9	MW-12
DATE SAMPLED	01/29/99	02/04/99
DEPTH (feet)	87 - 89	87 - 89
PARAMETER	CONCENTRATION (mg/kg)	
Acenaphthene	0.14	ND
Fluorene	0.24	ND
Naphthalene	0.41	ND
Phenanthrene	0.34	ND
TOTAL	1.13	ND

PARAMETER	SAMPLE LOCATION	SAMPLE DATE	DEPTH (feet)	RESULT A	RESULT B
Fraction Organic Carbon (%)	MW-3	03/25/99	22	1.2	1.0
Water Content (%), dry mass	MW-3	03/25/99	22	10.7	17.7

NOTE:
All Constituents not listed above were ND.

TABLE III

SUMMARY OF SOIL RESULTS - SPLP
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE ID	MW-3	MW-9	MW-13
DATE SAMPLED	01/25/99	01/29/99	10/18/99
DEPTH (feet)	85 - 87	87 - 89	2 to 4
PARAMETER	CONCENTRATION (mg/L)		
VOC			
Ethylbenzene	0.087	ND	ND
Isopropylbenzene (Cumene)	0.029	ND	ND
Naphthalene	0.295	0.096	ND
n-Propylbenzene	0.031	ND	ND
Toluene	0.062	ND	ND
1,2,4-Trimethylbenzene	0.082	0.039	ND
o-Xylene	0.052	ND	0.026
m,p-Xylenes	0.090	ND	ND
TOTAL	0.728	0.135	0.026
SVOC			
Di-n-Butyl Phthalate	ND	ND	0.147
Acenaphthene	ND	0.025	ND
bis [2-Ethylhexyl) phthalate	ND	0.039	ND
Dibenzofuran	ND	0.046	ND
Fluorene	ND	0.035	ND
2-Methylnaphthalene	0.565	0.269	0.009
Naphthalene	0.134	0.079	0.007
Phenanthrene	0.087	0.049	ND
Pyrene	0.024	ND	ND
TOTAL	0.810	0.542	0.163
TPH (ppm)	2.6 ppm	2.0 ppm	1.99 ppm

NOTE:
All constituents not listed were ND.

TABLE IV

SUMMARY OF GROUND WATER MEASUREMENTS
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE MEASURED	DEPTH TO WATER FROM PVC (feet)	ELEVATION OF WATER (feet)		PSH THICKNESS (feet)
			Actual	Corrected	
MW-01	02/04/99	92.59	2902.03	—	—
MW-01	02/22/99	92.51	2902.11	—	—
MW-01	03/11/99	92.63	2901.99	—	—
MW-01	04/07/99	92.95	2901.67	—	—
MW-01	05/03/99	92.54	2902.08	—	—
MW-01	06/08/99	92.72	2901.90	—	—
MW-01	06/22/99	92.75	2901.87	—	—
MW-01	07/06/99	92.73	2901.89	—	—
MW-01	08/14/99	92.80	2901.82	—	—
MW-01	09/16/99	92.76	2901.86	—	—
MW-01	10/19/99	92.75	2901.87	—	—
MW-02	02/22/99	94.56	2894.87	2901.99	8.28
MW-02	03/11/99	94.55	2894.88	2901.87	8.13
MW-02	03/24/99	94.54	2894.89	2901.91	8.16
MW-02	03/31/99	94.27	2895.16	2901.93	7.87
MW-02	04/02/99	94.52	2894.91	2901.82	8.03
MW-02	04/07/99	94.59	2894.84	2901.80	8.09
MW-02	02/04/99	94.58	2894.85	2902.05	8.37
MW-02	07/15/99	94.40	2895.03	2901.66	7.71
MW-02	10/26/99	94.40	2895.03	2901.45	7.47
MW-03	02/04/99	95.45	2895.36	2902.35	8.13
MW-03	02/22/99	95.43	2895.38	2902.26	8.00
MW-03	03/11/99	95.39	2895.42	2902.17	7.85
MW-03	03/31/99	95.35	2895.46	2902.23	7.87
MW-03	04/02/99	95.32	2895.49	2902.12	7.71
MW-03	03/24/99	95.35	2895.46	2902.22	7.86
MW-03	07/15/99	98.10	2892.71	2899.20	7.55
MW-03	08/07/99	95.34	2895.47	2901.90	7.48
MW-03	08/14/99	95.40	2895.41	2901.13	6.65
MW-03	08/22/99	98.15	2892.66	2899.07	7.45
MW-03	09/01/99	95.40	2895.41	2901.82	7.45
MW-03	09/11/99	98.21	2892.60	2898.99	7.43
MW-03	09/16/99	95.25	2895.56	2901.80	7.25
MW-03	09/25/99	95.35	2895.46	2900.96	6.40
MW-03	10/02/99	95.25	2895.56	2901.84	7.30
MW-03	10/09/99	97.83	2892.98	2899.30	7.35
MW-03	10/15/99	98.00	2892.81	2899.09	7.30
MW-03	10/21/99	95.25	2895.56	2901.80	7.25
MW-03	10/26/99	95.25	2895.56	2901.80	7.25

TABLE IV

SUMMARY OF GROUND WATER MEASUREMENTS
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE MEASURED	DEPTH TO WATER FROM PVC (feet)	ELEVATION OF WATER (feet)		PSH THICKNESS (feet)
			Actual	Corrected	
MW-04	04/07/99	89.05	2902.11	—	—
MW-04	02/04/99	88.77	2902.39	—	—
MW-04	02/22/99	88.84	2902.32	—	—
MW-04	03/11/99	88.88	2902.28	—	—
MW-04	05/03/99	88.94	2902.22	2902.27	0.06
MW-04	05/10/99	89.12	2902.04	2902.14	0.12
MW-04	05/18/99	89.25	2901.91	2902.04	0.15
MW-04	05/24/99	89.24	2901.92	2902.06	0.16
MW-04	06/08/99	89.22	2901.94	2902.10	0.19
MW-04	06/01/99	89.08	2902.08	2902.19	0.13
MW-04	06/14/99	89.14	2902.02	2902.20	0.21
MW-04	06/22/99	89.02	2902.14	2902.32	0.21
MW-04	07/02/99	89.35	2901.81	2902.04	0.27
MW-04	07/06/99	89.44	2901.72	2902.01	0.34
MW-04	07/13/99	89.50	2901.66	2901.96	0.35
MW-04	07/20/99	89.48	2901.68	2902.01	0.38
MW-04	07/26/99	89.50	2901.66	2902.00	0.40
MW-04	08/07/99	89.71	2901.45	2901.85	0.47
MW-04	08/14/99	89.83	2901.33	2901.83	0.58
MW-04	08/22/99	89.85	2901.31	2901.87	0.65
MW-04	09/01/99	89.80	2901.36	2901.92	0.65
MW-04	09/11/99	90.02	2901.14	2901.82	0.79
MW-04	09/16/99	90.00	2901.16	2901.85	0.80
MW-04	09/25/99	90.05	2901.11	2901.89	0.91
MW-04	10/02/99	90.10	2901.06	2901.88	0.95
MW-04	10/09/99	90.12	2901.04	2901.94	1.05
MW-04	10/15/99	90.10	2901.06	2901.96	1.05
MW-04	10/21/99	90.35	2900.81	2901.84	1.20
MW-04	10/26/99	90.37	2900.79	2901.86	1.24
MW-05	02/04/99	88.94	2902.44	—	—
MW-05	02/22/99	88.98	2902.40	—	—
MW-05	03/11/99	89.12	2902.26	—	—
MW-05	04/07/99	89.16	2902.22	—	—
MW-05	05/03/99	89.05	2902.33	—	—
MW-05	06/08/99	89.40	2901.98	—	—
MW-05	06/22/99	89.25	2902.13	—	—
MW-05	07/06/99	89.34	2902.04	—	—
MW-05	08/14/99	89.45	2901.93	—	—
MW-05	09/16/99	89.45	2901.93	—	—
MW-05	10/19/99	89.37	2902.01	—	—

TABLE IV

SUMMARY OF GROUND WATER MEASUREMENTS
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE MEASURED	DEPTH TO WATER FROM PVC (feet)	ELEVATION OF WATER (feet)		PSH THICKNESS (feet)
			Actual	Corrected	
MW-06	02/04/99	89.78	2900.39	2902.36	2.29
MW-06	02/22/99	91.52	2898.65	2902.21	4.14
MW-06	03/03/99	91.93	2898.24	2902.14	4.53
MW-06	07/15/99	91.25	2898.92	2901.78	3.32
MW-06	08/07/99	93.46	2896.71	2900.95	4.93
MW-06	08/14/99	93.75	2896.42	2901.58	6.00
MW-06	08/22/99	93.75	2896.42	2901.65	6.08
MW-06	09/01/99	93.70	2896.47	2901.68	6.06
MW-06	09/11/99	93.86	2896.31	2901.61	6.16
MW-06	09/16/99	93.77	2896.40	2901.66	6.12
MW-06	09/25/99	93.62	2896.55	2901.73	6.02
MW-06	10/02/99	93.65	2896.52	2901.71	6.04
MW-06	10/09/99	93.63	2896.54	2901.73	6.04
MW-06	10/15/99	93.65	2896.52	2901.75	6.08
MW-06	10/21/99	93.82	2896.35	2901.66	6.17
MW-06	10/26/99	93.80	2896.37	2901.66	6.15
MW-07	02/04/99	87.19	2902.28	—	—
MW-07	02/22/99	87.29	2902.18	—	—
MW-07	03/11/99	87.42	2902.05	—	—
MW-07	04/07/99	87.51	2901.96	—	—
MW-07	05/03/99	87.52	2901.95	—	0.18
MW-07	05/10/99	87.74	2901.73	—	0.34
MW-07	05/18/99	88.04	2901.43	—	0.57
MW-07	05/24/99	88.05	2901.42	—	0.60
MW-07	06/01/99	87.93	2901.54	—	0.52
MW-07	06/08/99	88.15	2901.32	—	0.70
MW-07	06/14/99	87.47	2902.00	—	0.88
MW-07	06/22/99	87.43	2902.04	—	0.92
MW-07	07/02/99	88.48	2900.99	—	1.08
MW-07	07/06/99	88.65	2900.82	—	1.15
MW-07	07/13/99	88.88	2900.59	—	1.38
MW-07	07/20/99	89.03	2900.44	—	1.59
MW-07	07/26/99	89.30	2900.17	—	1.85
MW-07	08/07/99	89.70	2899.77	—	2.18
MW-07	08/14/99	90.10	2899.37	—	2.63
MW-07	08/22/99	90.65	2898.82	—	3.30
MW-07	09/01/99	90.90	2898.57	—	3.63
MW-07	09/11/99	91.30	2898.17	—	4.10
MW-07	09/16/99	91.40	2898.07	—	4.25
MW-07	09/25/99	91.50	2897.97	—	2.53
MW-07	10/02/99	91.65	2897.82	—	4.65
MW-07	10/09/99	91.80	2897.67	—	4.80
MW-07	10/15/99	91.85	2897.62	—	4.90
MW-07	10/19/99	—	—	—	PLUGGED

TABLE IV

SUMMARY OF GROUND WATER MEASUREMENTS
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE MEASURED	DEPTH TO WATER FROM PVC (feet)	ELEVATION OF WATER (feet)		PSH THICKNESS (feet)
			Actual	Corrected	
MW-08	03/31/99	89.23	2901.50	2901.88	0.44
MW-08	04/02/99	89.15	2901.58	2901.80	0.25
MW-08	04/07/99	89.70	2901.03	2901.77	0.86
MW-08	04/13/99	89.59	2901.14	2901.91	0.89
MW-08	04/19/99	89.77	2900.96	2901.87	1.06
MW-08	04/26/99	90.06	2900.67	2901.81	1.33
MW-08	03/24/99	89.18	2901.55	2901.88	0.38
MW-08	02/04/99	88.76	2901.97	2901.98	0.01
MW-08	02/22/99	88.82	2901.91	2901.93	0.02
MW-08	03/11/99	88.94	2901.79	2901.86	0.08
MW-08	05/03/99	90.23	2900.50	2901.85	1.57
MW-08	05/10/99	90.65	2900.08	2901.76	1.95
MW-08	05/18/99	91.15	2899.58	2901.67	2.43
MW-08	05/24/99	91.36	2899.37	2901.68	2.69
MW-08	06/08/99	91.80	2898.93	2901.75	3.28
MW-08	06/01/99	91.27	2899.46	2901.79	2.71
MW-08	06/14/99	88.90	2901.83	2904.58	3.20
MW-08	06/22/99	88.50	2902.23	2905.37	3.65
MW-08	07/02/99	92.38	2898.35	2901.65	3.84
MW-08	07/06/99	92.52	2898.21	2901.65	4.00
MW-08	07/13/99	92.68	2898.05	2901.56	4.08
MW-08	07/20/99	92.70	2898.03	2901.64	4.20
MW-08	07/26/99	92.85	2897.88	2901.64	4.37
MW-08	08/07/99	92.96	2897.77	2901.58	4.43
MW-08	08/14/99	93.20	2897.53	2901.49	4.60
MW-08	08/22/99	93.25	2897.48	2901.52	4.70
MW-08	09/01/99	93.15	2897.58	2901.54	4.60
MW-08	09/11/99	93.50	2897.23	2901.49	4.95
MW-08	09/16/99	93.50	2897.23	2901.45	4.91
MW-08	09/25/99	93.50	2897.23	2901.53	5.00
MW-08	10/02/99	93.55	2897.18	2901.49	5.01
MW-08	10/09/99	93.50	2897.23	2901.52	4.99
MW-08	10/15/99	93.65	2897.08	2901.51	5.15
MW-08	10/21/99	93.80	2896.93	2900.60	4.27
MW-08	10/26/99	93.85	2896.88	2901.46	5.32
MW-09	02/22/99	91.52	2898.79	2902.35	4.14
MW-09	03/11/99	94.40	2895.91	2901.68	6.71
MW-09	03/24/99	94.35	2895.96	2901.68	6.65
MW-09	03/31/99	94.32	2895.99	2901.73	6.68
MW-09	04/02/99	94.44	2895.87	2901.61	6.68
MW-09	04/07/99	94.50	2895.81	2901.58	6.71
MW-09	02/04/99	88.98	2901.33	2901.83	0.58
MW-09	07/15/99	94.05	2896.26	2901.44	6.02
MW-09	10/26/99	93.55	2896.76	2901.23	5.20

TABLE IV

SUMMARY OF GROUND WATER MEASUREMENTS
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE MEASURED	DEPTH TO WATER FROM PVC (feet)	ELEVATION OF WATER (feet)		PSH THICKNESS (feet)
			Actual	Corrected	
MW-10	04/07/99	88.81	2902.03	—	—
MW-10	02/04/99	88.61	2902.23	—	—
MW-10	02/22/99	88.64	2902.20	—	—
MW-10	03/11/99	88.75	2902.09	—	—
MW-10	05/03/99	88.69	2902.15	—	—
MW-10	06/08/99	88.90	2901.94	—	—
MW-10	06/22/99	89.95	2900.89	—	—
MW-10	07/06/99	89.95	2900.89	—	—
MW-10	08/14/99	89.07	2901.77	—	—
MW-10	09/16/99	89.10	2901.74	—	—
MW-10	10/19/99	89.05	2901.79	—	—
MW-11	02/04/99	89.88	2902.42	—	—
MW-11	02/22/99	89.84	2902.46	—	—
MW-11	03/11/99	89.94	2902.36	—	—
MW-11	04/07/99	89.90	2902.40	—	—
MW-11	05/03/99	89.72	2902.58	—	—
MW-11	06/08/99	90.05	2902.25	—	—
MW-11	06/22/99	90.10	2902.20	—	—
MW-11	07/06/99	90.18	2902.12	—	—
MW-11	08/14/99	90.32	2901.98	—	—
MW-11	09/16/99	89.95	2902.35	—	—
MW-11	10/19/99	90.00	2902.30	—	—
MW-12	02/04/99	89.72	2901.27	—	—
MW-12	02/22/99	89.46	2901.53	—	—
MW-12	03/11/99	89.58	2901.41	—	—
MW-12	04/07/99	89.66	2901.33	—	—
MW-12	05/03/99	89.56	2901.43	—	—
MW-12	06/08/99	89.75	2901.24	—	—
MW-12	06/22/99	89.75	2901.24	—	—
MW-12	07/06/99	89.80	2901.19	—	—
MW-12	08/14/99	89.90	2901.09	—	—
MW-12	09/16/99	89.91	2901.08	—	—
MW-12	10/19/99	89.92	2901.07	—	—
MW-13	10/19/99	91.46	2901.51	—	—
MW-14	10/19/99	88.14	2900.98	—	—
MW-15	10/19/99	88.51	2901.13	—	—

TABLE IV

SUMMARY OF GROUND WATER MEASUREMENTS
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	DATE MEASURED	DEPTH TO WATER FROM PVC (feet)	ELEVATION OF WATER (feet)		PSH THICKNESS (feet)
			Actual	Corrected	
TANK	03/31/99	6.67	—	—	0.25
TANK	04/07/99	6.67	—	—	0.29
TANK	04/13/99	6.77	—	—	0.39
TANK	04/19/99	6.77	—	—	0.40
TANK	04/26/99	6.69	—	—	0.44
TANK	05/03/99	6.77	—	—	0.54
TANK	05/10/99	6.58	—	—	0.58
TANK	05/18/99	6.75	—	—	0.70
TANK	05/24/99	6.77	—	—	0.77
TANK	06/01/99	6.78	—	—	0.81
TANK	06/08/99	6.78	—	—	0.95
TANK	06/14/99	6.75	—	—	1.00
TANK	06/22/99	6.81	—	—	1.13
TANK	07/02/99	6.81	—	—	1.24
TANK	07/06/99	7.36	—	—	1.27
TANK	07/13/99	6.80	—	—	1.36
TANK	07/20/99	6.80	—	—	1.36
TANK	07/26/99	6.86	—	—	1.41
TANK	09/01/99	6.90	—	—	1.45

TABLE V

SUMMARY OF GROUND WATER RESULTS - BTEX AND TPH
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

MONITORING WELL	DATE SAMPLED	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYL-BENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)	TPH-DRO (mg/l)
MW-1	02/23/99	ND	ND	ND	ND	ND	---
MW-1	06/22/99	ND	ND	ND	ND	ND	ND
MW-1	10/19/99	ND	ND	ND	ND	ND	0.135
MW-4	02/23/99	ND	ND	ND	0.005	0.005	---
MW-5	02/23/99	ND	ND	ND	ND	ND	---
MW-5	06/22/99	ND	ND	ND	ND	ND	ND
MW-5	10/19/99	ND	ND	ND	ND	ND	0.156
MW-7	02/23/99	ND	ND	ND	0.004	0.004	---
MW-10	02/23/99	ND	ND	ND	ND	ND	---
MW-10	06/22/99	ND	ND	ND	ND	ND	ND
MW-10	10/19/99	ND	ND	ND	ND	ND	0.124
MW-11	02/23/99	ND	ND	ND	ND	ND	---
MW-11	06/22/99	ND	ND	ND	ND	ND	3.2
MW-11	10/19/99	ND	ND	ND	ND	ND	0.077
MW-12	02/23/99	ND	ND	ND	ND	ND	---
MW-12	06/22/99	ND	ND	ND	ND	ND	2.5
MW-12	10/19/99	ND	ND	ND	ND	ND	0.306
MW-13	10/19/99	ND	ND	ND	ND	ND	0.127
MW-14	10/19/99	0.007	ND	ND	0.010	0.017	0.481
MW-15	10/19/99	ND	ND	ND	ND	ND	0.132
Product Tank	06/14/99	0.077	0.218	0.118	0.274	0.687	---

TABLE VI

SUMMARY OF GROUND WATER RESULTS - OTHER
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	MW-1	MW-1	MW-4	MW-5	MW-5	MW-7	MW-10	MW-10
DATE SAMPLED	02/23/99	10/19/99	02/23/99	02/23/99	10/19/99	02/23/99	02/23/99	10/19/99
PARAMETER	CONCENTRATION (mg/l)							
PAH								
Acenaphthalene	ND	ND	ND	ND	ND	0.003	ND	ND
Fluorene	ND	ND	ND	ND	ND	0.005	ND	ND
Naphthalene	ND	ND	0.005	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	0.003	ND	ND
TOTAL	ND	ND	0.005	ND	ND	0.011	ND	ND
Metals								
Aluminum	ND	1.29	ND	ND	2.61	4.93	ND	2.72
Barium	ND	ND	ND	0.65	0.492	ND	ND	0.308
Boron	ND	0.919	1.78	ND	0.355	ND	ND	0.308
Calcium	587	413	447	1650	335	737	949	311
Chromium	0.13	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	0.034	0.068	ND
Iron	8.72	2.94	1.44	1.28	2.72	3.11	ND	3.28
Lead	0.021	ND	0.019	ND	ND	0.030	ND	ND
Magnesium	202	163	49.3	49.8	41.4	78.5	55.9	61.0
Manganese	0.31	ND	ND	0.85	0.184	0.42	0.32	0.121
Potassium	14.56	13.0	9.17	8.39	7.17	12.11	9.44	7.56
Selenium	0.13	0.081	ND	ND	ND	ND	ND	ND
Silica	62.28	51.30	60.06	54.67	52.20	60.44	44.11	59.5
Sodium	167	176	92.44	66.89	66.7	231	43.83	41.7
Strontium	11.59	10.6	2.89	4.61	2.38	4.74	3.89	3.80
Vanadium	ND	ND	ND	ND	0.12	ND	ND	ND
Cations/Anions								
Bicarbonate	362	385	377	280	338	402	256	376
Chloride	767	159	34	15	9.60	58.6	54	28.9
Sulfate	1,960	453	55	40	33	980	38	25.9
TDS	2,670	2290	730	640	512	1,330	610	621

NOTE:
All constituents not listed were ND.

TABLE VI

SUMMARY OF GROUND WATER RESULTS - OTHER
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION

SAMPLE LOCATION	MW-11	MW-11	MW-12	MW-12	MW-13	MW-14	MW-15
DATE SAMPLED	02/23/99	10/19/99	02/23/99	10/19/99	10/19/99	10/19/99	10/19/99
PARAMETER							
PAH							
Acenaphthalene	ND	ND	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	0.038	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND
TOTAL	ND	ND	ND	ND	ND	ND	ND
Metals							
Aluminum	ND	0.528	5.78	0.696	4.56	0.936	1.39
Barium	ND	ND	0.59	ND	0.451	0.320	ND
Boron	ND	0.572	ND	0.636	ND	1.70	0.838
Calcium	387	110	524	128	807	1680	268
Chromium	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	0.04	ND	ND	ND	ND
Iron	2.56	0.556	3.33	0.072	5.89	4.33	1.61
Lead	0.019	ND	0.031	ND	ND	ND	ND
Magnesium	49.6	41.9	48.1	51.5	41.6	87.2	96.9
Manganese	0.23	ND	0.28	ND	0.581	0.388	ND
Potassium	9.389	6.78	9.67	8.06	10.9	16.3	14.6
Selenium	ND	ND	ND	ND	ND	ND	ND
Silica	61.56	58.70	64.33	54.2	54.6	51.0	52.2
Sodium	227	211	97.22	82.5	64.6	186	167
Strontium	2.909	2.85	2.85	3.1	2.92	6.22	5.18
Vanadium	ND	ND	ND	ND	0.143	ND	ND
Cations/Anions							
Bicarbonate	272	278	382	498	284	345	202
Chloride	89	67.3	8	14.7	4.90	9.90	116
Sulfate	389	350	31	38	10.9	62.3	562
TDS	2,060	1060	600	710	454	1110	1520

NOTE:
All constituents not listed were ND.

GENERAL NOTES

ND - Indicates constituent was not detected above the method detection or reporting limit.

--- - Indicates LNAPL was not detected (TABLE IV).

Depth to water is referenced from ground surface unless otherwise indicated.

Method detection or reporting limits:

Soil:	BTEX	- 0.020 to 0.100 mg/kg
	TPH-DRO	- 1.65 to 500 mg/kg
	SPLP SVOC	- 0.005 to 0.084 mg/L
	SPLP VOC	- 0.025 to 0.050 mg/L
	SPLP TPH	- 0.7 to 1.4 ppm
	PAH	- 0.07 mg/kg
Water:	BTEX	- 0.001 to 0.002 mg/L
	TPH-DRO	- 0.050 mg/L
	PAH	- 0.002 mg/L
	Metals	- 0.001 to 5.556 mg/L
	Anions	- 2.00 to 10.0 mg/L
	Cations	- 4.00 mg/L
	TDS	- 5.00 mg/L

Laboratory test methods:

BTEX	- EPA Method SW846-8021B
TPH	- Modified EPA Method 8015 M Diesel Range Organics
SPLP VOC	- EPA Method 1312/8260B
SPLP SVOC	- EPA Method 1312/8270
SPLP TPH	- EPA Method 418.1
PAH	- EPA Method 8270C
Metals	- EPA ICP Method 6020
Mercury	- EPA Method 7470A
Anions	- EPA Method 300.0
Cations	- EPA Method 310.1
TDS	- EPA Method 160.1
Particle Size Analysis	- ASTM D422
Organic Content	- ASTM D2974
Water Content	- ASTM D2974

Analytical Report 94534

for

KEI Consultants, Ltd.

Project Manager: Stanley Grover

Project Name : JAL Station

Project Id : 910103-3

November 11, 1999

11381 Meadowglen, Suite L Houston, TX 77082 Ph:(281) 589-0692 Fax:(281) 589-0695

Houston - Dallas - San Antonio - Austin - Latin America

XENCO Laboratories

November 11, 1999

Project Manager: Stanley Grover
KEI Consultants, Ltd.
5309 Wurzbach Rd. Suite 100
San Antonio , TX 78238

Reference: XENCO Report No: 94534
Project Name : JAL Station
Project Address: Jal, New Mexico

Dear Stanley Grover :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Chain of Custody Numbered 94534 . All results being reported under this Chain of Custody apply to the samples analyzed and properly identified with a Laboratory ID number.

All the results for the quality control samples were reviewed. Also, all parameters for data reduction and validation were reviewed. In view of this, we are able to release the analytical data for this report within acceptance criteria for accuracy, precision, completeness or properly flagged.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 3 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in COC No. 94534 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Sincerely,

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

[redacted] 11104 Meadowglen, Suite E, Houston TX 77082 281-589-0692
☐ 5309 Wurzbach Road, Suite 104, San Antonio, TX 78238 210-509-3334
☐ 11078 Morrison Ln, Suite D, Dallas, TX 75229 972-481-9999

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

On-LINE Help & Technical Services at www.XENCO.com

27397

Company COC No: Work Order No: Page 1 of 1

Company: KEI Consultants	Phone: 210-680-3767
Project Name: Jal Station ☑ Previously done at XENCO	Project ID: 910103-3
Location: Jal, New Mexico	
Project Manager (PM): Stan Grover	Project Director (PD): Mike Lewis
Fax Results to ☑ PM and / or	Fax: 210-680-3763
Invoice to ☑ Accounting ☐ Include Invoice with Final Report Attn PM ☐ Invoice must have a P.O Bill to: 910103-3	
Quote No.	P.O No 910103-3 ☐ Call for a P.O.
Special DLs (RR I RR II DW QAPP See Lab PM Call Proj. PM)	
Specifications	
Sampler Name: Stan Grover	Signature: Stan Grover

Lab Only: 94534-H

TAT: 5h 12h 20h 24h 48h 3d 5d 7d 14d 21d Standard TAT is 10 Working Days unless otherwise agreed in writing. But often reported in 5-7 Working Days

Lab Only Additions: From: / Rcv by: / Date

#	Sample ID	Sampling Date	Time	Depth ft	Matrix (A P S W)	Composite	Grab	# Containers	Container Size	Type	Preservatives	BTEX by 8021 8260 602 624 Other BC20	BTEX-MTBE by 8021 8260 602 624 Other:	TPH by TX1005 TX1006 418.1 8015GRO 8015DRO 8015JetF	PAHs by 8270 8100 8310	METALS by 6020 8RCRA Tot Pb TCLP_8 13PP 23TAL List	VOAs by 8260 624 BTEX MTBE PPs TCLP See List Call PM	SVOAs by 8270 625 PAHs BN&A TCLP PPs See List Call PM	SPLP TPH 1312/4116.1	SPLP VOCs SW846-1312/8260	SPLP SVOCs SW846-1312/8270	TAT 5h 12h 20h 24h 48h 3d 5d 7d (10d) 14d 21d	Adan: PAH above mg/L W. mg/Kg S Highest Hit	Hold Analysis	Remarks
1	MW-15	10/18/99	8:00	0'-2'				1	9oz	GC	C4														Soil Sample w/ Highest TPH Value will also be analyzed for SPLP TPH, SPLP VOCs, & SPLP SVOCs
2			9:27	50'-52'																					
3			10:25	87'-89'																					
4	MW-13		12:45	2'-4'																					
5			13:45	50'-52'																					
6			14:50	87'-89'																					
7	MW-14	10/19/99	7:50	0'-2'																					
8			8:40	50'-52'																					
9			9:30	86'-88'																					
10																									

Relinquished by (Initials and Sign.)	Date & Time	Relinquished to (Initials and Sign.)	Date & Time
1 SG Stan Grover	10/20/99 1600		
2			
3		Lab.:	10/22/99 10:00

Total Containers per COC:

Rush TATs Fax Due: Final Fax Due:

Final Report Data Package Due Date:

Rush Charges are Pre-Approved upon Requesting them. All Terms Apply

Preservatives - Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), NaOH+Asbo Acid (NAA), ZnAc+NaOH (ZA), (Cool,<4C) (C4), None (N), See Label (SL), Other (O) _____

SIZE: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (V), 1L (1), 500ml (.5), Tedlar Bag (B), Wipe (W), Other 9oz **TYPE** Glass Amb (GA), Glass Clear (GC), Plastic (P), Other (O) _____

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94534-001		94534-002		94534-003		94534-004		94534-005		94534-006	
	Field ID :	MW-15		MW-15		MW-15		MW-13		MW-13		MW-13	
	Depth :	0-2 ft		50-52 ft		87-89 ft		2-4 ft		50-52 ft		87-89 ft	
	Matrix :	Soil		Soil		Soil		Soil		Soil		Soil	
	Sampled :	Oct-18-1999		Oct-18-1999		Oct-18-1999		Oct-18-1999		Oct-18-1999		Oct-18-1999	
BTEX by EPA 8021	*Analyzed :*	Oct-29-1999		Oct-29-1999		Oct-29-1999		Oct-29-1999		Oct-29-1999		Oct-29-1999	
	Units :	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		BRL	0.050	BRL	0.050	BRL	0.050	BRL	0.050	BRL	0.050	BRL	0.050
Toluene		BRL	0.050	BRL	0.050	BRL	0.050	0.187	0.050	BRL	0.050	BRL	0.050
Ethylbenzene		0.244	0.050	0.053	0.050	BRL	0.050	0.964	0.050	0.051	0.050	BRL	0.050
m,p-Xylenes		BRL	0.100	BRL	0.100	BRL	0.100	5.27	0.100	BRL	0.100	BRL	0.100
o-Xylene		BRL	0.050	BRL	0.050	BRL	0.050	1.96	0.050	BRL	0.050	BRL	0.050
Total Xylenes		BRL		BRL		BRL		7.23		BRL		BRL	
Total BTEX		0.244		0.053		BRL		8.38		0.051		BRL	

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID:* / *Field ID:* / *Depth:* / *Matrix:* / *Sampled:*	94534-001 MW-15 0-2 ft Soil Oct-18-1999	94534-002 MW-15 50-52 ft Soil Oct-18-1999	94534-003 MW-15 87-89 ft Soil Oct-18-1999	94534-004 MW-13 2-4 ft Soil Oct-18-1999	94534-005 MW-13 50-52 ft Soil Oct-18-1999	94534-006 MW-13 87-89 ft Soil Oct-18-1999
SPLP Semivolatiles by 8270C	*Analyzed:* / *Units:*				Nov-03-1999 mg/L		
					RL		
Acenaphthene					BRL 0.004		
Acenaphthylene					BRL 0.004		
Anthracene					BRL 0.004		
Benzo(a)anthracene					BRL 0.004		
Benzo(a)pyrene					BRL 0.004		
Benzo(b)fluoranthene					BRL 0.004		
Benzo(g,h,i)perylene					BRL 0.004		
Benzo(k)fluoranthene					BRL 0.004		
Benzyl Alcohol					BRL 0.038		
Benzyl Butyl Phthalate					BRL 0.019		
bis(2-chloroethoxy) methane					BRL 0.019		
bis(2-chloroethyl) ether					BRL 0.019		
bis(2-chloroisopropyl) ether					BRL 0.019		
bis(2-ethylhexyl) phthalate					BRL 0.019		
4-Bromophenyl-phenylether					BRL 0.019		
di-n-Butyl Phthalate					0.147 0.019		
4-chloro-3-methylphenol					BRL 0.038		
4-Chloroaniline					BRL 0.038		
2-Chloronaphthalene					BRL 0.019		

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :* / *Field ID :* / *Depth :* / *Matrix :* / *Sampled :*	94534-001 MW-15 0-2 ft Soil Oct-18-1999	94534-002 MW-15 50-52 ft Soil Oct-18-1999	94534-003 MW-15 87-89 ft Soil Oct-18-1999	94534-004 MW-13 2-4 ft Soil Oct-18-1999	94534-005 MW-13 50-52 ft Soil Oct-18-1999	94534-006 MW-13 87-89 ft Soil Oct-18-1999
SPLP Semivolatiles by 8270C	*Analyzed :* / *Units :*				Nov-03-1999 mg/L		
					RL		
2-Chlorophenol					BRL 0.019		
4-Chlorophenyl Phenyl Ether					BRL 0.019		
Chrysene					BRL 0.004		
Dibenz(a,h)Anthracene					BRL 0.004		
Dibenzofuran					BRL 0.019		
1,2-Dichlorobenzene					BRL 0.019		
1,3-Dichlorobenzene					BRL 0.019		
1,4-Dichlorobenzene					BRL 0.019		
2,4-Dichlorophenol					BRL 0.019		
Diethyl Phthalate					BRL 0.019		
Dimethyl Phthalate					BRL 0.019		
2,4-Dimethylphenol					BRL 0.019		
4,6-dinitro-2-methyl phenol					BRL 0.096		
2,4-Dinitrophenol					BRL 0.096		
2,6-Dinitrotoluene					BRL 0.019		
Fluoranthene					BRL 0.004		
Fluorene					BRL 0.004		
Hexachlorobenzene					BRL 0.019		
Hexachlorobutadiene					BRL 0.019		

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID:*	94534-001	94534-002	94534-003	94534-004	94534-005	94534-006
	Field ID:	MW-15	MW-15	MW-15	MW-13	MW-13	MW-13
	Depth:	0-2 ft	50-52 ft	87-89 ft	2-4 ft	50-52 ft	87-89 ft
	Matrix:	Soil	Soil	Soil	Soil	Soil	Soil
	Sampled:	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999
SPLP Semivolatiles by 8270C	*Analyzed:*				Nov-03-1999		
	Units:				mg/L		
					RL		
Hexachlorocyclopentadiene					BRL 0.019		
Hexachloroethane					BRL 0.019		
Indeno(1,2,3-c,d)Pyrene					BRL 0.004		
Isophorone					BRL 0.019		
2-Methylnaphthalene					0.009 0.004		
2-methylphenol					BRL 0.019		
3&4-Methylphenol					BRL 0.019		
Naphthalene					0.007 0.004		
4-Nitroaniline					BRL 0.038		
3-Nitroaniline					BRL 0.096		
2-Nitroaniline					BRL 0.096		
Nitrobenzene					BRL 0.019		
2-Nitrophenol					BRL 0.019		
4-Nitrophenol					BRL 0.019		
n-Nitrosodi-n-Propylamine					BRL 0.019		
n-Nitrosodiphenylamine					BRL 0.019		
di-n-Octyl Phthalate					BRL 0.019		
Pentachlorophenol					BRL 0.019		
Phenanthrene					BRL 0.004		

BRL Below Reporting Limits.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID:* / *Field ID:* / *Depth:* / *Matrix:* / *Sampled:*	94534-001 MW-15 0-2 ft Soil Oct-18-1999	94534-002 MW-15 50-52 ft Soil Oct-18-1999	94534-003 MW-15 87-89 ft Soil Oct-18-1999	94534-004 MW-13 2-4 ft Soil Oct-18-1999	94534-005 MW-13 50-52 ft Soil Oct-18-1999	94534-006 MW-13 87-89 ft Soil Oct-18-1999
SPLP Semivolatiles by 8270C	*Analyzed:*				Nov-03-1999		
	Units:				mg/L		
					RL		
Phenol					BRL 0.019		
Pyrene					BRL 0.004		
1,2,4-Trichlorobenzene					BRL 0.019		
2,4,6-Trichlorophenol					BRL 0.019		
2,4,5-Trichlorophenol					BRL 0.019		
SPLP TPH by EPA 418.1	*Analyzed:*				Nov-02-1999		
	Units:				mg/L		
					RL		
Total Petroleum Hydrocarbons (TPH)					1.99 1.00		

BRL Below Reporting Limits.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94534-001	94534-002	94534-003	94534-004	94534-005	94534-006
	Field ID :	MW-15	MW-15	MW-15	MW-13	MW-13	MW-13
	Depth :	0-2 ft	50-52 ft	87-89 ft	2-4 ft	50-52 ft	87-89 ft
	Matrix :	Soil	Soil	Soil	Soil	Soil	Soil
	Sampled :	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999
SPLP Volatiles by EPA 8260B	*Analyzed :*				Nov-03-1999		
	Units :				mg/L		
					RL		
Benzene					BRL 0.020		
Bromobenzene					BRL 0.020		
Bromochloromethane					BRL 0.020		
Bromodichloromethane					BRL 0.020		
Bromoform					BRL 0.020		
Bromomethane					BRL 0.020		
MTBE					BRL 0.020		
tert-Butylbenzene					BRL 0.020		
Sec-Butylbenzene					BRL 0.020		
n-Butylbenzene					BRL 0.020		
Carbon Tetrachloride					BRL 0.020		
Chlorobenzene					BRL 0.020		
Chloroethane					BRL 0.050		
Chloroform					BRL 0.020		
Chloromethane					BRL 0.050		
2-Chlorotoluene					BRL 0.020		
4-Chlorotoluene					BRL 0.020		
p-Cymene (p-Isopropyltoluene)					BRL 0.020		
1,2-Dibromo-3-Chloropropane					BRL 0.020		

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID:*	94534-001	94534-002	94534-003	94534-004	94534-005	94534-006
	Field ID:	MW-15	MW-15	MW-15	MW-13	MW-13	MW-13
	Depth:	0-2 ft	50-52 ft	87-89 ft	2-4 ft	50-52 ft	87-89 ft
	Matrix:	Soil	Soil	Soil	Soil	Soil	Soil
	Sampled:	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999	Oct-18-1999
SPLP Volatiles by EPA 8260B	*Analyzed:*				Nov-03-1999		
	Units:				mg/L		
					RL		
Dibromochloromethane					BRL 0.020		
Dibromomethane					BRL 0.020		
1,2-Dichlorobenzene					BRL 0.020		
1,3-Dichlorobenzene					BRL 0.020		
1,4-Dichlorobenzene					BRL 0.020		
Dichlorodifluoromethane					BRL 0.020		
1,2-Dichloroethane					BRL 0.020		
1,1-Dichloroethane					BRL 0.020		
trans-1,2-dichloroethene					BRL 0.020		
cis-1,2-Dichloroethene					BRL 0.020		
1,1-Dichloroethene					BRL 0.020		
2,2-Dichloropropane					BRL 0.020		
1,3-Dichloropropane					BRL 0.020		
1,2-Dichloropropane					BRL 0.020		
trans-1,3-dichloropropene					BRL 0.020		
1,1-Dichloropropene					BRL 0.020		
cis-1,3-Dichloropropene					BRL 0.020		
Ethylbenzene					BRL 0.020		
Hexachlorobutadiene					BRL 0.020		

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :* / *Field ID :* / *Depth :* / *Matrix :* / *Sampled :*	94534-001 MW-15 0-2 ft Soil Oct-18-1999	94534-002 MW-15 50-52 ft Soil Oct-18-1999	94534-003 MW-15 87-89 ft Soil Oct-18-1999	94534-004 MW-13 2-4 ft Soil Oct-18-1999	94534-005 MW-13 50-52 ft Soil Oct-18-1999	94534-006 MW-13 87-89 ft Soil Oct-18-1999
SPLP Volatiles by EPA 8260B	*Analyzed :* / *Units :*				Nov-03-1999 mg/L		
					RL		
Isopropylbenzene					BRL 0.020		
Methylene Chloride					BRL 0.100		
Naphthalene					BRL 0.050		
n-Propylbenzene					BRL 0.020		
Styrene					BRL 0.020		
1,1,1,2-Tetrachloroethane					BRL 0.020		
1,1,2,2-Tetrachloroethane					BRL 0.020		
Tetrachloroethylene					BRL 0.020		
Toluene					BRL 0.020		
1,2,4-Trichlorobenzene					BRL 0.020		
1,2,3-Trichlorobenzene					BRL 0.020		
1,1,2-Trichloroethane					BRL 0.020		
1,1,1-Trichloroethane					BRL 0.020		
Trichloroethene					BRL 0.020		
Trichlorofluoromethane					BRL 0.020		
1,2,3-Trichloropropane					BRL 0.020		
1,2,4-Trimethylbenzene					BRL 0.020		
1,3,5-trimethylbenzene					BRL 0.020		
Vinyl Chloride					BRL 0.020		

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94534-001		94534-002		94534-003		94534-004		94534-005		94534-006	
	Field ID :	MW-15		MW-15		MW-15		MW-13		MW-13		MW-13	
	Depth :	0-2 ft		50-52 ft		87-89 ft		2-4 ft		50-52 ft		87-89 ft	
	Matrix :	Soil		Soil		Soil		Soil		Soil		Soil	
	Sampled :	Oct-18-1999		Oct-18-1999		Oct-18-1999		Oct-18-1999		Oct-18-1999		Oct-18-1999	
SPLP Volatiles by EPA 8260B	*Analyzed :*							Nov-03-1999					
	Units :							mg/L					
									RL				
o-Xylene								0.026	0.020				
m,p-Xylenes								BRL	0.020				
TPH DRO by SW846-8015	*Analyzed :*	Oct-29-1999		Oct-29-1999		Oct-29-1999		Oct-29-1999		Oct-29-1999		Oct-29-1999	
	Units :	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			RL		RL		RL		RL		RL		RL
TPH-DRO (Diesel Range Organics)		1.70	1.65	1.91	1.65	BRL	1.65	5230	165	2.56	1.65	BRL	1.65

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Analysis Summary 94534

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-3
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-11-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID:*	94534-007		94534-008		94534-009				
	Field ID:	MW-14		MW-14		MW-14				
	Depth:	0-2 ft		50-52 ft		86-88 ft				
	Matrix:	Soil		Soil		Soil				
	Sampled:	Oct-19-1999		Oct-19-1999		Oct-19-1999				
BTEX by EPA 8021	*Analyzed:*	Oct-29-1999		Oct-29-1999		Oct-29-1999				
	Units:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		BRL	0.050	BRL	0.050	BRL	0.050			
Toluene		BRL	0.050	BRL	0.050	BRL	0.050			
Ethylbenzene		BRL	0.050	BRL	0.050	BRL	0.050			
m,p-Xylenes		BRL	0.100	BRL	0.100	BRL	0.100			
o-Xylene		BRL	0.050	BRL	0.050	BRL	0.050			
Total Xylenes		BRL		BRL		BRL				
Total BTEX		BRL		BRL		BRL				
TPH DRO by SW846-8015	*Analyzed:*	Oct-30-1999		Nov-01-1999		Oct-30-1999				
	Units:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
TPH-DRO (Diesel Range Organics)		5.07	1.65	2.32	1.65	3.10	1.65			

Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limits.

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94534

Project Name: JAL Station

Lab Batch ID: 201116 **Sample:** 100548-1-

Project ID: 910103-3

Units: mg/L **Matrix:** Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

SVOAs by EPA 8270C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.003	0.05	0.043	86.0	0.042	84.0	2.4	41-134	19	
4-chloro-3-methylphenol	<0.020	0.05	0.041	82.0	0.039	78.0	5.0	28-134	27.6	
2-Chlorophenol	<0.013	0.05	0.035	70.0	0.036	72.0	2.8	25-140	50	
1,4-Dichlorobenzene	<0.013	0.05	0.037	74.0	0.038	76.0	2.7	36-134	27	
4-Nitrophenol	<0.013	0.05	0.023	46.0	0.021	42.0	9.1	5.5-57	50	
n-Nitrosodi-n-Propylamine	<0.013	0.05	0.044	88.0	0.044	88.0	0.0	53-130	38	
Pentachlorophenol	<0.013	0.05	0.048	96.0	0.040	80.0	18.2	40-111	47	
Phenol	<0.013	0.05	0.024	48.0	0.024	48.0	0.0	27-127	35	
Pyrene	<0.002	0.05	0.048	96.0	0.044	88.0	8.7	41-144	36	
1,2,4-Trichlorobenzene	<0.013	0.05	0.043	86.0	0.043	86.0	0.0	37-133	23	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94534

Project Name: JAL Station
Project ID: 910103-3

Lab Batch #: 200881
Reporting Units: mg/kg **Matrix:** Solid

BTEX-MTBE by EPA 8021 Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	<0.001	0.1	0.111	111.0	70-130	
Toluene	<0.001	0.1	0.116	116.0	70-130	
Ethylbenzene	<0.001	0.1	0.116	116.0	71-129	
m,p-Xylenes	<0.002	0.2	0.242	121.0	70-135	
o-Xylene	<0.001	0.1	0.091	91.0	71-133	
MTBE	<0.020	1.0	0.955	95.5	71-133	

Lab Batch #: 200870
Reporting Units: mg/kg **Matrix:** Solid

TPH DRO by SW846-8015 Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
TPH-DRO (Diesel Range Organics)	<1.65	33.0	30.5	92.4	80-120	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94534

Project Name: JAL Station

Project ID: 910103-3

Lab Batch ID: 200911 **Sample:** 200911-1-

Units: mg/L **Matrix:** Solid

SPLP TPH by EPA 418.1 Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Total Petroleum Hydrocarbons	<1.00	4.01	3.42	85.3	3.49	87.0	2.0	65-135	30	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94534

Project Name: JAL Station
Project ID: 910103-3

Lab Batch #: 200945

Reporting Units: mg/L **Matrix:** Water

VOAs by SW-846 8260 Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	<0.005	0.05	0.053	106.0	66-142	
Chlorobenzene	<0.005	0.05	0.054	108.0	60-133	
1,1-Dichloroethene	<0.005	0.05	0.057	114.0	59-172	
Toluene	<0.005	0.05	0.055	110.0	59-139	
Trichloroethene	<0.005	0.05	0.052	104.0	62-137	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94534

Project Name: JAL Station

Project ID: 910103-3

Lab Batch ID: 200945

QC- Sample ID: 94643-010

Reporting Units: mg/L **Matrix:** Water

VOAs by SW-846 8260 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY									
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Duplicate Spiked Sample Result [E]	Spiked Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.005	0.05	0.050	100.00	0.049	98.00	2.02	66-142	21	
Chlorobenzene	<0.005	0.05	0.049	98.00	0.049	98.00	0.00	60-133	21	
1,1-Dichloroethene	<0.005	0.05	0.059	118.00	0.055	110.00	7.02	59-172	22	
Toluene	<0.005	0.05	0.050	100.00	0.049	98.00	2.02	59-139	21	
Trichloroethene	<0.005	0.05	0.047	94.00	0.047	94.00	0.00	62-137	24	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Matrix Spike Duplicate Percent Recovery [F] = 100*(E-A)/B
Relative Percent Difference RPD = 200*(C-E)/(C+E)
All Results are based on MDL and validated for QC purposes

Eddie L. Clemons, II
QA/QC Director

Analytical Report 94531

for

KEI Consultants, Ltd.

Project Manager: Stanley Grover

Project Name : JAL Station

Project Id : 910103-1

November 4, 1999

11381 Meadowglen, Suite L Houston, TX 77082 Ph:(281) 589-0692 Fax:(281) 589-0695

Houston - Dallas - San Antonio - Austin - Latin America

XENCO Laboratories

November 4, 1999

Project Manager: Stanley Grover
KEI Consultants, Ltd.
5309 Wurzbach Rd. Suite 100
San Antonio , TX 78238

Reference: XENCO Report No: 94531
Project Name : JAL Station
Project Address: Jal, New Mexico

Dear Stanley Grover :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Chain of Custody Numbered 94531 . All results being reported under this Chain of Custody apply to the samples analyzed and properly identified with a Laboratory ID number.

All the results for the quality control samples were reviewed. Also, all parameters for data reduction and validation were reviewed. In view of this, we are able to release the analytical data for this report within acceptance criteria for accuracy, precision, completeness or properly flagged.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 3 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in COC No. 94531 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Sincerely,

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

☑ 11381 Meadowglen, Suite L, Houston TX 77082 281-589-0692
☐ 5309 Wurzbach Road, Suite 104, San Antonio, TX 78238 210-509-3334
☐ 11078 Morrison Ln, Suite D, Dallas, TX 75229 972-481-9999

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

On-LINE Help & Technical Services at www.XENCO.com

27395

Company COC No: | Work Order No: | Page 1 of 1

Company KEI Consultants	**Phone** 210-680-3767
Project Name ☑ Previously done at XENCO: Jal STATION	**Project ID** 910103-1
Location Jal, New Mexico	
Project Manager (PM) Stas Grover	**Project Director (PD)** Mike Lewis
Fax Results to ☑ PM and / or	**Fax** 210-680-3763
Invoice to ☑ Accounting ☐ Include Invoice with Final Report Attn PM ☐ Invoice must have a P.O Bill to: 910103-1	
Quote No.	**P.O No** 910103-1 ☐ Call for a P.O.
Special DLs (RRI RRII DW QAPP See Lab PM Call Proj. PM)	
Specifications	

Sampler Name Stas Grover Signature Stas Grover

Lab Only: 94531-H

TAT: 5h 12h 20h 24h 48h 3d 5d 7d 14d 21d Standard TAT is 10 Working Days *unless otherwise agreed in writing. But often reported in 5-7 Working Days*

Lab Only Additions

	Sample ID	Sampling Date	Time	Depth ft / in / m	Matrix A P S W	Composite	Grab	# Containers	Container Size	Type	Preservatives	BTEX by 8021 8260 602 624 Other 8020	BTEX-MTBE by 8021 8260 602 624 Other	TPH by TX1005 TX 1006 416.1 8015GRO 8015DRO 8015JetF	PAHs by 8270 8100 8310	METALS by 6020 8RCRA Tot Pb TCLP_8 13PP 23TAL List TCP Scan	VOAs by 8260 624 BTEX MTBE PPs TCLP See List Call PM	SVOAs by 8270 625 PAHs BN&A TCLP PPs See List Call PM	TDS	CATIONS/ANIONS	TAT 5h 12h 20h 24h 48h 3d 5d 7d 10d 14d 21d	Addn: PAH above mg/L W. mg/Kg S Highest Hit	Hold Analysis	Remarks	Lab Only Additions
1	MW-12	10/19/99	15:15				✓	7	V.5	GA	✓	✓		✓	✓	✓			✓	✓				IF you have any question Call STAS Grover @ 210-680-3767	From: Rcv by: Date
2	MW-14	↓	16:25				↓	↓	1	P	↓	↓		↓	↓	↓			↓	↓					From: Rcv by: Date
3	MW-15	↓	17:00				↓	↓	↓	↓	↓	↓		↓	↓	↓			↓	↓					From: Rcv by: Date
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Relinquished by (Initials and Sign.)	Date & Time	Relinquished to (Initials and Sign.)	Date & Time	Total Containers per COC:
1 SJG Stas Grover			10/20/99 1600	**Rush TATs Fax Due:** Final Fax Due:
2				Final Report Data Package Due Date:
3		Lab.: Scott	10/22/99 10:15	Rush Charges are Pre-Approved upon Requesting them. All Terms Apply

Preservatives - Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), NaOH+AsbO Acid (NAA), ZnAc+NaOH (ZA), (Cool,<4C) (C4), None (N), See Label (SL), Other (O) _____

SIZE: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (V), 1L (1), 500ml (.5), Tedlar Bag (B), Wipe (W), Other _____ **TYPE** Glass Amb (GA), Glass Clear (GC), Plastic (P), Other (O) _____

Certificate of Analysis Summary 94531

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94531-001		94531-002		94531-003	
	Field ID :	MW-12		MW-14		MW-15	
	Depth :						
	Matrix :	Water		Water		Water	
	Sampled :	Oct-19-1999		Oct-19-1999		Oct-19-1999	
BTEX by EPA 8021	*Analyzed :*	Oct-29-1999		Oct-29-1999		Oct-29-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
Benzene		BRL	0.001	0.007	0.001	BRL	0.001
Toluene		BRL	0.001	BRL	0.001	BRL	0.001
Ethylbenzene		BRL	0.001	BRL	0.001	BRL	0.001
m,p-Xylenes		BRL	0.002	0.009	0.002	BRL	0.002
o-Xylene		BRL	0.001	0.001	0.001	BRL	0.001
Total Xylenes		BRL		0.010		BRL	
Total BTEX		BRL		0.017		BRL	
Bicarbonate, Alkalinity by EPA 310.1	*Analyzed :*	Oct-26-1999		Oct-26-1999		Oct-26-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
Alkalinity, Bicarbonate (as CaCO3)		498	4.00	345	4.00	202	4.00
Carbonate, Alkalinity by EPA 310.1	*Analyzed :*	Oct-26-1999		Oct-26-1999		Oct-26-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
Alkalinity, Carbonate (as CaCO3)		BRL	4.00	BRL	4.00	BRL	4.00

Eddie L. Clemons, II
QA QC Director

BRL Below Reporting Limit.

XENCO Laboratories

Certificate of Analysis Summary 94531

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94531-001		94531-002		94531-003		
	Field ID :	MW-12		MW-14		MW-15		
	Depth :							
	Matrix :	Water		Water		Water		
	Sampled :	Oct-19-1999		Oct-19-1999		Oct-19-1999		
ICP-MS Metals by EPA 6020	*Analyzed :*	Oct-26-1999		Oct-26-1999		Oct-26-1999		
	Units :	mg/L		mg/L		mg/L		
			RL		RL		RL	
Aluminum		0.696	0.278	0.936	0.278	1.39	0.278	
Arsenic		BRL	0.056	BRL	0.056	BRL	0.056	
Barium		BRL	0.278	0.320	0.278	BRL	0.278	
Beryllium		BRL	0.056	BRL	0.056	BRL	0.056	
Boron		0.636	0.278	1.70	0.278	0.838	0.278	
Cadmium		BRL	0.006	BRL	0.006	BRL	0.006	
Calcium		128	1.11	1680	1.11	268	1.11	
Chromium		BRL	0.050	BRL	0.050	BRL	0.050	
Cobalt		BRL	0.050	BRL	0.050	BRL	0.050	
Copper		BRL	0.278	BRL	0.278	BRL	0.278	
Iron		0.072	0.556	4.33	0.556	1.61	0.556	
Lead		BRL	0.050	BRL	0.050	BRL	0.050	
Magnesium		51.5	1.11	87.2	1.11	96.9	1.11	
Manganese		BRL	0.111	0.388	0.111	BRL	0.111	
Molybdenum		BRL	0.278	BRL	0.278	BRL	0.278	
Nickel		BRL	0.111	BRL	0.111	BRL	0.111	
Potassium		8.06	1.11	16.3	1.11	14.6	1.11	
Selenium		BRL	0.050	BRL	0.050	BRL	0.050	
Silver		BRL	0.050	BRL	0.050	BRL	0.050	
Sodium		82.5	1.11	186	1.11	167	1.11	
Tin		BRL	0.556	BRL	0.556	BRL	0.556	
Vanadium		BRL	0.111	BRL	0.111	BRL	0.111	
Zinc		BRL	0.278	BRL	0.278	BRL	0.278	
Inorganic Anions by EPA 300	*Analyzed :*	Oct-25-1999		Oct-25-1999		Oct-25-1999		
	Units :	mg/L		mg/L		mg/L		
			RL		RL		RL	
Chloride		14.7	2.00	9.90	2.00	116	2.00	
Sulfate		38.0	2.00	62.3	2.00	562	4.00	

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94531

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94531-001		94531-002		94531-003	
	Field ID :	MW-12		MW-14		MW-15	
	Depth :						
	Matrix :	Water		Water		Water	
	Sampled :	Oct-19-1999		Oct-19-1999		Oct-19-1999	
Mercury by EPA 7470A	*Analyzed :*	Oct-28-1999		Oct-28-1999		Oct-28-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
Mercury		BRL	0.001	BRL	0.001	BRL	0.001
Minerals by EPA 6020	*Analyzed :*	Oct-28-1999		Oct-28-1999		Oct-28-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
Silica		54.2	0.556	51.0	0.556	52.2	0.556
Strontium		3.10	0.278	6.22	0.278	5.18	0.278
SVOA PAHs List by EPA 8270C	*Analyzed :*	Oct-26-1999		Oct-26-1999		Oct-26-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
Acenaphthene		BRL	0.002	BRL	0.002	BRL	0.002
Acenaphthylene		BRL	0.002	BRL	0.002	BRL	0.002
Anthracene		BRL	0.002	BRL	0.002	BRL	0.002
Benzo(a)anthracene		BRL	0.002	BRL	0.002	BRL	0.002
Benzo(a)pyrene		BRL	0.002	BRL	0.002	BRL	0.002
Benzo(b)fluoranthene		BRL	0.002	BRL	0.002	BRL	0.002
Benzo(g,h,i)perylene		BRL	0.002	BRL	0.002	BRL	0.002
Benzo(k)fluoranthene		BRL	0.002	BRL	0.002	BRL	0.002
Chrysene		BRL	0.002	BRL	0.002	BRL	0.002
Dibenz(a,h)Anthracene		BRL	0.002	BRL	0.002	BRL	0.002
Fluoranthene		BRL	0.002	BRL	0.002	BRL	0.002
Fluorene		BRL	0.002	BRL	0.002	BRL	0.002
Indeno(1,2,3-c,d)Pyrene		BRL	0.002	BRL	0.002	BRL	0.002
Naphthalene		BRL	0.002	0.038	0.002	BRL	0.002
Phenanthrene		BRL	0.002	BRL	0.002	BRL	0.002
Pyrene		BRL	0.002	BRL	0.002	BRL	0.002
TDS (Total Dissolved Solids) by EPA 160.1	*Analyzed :*	Oct-26-1999		Oct-26-1999		Oct-26-1999	
	Units :	mg/L		mg/L		mg/L	
			RL		RL		RL
TDS, Total Dissolve Solids		710	5.00	1110	5.00	1520	5.00

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94531

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94531-001		94531-002		94531-003		
	Field ID :	MW-12		MW-14		MW-15		
	Depth :							
	Matrix :	Water		Water		Water		
	Sampled :	Oct-19-1999		Oct-19-1999		Oct-19-1999		
TPH DRO by SW846-8015	*Analyzed :*	Oct-29-1999		Oct-29-1999		Oct-29-1999		
	Units :	mg/L		mg/L		mg/L		
			RL		RL		RL	
TPH-DRO (Diesel Range Organics)		0.306	0.050	0.481	0.050	0.132	0.050	

Eddie L. Clemons, II
QA QC Director

BRL Below Reporting Limit.

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200873

Reporting Units: mg/L **Matrix:** Water

BLANK/BLANK SPIKE RECOVERY STUDY

BTEX-MTBE by EPA 8021 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	<0.001	0.1	0.118	118.0	70-125	
Toluene	<0.001	0.1	0.118	118.0	70-125	
Ethylbenzene	<0.001	0.1	0.112	112.0	71-129	
m,p-Xylenes	<0.002	0.2	0.227	113.5	70-125	
o-Xylene	<0.001	0.1	0.080	80.0	71-133	
MTBE	<0.020	1.0	1.11	111.0	71-133	

ank Spike Recovery [D] = 100*(C-A)/[B]
l results are based on MDL and validated for QC purposes.

Eddie L. Clemons. II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200794

Reporting Units: mg/L **Matrix:** Water

Bicarbonate, Alkalinity by EPA 310.1	BLANK/BLANK SPIKE RECOVERY STUDY					
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Alkalinity, Bicarbonate (as CaCO3)	<4.00	25.0	24.0	96.0	80-120	

ank Spike Recovery [D] = 100*(C-A)/[B]
l results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200791
Reporting Units: mg/L **Matrix:** Water

ICP-MS Metals by EPA 6020 Analytes	BLANK/BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Aluminum	<0.028	2.22	2.33	105.0	75-125	
Antimony	<0.056	3.33	3.31	99.4	75-125	
Arsenic	<0.010	1.11	1.25	112.6	75-125	
Barium	<0.010	1.11	1.16	104.5	75-125	
Beryllium	<0.006	0.444	0.466	105.0	75-125	
Boron	<0.278	2.22	2.33	105.0	75-125	
Cadmium	<0.001	0.444	0.466	105.0	75-125	
Calcium	<1.11	4.44	3.94	88.7	75-125	
Chromium	<0.010	1.11	1.22	109.9	75-125	
Cobalt	<0.050	1.11	1.15	103.6	75-125	
Copper	<0.010	1.11	1.20	108.1	75-125	
Iron	<0.556	2.22	2.28	102.7	75-125	
Lead	<0.011	2.22	2.40	108.1	75-125	
Magnesium	<1.11	4.44	5.11	115.1	75-125	
Manganese	<0.111	2.22	2.29	103.2	75-125	
Nickel	<0.010	1.11	1.17	105.4	75-125	
Potassium	<1.11	4.44	5.06	114.0	75-125	
Selenium	<0.010	1.11	1.21	109.0	75-125	
Silver	<0.050	0.278	0.264	95.0	75-125	
Sodium	<1.11	15.6	14.6	93.6	75-125	
Thallium	0.018	1.11	1.17	103.8	75-125	
Tin	<0.556	2.22	2.39	107.7	75-125	
Vanadium	<0.111	1.11	1.21	109.0	75-125	
Zinc	<0.005	1.11	1.16	104.5	75-125	

ank Spike Recovery [D] = 100*(C-A)/[B]
l results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station

Lab Batch ID: 200719 **Sample:** 200719-1-

Project ID: 910103-1

Units: mg/L **Matrix:** Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Bromide	<0.200	10.0	9.50	95.0	9.90	99.0	4.1	70-125	20	
Chloride	<0.200	10.0	9.60	96.0	9.40	94.0	2.1	70-125	20	
Sulfate	<0.200	10.0	9.50	95.0	9.50	95.0	0.0	70-125	20	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200890

Reporting Units: mg/L **Matrix:** Water

BLANK/BLANK SPIKE RECOVERY STUDY

Mercury by EPA 7470A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Mercury	<0.001	0.006	0.004	80.0	75-125	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station
Project ID: 910103-i

Lab Batch #: 200910

Reporting Units: mg/L **Matrix:** Water

BLANK/BLANK SPIKE RECOVERY STUDY

Minerals by EPA 6020 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Silica	0.556	3.33	3.39	85.1	75-125	
Strontium	<0.278	2.22	2.29	103.2	75-125	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station

Project ID: 910103-1

Lab Batch ID: 200739 **Sample:** 100395-1-

Units: mg/L **Matrix:** Water

SVOA PAHs List by EPA 8270C Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.002	0.05	0.037	74.0	0.037	74.0	0.0	27-132	31	
Pyrene	<0.002	0.05	0.055	110.0	0.051	102.0	7.5	23-152	31	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200801
Reporting Units: mg/L **Matrix:** Water

Residue, Filterable (TDS) by EPA 160.1	BLANK/BLANK SPIKE RECOVERY STUDY					
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids (residue, filterable)	<5.00	1000.0	968	96.8	80-120	

ank Spike Recovery [D] = 100*(C-A)/[B]
l results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station

Project ID: 910103-1

Lab Batch ID: 200874 **Sample:** 100472-1-

Units: mg/L **Matrix:** Water

TPH DRO by SW846-8015 Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-DRO (Diesel Range Organics)	<0.050	1.0	0.915	91.5	0.869	86.9	5.2	40-120	35	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94531

Project Name: JAL Station

Lab Batch ID: 200873

Project ID: 910103-1

QC- Sample ID: 94477-004

Reporting Units: mg/L **Matrix:** Water

BTEX-MTBE by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY									
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Duplicate Spiked Sample Result [E]	Spiked Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.159	0.1	0.246	87.00	0.236	77.00	4.15	70-125	25	
Toluene	0.001	0.1	0.164	163.00	0.141	140.00	15.08	70-125	25	A
Ethylbenzene	<0.001	0.1	0.149	149.00	0.131	131.00	12.86	71-129	25	A
m,p-Xylenes	0.016	0.2	0.323	153.50	0.282	133.00	13.55	70-125	25	A
o-Xylene	<0.001	0.1	0.114	114.00	0.097	97.00	16.11	71-133	25	
tert-butyl methyl ether	<0.020	1	1.33	133.00	1.28	128.00	3.83	71-133	25	

A) MS or MSD outside control limits; LCS is within acceptance range.

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Matrix Spike Duplicate Percent Recovery [F] = 100*(E-A)/B
Relative Percent Difference RPD = 200*(C-E)/(C+E)
All Results are based on MDL and validated for QC purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report : 94531
Lab Batch #: 200801
QC- Sample ID: 94535-001
Reporting Units: mg/L **Matrix:** Water

Project Name: JAL Station
Project ID: 910103-1

Residue, Filterable (TDS) by EPA 160.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids (residue, filterable)	621	610	1.8	30	

Spike Relative Difference RPD 200*|(B-A)/(B+A)
All Results are based on MDL and validated for QC purposes.

Eddie L. Clemons. II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report : 94531
Lab Batch #: 200794
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Project Name: JAL Station
Project ID: 910103-1

Bicarbonate, Alkalinity by EPA 310.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Bicarbonate (as CaCO3)	498	498	0	20	

Spike Relative Difference RPD 200*|(B-A)/(B+A)
All Results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report : 94531
Lab Batch #: 200796
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Project Name: JAL Station
Project ID: 910103-1

Carbonate, Alkalinity by EPA 310.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, carbonate (as CaCO3)	<4.00	<4.00	NC	20	

Spike Relative Difference RPD 200*|(B-A)/(B+A)
All Results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

Analytical Report 94535

for

KEI Consultants, Ltd.

Project Manager: Stanley Grover

Project Name : JAL Station

Project Id : 910103-1

November 4, 1999

11381 Meadowglen, Suite L Houston, TX 77082 Ph:(281) 589-0692 Fax:(281) 589-0695

Houston - Dallas - San Antonio - Austin - Latin America

XENCO Laboratories

November 4, 1999

Project Manager: Stanley Grover
KEI Consultants, Ltd.
5309 Wurzbach Rd. Suite 100
San Antonio , TX 78238

Reference: XENCO Report No: 94535
Project Name : JAL Station
Project Address: Jal, New Mexico

Dear Stanley Grover :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Chain of Custody Numbered 94535 . All results being reported under this Chain of Custody apply to the samples analyzed and properly identified with a Laboratory ID number.

All the results for the quality control samples were reviewed. Also, all parameters for data reduction and validation were reviewed. In view of this, we are able to release the analytical data for this report within acceptance criteria for accuracy, precision, completeness or properly flagged.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 3 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in COC No. 94535 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Sincerely,

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

[redacted] 1138[redacted]dowglen, Suite L, Houston TX 77082 281-589-0692 [redacted]
☐ 5309 Wurzbach Road, Suite 104, San Antonio, TX 78238 210-509-3334
☐ 11078 Morrison Ln, Suite D, Dallas, TX 75229 972-481-9999

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

On-LINE Help & Technical Services at www.XENCO.com

27396

Company COC No: Work Order No: Page 1 of 1

Company KET Consultants	**Phone** 210-680-3767
Project Name ☐ Previously done at XENCO: Jal Station	**Project ID** 410103-1
Location Jal, New Mexico	
Project Manager (PM) Steve Graves	**Project Director (PD)** ~~Greg Pope~~ / Mike Lewis
Fax Results to ☐ PM and / or	**Fax** 210-680-3763
Invoice to ☐ Accounting ☐ Include Invoice with Final Report Attn PM ☐ Invoice must have a P.O Bill to: 410103-1	
Quote No.	**P.O No** 410103-1 ☐ Call for a P.O.
Special DLs (RR I RR II DW QAPP See Lab PM Call Proj. PM)	
Specifications	
Sampler Name Steve Graves	**Signature**

Lab Only: 94535-H

TAT: 5h 12h 20h 24h 48h 3d 5d 7d 14d 21d Standard TAT is 10 Working Days unless otherwise agreed in writing. But often reported in 5-7 Working Days

#	Sample ID	Sampling Date	Time	Depth ft in m	Matrix A P S W	Composite	Grab	# Containers	Container Size	Type	Preservatives	BTEX by 8021 8260 602 624 Other 8020	BTEX-MTBE by 8021 8260 602 624 Other	TPH by TX1005 TX 1006 418.1 8015GRO 8015DRO 8015Jeff	PAHs by 8270 8100 8310	METALS by 6020 8RCRA Tot Pb TCLP_8 13PP 23TAL List TCLP SCMU	VOAs by 8260 624 BTEX MTBE PPs TCLP See List Call PM	SVOAs by 8270 625 PAHs BN&A TCLP PPs See List Call PM	TDS	Cations / Anions
1	MW-10	10/19/99	1405				/	7	V. 1 .5	GB P	V	/		/	/	/			/	/
2	MW-13	10/19/99	1550				/	7	V. 1 .5	GA P	V	/		/	/	/			/	/
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

	TAT 5h 12h 20h 24h 48h 3d 5d 7d 10d 14d 21d	Addn: PAH above mg/L W. mg/Kg S Highest Hit	Hold Analysis
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Remarks

Please call Steve Graves @ 210-680-3767 if you have any questions on analysis.

Lab Only Additions

	From:	Rcv by:	From:	Rcv by:	From:	Rcv by:
	Date		Date		Date	

Relinquished by (Initials and Sign.)	Date & Time	Relinquished to (Initials and Sign.)	Date & Time
1 Steve Graves	10/20/99 1600		
2			
3		Lab.:	10/22/99 10:15

Total Containers per COC:

Rush TATs Fax Due: Final Fax Due:

Final Report Data Package Due Date:

Rush Charges are Pre-Approved upon Requesting them. All Terms Apply

Preservatives - Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), NaOH+Asbc Acid (NAA), ZnAc+NaOH (ZA), (Cool,<4C) (C4), None (N), See Label (SL), Other (O) _____

SIZE: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (V), 1L (1), 500ml (.5), Tedlar Bag (B), Wipe (W), Other _____ **TYPE** Glass Amb (GA), Glass Clear (GC), Plastic (P), Other (O) _____

XENCO Laboratories

Certificate of Analysis Summary 94535

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94535-001		94535-002			
	Field ID :	MW-10		MW-13			
	Depth :						
	Matrix :	Water		Water			
	Sampled :	Oct-19-1999		Oct-19-1999			
BTEX by EPA 8021	*Analyzed :*	Oct-29-1999		Oct-29-1999			
	Units :	mg/L		mg/L			
			RL		RL		
Benzene		BRL	0.001	BRL	0.001		
Toluene		BRL	0.001	BRL	0.001		
Ethylbenzene		BRL	0.001	BRL	0.001		
m,p-Xylenes		BRL	0.002	BRL	0.002		
o-Xylene		BRL	0.001	BRL	0.001		
Total Xylenes		BRL		BRL			
Total BTEX		BRL		BRL			
Bicarbonate, Alkalinity by EPA 310.1	*Analyzed :*	Oct-26-1999		Oct-26-1999			
	Units :	mg/L		mg/L			
			RL		RL		
Alkalinity, Bicarbonate (as CaCO3)		376	4.00	284	4.00		
Carbonate, Alkalinity by EPA 310.1	*Analyzed :*	Oct-26-1999		Oct-26-1999			
	Units :	mg/L		mg/L			
			RL		RL		
Alkalinity, Carbonate (as CaCO3)		BRL	4.00	BRL	4.00		

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94535

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94535-001		94535-002			
	Field ID :	MW-10		MW-13			
	Depth :						
	Matrix :	Water		Water			
	Sampled :	Oct-19-1999		Oct-19-1999			
ICP-MS Metals by EPA 6020	*Analyzed :*	Oct-26-1999		Oct-26-1999			
	Units :	mg/L		mg/L			
			RL		RL		
Aluminum		2.72	0.278	4.56	0.278		
Arsenic		BRL	0.056	BRL	0.056		
Barium		0.308	0.278	0.451	0.278		
Beryllium		BRL	0.056	BRL	0.056		
Boron		0.308	0.278	BRL	0.278		
Cadmium		BRL	0.006	BRL	0.006		
Calcium		311	1.11	807	1.11		
Chromium		BRL	0.050	BRL	0.050		
Cobalt		BRL	0.050	BRL	0.050		
Copper		BRL	0.278	BRL	0.278		
Iron		3.28	0.556	5.89	0.556		
Lead		BRL	0.050	BRL	0.050		
Magnesium		61.0	1.11	41.6	1.11		
Manganese		0.121	0.111	0.581	0.111		
Molybdenum		BRL	0.278	BRL	0.278		
Nickel		BRL	0.111	BRL	0.111		
Potassium		7.56	1.11	10.9	1.11		
Selenium		BRL	0.050	BRL	0.050		
Silver		BRL	0.050	BRL	0.050		
Sodium		41.7	1.11	64.6	1.11		
Tin		BRL	0.556	BRL	0.556		
Vanadium		BRL	0.111	0.143	0.111		
Zinc		BRL	0.278	BRL	0.278		
Inorganic Anions by EPA 300	*Analyzed :*	Oct-25-1999		Oct-25-1999			
	Units :	mg/L		mg/L			
			RL		RL		
Chloride		28.9	2.00	4.90	2.00		
Sulfate		25.9	2.00	10.9	2.00		

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94535

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :* / *Field ID :* / *Depth :* / *Matrix :* / *Sampled :*	94535-001 MW-10 Water Oct-19-1999		94535-002 MW-13 Water Oct-19-1999			
Mercury by EPA 7470A	*Analyzed :* / *Units :*	Oct-28-1999 mg/L	RL	Oct-28-1999 mg/L	RL		
Mercury		BRL	0.001	BRL	0.001		
Minerals by EPA 6020	*Analyzed :* / *Units :*	Oct-28-1999 mg/L	RL	Oct-28-1999 mg/L	RL		
Silica		59.5	0.556	54.6	0.556		
Strontium		3.80	0.278	2.92	0.278		
SVOA PAHs List by EPA 8270C	*Analyzed :* / *Units :*	Oct-26-1999 mg/L	RL	Oct-26-1999 mg/L	RL		
Acenaphthene		BRL	0.002	BRL	0.002		
Acenaphthylene		BRL	0.002	BRL	0.002		
Anthracene		BRL	0.002	BRL	0.002		
Benzo(a)anthracene		BRL	0.002	BRL	0.002		
Benzo(a)pyrene		BRL	0.002	BRL	0.002		
Benzo(b)fluoranthene		BRL	0.002	BRL	0.002		
Benzo(g,h,i)perylene		BRL	0.002	BRL	0.002		
Benzo(k)fluoranthene		BRL	0.002	BRL	0.002		
Chrysene		BRL	0.002	BRL	0.002		
Dibenz(a,h)Anthracene		BRL	0.002	BRL	0.002		
Fluoranthene		BRL	0.002	BRL	0.002		
Fluorene		BRL	0.002	BRL	0.002		
Indeno(1,2,3-c,d)Pyrene		BRL	0.002	BRL	0.002		
Naphthalene		BRL	0.002	BRL	0.002		
Phenanthrene		BRL	0.002	BRL	0.002		
Pyrene		BRL	0.002	BRL	0.002		
TDS (Total Dissolved Solids) by EPA 160.1	*Analyzed :* / *Units :*	Oct-26-1999 mg/L	RL	Oct-26-1999 mg/L	RL		
TDS, Total Dissolve Solids		621	5.00	454	5.00		

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Analysis Summary 94535

KEI Consultants, Ltd., San Antonio , TX

Project Name: JAL Station

Project ID: 910103-1
Project Manager: Stanley Grover
Project Location: Jal, New Mexico

Date Received in Lab: Fri Oct-22-99 10:15 AM
Date Report Faxed: thu Nov-04-99
XENCO Contact: Debbie Simmons

Analysis Requested	*Lab ID :*	94535-001		94535-002			
	Field ID :	MW-10		MW-13			
	Depth :						
	Matrix :	Water		Water			
	Sampled :	Oct-19-1999		Oct-19-1999			
TPH DRO by SW846-8015	*Analyzed :*	Oct-29-1999		Oct-30-1999			
	Units :	mg/L		mg/L			
			RL		RL		
TPH-DRO (Diesel Range Organics)		0.124	0.050	0.127	0.050		

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200791
Reporting Units: mg/L **Matrix:** Water

ICP-MS Metals by EPA 6020 Analytes	BLANK/BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Aluminum	<0.028	2.22	2.33	105.0	75-125	
Antimony	<0.056	3.33	3.31	99.4	75-125	
Arsenic	<0.010	1.11	1.25	112.6	75-125	
Barium	<0.010	1.11	1.16	104.5	75-125	
Beryllium	<0.006	0.444	0.466	105.0	75-125	
Boron	<0.278	2.22	2.33	105.0	75-125	
Cadmium	<0.001	0.444	0.466	105.0	75-125	
Calcium	<1.11	4.44	3.94	88.7	75-125	
Chromium	<0.010	1.11	1.22	109.9	75-125	
Cobalt	<0.050	1.11	1.15	103.6	75-125	
Copper	<0.010	1.11	1.20	108.1	75-125	
Iron	<0.556	2.22	2.28	102.7	75-125	
Lead	<0.011	2.22	2.40	108.1	75-125	
Magnesium	<1.11	4.44	5.11	115.1	75-125	
Manganese	<0.111	2.22	2.29	103.2	75-125	
Nickel	<0.010	1.11	1.17	105.4	75-125	
Potassium	<1.11	4.44	5.06	114.0	75-125	
Selenium	<0.010	1.11	1.21	109.0	75-125	
Silver	<0.050	0.278	0.264	95.0	75-125	
Sodium	<1.11	15.6	14.6	93.6	75-125	
Thallium	0.018	1.11	1.17	103.8	75-125	
Tin	<0.556	2.22	2.39	107.7	75-125	
Vanadium	<0.111	1.11	1.21	109.0	75-125	
Zinc	<0.005	1.11	1.16	104.5	75-125	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200910
Reporting Units: mg/L **Matrix:** Water

BLANK/BLANK SPIKE RECOVERY STUDY

Minerals by EPA 6020 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Silica	0.556	3.33	3.39	85.1	75-125	
Strontium	<0.278	2.22	2.29	103.2	75-125	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94535

Project Name: JAL Station

Lab Batch ID: 200829 **Sample:** 100444-1-

Project ID: 910103-1

Units: mg/L **Matrix:** Water

BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.001	0.1	0.114	114.0	0.112	112.0	1.8	70-125	25	
Toluene	<0.001	0.1	0.120	120.0	0.120	120.0	0.0	70-125	25	
Ethylbenzene	<0.001	0.1	0.115	115.0	0.115	115.0	0.0	71-129	25	
m,p-Xylenes	<0.002	0.2	0.228	114.0	0.228	114.0	0.0	70-125	25	
o-Xylene	<0.001	0.1	0.120	120.0	0.120	120.0	0.0	71-133	25	
tert-butyl methyl ether	<0.020	1.0	1.15	115.0	1.14	114.0	0.9	71-133	25	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch ID: 200739 **Sample:** 100395-1-
Units: mg/L **Matrix:** Water

SVOA PAHs List by EPA 8270C Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.002	0.05	0.037	74.0	0.037	74.0	0.0	27-132	31	
Pyrene	<0.002	0.05	0.055	110.0	0.051	102.0	7.5	23-152	31	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

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Analytical Report: 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch ID: 200719 **Sample:** 200719-1-
Units: mg/L **Matrix:** Water

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Blank Spike Duplicate Result [E]	Blk. Spk Dup. %R [F]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Bromide	<0.200	10.0	9.50	95.0	9.90	99.0	4.1	70-125	20	
Chloride	<0.200	10.0	9.60	96.0	9.40	94.0	2.1	70-125	20	
Sulfate	<0.200	10.0	9.50	95.0	9.50	95.0	0.0	70-125	20	

Relative Percent Difference RPD = 200*|(C-E)/(C+E)|
Blank Spike Recovery [D] = 100*(C-A)/[B]
Blank Spike Duplicate Recovery [F] = 100*(E-A)/[B]
All results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200794
Reporting Units: mg/L **Matrix:** Water

Bicarbonate, Alkalinity by EPA 310.1 Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Alkalinity, Bicarbonate (as CaCO3)	<4.00	25.0	24.0	96.0	80-120	

Lab Batch #: 200801
Reporting Units: mg/L **Matrix:** Water

Residue, Filterable (TDS) by EPA 160.1 Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids (residue, filterable)	<5.00	1000.0	968	96.8	80-120	

Lab Batch #: 201041
Reporting Units: mg/L **Matrix:** Water

Mercury (Hg) by EPA 6020 Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Mercury	<0.000	0.004	0.005	125.0	75-125	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report: 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200890

Reporting Units: mg/L **Matrix:** Water

Mercury by EPA 7470A Analytes	Blank Result [A]	BLANK/BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Mercury	<0.001	0.006	0.004	80.0	75-125	

Blank Spike Recovery [D] = 100*(C-A)/[B]
All results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report : 94535
Lab Batch #: 200791
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Project Name: JAL Station
Project ID: 910103-1

ICP-MS Metals by EPA 6020 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Aluminum	0.696	0.853	20.3	25	
Arsenic	<0.056	<0.056	NC	25	
Barium	<0.278	<0.278	NC	25	
Beryllium	<0.056	<0.056	NC	25	
Boron	0.636	0.567	11.5	25	
Cadmium	<0.006	<0.006	NC	25	
Calcium	128	133	3.8	25	
Chromium	<0.050	<0.050	NC	25	
Cobalt	<0.050	<0.050	NC	25	
Copper	<0.278	<0.278	NC	25	
Iron	<0.556	0.778	NC	25	
Lead	<0.050	<0.050	NC	25	
Magnesium	51.5	54.3	5.3	25	
Manganese	<0.111	<0.111	NC	25	
Molybdenum	<0.278		NC	25	
Nickel	<0.111	<0.111	NC	25	
Potassium	8.06	8.39	4.0	25	
Selenium	<0.050	<0.050	NC	25	
Silver	<0.050	<0.050	NC	25	
Sodium	82.5	86.7	5.0	25	
Tin	<0.556	<0.556	NC	25	
Vanadium	<0.111	<0.111	NC	25	
Zinc	<0.278	<0.278	NC	25	

Lab Batch #: 200791
QC- Sample ID: 94526-001
Reporting Units: mg/L **Matrix:** Water

Priority Pollutant Metals per ICP/MS by EPA 200.8 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Beryllium	<0.005	<0.005	NC	25	

Spike Relative Difference RPD 200*|(B-A)/(B+A)
All Results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

File Name : L:\Reprots\LQc_SmpSmpDup

XENCO Laboratories

Certificate of Quality Control

Analytical Report : 94535
Lab Batch #: 200719
QC- Sample ID: 94528-001
Reporting Units: mg/L **Matrix:** Water

Project Name: JAL Station
Project ID: 910103-1

Inorganic Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Bromide	<2.00	<2.00	NC	20	

Lab Batch #: 200719
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Inorganic Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	14.7	13.1	11.5	20	
Sulfate	38.0	37.0	2.7	20	

Lab Batch #: 200796
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Carbonate, Alkalinity by EPA 310.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, carbonate (as CaCO3)	<4.00	<4.00	NC	20	

Lab Batch #: 200794
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Bicarbonate, Alkalinity by EPA 310.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Bicarbonate (as CaCO3)	498	498	0	20	

Spike Relative Difference RPD 200*|(B-A)/(B+A)
All Results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report : 94535
Lab Batch #: 201041
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Project Name: JAL Station
Project ID: 910103-1

Mercury (Hg) by EPA 6020 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Mercury	<0.000	<0.000	NC	25	

Lab Batch #: 200910
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Minerals by EPA 6020 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Silica	54.2	53.1	2.1	25	
Strontium	3.10	3.30	6.3	25	

Lab Batch #: 200890
QC- Sample ID: 94526-001
Reporting Units: mg/L **Matrix:** Water

Mercury, Total by EPA 245.1 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Mercury	<0.000	<0.000	NC	20	

Lab Batch #: 200801
QC- Sample ID: 94535-001
Reporting Units: mg/L **Matrix:** Water

Residue, Filterable (TDS) by EPA 160.1 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Total dissolved solids (residue, filterable)	621	610	1.8	30	

Spike Relative Difference RPD 200*|(B-A)/(B+A)
All Results are based on MDL and validated for QC purposes.

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200791
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

ICP-MS Metals by EPA 6020 Analyte	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Cobalt	<0.050	1.11	1.12	100.90	75-125	
Manganese	<0.111	2.22	2.31	104.05	75-125	
Magnesium	51.5	4.44	56.7	117.12	75-125	
Arsenic	<0.056	1.11	1.22	109.91	75-125	
Cadmium	<0.006	.444	0.449	101.13	75-125	
Barium	<0.278	1.11	1.25	112.61	75-125	
Iron	<0.556	2.22	3.72	167.57	75-125	A
Sodium	82.5	15.6	95.8	85.26	75-125	
Potassium	8.06	4.44	13.2	115.77	75-125	
Aluminum	0.696	2.22	3.9	144.32	75-125	A
Beryllium	<0.056	.444	0.421	94.82	75-125	
Zinc	<0.278	1.11	1.15	103.60	75-125	
Copper	<0.278	1.11	1.14	102.70	75-125	
Nickel	<0.111	1.11	1.12	100.90	75-125	
Chromium	<0.050	1.11	1.11	100.00	75-125	
Vanadium	<0.111	1.11	1.17	105.41	75-125	
Calcium	128	4.44	137	202.70	75-125	A
Boron	0.636	2.22	2.69	92.52	75-125	
Lead	<0.050	2.22	2.32	104.50	75-125	
Tin	<0.556	2.22	2.28	102.70	75-125	
Silver	<0.050	.556	0.598	107.55	75-125	
Selenium	<0.050	1.11	1.14	102.70	75-125	

Lab Batch #: 200791
QC- Sample ID: 94526-001
Reporting Units: mg/L **Matrix:** Water

Priority Pollutant Metals per ICP/MS by EPA 200.8	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Beryllium	<0.005	.444	0.441	99.32	75-125	

A) MS or MSD outside control limits; LCS is within acceptance range.

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200910
QC- Sample ID: 94531-001
Reporting Units: mg/L **Matrix:** Water

Minerals by EPA 6020	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analyte	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Silica	54.2	3.33	67.2	390.39	75-125	A
Strontium	3.10	2.22	5.44	105.41	75-125	

A) MS or MSD outside control limits; LCS is within acceptance range.

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report 94535

Project Name: JAL Station
Project ID: 910103-1

Lab Batch #: 200890
QC- Sample ID: 94526-001
Reporting Units: mg/L **Matrix:** Water

Mercury, Total by EPA 245.1	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analyte	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Mercury	<0.000	.006	0.004	80.0	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA QC Director

XENCO Laboratories

Certificate of Quality Control

Analytical Report 94535

Project Name: JAL Station

Project ID: 910103-1

Lab Batch #: 201041

QC- Sample ID: 94531-001

Reporting Units: mg/L **Matrix:** Water

Mercury (Hg) by EPA 6020	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analyte	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Mercury	<0.000	.004	0.005	125.00	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Eddie L. Clemons, II
QA/QC Director

QA/QC PROCEDURES

DECONTAMINATION OF EQUIPMENT

Cleaning of drilling equipment was the responsibility of the drilling company. In general, the cleaning procedures consisted of using high pressure steam to wash the drilling and sampling equipment prior to drilling and prior to starting each hole. Prior to use, the sampling equipment was cleaned with Liqui-Nox detergent and rinsed with distilled water.

SOIL SAMPLING

Samples of the subsurface soils were obtained utilizing an air rotary drilling rig with split spoon samples at discrete intervals. Representative soil samples were divided into 2 separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample was placed in a disposable sample bag. The bag was labeled and sealed for head-space analysis using a photo-ionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample was allowed to volatilize for approximately 30 minutes at ambient temperature prior to conducting the analysis.

The other portion of the soil sample was placed in a sterile glass container equipped with a Teflon-lined lid furnished by the analytical laboratory. The container was filled to capacity to limit the amount of head-space present. Each container was labeled and placed on ice in an insulated cooler. Upon selection of samples for analysis, the cooler was sealed for shipment to the laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

Soil samples were express mailed to Xenco Laboratories of San Antonio, Texas for BTEX, TPH-DRO, SPLP SVOC, and SPLP TPH analyses using the methods described below. Soil samples were prepared for analysis by the analytical laboratory for BTEX, TPH, and SPLP concentrations within 14 days following the collection date.

The soil samples were analyzed in accordance with the methods as follows:

- BTEX concentrations in accordance with EPA Method SW846-8021B
- TPH concentrations in accordance with modified EPA Method 8015-DRO
- SPLP TPH concentrations in accordance with EPA Method 1312/418.1
- SPLP SVOC concentrations in accordance with EPA Method SW846-1312/8270
- SPLP VOC concentrations in accordance with EPA Method 1312/8260B
- PAH concentrations in accordance with EPA Method 8270

GROUND WATER SAMPLING

Monitoring wells were developed and purged with a clean PVC bailer. The bailer was cleaned prior to each use with Liqui-Nox detergent and rinsed with distilled water. Monitoring wells with sufficient recharge were purged by removing a minimum of 3 well volumes. Monitoring wells that did not recharge sufficiently were purged until no additional ground water could be obtained.

After purging the wells, ground water samples were collected with a disposable Teflon sampler and polyethylene line by personnel wearing clean, disposable gloves. Ground water sample containers were filled in the order of decreasing volatilization sensitivity (i.e., BTEX containers were filled first and PAH containers second).

Ground water samples collected for BTEX analysis were placed in 40 ml glass VOA vials equipped with Teflon-lined caps. The containers provided were pre-preserved with HCl by the analytical laboratory. The vials were filled to a positive meniscus, sealed, and visually checked to ensure the absence of air bubbles.

Ground water samples collected for PAH and Cations/Anions analyses were filled to capacity in sterile, 1 liter glass containers equipped with Teflon-lined caps. Ground water samples collected for metals analysis were filled to capacity in 1 liter plastic containers pre-preserved with HNO_3 and equipped with Teflon-lined caps. The containers were provided by the analytical laboratory.

The filled containers were labeled and placed on ice in an insulated cooler. The cooler was sealed for transportation to the analytical laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

The ground water samples were analyzed in accordance with the methods as follows:

- BTEX concentrations in accordance with EPA Method SW846-8021B
- TPH concentrations in accordance with EPA Method 8015M Diesel Range Organics
- PAH concentrations in accordance with EPA Method 8270C
- Metals concentrations in accordance with EPA ICP Method 6020
- Mercury concentrations in accordance with EPA Method 7470A
- Anion concentrations in accordance with EPA Method 300.0
- Cations concentrations in accordance with EPA Method 310.1
- TDS concentrations in accordance with EPA Method 160.1

LABORATORY PROTOCOL

The laboratory was responsible for proper QA/QC procedures. These procedures are either transmitted with the laboratory reports or are on file at the laboratory.