

AP - 24

# STAGE 1 & 2 REPORTS

DATE:

June 2003

AP-24

## **PRELIMINARY SITE INVESTIGATION REPORT**

### **FORMER INEX PIT LOCATION**

**SE 1/4, NW 1/4, Section 26, Township 18 South, Range 26 East  
Eddy County, New Mexico**

Prepared For:

**Yates Petroleum Corporation**  
105 South Fourth Street  
Artesia, New Mexico 88210

**RECEIVED**

**FEB 25 2004**

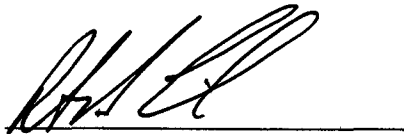
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Environmental Bureau**

ETGI Project # YP2220

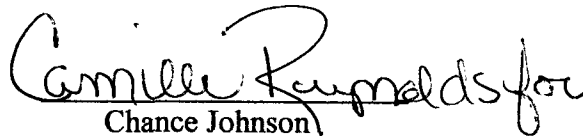
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**June 2003**



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## **Table of Contents**

1.0	INTRODUCTION	1
2.0	SUMMARY OF FIELD ACTIVITIES	1
3.0	SITE DESCRIPTION	1
3.1	Regional Geology/Hydrogeology	1
3.2	Site Geology/Hydrogeology	2
3.3	New Mexico Oil Conservation Division (NMOCD) Soil Classification	3
3.4	Distribution of Hydrocarbons in the Unsaturated Zone	3
3.5	Distribution of Hydrocarbons in the Saturated Zone	4
4.0	FOLLOW-UP ACTIVITIES	4
5.0	QA/QC PROCEDURES	5
5.1	Soil Sampling	5
5.2	Groundwater Sampling	6
5.3	Decontamination of Equipment	6
5.4	Laboratory Protocol	7
6.0	LIMITATIONS	7
7.0	DISTRIBUTION	8

## **Tables**

TABLE 1:	Groundwater Elevation Data
TABLE 2:	Concentrations of BTEX, Chlorides and TPH in Soil
TABLE 3:	Concentrations of BTEX, Chlorides and TDS in Groundwater

## **Figures**

FIGURE 1:	Site Location Map
FIGURE 2:	Site Map/Inferred Groundwater Gradient Map

## **Appendices**

APPENDIX A:	Soil Boring and Monitor Well Details
APPENDIX B:	Laboratory Reports
APPENDIX C:	New Mexico Office of the State Engineer Database – Water Well Search

## **1.0 INTRODUCTION**

Yates Petroleum Corporation (YATES) is submitting this Preliminary Site Investigation Report as a summary of activities completed to date at the former Inex Pit site in Eddy County, New Mexico. The regulatory basis for site characterization actions conducted at this site is the August 1993 New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases*. Data collected during this subsurface investigation is suitable for use in any subsequent Stage II Abatement Plan. The site is located in the SE ¼ of the NW ¼ of Section 26, Township 18 South, Range 26 East in Eddy County, New Mexico. The surface expression of the former pit area measures approximately 84 feet by 45 feet. The immediate area and region is dominated by petroleum exploration and production facilities. For reference, a site location and site map are provided as Figures 1 and 2, respectively.

Site characterization action was conducted to assess subsurface soil and groundwater conditions associated with oil and gas exploration and production activities by the former responsible party operating the site. Environmental Technology Group, Inc. (ETGI) had previously conducted subsurface soil and groundwater characterization action at the site on 19 October 2000. Refer to the Preliminary Site Investigation Report, November 2000 for details of the previous site characterization action. Laboratory analysis of soil and groundwater samples collected during this previous investigation indicated that groundwater underlying the former pit area had been impacted with dissolved phase benzene and chloride in excess of NMOCD standards.

## **2.0 SUMMARY OF FIELD ACTIVITIES**

ETGI mobilized a hollow-stem auger drilling rig on 9 September 2000 to conduct a preliminary site investigation and determine the nature and extent of dissolved phase benzene and chloride concentrations present in the groundwater in the former pit area. ETGI advanced a total of four soil borings, subsequently converted to permanent groundwater monitor wells, to a maximum depth of approximately 70 feet, which was the prevailing depth to sufficiently assess the potential for groundwater impact. The monitor wells were developed utilizing a single use disposable Teflon bailer until a minimum of three well volumes had been removed and groundwater temperature, pH and conductivity parameters had stabilized. Approximately 48 hours after well development, the monitor wells were purged of three well volumes, again monitoring temperature, pH and conductivity parameters, allowed to recharge to a minimum of 80 percent of the original well volume and sampled for dissolved phase Benzene, Toluene, Ethyl-benzene and total Xylene (BTEX) constituents, chlorides and Total Dissolved Solids (TDS).

## **3.0 SITE DESCRIPTION**

### **3.1 Regional Geology/Hydrogeology**

In the site vicinity, the surface is composed of Quaternary alluvium associated with Pecos River flood plain deposits originating from the Sacramento Mountains to the west. The alluvium is underlain by the Triassic age Dockum Group formation that consists primarily of

red silts and sands, which are irregularly slightly to moderately indurated. The Dockum Group is approximately 1,000 feet thick in the site area and is divided into the Pierce Canyon redbeds and Santa Rosa sandstone in the site vicinity. These formations unconformably overly the Upper Permian Rustler Formation (gypsum, redbeds and dolomites) which unconformably overly the Middle Permian Chalk Bluff Formation (back reef deposits of dolomite, evaporites, redbeds and sandstone).

The site is located near the eastern margin of the Roswell Basin physiographic province, a north-south trending feature located between the Sacramento Mountains to the west and the Permian Basin to the east. Within this feature, groundwater commonly occurs in the alluvium near the Pecos River and in the Permian formations throughout the feature. These aquifers are typically characterized by relatively high hydraulic conductivity and transmissivity. Aquifers within the Triassic Dockum group are usually thin and discontinuous resulting in poor water quality and low well yields.

In the site vicinity, groundwater generally flows to the southeast toward the west channel of the Pecos River, which joins the main channel at the confluence of Brantly Reservoir. The east-west trending intermittent streams in the area appear to have little influence on the region hydraulic gradient, however local variations may occur in the vicinity of these drainage features during precipitation events.

Data collected by the United States Weather Bureau indicate that the average annual precipitation in the site vicinity is approximately 12.4 inches. This amount occurs primarily as storm events during the period from June to October, inclusive. Infiltration from these events is minimal given the high rate of surface runoff and evaporation. The Quaternary alluvium consists of clay, silt, sand, gravel and conglomerate in the near surface area. The thickness of the alluvium ranges from a thin veneer in the west to greater than 300 feet in places just west of the Pecos River. Groundwater in the alluvium originates from the cumulative effects of five sources: local precipitation, surface water, losses from leaky artesian wells, natural leakage of artesian water from the underlying artesian aquifers and irrigation return. The amount of water from each source is variable and indeterminate but, it has been concluded that the majority of the shallow groundwater supply is derived directly or indirectly from the artesian supply through natural leakage and that contributions from direct precipitation and surface runoff contribute as only a minor part of the total recharge. Movement of the shallow groundwater is primarily to the east toward the Pecos River channel where it discharges. The occurrence of shallow groundwater discharging into tributary streams of the Pecos River takes place where the channel beds are cut below the water table; therefore, groundwater locally moves toward those channels. There are a considerable number of shallow irrigation wells introducing artificial discharge into the area, which has locally altered the movement of shallow groundwater, inducing it to flow to the wells.

### **3.2 Site Geology/Hydrology**

Review of the soil boring/monitor well details from previous site investigations and from the current investigation indicates that backfill materials are present at depths varying from 16 to 20 feet bgs in the former pit area. Native, undisturbed soils consisting of soil types including

clay units, a thin sandy clay unit, a sandy gravel unit, a thin silty sand unit and a clean sand unit were encountered underlying the backfilled former pit area. Unconsolidated sands and variable sandy/silty clay units are present from the surface to the terminus of all borings surrounding the former pit area. The sands are characterized by their variable coloration, very fine to fine grained, moderately to well sorted alluvial deposits. The clay and sandy clay units are characterized by their variable coloration, moderately soft to stiff with minor hematitic staining at depth. Thin discontinuous gravelly units are located at irregular intervals varying in depth from 13 feet to 45 feet bgs to the east and west of the former pit area.

Groundwater occurs at depths varying from approximately 53 to 54 feet bgs in the borings surrounding the former pit area. The first incidence of groundwater below the former pit area occurred at a depth of approximately 43 feet bgs. Following monitor well development, gauging measurements indicate that the depth to a stabilized groundwater table is approximately 53 feet bgs. The inferred groundwater gradient on-site as measured between groundwater monitor wells MW-3 and MW-4 slopes to the northwest with a magnitude of 0.016 feet per foot.

### **3.3 New Mexico Oil Conservation Division (NMOCD) Soil Classification**

Groundwater samples were collected and analyzed for BTEX, TPH (GRO/DRO) and TDS to determine if the water meets the NMOCD definition of "beneficial use" (i.e. less than or equal to 10,000 mg/L TDS). Based on the following data: depth to groundwater being approximately 34 feet below the deepest known concentration of regulated contaminant, the nearest surface water body being greater than 1,000 feet away, and the distance of the nearest water well head being greater than 1,000 feet away, according to the NMOCD ranking system (NMOCD, 1993), the site can be assigned a ranking score of greater than 19. Therefore, the preliminary soil action levels are 100 mg/kg for TPH, 50 mg/kg for total BTEX, and 10 mg/kg for benzene.

The preliminary site action levels will be used in conjunction with risk/exposure assessment techniques to demonstrate to NMOCD that human health and the environment are adequately protected at the site. Regulatory closure will be sought based on such a demonstration.

### **3.4 Distribution of Hydrocarbons in the Unsaturated Zone**

To date, three soil borings have been advanced and four groundwater monitor wells have been installed at the site to characterize the potential impact to the site from the former pit area. The presence of hydrocarbon contaminated soil in excess of NMOCD regulatory standards for TPH and total BTEX was detected in the area of monitor well MW-4 at a depth of 10' bgs. The identified extent of TPH concentrations exceeding the preliminary NMOCD criteria exists to a depth of 20 feet bgs in the former pit area. There were no detectable concentrations of TPH or BTEX constituents in the soil samples collected during the installation of monitor wells MW-1, MW-2 or MW-3 in locations surrounding the former pit area. Results of the laboratory analysis of soil sampling conducted during monitor well installation activities are included in Table 2 and laboratory reports generated from monitor well installation activities are included as Appendix B.

Based on field screening and laboratory results, hydrocarbon impacted soil in excess of preliminary NMOCD criteria for BTEX and TPH constituents was determined to exist within the backfill materials in the area of MW-4 to a depth of 20 feet beneath the former pit. The soil sample collected from undisturbed, native soil at a depth of 45 feet bgs did not show evidence of either BTEX or TPH impacts. Chloride concentrations detected in soil samples collected during the installation of monitor wells MW-1 at 35 feet bgs, MW-3 at 50 and 60 feet bgs and MW-4 at ten and 20 feet bgs exceeded agency standards. The chloride concentration recorded from analysis of the 45-foot soil sample collected from monitor well MW-4 indicated decreasing impacts at this depth below the former pit area.

The distribution of hydrocarbons in the unsaturated zone has been estimated by utilizing the following techniques:

- Visual observations of subsurface soil samples;
- Review of field screening data;
- Laboratory analyses of selected soil samples.

### **3.5 Distribution of Hydrocarbons in the Saturated Zone**

ETGI advanced a total of four soil borings that were subsequently converted to permanent groundwater monitor wells, to depths of approximately 60 to 70 feet bgs, which was the prevailing depth to sufficiently assess the potential for groundwater impact. Laboratory analyses of groundwater samples collected following well development and purging actions indicate that groundwater at this location is not impacted with dissolved phase BTEX constituents. Laboratory analysis of the groundwater samples collected for chloride and TDS concentrations indicate elevated concentrations of both chloride and TDS are present below and up gradient of the former pit area. Based on TDS concentrations observed in the upgradient monitor well of less than 10,000 mg/L the aquifer is considered to be of beneficial use and must be remediated to New Mexico Water Quality Control Commission (WQCC) standards for each contaminant to qualify for site for closure.

### **4.0 FOLLOW-UP ACTIVITIES**

ETGI proposes to establish site-specific risk based closure criteria and utilize a long term groundwater monitoring plan at this site. Given the rural nature of the project location and lack of receptors (i.e. residential and other populated areas, domestic groundwater use, etc.), site-specific action levels will be used in lieu of the default NMOCD action levels. The risk assessment will be conducted using USEPA protocols, and will quantify potential impacts to human health for receptor populations present in the vicinity of the release site.

Through the utilization of a Human-Health Based Risk Assessment process, a site-specific approach will be employed to assess the probability of likely human exposure pathways with evaluations of the individual constituents of TPH concentrations present in the soil and chloride and TDS concentrations present in the soil and groundwater. Analytical fate-and-transport modeling will provide a means of estimating exposure concentrations and developing risk-based soil and groundwater closure standards. Under ASTM E-1739

"Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites," modeling is recommended as a conservative first step under Tiers 1 and 2 of the site evaluation process, prior to use of more complex numerical modeling methods under Tier 3.

Annual groundwater monitoring will be conducted until chloride and TDS concentration levels begin decreasing through natural attenuation mechanisms. The monitoring frequency will be increased to a semi-annual schedule and finally to a quarterly monitoring schedule to demonstrate constituent concentrations approaching the Risk Based closure criteria.

In order to prevent subsequent unintended or accidental human exposure to TPH constituents remaining on-site following a risk based scenario, the specific site area will be deed restricted preventing future consideration of development or improvements in the county clerk office, Lovington, Lea County, New Mexico.

Documentation of the aforementioned actions will be submitted to the NMOCD in the final subsurface investigation and site remediation report. Upon receipt of NMOCD's approval of the proposed risk assessment in this Preliminary Site Investigation Report, the activities described above will be implemented.

## **5.0 QA/QC PROCEDURES**

### **5.1 Soil Sampling**

Samples of subsurface soils were obtained utilizing a five foot continuous sampling device using clean, disposable gloves and clean sampling tools. One half of each sample was placed into a labeled zip-lock baggie and exposed to sunlight and ambient temperature for a minimum of thirty minutes prior to field screening with a photoionization detector (PID) calibrated to a 100 ppm isobutylene standard. Soil samples selected for laboratory analysis were sealed in an insulated cooler on ice under completed chain-of custody and transported to the Environmental Laboratory of Texas in Odessa, Texas for the requested 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 headspace 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 delivered to Environmental Lab of Texas, Inc. in Odessa, Texas for BTEX, TPH and chloride analyses using the methods described below. All soil samples were analyzed within fourteen days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA SW 846 Method 8021B, 5030



- TPH concentrations in accordance with modified EPA SW 846 Method 8015M GRO/DRO
- Chloride concentrations in accordance with EPA SW846 Method 9253

## **5.2 Groundwater Sampling**

Monitor wells were developed and purged with a single use, disposable, bailer. Monitor wells with sufficient recharge were purged by removing a minimum of three well volumes. Monitor wells that did not recharge sufficiently were purged until no additional groundwater could be obtained.

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

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

Groundwater samples, collected for TDS analysis, were filled to capacity in sterile, Amber, 1-liter glass containers equipped with Teflon-lined caps. Groundwater samples, collected for chloride analysis, were filled to capacity in sterile, 500-ml plastic containers equipped with Teflon-lined caps preserved with nitric acid. The analytical laboratory provided all containers and preservatives.

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 groundwater samples were analyzed as follows:

- BTEX concentrations in accordance with EPA SW 846 Methods 8021B, 5030
- TDS concentrations in accordance with EPA SW 846 Method 160.1
- Chloride concentrations in accordance with EPA SW 846 Method 9253

## **5.3 Decontamination Of Equipment**

In general, the cleaning procedures consisted of using high pressure steam to wash the drilling and sampling equipment prior to drilling. Prior to use, the sampling equipment was cleaned with Liqui-Nox<sup>®</sup> detergent and rinsed with distilled water.

#### **5.4 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

#### **6.0 LIMITATIONS**

Environmental Technology Group, Inc. has prepared this Preliminary Site Investigation Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

Environmental Technology Group, Inc. has examined and relied upon documents referenced in the report. Environmental Technology Group, Inc. has not conducted an independent examination of the facts contained in referenced materials. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Environmental Technology Group, Inc. has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Environmental Technology Group, Inc. also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Yates Petroleum Corporation. The information contained in this report including all exhibits and attachments, may not be used by any other party without the express consent of Environmental Technology Group, Inc. and/or Yates Petroleum Corporation.

## 7.0 REFERENCES

Title 19 NMAC 15.A.19;

Guidelines for Remediation of Leaks, Spills and Releases; August 1993 (NMOCD, 1993);

Unlined Surface Impoundment Closure Guidelines; February 1993 (NMOCD, 1993); and

Geology and Ground-Water Resources of Eddy County, New Mexico; G. E. Hendrickson and R. S. Jones; United States Geological Survey, New Mexico State Bureau of Mines and Mineral Resources and the State Engineer of New Mexico, 1952.

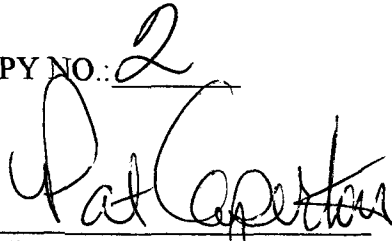
## 8.0 DISTRIBUTION

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Midland, Texas 79703

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Hobbs, New Mexico 88240

COPY NO.: 2

A handwritten signature in cursive script, appearing to read "Pat Caperton", written over a horizontal line.

Quality Control Reviewer

## TABLES

**TABLE 1****GROUND WATER ELEVATION DATA**

**YATES PETROLEUM CORPORATION  
FORMER INEX PIT SITE  
EDDY COUNTY, NEW MEXICO  
ETGI PROJECT # YA 2220**

<b>WELL NUMBER</b>	<b>DATE MEASURED</b>	<b>TOP OF CASING ELEVATION</b>	<b>DEPTH TO PRODUCT</b>	<b>DEPTH TO WATER</b>	<b>PSH THICKNESS</b>	<b>GROUND WATER ELEVATION</b>
MW - 1	09/18/02	3,301.73	-	53.23	0.00	3,248.50
	09/19/02	3,301.73	-	53.24	0.00	3,248.49
MW - 2	09/18/02	3,301.67	-	52.82	0.00	3,248.85
	09/19/02	3,301.67	-	54.11	0.00	3,247.56
MW - 3	09/18/02	3,302.19	-	54.14	0.00	3,248.05
	09/19/02	3,302.19	-	52.95	0.00	3,249.24
MW - 4	09/18/02	3,301.02	-	53.11	0.00	3,247.91
	09/19/02	3,301.02	-	53.43	0.00	3,247.59

TABLE 2

## CONCENTRATIONS OF BTEX, CHLORIDES AND TPH IN SOIL

YATES PETROLEUM CORPORATION  
FORMER INEX PIT SITE  
EDDY COUNTY, NEW MEXICO  
ETGI PROJECT #YA 2200

All concentrations are in mg/kg

SAMPLE NAME	SAMPLE DATE	SAMPLE DEPTH	SW 846-8021B, 5030					Method: 9253	Method: 8015	
			BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	CHLORIDES	GRO	DRO
MW-1	09/09/02	35'	<0.025	<0.025	<0.025	<0.025	<0.025	10600	<10.0	<10.0
		55'	<0.025	<0.025	<0.025	<0.025	<0.025	177	<10.0	<10.0
		70'	<0.025	<0.025	<0.025	<0.025	<0.025	70.9	<10.0	<10.0
MW-2	09/09/02	35'	<0.025	<0.025	<0.025	<0.025	<0.025	112	<10.0	<10.0
		55'	<0.025	<0.025	<0.025	<0.025	<0.025	<20.0	<10.0	<10.0
		65'	<0.025	<0.025	<0.025	<0.025	<0.025	<20.0	<10.0	<10.0
MW-3	09/09/02	30'	<0.025	<0.025	<0.025	<0.025	<0.025	106	<10.0	<10.0
		50'	<0.025	<0.025	<0.025	<0.025	<0.025	603	<10.0	<10.0
		60'	<0.025	<0.025	<0.025	<0.025	<0.025	7800	<10.0	<10.0
MW-4	09/09/02	10'	6.79	1.56	29.8	31.2	15.9	9040	1570	3170
		20'	5.20	0.565	20.3	8.88	0.233	3540	588	1350
		45'	<0.025	<0.025	<0.025	<0.025	<0.025	993	<10.0	<10.0

TABLE 3

## CONCENTRATIONS OF BTEX, CHLORIDES AND TDS IN GROUNDWATER

YATES PETROLEUM CORPORATION  
FORMER INEX PIT SITE  
EDDY COUNTY , NEW MEXICO  
ETGI PROJECT # YA 2220

*All concentrations are in mg/L*

SAMPLE LOCATION	SAMPLE DATE	SW 846-8021B, 5030				Method:9253	Method:160.1
		BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	CHLORIDES	TDS
MW - 1	09/19/02	<0.001	<0.001	<0.001	<0.001	1110	3880
MW - 2	09/19/02	<0.001	<0.001	<0.001	<0.001	319	2270
MW - 3	09/19/02	<0.001	<0.001	<0.001	<0.001	37200	67400
MW - 4	09/19/02	<0.001	<0.001	<0.001	<0.001	21300	38200



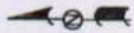
## FIGURES

## APPENDICES

**Appendix A**  
**Soil Boring Logs**







Lease Road (Unimproved)

Current Production Area

Former Pit Area

20" Gas Pipeline  
1019 ft./m.

SB-2

SB-1 (3247.59)

MW-4

MW-4 (3248.49)

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3128.50

3128.00

3127.50

3127.00

3126.50

3126.00

3125.50

3125.00

3124.50

3124.00

3123.50

3123.00

3122.50

3122.00

3121.50

3121.00

3120.50

3120.00

3119.50

3119.00

3118.50

3118.00

3117.50

3117.00

3116.50

3116.00

3115.50

3115.00

3114.50

3114.00

3113.50

3113.00

3112.50

3112.00

3111.50

3111.00

3110.50

3110.00

3109.50

3109.00

3108.50

3108.00

3107.50

3107.00

3106.50

3106.00

3105.50

3105.00

3104.50

3104.00

3103.50

3103.00

3102.50

3102.00

3101.50

3101.00

3100.50

3100.00

3099.50

3099.00

3098.50

3098.00

3097.50

3097.00

3096.50

3096.00

3095.50

3095.00

3094.50

3094.00

3093.50

3093.00

3092.50

3092.00

3091.50

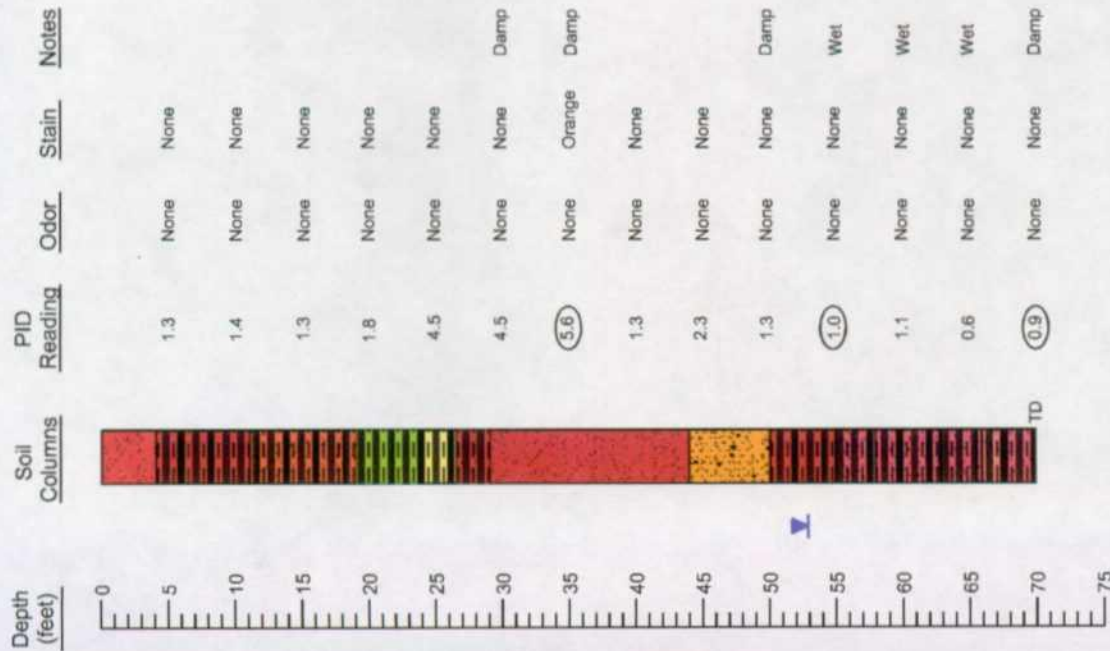
3091.00

3090.50

3090.00

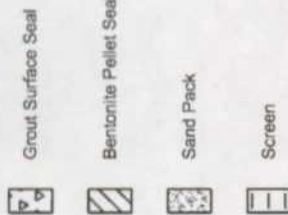
3089.50

# Monitoring Well MW - 1



## Monitoring Well Details

Date Drilled: 9 - 9 - 02  
 Thickness of Bentonite Seal: 3 ft  
 Length of PVC Well Screen: 30 ft  
 Depth of PVC Well: 70 ft  
 Depth of Exploratory Well: 70 ft  
 Depth to Ground Water: 53 ft



## Legend

- Silty Sand - (SM) - Moderate Brown, Very Fine Grained, Loose.
- Sandy Clay - (CL) - Light Brown, Soft.
- Clay - (CL) - Moderate Orange Pink, Medium Soft to Soft, Slightly Sandy, Slightly Fractured, Filled with Sand.
- Sandy Clay - (CL) - Moderate Yellowish Brown, Medium Soft.
- Clay - (CL) - Yellowish Gray to Grayish Yellow, Medium Soft.
- Sandy Clay - (SC) - Light Brown, Medium Soft to Stiff.
- Silty Sand - (SM) - Light Brown, Very Fine Grained, Well Sorted, Damp.
- Silty Sand - (SM) - Light Brown, Very Fine Grained, Well Sorted, Damp.
- Sandy Gravel - (GC) - Grayish Orange to Dark Yellowish Orange, Medium to Coarse Gravel, Sub-Angular, Fine Sand, Loose, Damp.
- Sandy Clay - (CL) - Light Brown, Soft.
- Sandy Clay - (CL) - Mottled Pale Greenish Yellow and Light Brown, Soft to Moderately Soft, Orange Ferric Staining, Moist.
- Sandy Clay - (CL) - Moderate Greenish Yellow, Soft.
- Sandy Clay - (ML) - Mottled Pale Greenish Yellow, to Light Brown, Soft to Moderate Soft.
- Sandy Clay - (CL) - Moderate Greenish Yellow, Soft.
- Sandy Gravel - (GC) - Pale Olive, Coarse Sand to Fine Gravel, Sub-Angular to Sub-Rounded Gravel, Loose, Wet.
- Sandy Clay - (CL) - Mottled Pale Greenish Yellow to Light Brown, Soft, Moist.

Indicates samples selected for laboratory analysis.

Indicates the ground water level measured on date.

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

## Completion Notes

- The monitoring well was installed on date using hollow stem auger drilling techniques.
- The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- The well is protected with a locked stick up steel cover and a compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from the ground surface.

## Boring Log And Monitoring Well Detail

### Monitoring Well - MW-1

Yates Petroleum.

Former Inex Pit Site

Eddy County, NM

Environmental Technology Group, Inc.

Scale: use scale Prep By: LGM Checked By: RE

Oct. 26, 2002 ETGI Project # YAC220

SE1/4 of the NW 1/4 of Section 26, Township 18 South, Range 26 East



# Monitoring Well MW - 2

Depth (feet) \_\_\_\_\_

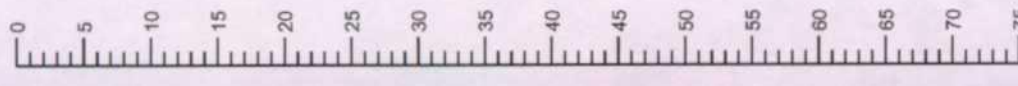
Soil Columns \_\_\_\_\_

PID Reading \_\_\_\_\_

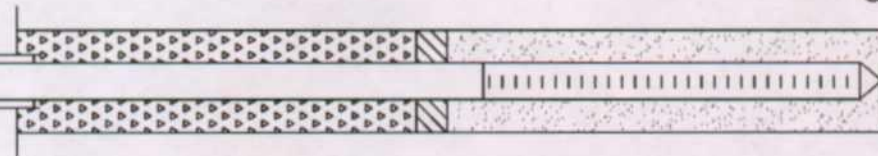
Odor \_\_\_\_\_

Stain \_\_\_\_\_

Notes \_\_\_\_\_



TD



## Monitoring Well Details

Date Drilled	9 - 10 - 02
Thickness of Bentonite Seal	2 ft
Length of PVC Well Screen	30 ft
Depth of PVC Well	65 ft
Depth of Exploratory Well	65 ft
Depth to Ground Water	54 ft

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates samples selected for laboratory analysis.

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

## Completion Notes

1. The monitoring well was installed on date using hollow stem auger drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a 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.

## Legend

- Silty Sand - (SM) - Dark Yellowish Orange, Very Fine Grained, Well Sorted, Loose.
- Caliche - White, Soft, Crumbly, Indurated with Depth.
- Silty Sand - (SM) - Grayish Orange, Very fine grained, Well Sorted.
- Sandy Clay - (CL) - Light Brown, Medium Soft to Stiff, Imbedded Caliche.
- Sand - (SW) - Moderate Orange Pink, Very Fine Grained, Well Sorted, Loose to Medium Dense.
- Sandy Clay - (CL) - Pale Olive, Moderate Soft to Stiff.
- Sandy Clay - (CL) - Mottled, Moderate Reddish-Brown and Moderate Greenish Yellow, Stiff.
- Sandy Clay - (CL) - Moderate Reddish Brown, Hematitic Staining, Very Stiff.
- Sand - (SW) - Moderate Orange Pink, Very Fine Grained, Well Sorted.
- Clay - (CL) - Moderate Greenish Yellow, Medium Soft to Stiff.
- Sandy Gravel - (GC) - Light Brown, Very Fine Grained Sand Coarse Gravel, Medium Dark Gray Quartz.
- Silty Sand - (SM) - Dark Yellowish Orange, Loose to Medium Dense, Very Fine Grained, Milky Clear Quartz, Sub-Rounded Grains.
- Clay - (CL) - Light Brown to Pale Olive, Soft.
- Clay - (CL) - Pale Olive to Light Brown, Soft.
- Sandy Clay - (CL) - Mottled Light Brown and Pale Olive.
- Sandy Gravel - (SG) - Pale Olive, Fine to Coarse Grained, Damp.
- Sandy Clay - (CL) - Moderate Brown, Soft, Wet.
- Sandy Clay - (CL) - Pale Greenish Yellow, Medium firm, Gravelly, Fine Sandy Gravel.
- Sandy Clay - (CL) - Moderate Yellowish Brown, Moderate Soft, Wet.
- Sandy Clay - (CL) - Moderate Yellowish Gray, Soft, Wet.
- Clayey Sand - (SC) - Grayish Orange, Very Fine Grained, Poorly Sorted, Slightly Gravelly, Fine.

Boring Log And Monitoring Well Detail

Monitoring Well - MW-2

Former Inex Pit Site

Eddy County, NM

Yates Petroleum.



Environmental Technology Group, Inc.

Scale: use scale

Prep By: LGM

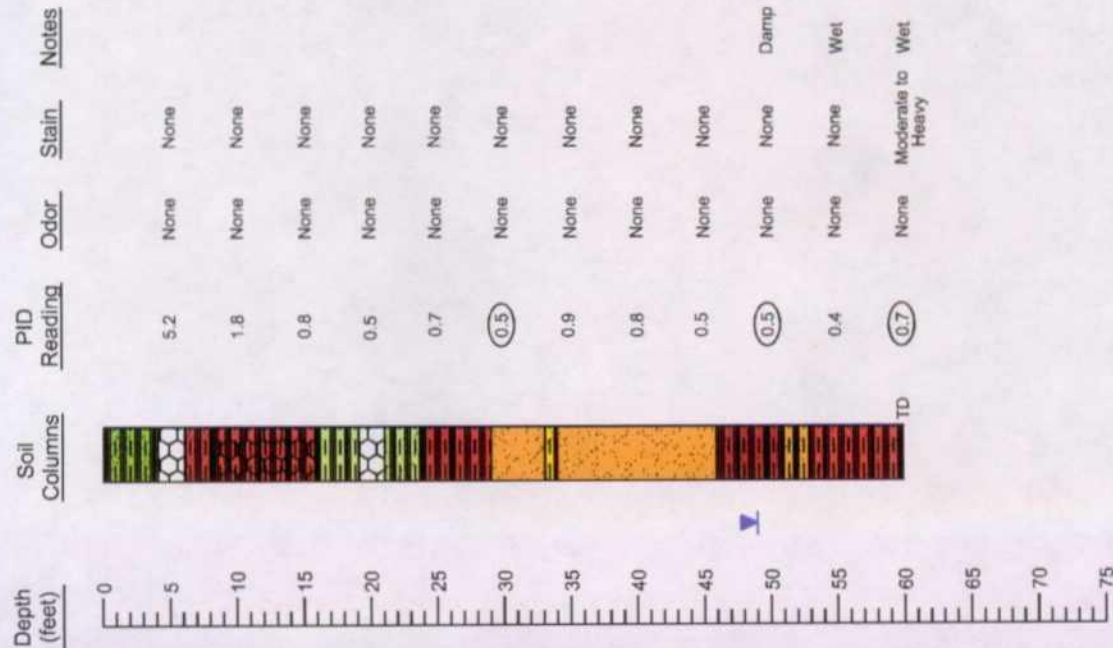
Checked By: RE

Oct. 28, 2002

ETGI Project # YAZZ20

SE1/4 of the NW 1/4 of Section 26, Township 18 South, Range 26 East

# Monitoring Well MW - 3



## Legend

- Sandy Clay - (CL) - Moderate Yellowish Brown, Soft.
- Caliche - White, Moderately Indurated.
- Sandy Clay - (CL) - Light Brown, Fractured, Filled with White Quartz Sand, Very Fine Grained, Soft.
- Clay - (CL) - Moderate Brown, Fractured, Filled with Very Fine Grained Quartz Sand, Imbedded Caliche.
- Clay - (ML) - Yellowish Gray, Moderate Soft to Stiff.
- Caliche - White, Very Soft to Slightly Indurated.
- Sandy Clay - (CL) - Yellowish Gray, Soft.
- Clay - (ML) - Light Brown, Medium Soft to Soft.
- Sand - (SW) - Grayish Orange, Very Fine Grained, Well Sorted.
- Sandy Clay - (CL) - Dark Yellowish Orange, Soft, Very Fine grained Sand.
- Sand - (SW) - Grayish Orange, Very Fine Grained, Loose, Well Sorted.
- Sandy Clay - (CL) - Mottled Moderate Yellowish Brown and Moderate Greenish Yellow, Soft, Moist.
- Sand - (SP) - Grayish Orange, Fine to Course Grained, Poorly Sorted, Gravelly, Wet.
- Sandy Clay - (CL) - Moderate Brown, Soft, Wet.

Indicates samples selected for laboratory analysis.

Indicates the ground water level measured on date.

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

## Completion Notes

- The monitoring well was installed on date using hollow stem auger drilling techniques.
- The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- The well is protected with a locked stick up steel cover and a compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from the ground surface.



Environmental Technology Group, Inc.

Scale: use scale  
Prep By: LGM  
Checked By: RE  
Oct. 28, 2002  
ETGI Project # YA2220

SE 1/4 of the NW 1/4 of Section 26, Township 16 South, Range 26 East

Boring Log And Monitoring Well Detail

Monitoring Well - MW-3

Former Inex Pit Site

Eddy County, NM

Yates Petroleum.



# Monitoring Well MW - 4

Depth (feet)

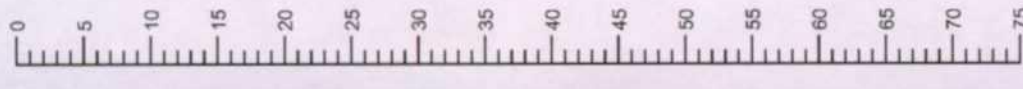
Soil Columns

PID Reading

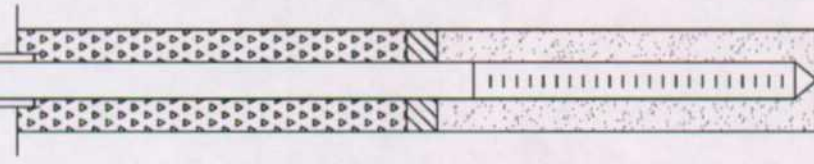
Odor

Stain

Notes

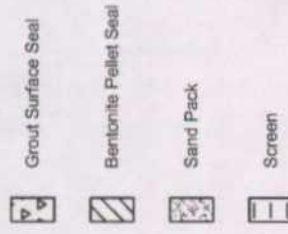


109	Slight	None	
863	Strong	Heavy	
867	Strong	Heavy	
1033	Strong	Moderate	
9.5	None	None	
7.1	None	None	
8.9	None	None	
4.8	None	None	
3.7	None	None	
4.7	None	Orange	Damp
3.6	None	None	Wet
3.8	None	None	Wet



## Monitoring Well Details

Date Drilled	9 - 11 - 02
Thickness of Bentonite Seal	2.0 ft
Length of PVC Well Screen	25 ft
Depth of PVC Well	60 ft
Depth of Exploratory Well	60 ft
Depth to Ground Water	43 ft



## Legend

- Silty Sand - (SM) - Moderate Yellowish Brown, Very Fine Grained, Well Sorted, Loose.
- Sandy Clay - (CL) - Light Bluish Gray to Dark Greenish Gray, Soft, Heavily Stained, Strong Odor.
- Caliche - Grayish Yellow Green, Indurated, Hard, Dark Gray Fractures.
- Sandy Clay - (SC) - Moderate Brown, Soft, Heavy Stain, Dark Bluish Green, Strong Odor.
- Silty Sand - (SM) - Dark Yellowish Orange, With Light Greenish Blue Staining, Fine to Medium Grained Sub-Angular to Rounded, Loose.
- Sandy Clay - (CL) - Moderate Brown, Soft to Medium Soft.
- Sand - (SW) - Grayish Orange, Very Fine to Fine Grained, Sub-Rounded, Loose, Damp.
- Sandy Clay - (GC) - Moderate Yellowish Brown, Gravely, Fine Gravel to Fine Sand, poorly Sorted, Loose.
- Silty Sand - (SM) - Light Brown, Very Fine to Medium Grained, Poorly Sorted, Loose, Moist.
- Clay - (CL) - Dark Yellowish Brown, Soft, Moist.
- Silty Sand - (SM) - Grayish Orange, Fine to Medium Grained, Sub-Angular to Sub-Rounded, Moderately Sorted.
- Sandy Clay - (CL) - Light Brown, Soft, Damp.
- Sandy Clay - (SC) - dark Yellowish Orange, Soft To Medium Soft, Damp.

Indicates samples selected for laboratory analysis.

Indicates the ground water level measured on date.

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

## Completion Notes

- The monitoring well was installed on date using hollow stem auger drilling techniques.
- The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- The well is protected with a locked stick up steel cover and a compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from the ground surface.

Boring Log And Monitoring Well Detail

Monitoring Well - MW-4

Yates Petroleum.

Former Inex Pit Site

Eddy County, NM

Environmental Technology Group, Inc.



Scale: use scale Prep By: LGM Checked By: RE

Oct. 28, 2002 ETGI Project # YA2220

SE1/4 of the NW 1/4 of Section 26, Township 18 South, Range 26 East

**Appendix B**  
**Laboratory Reports**

**FILE**

## **ANALYTICAL REPORT**

**Prepared for:**

**KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240**

**Project: INEX  
PO#:  
Order#: G0204528  
Report Date: 09/24/2002**

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240  
505-397-4701

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>	<u>Date / Time</u>	<u>Container</u>	<u>Preservative</u>
			<u>Collected</u>	<u>Received</u>		
0204528-01	INEX MW-1 (35')	SOIL	9/9/02 10:00	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX Chloride	Rejected: No		Temp: 4 C		
0204528-02	INEX MW-1 (55')	SOIL	9/9/02 11:13	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX Chloride	Rejected: No		Temp: 4 C		
0204528-03	INEX MW-1 (70')	SOIL	9/9/02 12:29	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX Chloride	Rejected: No		Temp: 4 C		
0204528-04	INEX MW-2 (35')	SOIL	9/10/02 8:55	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX Chloride	Rejected: No		Temp: 4 C		
0204528-05	INEX MW-2 (55')	SOIL	9/10/02 9:48	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX Chloride	Rejected: No		Temp: 4 C		
0204528-06	INEX MW-2 (65')	SOIL	9/10/02 10:51	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M	Rejected: No		Temp: 4 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240  
505-397-4701

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
	8021B/5030 BTEX Chloride					
0204528-07	INEX MW-3 (30')	SOIL	9/10/02 14:01	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 4 C		
	8015M 8021B/5030 BTEX Chloride					
0204528-08	INEX MW-3 (50')	SOIL	9/10/02 15:00	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 4 C		
	8015M 8021B/5030 BTEX Chloride					
0204528-09	INEX MW-3 (60')	SOIL	9/10/02 15:41	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 4 C		
	8015M 8021B/5030 BTEX Chloride					
0204528-10	INEX MW-4 (10')	SOIL	9/11/02 9:03	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 4 C		
	8015M 8021B/5030 BTEX Chloride					
0204528-11	INEX MW-4 (20')	SOIL	9/11/02 9:34	9/16/02 14:10	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 4 C		
	8015M 8021B/5030 BTEX Chloride					

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240  
505-397-4701

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0204528-12	INEX MW-4 (45')	SOIL	9/11/02 10:50	9/16/02 14:10	4 oz glass	Ice
<u>Lab Testing:</u>		Rejected: No	Temp:	4 C		
8015M						
8021B/5030 BTEX						
Chloride						

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-01  
Sample ID: INEX MW-1 (35')

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003187-02		9/19/02 20:18	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	90%	80	120
Bromofluorobenzene	96%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-02  
Sample ID: INEX MW-1 (55')

### 8015M

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003187-02		9/19/02 20:40	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	83%	80	120
Bromofluorobenzene	92%	80	120



# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-03  
Sample ID: INEX MW-1 (70')

### 8015M

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003187-02		9/19/02 21:02	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	102%	80	120
Bromofluorobenzene	101%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-04  
Sample ID: INEX MW-2 (35')

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003187-02		9/19/02 21:25	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	97%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-05  
Sample ID: INEX MW-2 (55')

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003197-02		9/20/02 10:36	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	92%	80	120
Bromofluorobenzene	95%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-06  
Sample ID: INEX MW-2 (65')

### 8015M

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003197-02		9/20/02 10:58	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	101%	80	120
Bromofluorobenzene	99%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-07  
Sample ID: INEX MW-3 (30')

### 8015M

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003197-02		9/20/02 11:20	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	94%	80	120
Bromofluorobenzene	97%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-08  
Sample ID: INEX MW-3 (50')

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003197-02		9/20/02 11:42	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	99%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-09  
Sample ID: INEX MW-3 (60')

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003197-02		9/20/02 12:04	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	96%	80	120
Bromofluorobenzene	96%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-10  
Sample ID: INEX MW-4 (10')

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	1,570	10.0
DRO, >C12-C35	3,170	10.0
TOTAL, C6-C35	4,740	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003197-02		9/20/02 12:26	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	6.79	0.025
Ethylbenzene	29.8	0.025
Toluene	1.56	0.025
p/m-Xylene	31.2	0.025
o-Xylene	15.9	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1250%	80	120
Bromofluorobenzene	144%	80	120



# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-11  
Sample ID: INEX MW-4 (20')

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/17/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	588	10.0
DRO, >C12-C35	1,350	10.0
TOTAL, C6-C35	1,938	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003197-02		9/20/02 12:49	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	5.20	0.025
Ethylbenzene	20.3	0.025
Toluene	0.565	0.025
p/m-Xylene	8.88	0.025
o-Xylene	0.233	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	854%	80	120
Bromofluorobenzene	119%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-12  
Sample ID: INEX MW-4 (45')

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/18/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003197-02		9/20/02 13:10	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	97%	80	120
Bromofluorobenzene	101%	80	120

Approval:

Raland K. Tuttle, Lab Director, QA Officer  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 12 of 12

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-01  
Sample ID: INEX MW-1 (35')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	10600	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-02  
Sample ID: INEX MW-1 (55')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	177	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-03  
Sample ID: INEX MW-1 (70')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	70.9	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-04  
Sample ID: INEX MW-2 (35')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	112	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-05  
Sample ID: INEX MW-2 (55')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	<20.0	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-06  
Sample ID: INEX MW-2 (65')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	<20.0	mg/kg	1	20	9253	9/17/02	SB

RL = Reporting Limit    N/A = Not Applicable

Page 1 of 3

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204528  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204528-07  
Sample ID: INEX MW-3 (30')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	106	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-08  
Sample ID: INEX MW-3 (50')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	603	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-09  
Sample ID: INEX MW-3 (60')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	7800	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-10  
Sample ID: INEX MW-4 (10')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	9040	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-11  
Sample ID: INEX MW-4 (20')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	3540	mg/kg	1	20	9253	9/17/02	SB

Lab ID: 0204528-12  
Sample ID: INEX MW-4 (45')

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	993	mg/kg	1	20	9253	9/17/02	SB

RL = Reporting Limit    N/A = Not Applicable

Page 2 of 3

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON

Environmental Technology Group, Inc.

2540 W. MARLAND

HOBBS, NM 88240

Order#: G0204528

Project: YA 2220

Project Name: INEX

Location: Artesia, NM

Approval: Raland K. Tuttle 9-24-02

Raland K. Tuttle, Lab Director, QA Officer

Date

Celey D. Keene, Org. Tech. Director

Jeanne McMurrey, Inorg. Tech. Director

Sandra Biezugbe, Lab Tech.

Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0204528

<b>BLANK</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003170-02			<10.0		
TOTAL, C6-C35-mg/kg	0003172-02			<10.0		
<b>CONTROL</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003170-03		1000	1070	107.0%	
TOTAL, C6-C35-mg/kg	0003172-03		1000	1070	107.0%	
<b>CONTROL DUP</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003170-04		1000	1080	108.0%	0.9%
TOTAL, C6-C35-mg/kg	0003172-04		1000	1080	108.0%	0.9%
<b>SRM</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003170-05		1000	1060	106.0%	
TOTAL, C6-C35-mg/kg	0003172-05		1000	1080	108.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204528

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003187-02			<0.025		
Benzene-mg/kg		0003197-02			<0.025		
Ethylbenzene-mg/kg		0003187-02			<0.025		
Ethylbenzene-mg/kg		0003197-02			<0.025		
Toluene-mg/kg		0003187-02			<0.025		
Toluene-mg/kg		0003197-02			<0.025		
p/m-Xylene-mg/kg		0003187-02			<0.025		
p/m-Xylene-mg/kg		0003197-02			<0.025		
o-Xylene-mg/kg		0003187-02			<0.025		
o-Xylene-mg/kg		0003197-02			<0.025		
<b>MS</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204528-01	0	0.1	0.103	103.%	
Benzene-mg/kg		0204530-09	0	0.1	0.097	97.%	
Ethylbenzene-mg/kg		0204528-01	0	0.1	0.106	106.%	
Ethylbenzene-mg/kg		0204530-09	0	0.1	0.100	100.%	
Toluene-mg/kg		0204528-01	0	0.1	0.105	105.%	
Toluene-mg/kg		0204530-09	0	0.1	0.100	100.%	
p/m-Xylene-mg/kg		0204528-01	0	0.2	0.220	110.%	
p/m-Xylene-mg/kg		0204530-09	0	0.2	0.207	103.5%	
o-Xylene-mg/kg		0204528-01	0	0.1	0.106	106.%	
o-Xylene-mg/kg		0204530-09	0	0.1	0.098	98.%	
<b>MSD</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204528-01	0	0.1	0.102	102.%	1.%
Benzene-mg/kg		0204530-09	0	0.1	0.095	95.%	2.1%
Ethylbenzene-mg/kg		0204528-01	0	0.1	0.106	106.%	0.%
Ethylbenzene-mg/kg		0204530-09	0	0.1	0.096	96.%	4.1%
Toluene-mg/kg		0204528-01	0	0.1	0.104	104.%	1.%
Toluene-mg/kg		0204530-09	0	0.1	0.097	97.%	3.%
p/m-Xylene-mg/kg		0204528-01	0	0.2	0.219	109.5%	0.5%
p/m-Xylene-mg/kg		0204530-09	0	0.2	0.201	100.5%	2.9%
o-Xylene-mg/kg		0204528-01	0	0.1	0.105	105.%	0.9%
o-Xylene-mg/kg		0204530-09	0	0.1	0.095	95.%	3.1%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003187-05		0.1	0.107	107.%	
Benzene-mg/kg		0003197-05		0.1	0.100	100.%	
Ethylbenzene-mg/kg		0003187-05		0.1	0.107	107.%	
Ethylbenzene-mg/kg		0003197-05		0.1	0.101	101.%	
Toluene-mg/kg		0003187-05		0.1	0.108	108.%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

<b>SRM</b>	<b>SOIL</b>	<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
Toluene-mg/kg		0003197-05		0.1	0.102	102.%	
p/m-Xylene-mg/kg		0003187-05		0.2	0.222	111.%	
p/m-Xylene-mg/kg		0003197-05		0.2	0.210	105.%	
o-Xylene-mg/kg		0003187-05		0.1	0.107	107.%	
o-Xylene-mg/kg		0003197-05		0.1	0.101	101.%	



# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0204528

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003168-01			<20.00		
<b>MS</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204527-01	8680	5000	13600	98.4%	
<b>MSD</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204527-01	8680	5000	13600	98.4%	0.0%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003168-04		5000	4960	99.2%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

**Order#:** G0204528

**Project:** INEX

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
INEX MW-1 (35')	0204528-01	SOIL	09/09/2002	09/16/2002
INEX MW-1 (55')	0204528-02	SOIL	09/09/2002	09/16/2002
INEX MW-1 (70')	0204528-03	SOIL	09/09/2002	09/16/2002
INEX MW-2 (35')	0204528-04	SOIL	09/10/2002	09/16/2002
INEX MW-2 (55')	0204528-05	SOIL	09/10/2002	09/16/2002
INEX MW-2 (65')	0204528-06	SOIL	09/10/2002	09/16/2002
INEX MW-3 (30')	0204528-07	SOIL	09/10/2002	09/16/2002
INEX MW-3 (50')	0204528-08	SOIL	09/10/2002	09/16/2002
INEX MW-3 (60')	0204528-09	SOIL	09/10/2002	09/16/2002
INEX MW-4 (10')	0204528-10	SOIL	09/11/2002	09/16/2002
INEX MW-4 (20')	0204528-11	SOIL	09/11/2002	09/16/2002
INEX MW-4 (45')	0204528-12	SOIL	09/11/2002	09/16/2002

**Surrogate recoveries are outside control limits due to interference from coeluting compounds**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By:

Ralanda Juil  
Environmental Lab of Texas I, Ltd.

Date:

9-24-02

# Environmental Lab of Texas I, Ltd.

2600 West I-20 East  
Dessa, Texas 79763

Phone: 915-563-1800  
Fax: 915-563-1713

Project Manager: Ken Dutton

Company Name: ETGI

Company Address: 2540 West Marland

City/State/Zip: Hooars / NM / 88242

Telephone No: (505) 397-4882

Fax No: (505) 397-4901

Sampler Signature: [Signature]

Project Name: Yates-Karros

Project #: X-2000

Project Loc: Artesia, NM

PO #:

COC # 148 00 INEX

10F 28K

Sample Signature: <u>  </u>
---

Special Instructions: Proj. #'s Williams: YA 2217

INEX: YA 2220

Sample Containers Intact? Y  
Temperature Upon Receipt: 40C  
Laboratory Comments: COF

Relinquished by: [Signature]

Date: 9/14/02 Time: 14:10

Received by: [Signature]

Date: 9/16/02 Time: 14:10

Received by: [Signature]

# Environmental Lab of Texas I, Ltd.

2600 West I-20 East  
Mesquite, Texas 79763

Phone: 915-563-1800  
Fax: 915-563-1713

Project Manager: Ken Dutton

Company Name: ETGI

Company Address: 2540 West Meadows

City/State/Zip: Hood/ NM / 88242

Telephone No: (505) 392-4882

Sampler Signature: [Signature]

Fax No: (505) 392-4301

Project Name: Various

Project #: HA-2200

Project Loc: Arcosa, NM

PO #:

COC #148 INEX

201-2342

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative							Matrix				Analyze For:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
					Ice	HNO <sub>3</sub>	HCl	NaOH	H <sub>2</sub> SO <sub>4</sub>	None	Other (Specify)	Water	Sludge	Soil	Other (specify):	TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	PCI	TCLP:	TOTAL:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
05	INEX MN-2(55')	9/10/02	0948	1	X									X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Special Instructions: PROJ. #5: INEX YA-2220

SCRIPPS YA-2219

Relinquished by: [Signature]

Date: 9/14/02  
Time: 1410

Received by:

Date: 9/16/02  
Time: 1410

Date: 9/16/02  
Time: 1410

Sample Containers Intact?  
Temperature Upon Receipt:  
Laboratory Comments:

4°C

**FILE**

## **ANALYTICAL REPORT**

**Prepared for:**

**KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240**

**Project: INEX  
PO#:  
Order#: G0204574  
Report Date: 09/30/2002**

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240  
505-397-4701

Order#: G0204574  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>	<u>Date / Time</u>	<u>Container</u>	<u>Preservative</u>
			<u>Collected</u>	<u>Received</u>		
0204574-01	MW 1	WATER	9/19/02 13:20	9/20/02 14:05	See COC	See COC
	<u>Lab Testing:</u> 8021B/5030 BTEX Chloride Total Dissolved Solids (TDS)	Rejected: No		Temp: 3.0 C		
0204574-02	MW 2	WATER	9/19/02 14:02	9/20/02 14:05	See COC	See COC
	<u>Lab Testing:</u> 8021B/5030 BTEX Chloride Total Dissolved Solids (TDS)	Rejected: No		Temp: 3.0 C		
0204574-03	MW 3	WATER	9/19/02 12:50	9/20/02 14:05	See COC	See COC
	<u>Lab Testing:</u> 8021B/5030 BTEX Chloride Total Dissolved Solids (TDS)	Rejected: No		Temp: 3.0 C		
0204574-04	MW 4	WATER	9/19/02 13:45	9/20/02 14:05	See COC	See COC
	<u>Lab Testing:</u> 8021B/5030 BTEX Chloride Total Dissolved Solids (TDS)	Rejected: No		Temp: 3.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204574  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204574-01

Sample ID: MW 1

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	1110	mg/L	1	5.00	9253	9/24/02	SB
Total Dissolved Solids (TDS)	3880	mg/L	1	5.0	160.1	9/25/02	TAL

Lab ID: 0204574-02

Sample ID: MW 2

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	319	mg/L	1	5.00	9253	9/24/02	SB
Total Dissolved Solids (TDS)	2270	mg/L	1	5.0	160.1	9/25/02	TAL

Lab ID: 0204574-03

Sample ID: MW 3

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	37200	mg/L	1	5.00	9253	9/24/02	SB
Total Dissolved Solids (TDS)	67400	mg/L	1	5.0	160.1	9/25/02	TAL

Lab ID: 0204574-04

Sample ID: MW 4

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	21300	mg/L	1	5.00	9253	9/24/02	SB
Total Dissolved Solids (TDS)	38200	mg/L	1	5.0	160.1	9/25/02	TAL

Approval:

Raland K. Tuttle, Lab Director, QA Officer  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date

RL = Reporting Limit    N/A = Not Applicable

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765    Ph: 915-563-1800

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204574

<b>BLANK</b>						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Benzene-mg/L		0003245-02			<0.001	
Ethylbenzene-mg/L		0003245-02			<0.001	
Toluene-mg/L		0003245-02			<0.001	
p/m-Xylene-mg/L		0003245-02			<0.001	
o-Xylene-mg/L		0003245-02			<0.001	
<b>MS</b>						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Benzene-mg/L		0204610-04	0	0.1	0.096	96.%
Ethylbenzene-mg/L		0204610-04	0	0.1	0.098	98.%
Toluene-mg/L		0204610-04	0	0.1	0.100	100.%
p/m-Xylene-mg/L		0204610-04	0	0.2	0.208	104.%
o-Xylene-mg/L		0204610-04	0	0.1	0.098	98.%
<b>MSD</b>						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Benzene-mg/L		0204610-04	0	0.1	0.102	102.%
Ethylbenzene-mg/L		0204610-04	0	0.1	0.104	104.%
Toluene-mg/L		0204610-04	0	0.1	0.105	105.%
p/m-Xylene-mg/L		0204610-04	0	0.2	0.221	110.5%
o-Xylene-mg/L		0204610-04	0	0.1	0.105	105.%
<b>SRM</b>						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Benzene-mg/L		0003245-05		0.1	0.095	95.%
Ethylbenzene-mg/L		0003245-05		0.1	0.097	97.%
Toluene-mg/L		0003245-05		0.1	0.098	98.%
p/m-Xylene-mg/L		0003245-05		0.2	0.207	103.5%
o-Xylene-mg/L		0003245-05		0.1	0.098	98.%



# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0204574

<b>BLANK</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0003215-01			<5.00		
Total Dissolved Solids (TDS)-mg/L		0003239-01			<5.0		
<b>DUPLICATE</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0204572-01	6140		6160		0.3%
<b>MS</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0204560-01	425	500	922	99.4%	
<b>MSD</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0204560-01	425	500	913	97.6%	1.0%
<b>SRM</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0003215-04		5000	4960	99.2%	

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204574  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204574-01

Sample ID: MW 1

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003245-02		9/27/02 15:52	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	84%	80	120
Bromofluorobenzene	85%	80	120

Lab ID: 0204574-02

Sample ID: MW 2

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003245-02		9/27/02 9:07	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	84%	80	120
Bromofluorobenzene	87%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 1 of 3

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204574  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Lab ID: 0204574-03  
Sample ID: MW 3

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003245-02		9/27/02 17:43	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	80%	80	120
Bromofluorobenzene	82%	80	120

Lab ID: 0204574-04  
Sample ID: MW 4

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003245-02		9/27/02 18:05	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	97%	80	120
Bromofluorobenzene	94%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 2 of 3

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

KEN DUTTON  
Environmental Technology Group, Inc.  
2540 W. MARLAND  
HOBBS, NM 88240

Order#: G0204574  
Project: YA 2220  
Project Name: INEX  
Location: Artesia, NM

Approval:

Raland K. Tuttle  
Raland K. Tuttle, Lab Director, QA Officer  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date

9-30-02

12600 West I-20 East  
Odessa, Texas 79763

**Phone: 915-563-1800**  
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KEN DUTTON

**Project Manager:**

ETG I

**Company Name**

Company Address: 2540 W MARLANDS

City/State/Zip: 408BS NM 88240

Telephone No. (505) 397-4882

Fax No: 505/397-4701

Sampler Signature: James Cass

101

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Index

Project #: VA 2220

Project Loc: ARTESIA, NM

PO #:

[illegible]

**Appendix C**  
**Water Well Search**

New Mexico Office of the State Engineer  
Well Reports and Downloads

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

Well / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

## AVERAGE DEPTH OF WATER REPORT 06/04/2003

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
RA	18S	26E	22				3	55	70	62
RA	18S	26E	23				2	70	80	75
RA	18S	26E	24				4	18	90	40
RA	18S	26E	26				6	50	55	52
RA	18S	26E	27				2	60	85	73
RA	18S	26E	34				2	70	100	85
RA	18S	26E	35				9	40	50	46

Record Count: 28

New Mexico Office of the State Engineer  
Well Reports and Downloads

Township: 18S

Range: 26E

Sections: 22,23,24,25,26,27,34,35,36

NAD27 X:

Y:

Zone:

Search Radius:

County:

Basin:

Number:

Suffix:

Owner Name: (First) (Last)

☐ Non-Domestic ☐ Domestic ☒ All

Well / Surface Data Report

Clear Form

Avg Depth to Water Report

WATERS Menu

Water Column Report

Help

WELL / SURFACE DATA REPORT 06/04/2003

(quarters are 1=NW 2=NE 3=SW 4=SE)																	
(acre ft per annum)				(quarters are biggest to smallest)								X Y are in Feet		UTM are in Meters)			
DB File Nbr	Use	Diversion	Owner	Well Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM Zone	Easting	North
RA 00297	IRR	1188.25	CHARLES MARTIN, INC.	RA 01296	Shallow	18S	26E	23	1	3	3	13	559997		13	559997	3621
				RA 01296 S	Shallow	18S	26E	23	3	1	1	13	559998		13	559998	3621
				RA 01296 S2	Shallow	18S	26E	23	1	3	2	13	560197		13	560197	3621
RA 00773	DOM	3	R.C. HORNER	RA 00773		18S	26E	23	2	1		13	560899		13	560899	3621
RA 00774	DOM	3	TOM LATTION	RA 00774		18S	26E	23	2	1		13	560899		13	560899	3621
RA 00775	DOM	0	BOARD OF REGENTS	RA 00775		18S	26E	23	2	1		13	556755		13	556755	3621
RA 00779	IRR	2832.2	DONALD FANNING AND SONS, INC.	RA 01524 S7	Shallow	18S	26E	25	1	1	1	13	561603		13	561603	3621
RA 00815	IRR	0	FORREST LEE	RA 00815		18S	26E	34	2			13	559504		13	559504	3611
RA 00827	IRR	344.225	NEW MEXICO STATE UNIVERSITY	RA 00775		18S	26E	23	2	1		13	556755		13	556755	3621
RA 00888 A	IRR	143.5	FRANK BOYCE	RA 00888 A	Artesian	18S	26E	27	4	3	3	13	559200		13	559200	3611
RA 00888 AA	IRR	24.5	GREGORY ROCKHOUSE, LLC	RA 00888 A	Artesian	18S	26E	27	4	3	3	13	559200		13	559200	3611
RA 01144	DOM	0	CHARIES R. MARTIN	RA 01144 -S	Artesian	18S	26E	23	1	3		13	560098		13	560098	3621
RA 01210	IRR	673.75	ROGERS, INC.	RA 01210	Shallow	18S	26E	23	3	3	2	13	560199		13	560199	3621
				RA 01210 S	Shallow	18S	26E	23	2	2	1	13	561199		13	561199	3621
RA 01296	IRR	1067.15	CHARLES MARTIN INC.	RA 01296	Shallow	18S	26E	23	1	3	3	13	559997		13	559997	3621
				RA 01296 S	Shallow	18S	26E	23	3	1	1	13	559998		13	559998	3621
				RA 01296 S2	Shallow	18S	26E	23	1	3	2	13	560197		13	560197	3621
RA 01446 A	nul	0	CHARLES MARTIN	RA 01446 A		18S	26E	23	1	3	1	13	559997		13	559997	3621
RA 01703	IRR	319.2	STANLEY WALDRIP	RA 01703	Artesian	18S	26E	34	3	1	3	13	558395		13	558395	3611
				RA 01703 CLW	Artesian	18S	26E	34	3	1	3	13	558395		13	558395	3611
				RA 01703 REPAR	Artesian	18S	26E	34	3	1	0	13	558496		13	558496	3611
				RA 01703 REPAR 2	Artesian	18S	26E	34	3	1	3	13	558395		13	558395	3611



RA 01858	IRR	3	HENDRICKS & E. E. MINTON JR.	RA 01858	Artesian	18S	26E 34	3 1 3	558395	361'
RA 01881	PRO	0	BASSETT & BIRNEY ET AL	RA 01881	Artesian	18S	26E 26	3 3	560105	361'
RA 01883	IRR	3	CLYDE MC DANIEL	RA 01883	Artesian	18S	26E 27	4 3 3	559200	361'
RA 02132	nul	0	X	RA 02132	Shallow	18S	26E 23	2 1 1	560798	362'
RA 02132 B	IRR	866.6	BOB MORGAN	RA 02132 B	Shallow	18S	26E 24	1 2 1	562000	362'
				RA 02132 BS	Shallow	18S	26E 24	1 3 1	561600	362'
				RA 02132 BS2	Shallow	18S	26E 24	1 1 3	561600	362'
				RA 02132 BS3	Shallow	18S	26E 24	1 3 1	561600	362'
RA 02627	PRO	3	SIMMS & RESSE OIL CO	RA 02627	Shallow	18S	26E 35	2 2 1	561215	361'
RA 02804	DOM	3	CLEMENT HENDRICKS	RA 02804	Shallow	18S	26E 34	3 1 3	558395	361'
RA 03055	DOM	3	MARK FANNING	RA 03055	Shallow	18S	26E 27	1 2 1	558796	362'
RA 03217	nul	0	DONALD E. FANNING	RA 03217	Shallow	18S	26E 25	1 1	561704	362'
RA 03340	DOM	3	JOE LEE	RA 03340	Shallow	18S	26E 22	1 3	558495	362'
RA 03409	DOM	3	SANDERS TERRY	RA 03409	Shallow	18S	26E 24	2 4 1	562804	362'
RA 03409 REPAR	DOM	3	SANDERS TERRY	RA 03409 REPAR	Shallow	18S	26E 24	2 4 2	563004	362'
RA 03580	OIL	0	WESTERN VENTURES	RA 03580	Shallow	18S	26E 22	1 3	558495	362'
RA 03598	OIL	0	WESTERN VENTURES	RA 03598	Shallow	18S	26E 22	2 3 1	559196	362'
RA 03599	nul	0	JONES AND MACARTHUR	RA 03599	Shallow	18S	26E 22	1 1 2	558594	362'
RA 03750	STK	3	PAUL & JOHNNIE ROGERS	RA 03750	Shallow	18S	26E 24	4 3	562508	362'
RA 03900	DOM	3	PAUL & JOHNNIE ROGERS	RA 03900	Artesian	18S	26E 24	1 3 1	561600	362'
RA 03968	DOM	3	SANDERS TERRY	RA 03968	Shallow	18S	26E 24	2 2 1	562801	362'
RA 04003	DOM	0	JOE R. LEE	RA 04003	Shallow	18S	26E 27	4 3 3	559200	361'
RA 04018	OBS	0	E. P. CAMPBELL	RA 04018	Artesian	18S	26E 26	4 3 3	560807	361'
RA 04022	OBS	0	E. P. CAMPBELL	RA 04022	Shallow	18S	26E 35	1 2	560511	361'
RA 04701	DOM	3	J.H. WILLIS	RA 04701	Shallow	18S	26E 22	3 3	558496	362'
RA 05237	DOM	3	QUENTIN ROGERS	RA 05237	Shallow	18S	26E 23	2 1 3	560798	362'
RA 06423	DOM	0	TODD TIDWELL	RA 06423	Shallow	18S	26E 27	2 4	559701	362'
RA 06979	PRO	0	YATES PETROLEUM CORPORATION	RA 06979	Shallow	18S	26E 25	1 1	561704	362'
RA 07219	MUL	3	ROBERT LYNN BARNES	RA 07219	Shallow	18S	26E 26	4	561109	361'
RA 07242 -EXPL	DOM	3	HUBERT C. GREEN	RA 07242 -EXPL	Shallow	18S	26E 26	4 3	560908	361'
RA 07242 EXP	EXP	0	HUBERT C. GREEN	RA 07242 EXP	Shallow	18S	26E 26	4 3	560908	361'
RA 07243 -EXPL	DOM	3	HUBERT C. GREEN	RA 07243 -EXPL	Shallow	18S	26E 26	4 3	560908	361'
RA 07243 EXP	nul	0	HUBERT C. GREEN	RA 07243 EXP	Shallow	18S	26E 26	4 3	560908	361'
RA 07243 EXPL	DOM	3	HUBERT C. GREEN	RA 07243 EXPL	Shallow	18S	26E 26	4 3	560908	361'
RA 07394	DOM	3	BRUCE & JAN WALDRIP	RA 07394	Shallow	18S	26E 34	3 3 3	558395	361'
RA 09207	NOT	3	GREGORY IRMA	RA 09207	Shallow	18S	26E 35	3 4 2	560625	361'
RA 09208	NOT	3	GREGORY IRMA	RA 09208	Shallow	18S	26E 35	3 4 2	560625	361'
RA 09209	NOT	3	GREGORY IRMA	RA 09209	Shallow	18S	26E 35	3 4 2	560625	361'
RA 09210	NOT	3	GREGORY IRMA	RA 09210	Shallow	18S	26E 35	3 4 2	560625	361'
RA 09211	NOT	3	GREGORY IRMA	RA 09211	Shallow	18S	26E 35	3 4 4	560625	361'
RA 09212	NOT	3	GREGORY IRMA	RA 09212	Shallow	18S	26E 35	3 4 4	560625	361'
RA 09213	DOM	3	GREGORY IRMA	RA 09213	Shallow	18S	26E 35	3 4 4	560625	361'
RA 09214	NOT	3	GREGORY IRMA	RA 09214	Shallow	18S	26E 35	3 4 4	560625	361'
RA 09374	PRO	0	H&S OIL LLC	RA 09374	Shallow	18S	26E 25	1 1 2	561803	362'
RA 09437	DOM	3	VICKIE BOYCE	RA 09437	Shallow	18S	26E 27	4 3 3	559200	361'
RA 09466	DOM	3	B.R. WILSON	RA 09466	Shallow	18S	26E 22	1 3 3	558394	362'
RA 09874	DOM	3	MELLISA DUNCAN	RA 09874	Shallow	18S	26E 35	1 2	560511	361'

Record Count: 69

