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**STAGE 1 & 2  
REPORTS**

**DATE:**

Dec. 20, 1996

# FINAL SITE INVESTIGATION REPORT FOR THE FORMER BRICKLAND REFINERY STAGE I ABATEMENT PLAN

DOCUMENT NO. REX114C.DOC

DECEMBER 20, 1996

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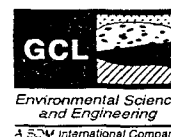
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**Final Site Investigation Report  
for the Former Brickland Refinery  
Stage 1 Abatement Plan**

**Document No. REX114C.DOC**

*December 20, 1996*

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## 1.0 Executive Summary

The Brickland Refinery site is currently owned by Rexene Corporation (Rexene) and consists of 35 acres located in Sunland Park, Doña Ana County, New Mexico. The former petroleum refinery operated from 1933 to 1958 and was subsequently dismantled. Petroleum hydrocarbons have been detected in soils and groundwater at the site.

Two environmental investigations have evaluated groundwater chemistry and regional and local hydrogeologic conditions that influence the fate and transport of compounds in subsurface soils and the underlying shallow aquifer. These investigations were also conducted to establish baseline conditions prior to determining an appropriate response to the observed petroleum hydrocarbons.

Data obtained from site investigations conducted by Geoscience Consultants, Ltd. (GCL, 1994) and Eder and Associates, Inc. (Eder, 1990) indicate petroleum hydrocarbons in on-site soils are restricted to the southern two-thirds of the facility. Hydrocarbon constituents detected in groundwater monitor wells show a spatial correlation with areas of impacted soil and suggest migration of hydrocarbons from soil to groundwater. Free-phase hydrocarbons are observed in several wells and well points in the southern portion of the site, with a maximum thickness of several feet in MW-10 and WP-26S. GCL studies indicate the areal extent of phase-separated hydrocarbons is much less than originally projected by Eder (1990). Metals are found locally and lead is the primary metal of concern. One soil sample contained lead in leachable concentrations, however, no lead has ever been detected in any of the on- or off-site monitor wells.

Our evaluation of regional and local geologic and hydrologic conditions indicate the heterogeneous clays and silts in subsurface soils have acted to restrict migration of constituents of concern. The observed petroleum hydrocarbons are confined to the property itself and the narrow strip of land between the site and the Rio Grande. The gates on the three culverts located on the southern half of the site have been closed. Stormwater runoff from the southern portion of the site, where constituents of concern are present in soils, can not occur since the three southern drainage culverts are now closed. There are no known off-site receptors of the observed constituents.

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No obvious evidence suggests the site poses a significant threat to human health or the environment. Site conditions make this site a favorable candidate for restoration of soil and groundwater through intrinsic remediation (attenuation and natural biodegradation). A Stage II Abatement Plan will be submitted to address environmental concerns at the site.

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## 2.0 Site History

Located in Sunland Park, New Mexico, the Brickland Refinery site consists of approximately 35 acres situated next to the Rio Grande (Figure 1). From 1933 to 1958, the site was operated as a petroleum refinery. Rexene currently owns the site and operated the refinery from 1955 to 1958, and a quality control laboratory until 1964. Processing equipment and buildings associated with refinery activities have been dismantled and removed. All that remains on site are concrete foundations and rubble. Between 1964 and 1989, the site was leased to various parties to garage and service trucks, graze livestock, and store used bricks (Eder, 1990). Releases of petroleum hydrocarbons during the operational life of the facility resulted in varying impacts to soil and groundwater at the site. The nature and extent of releases were initially investigated by Eder and further quantified by GCL (GCL, 1994).

In 1989, the predecessor of the New Mexico Environment Department, the New Mexico Environmental Improvement Division (NMEID), conducted a Screening Site Inspection (SSI) (NMEID, 1989). The findings of the SSI were submitted to the Environmental Protection Agency (EPA) Region VI for review and possible inclusion on the Superfund National Priority List (NPL). The site is not, nor has it ever been, listed on the NPL. Because all releases of constituents of concern were directly related to petroleum hydrocarbon releases, jurisdiction of the site resides within the regulatory authority of the New Mexico Water Quality Control Commission (WQCC). Because a refinery formerly occupied the site, WQCC jurisdiction is administered by the New Mexico Oil Conservation Division (NMOCD).

## 2.1 Activities

From 1933 to 1958, the Brickland Refinery processed crude oil into consumer-oriented petroleum products. Typical refinery operations identified at the site in the 1950s included:

- "Petresco" de-salting to remove salt and water from crude oil feed stock
- Single-column crude oil distillation

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- Thermal cracking of "heavy" (high boiling point) distillation ends
- Polymerization of "light" (low boiling point) distillation ends into gasoline range fractions
- Platformer reforming of naphtha range fractions into higher octane products (added in early 1950s)
- Clay tower filtration of some petroleum fractions
- Gasoline and kerosene treatment
- Tetra ethyl lead blending

Finished products were stored in tanks on the site (Eder, 1990).

The Eder investigation divided the site into seven distinct areas based on refinery operations, as described below and shown in Figure 2.

### *Area A: Bulk Petroleum Storage*

Area A consisted of aboveground storage tanks (ASTs) and pressure tanks. This area was never used as a production area. Two product storage tanks and two horizontal pressure cylinders were removed after the refinery was shut down. The area is presently covered with construction debris, primarily broken concrete.

### *Area B: Bulk Petroleum Storage*

Product transfer piping crossed this area. Pipeline runs crossed to the storage tanks in Area A. This area is currently covered with debris such as broken stone, concrete, and bricks. Construction/demolition debris does not include drums or other containers that could contain contaminants.

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### *Area C: Former Residences (4)*

This area consisted of former pipelines between the main refinery and storage tanks in Area A. Historical photographs also show company housing. Piles of demolition debris are scattered throughout.

### *Area D: Refinery Transportation Center*

This area was used for loading and unloading, vehicle maintenance, warehousing administration, indoor and outdoor storage, and laboratory facilities. A gasoline pump to fuel vehicles was also located in this area.

### *Area E: Drum and Tank Storage Area*

This area was used for petroleum storage, truck loading/unloading racks, drum storage, and truck maintenance facilities.

### *Area F: Refinery Process Facilities*

This was the production area with cracking towers, cooling towers, and other refinery process equipment. There was also a cooling water holding pond.

### *Area G: Cooling Water Lagoons and Slop Oil Lagoons*

Historical information shows this area consisted of a number of surface impoundments and tanks. Aerial photographs show the area was covered by sand dredged from the Rio Grande by the U.S. Army Corps of Engineers.

In 1958, the Brickland Refinery processed approximately 4,000 barrels of crude oil feed stock each day. By comparison, a typical refinery processes 168,000 barrels each day of crude oil feed stock in 1958 (Eder, 1990); therefore the Brickland Refinery was relatively small.



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## 2.2 Nature of Releases

During the refinery's operation, hydrocarbon releases apparently originated from spills and leaks in storage tanks and underground piping between refinery units. Leaking pipes and tanks were either repaired or replaced, as necessary. The refinery recovered released hydrocarbons by excavating small pits and removing the accumulated material with a vacuum pump. The recovered hydrocarbon was reprocessed or returned to storage, depending on its condition. Rexene has attempted to locate spill records and documentation, but thus far, these appear not to exist. Therefore, further discussion of the nature of specific releases at this site would be conjectural.

## 2.3 General Site Conditions

The site is adjacent to the Rio Grande, and presently vacant except for foundations from former refinery structures. Some construction and demolition debris is present on the site, including concrete from the refinery structures and rubble from road construction. Native vegetation grows over most of the site, but is more concentrated at the northern portion of the property.

The area in the vicinity of the site is composed primarily of residential, mixed residential/commercial, and commercial/industrial property. Figure 3 shows the status of land usage within a mile of the site. A list of property owners is included in Appendix A. The site adjoins several private and government land parcels that are described below:

- A private residence, owned by Evangelina Canales, is located adjacent to the northern property boundary.
- Property along the eastern site boundary, on either side of the Rio Grande, is owned by the International Boundary and Water Commission (IBWC).
- Private property, owned by Joseph J. Werthman, et. al, is located just south of the site; however, a narrow strip of IBWC land occurs between it and the site.

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- Land south of the Werthman property and directly to the west of the site is owned by the American Eagle Brick Company and includes right-of-ways granted to the Southern Pacific Railroad. The levee road along the west side of the site is apparently located on this railroad right-of-way.

Land usage in the area of the site was determined from information gathered from County Assessors offices in Doña Ana County, New Mexico and El Paso County, Texas.

Climate in the lower Mesilla Valley is characterized as arid continental with wide temperature ranges, low humidity, high evaporation, and low precipitation. Precipitation occurs mostly as rain; about one-half of the total annual precipitation occurs from July to September. Rainfall during these three months is usually from brief, intense thunderstorms (Eder, 1990). Annual precipitation at the site averages 10 inches per year. Pan evaporation is in excess of 90 inches per year, and therefore much of the precipitation evaporates.

### 2.4 Previous Site Investigations

In response to a neighbor's complaint about the death of shade trees on his property located just north of the site, the NMEID conducted a SSI (NMEID, 1989). The NMEID concluded constituents of concern were present in site soils and had migrated to groundwater. The NMEID did not observe releases to surface water. In addition, no groundwater users were identified within 3 miles of the site. Releases of hydrocarbons do not extend into the northern portion of the site. In addition, groundwater flow from beneath the site is to the south or southeast. Therefore, hydrocarbon releases at the site can be eliminated as a cause for the death of the shade trees.

In 1990, Rexene selected Eder and Associates, Inc. to conduct an expanded Phase I investigation of the site (Eder, 1990). The investigation focused on determining the nature and extent of hydrocarbon releases to subsurface soils and groundwater beneath the site. The field program included 15 monitor wells, 24 soil borings, 91 backhoe test pits, and the collection of 20 surface soil, hand auger, river, and stream-bank samples (Figure 4). Some general conclusions of this report were:

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- "Ambient groundwater chemistry would be characterized as saline and would not meet drinking water standards without regard to the petroleum-related contaminants found beneath the former refinery."
- "A review of the available data and reports for the 3-mile radius from the site did not reveal any drinking water wells that could intercept groundwater from the site. Surface water samples collected from the Rio Grande at points upstream, adjacent to, and downstream of the site were essentially indistinguishable in chemical quality."
- "There does not appear to be significant human or environmental exposure to this contamination. Heavy metals found in the soil appear to be chemically bound to the soil and are not readily leaching into the groundwater. Groundwater does contain dissolved volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), which relate to petroleum, however, no halogenated or solvent-related VOCs were found."

The results of this investigation are summarized in Section 3.0. A detailed description can be found in the Phase I Investigation Report by Eder (1990).

GCL conducted a remedial investigation at the site in June and July of 1994 (GCL, 1994). The objectives of this investigation were to better characterize the chemical, physical, and biological properties of site soils to determine the influence these factors might have on natural degradation, dispersion, and attenuation of hydrocarbon constituents, and to evaluate potential remedial actions appropriate for site conditions.

As part of the investigation, GCL completed 14 soil borings, excavated six test trenches, and installed four monitor wells and numerous well points. The screened intervals of all monitor wells and well points at the site are listed on Table 1. Over 100 soil samples were collected as part of the investigation. These samples were used to characterize the geological, chemical, physical, and biological subsurface conditions. The results also provided an estimate of the vertical and horizontal extent of hydrocarbons occurring in the subsurface. The results of this investigation are summarized in Section 3.0. Detailed descriptions can be found in the Remedial Investigation Report for the Former Brickland Refinery (GCL, 1994).

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## 3.0 Site Characterization

### 3.1 Environmental Setting

#### 3.1.1 Regional Hydrogeology

The Brickland Refinery site is located at the southern portion of the Mesilla Valley near the United States and Mexico border on the western flood plain of the Rio Grande, northeast of the Cerro de Cristo Rey uplift (Figure 1). The southern portion of the Mesilla Valley is bounded by the Franklin Mountains on the east and the Cerro de Cristo Rey uplift on the west.

Surficial unconsolidated material in the valley consists of the Quaternary Rio Grande alluvium. This alluvium is estimated to be about 70 to 80 feet thick in the central portions of the valley, becoming very thin near the bedrock highs at valley margins. Below the alluvium is the folded Muleros formation comprised of shaley limestones and siltstones.

Groundwater occurs within the alluvium, with a regional groundwater flow direction toward the southeast. Sources of groundwater are from upgradient throughflow, upland runoff, direct infiltration of precipitation, and recharge from the Rio Grande when, during high-flow times, it is a losing stream. Groundwater discharges in the valley are primarily pumpage, evapotranspiration, downgradient throughflow, and discharge to the river at low-flow times, when the river is a gaining stream. Surface water is dominated by the Rio Grande whose flow is predominantly controlled by upstream Elephant Butte and Caballo reservoirs (Lovejoy, 1976).

#### 3.1.2 Site Hydrogeology

The site is situated on Quaternary alluvial deposits of the Rio Grande. According to soil borings, trenching, and monitor well lithologic logs, the sediments at the site can be placed into two general categories: a near-surface zone (0 feet to 15 feet) of shallow, thin-interbedded heterogeneous clastic sediments and a deeper unit of relatively homogeneous sand, as shown in Appendices B, C, and geologic cross-sections (Plates A, B, C). The deeper lithology is observed in the deepest borehole at about 30 to 35 feet below ground surface (bgs).

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The upper lithologic zone consists of thin-bedded, fine-grained sand, silt, and silty clays. The deeper lithology consists of fine-grained sand characterized by well-sorted, subrounded sand grains that appear to coarsen with depth.

Groundwater beneath the site occurs under confined and unconfined conditions. Much of the shallow groundwater occurs in thin lenses of silt and fine sand interbedded with clay-rich sediments that do not readily transmit water. The depth to water measured in monitor wells ranges from about 1.7 to 11.4 feet bgs; water level elevations are listed in Table 2. The water table elevation varies up to about 3.5 feet with levels typically highest in summer and lowest in winter, correlating with irrigation and changes in flow in the Rio Grande. Plots of water levels versus time for individual monitor wells are included in Appendix D.

Groundwater flows primarily from northwest to southeast under a relatively flat hydraulic gradient of about 0.0005 to 0.0008 feet/foot across the site. Groundwater elevation contour maps for four consecutive quarters from September 1994 through June 1995 are shown in Figures 5 through 8. The direction of groundwater flow maintained an overall southerly trend, parallel to the Rio Grande. Based on water level differences in monitor well clusters MW-3S, MW-3D, MW-6S, and MW-6D (deep and shallow), small vertically downward and upward hydraulic gradients of up to 0.1 foot have been observed.

Rio Grande discharge rates between 1990 and 1995 average approximately 700 cubic feet per second (cfs). During high flow times of the year, the river will recharge the shallow aquifer, and, during low-flow times, the aquifer will recharge the river. As shown in Figures 5 through 8, the direction of groundwater flow remains relatively constant, however.

Slug test results show an average hydraulic conductivity of 14 feet per day for the shallow interbedded sands, silts, and clays (Section 3.5). The slug test data and results are in Section 3.5. An overall porosity of 25 percent is assumed to be representative of such materials (McWhorter and Sunada, 1977). Groundwater flow velocity within the shallow materials is therefore estimated at about 14 to 20 feet per year.

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Variations in water levels appear related to the flow in the Rio Grande. For example, in December 1994 (Figure 6), water levels are the lowest compared to the other quarters (see Figures 5, 7, and 8). Flow in the Rio Grande in December 1994 was also much lower than in the other quarters (IBWC, 1996).

## 3.2 Unsaturated Zone

Two phases of unsaturated zone soil investigations have been completed at the site. A Phase I Investigation conducted by Eder in March 1990 included 24 soil borings, 91 backhoe test pits, and 20 surface soil, hand-auger, river and stream-bank samples (Eder, 1990). Sample locations are provided in Figure 4 and results of this investigation are provided in Tables 3 through 10 herein. In June and July of 1994, GCL conducted further soil sampling at the Brickland Refinery site that was reported in GCL's Remedial Investigation Report (GCL, 1994). Sample locations and results from GCL's investigation are shown in Figures 9 through 12 herein. Fourteen boreholes were drilled and six trenches were excavated. Lithologic logs were compiled for each sampling during field operations. Over 70 soil samples were collected for chemical analysis to further characterize hydrocarbon releases and locate potential source areas contributing to groundwater impacts. Selected soil samples were analyzed for physical and biological properties. The results are briefly summarized in this section. Supporting boring logs, well construction, and trench diagrams from Eder and GCL (1994) are provided in Appendix B and C and Plates A, B, and C.

To characterize the nature and extent of hydrocarbon releases associated with past petroleum refining operations, soil samples were analyzed for total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene, and xylenes (BTEX); and polycyclic aromatic hydrocarbons (PAHs). In addition, soil samples were collected from several areas of the site to identify potential source areas. These samples were analyzed for metals, including arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium.

Although both Texas, New Mexico and other states have guidelines established for many types of petroleum hydrocarbon release sites, neither guidelines nor standards have been established for metals such as lead. Therefore, throughout the text, we will be comparing the concentrations of constituents of concern to both natural background values and EPA guidelines.

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### *3.2.1 Background Studies - Metals*

Studies conducted by the El Paso City-County Health Department and the Texas Air Control Board (Appendix E) have indicated that background surface soil metal concentrations are very likely related to airborne deposition from stack emissions at the nearby Asarco smelter. Background concentration levels in areas near the refinery have ranged from 400 to 600 parts per million (ppm) for lead and 20 to 1,100 ppm for arsenic. NMEID collected background samples for metals at the site. In addition, GCL collected two background samples for metals in soil, one north and hydraulically upgradient from the site, and the other south and hydraulically downgradient from the site. The results of the NMEID and GCL sampling are presented in Table 3 and indicate the following:

- Background lead concentrations from GCL sampling range from 103 ppm north of the site and 292 ppm south. NMEID background concentration for lead ranges from 150 to 182 ppm.
- Background arsenic concentrations from GCL sampling range from 14 ppm to the north of the site to 42 ppm to the south. NMEID background concentration for arsenic is 71 ppm.
- Background chromium concentrations from GCL sampling range from 8 ppm to the north of the site to 11 ppm to the south. NMEID background concentrations range from 3 to 9 ppm.
- Background barium concentrations from GCL sampling are 102 ppm both north and south of the site. NMEID background concentration for barium is 77 ppm.
- Background cadmium concentrations from GCL sampling range from 1.8 ppm north of the site to 9.2 ppm to the south. NMEID background concentration for cadmium is 4.2 ppm.
- Background concentrations for the other metals sampled by GCL were non-detect north and south of the site, with the exception of mercury, which was 0.12

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ppm to the south of the site. Other NMEID background metal concentrations were 0.05 ppm for mercury, 0.8 ppm for selenium, and 1.2 ppm for silver.

GCL and NMEID background sampling results are in agreement. The relatively small variation in some metals concentrations may be the result of normal variable distributions of metals in the soil and/or from irregular or intermittent dispersement of metals from the nearby Asarco smelter.

### 3.2.2 Soil Sampling

A summary of the soils data is provided below (see Figure 4).

#### *Area A - Bulk Petroleum Storage*

The Eder investigation for Area A included seven test pits and one hand auger boring. No additional soil sampling was conducted by GCL. The results of the soil sampling are discussed below:

- Photoionization detector (PID) screening did not detect VOCs in six of the seven test pits. Therefore, those six test pits were not sampled for TPH, BTEX, or PAHs.
- One test pit, A-TP-65, was sampled and found to contain 500 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) of xylenes from a 4-inch thick layer of stained soil (Table 4a).
- Two samples were composited from soil collected from each of the seven test pits and one hand auger boring for screening purposes (Eder, 1993). One uncomposited sample was collected from test pit A-TP-65. Table 4b shows the results of metals analyses for these samples, which were within the range of background concentrations shown in Table 3.



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### *Area B - Bulk Petroleum Storage*

Four test pits and four hand auger borings were completed by Eder in Area B. No additional soil samples were collected by GCL. The results of the soil sampling are discussed below:

- PID screening did not detect VOCs and oil and grease samples were below screening criteria in all the test pits and hand auger borings. Therefore, they were not sampled for TPH, BTEX, or PAHs.
- Soil samples from the four hand auger borings were analyzed for metals (Table 5a). High concentrations of copper (1370 milligrams per kilogram [mg/kg]), chromium (860 mg/kg), and lead (2830 mg/kg) were detected in hand auger boring B-HA-4, located in the northeastern corner of Area B. Hand auger boring B-HA-1, located in the southeastern corner of Area B, had slightly elevated concentrations of copper (390 mg/kg) and lead (427 mg/kg). Mercury was 0.41 mg/kg in B-HA-4. B-HA-1, -2, and -4 contained 1.4, 1.8, and 4.9 mg/kg silver, respectively; B-HA-3 contained 177.0 mg/kg silver.

### *Area C - Former Residences*

Eder collected 10 samples from eight test pits and GCL completed one hollow-stem auger boring in Area C. The results of the soil sampling are discussed below:

- PID screening triggered BTEX sampling for three of the 10 Eder test pits, C-TP-1-2, C-TP-2-2, and C-TP-4. Of the three, only soil from test pit C-TP-4, located in the southwestern corner of Area C, contained BTEX constituents with 14,700 µg/kg benzene; 75,500 µg/kg ethylbenzene; and 125,800 µg/kg xylenes (Table 6a).
- TPH was detected at a concentration of 97 mg/kg in a soil sample collected from hollow-stem auger boring B-01 (GCL), located in the western portion of Area C, from a depth of 4 to 6 feet below ground surface (Figure 9). No BTEX constituents were detected in this sample (Figure 10).

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- PAHs were detected in test pit C-TP-8 (Eder), located in the northeast corner of Area C within an area of hydrocarbon-stained soil (Table 6b). PAHs were not detected in hollow-stem auger boring B-01.
- Eight soil samples were collected from test pits, and two were collected from hollow-stem auger boring B-01 and analyzed for metals. Metals were detected in all the samples at below or near background concentrations, with the exception of C-TP-5 which contained lead at a concentration of 683 mg/kg (Table 6c and Figure 11b). Silver occurs in C-TP-8 at 2.9 mg/kg. Cadmium was identified at concentrations 16.5 and 19.0 mg/kg in C-TP-5 and C-TP-7, respectively. All other test pits contained cadmium near or below background levels.

### *Area D - Refinery Transportation Center*

Twenty-seven hollow-stem auger borings (24 by Eder and three by GCL), and seven test pits (six by Eder and one by GCL) were completed in Area D. In addition, one soil sample was collected from monitor well MW-4. The results of the soil sampling are discussed below:

- TPH was detected in hollow-stem auger borings B-02, B-03, and B-04 and test pit TR-2 in concentrations ranging from 165 mg/kg in TR-2 to 1240 mg/kg in B-02 (Figure 9).
- BTEX samples were collected from the test pits and detected the following ranges of BTEX constituents:
  - Benzene concentrations ranged from 2,300 µg/mg in D-TP-52 to 17,900 in D-TP-54, both of which are located in the western portion of Area D (Table 7a and Figure 10).
  - Toluene was detected only in test pit TR-2, located in the southwest corner of Area D, at a concentration of 3,800 µg/kg (Figure 10).
  - Ethylbenzene concentrations ranged from 1,300 µg/kg in D-TP-53 and D-TP-72 to 44,600 µg/kg in D-TP-32 (Table 7a and Figure 10).

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— Xylene concentrations ranged from non-detect in D-TP-2, D-TP-52 and D-TP-53 to 25,000 µg/kg in D-TP-51 (Table 7a and Figure 10).

One sample collected from B-02 was analyzed by toxicity characteristic leaching potential (TCLP) and detected benzene at 260 µg/L, below the regulatory level of 500 µg/L (Figure 10).

- Results of soil samples obtained by Eder showed the highest PAH concentration in pits adjacent to the crude unloading racks and adjacent to the north most storage warehouse (Table 7b).
- Soil samples obtained by GCL from test pit TR-2 showed presence of 1-methyl naphthalene (12,000 µg/kg) and 2-methyl naphthalene (12,000 µg/kg) from TR-02 at 4 feet to 6 feet (Figures 12a and 12b). These results correlate with the soil samples obtained by Eder for B-22 for 2-methyl naphthalene (18,500 µg/kg) (Table 7b).
- Cadmium, copper, zinc, and arsenic were found in one or more samples collected by Eder from hollow-stem auger borings across this area (Table 7c)
- Lead was identified in GCL trench TR-02 at a concentration of 55 mg/kg and in boring B-04 at concentrations of 46.0 and 9.0 mg/kg at depths of 2 to 4 and 6 to 8 feet, respectively. Eder soil sampling detected lead in borings B-1 through B-16 at concentrations ranging from 5.9 to 1,500 mg/kg.
- Soil samples obtained by GCL from 6 to 8 feet from B-02 showed low metal concentrations and all TCLP metals below the maximum concentration limits (Figure 11a).

### *Area E - Drum and Tank Storage*

Twenty-five test pits (20 by Eder and one by GCL) were excavated, along with two hollow-stem auger borings (GCL), and two surface soil samples (Eder) collected within Area E. Results of the soil sampling are discussed below:

- TPH concentrations ranged from 1,230 mg/kg at the 2- to 4-foot interval to 4,670 mg/kg at the 0- to 2-foot interval in hollow-stem boring B-07 (GCL).

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Analytical results are shown on Figure 9. No TPH samples were collected in Area E during Eder's phase of the investigation.

- BTEX samples were collected from nine test pits (eight Eder and one GCL) and two hollow-stem auger borings (GCL). VOC analyses by Eder showed widespread BTEX constituents in the southern part of the area. A soil sample (E-TP-32) collected adjacent to the former truck parking area contained 292,000 µg/kg total BTEX (Table 8a). Only one sample obtained by GCL was analyzed for BTEX (total BTEX 71,700 µg/kg). Results obtained are similar to those obtained by Eder for E-TP-20 (total BTEX 53,200 µg/kg) in the vicinity of TR-1.
- Total PAH samples obtained by Eder ranged across the area from nondetect in E-TP-68 mg/kg to 227 mg/kg in E-TP-21 (Table 8b). Soil samples obtained by GCL from TR-1 at 2 feet to 4 feet and analyzed for PAH detected 1-methyl naphthalene, 2-methyl naphthalene, and naphthalene (Figures 12a and 12b).
- Lead was the only metal found by Eder in Area E significantly above background values. The areas where lead was found in samples were limited to the southernmost transects, with the highest concentration of lead, 139,000 mg/kg in E-TP-26, found adjacent to the truck loading area (Table 8c). Lead concentrations from samples obtained by GCL from TR-01 at zero to two feet (53.0 mg/kg) and two to four feet (9-10 mg/kg) were low and are comparable to Eder results obtained from E-TP-29 (88.4 mg/kg), located in the southeast corner of Area E (Figure 11a).
- Soil sampling by Eder detected mercury at concentrations of 0.15, 0.16, and 0.76 mg/kg in test pits E-TP-25, -26 and -27, respectively. Soil sampled from GCL trench TR-01 contained 0.14 mg/kg at a depth of 0 to 2 feet, while the 2 to 4 foot sample was below the detection limit.

### *Area F - Refinery Process Facilities*

Twenty-nine test pits (27 by Eder and two by GCL) were excavated in Area F. In addition, six hollow-stem auger borings (four by Eder and two by GCL) were completed along with four surface samples collected by Eder during the 1990 investigation. The results of the soil sampling are discussed below:

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- TPH was detected in all four GCL hollow-stem auger borings (Figure 9). The highest concentrations were 1,790 µg/kg in boring B-08 from 6 feet to 8 feet bgs. No other TPH samples were collected in this area.
- BTEX concentrations were widespread in soil within Area F (Table 9a and Figure 10). Benzene was found in soil sampled from test pit TR-3 at a concentration of 219,000 µg/kg at a depth of 3 feet bgs. One sample collected for TCLP benzene detected 1,100 micrograms per liter (µg/L), which is above the 500 µg/L regulatory level.
- PAHs were detected in soil sampled from test pits (Eder and GCL) and hollow-stem auger borings (GCL) (Table 9b and Figures 12a and 12b).
- Three metals were distributed in soil samples obtained by Eder across Area F at concentrations significantly over background: copper, lead, and zinc. Lead concentrations in soil generally ranged from 0.008 mg/kg in F-TP-44 to 377 mg/kg in F-TP-34 (Table 9c). One TCLP lead sample obtained from B-08 by GCL at 4 feet to 6 feet was 82 mg/kg, which is above the 5 mg/kg regulatory level for TCLP lead (Figure 11). However, groundwater monitor wells MW-7 (located nearby), MW-17, and MW-6S (located downgradient from B-08) did not detect any lead, nor has lead been detected in any other monitor wells.
- Mercury was identified in Eder test pits ranging in concentration from 0.03 to 2.8 mg/kg while samples from GCL trenches were non-detect. Eder surface samples for mercury ranged from 0.1 to 10 mg/kg. Chromium was identified in Eder test pits ranging in concentration from 4.7 to 47.2 mg/kg and one GCL trench, TR-3, contained 8 mg/kg. Eder surface samples ranged in concentration from 8 to 28 mg/kg chromium. Cadmium was identified in Eder test pits ranging in concentration from 0.85 to 25.4 mg/kg and one TCLP sample from GCL boring B-06 was 0.12 mg/L. Silver was found in Eder test pits in concentrations ranging from 0.45 to 8.1 mg/kg while samples from GCL borings and trenches were non-detect.

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*Area G - Cooling Water Lagoons and Slop Oil Lagoons*

Area G is the southernmost and furthest downgradient area of the site and contained a number of surface impoundments and storage tanks. Nineteen test pits (17 by Eder and two by GCL), four hollow-stem auger borings (GCL), and three surface soil samples (Eder) were completed in Area G. The results of the soil sampling are discussed below:

- Although free-phase product occurs sporadically around the site as a sheen or extremely thin layers, one well in Area G, MW-10, contained a substantial thickness of free-phase product (up to 5 feet). Eder (1990, Plate 5), has previously projected free-phase product to occur as either a visible sheen or in measurable thicknesses extensively throughout the southern two-thirds of the site. However, further investigation by GCL determined that free-phase product occurs locally, trapped in discontinuous layers of silt and fine sand (Figure 13).
- TPH concentrations were detected in all the GCL test pits and hollow-stem auger borings (Figure 9). The highest concentration was 6,150 mg/kg from 10 to 12 feet bgs in boring B-13, located at the southern end of the site. No other samples were collected for TPH analysis.
- BTEX constituents are present in soil throughout Area G in varying concentrations. The highest concentration of total BTEX obtained was from test pit G-TP-12-2 at 253 mg/kg (Table 10a). One sample collected from hollow-stem auger boring B-12 (GCL) for TCLP analysis of benzene was non-detect (Figure 10a).
- The highest PAH concentrations were found on the north side of Area G and near the southeastern corner (Table 10b). The remainder of the area which has low PAH concentrations may reflect the previous locations of the four cooling water ponds that did not have any major source of hydrocarbons. 1-methyl naphthalene, 2-methyl naphthalene, naphthalene, phenanthrene, and pyrene were the only PAHs detected in samples obtained by GCL (Figures 12a and 12b). Highest concentration of 2-methyl naphthalene detected by GCL was 160,000 µg/kg from B-11 at 8 to 10 feet.

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- Elevated concentrations of copper and lead were detected in the central part of Area G and near the eastern fence line in several test pits and surface soil samples excavated by Eder in the 1990 investigation (Table 10c). Soil samples from GCL's test pits and hollow-stem auger borings did not detect metals above background concentrations (Figure 11).
- Other limited sampling detected concentrations of mercury, chromium, cadmium and silver. Eder sampling detected a mercury concentration of 0.06 mg/kg in test pit G-TP-77 and concentrations of 0.03, 0.15, and 0.09 in surface samples G-SS-7, -8, and -9, respectively. GCL borings contained no detectable mercury but trench TR-04 contained 0.14 and 0.19 mg/kg at depths of 0 to 2 and 2 to 4 feet, respectively. Eder test pit and surface samples contained chromium at concentrations ranging from 7.0 to 97.0 mg/kg. All GCL boring and trench samples were within background levels or nondetect for chromium and silver. One Eder sample from test pit G-TP-77 contained 2.5 mg/kg silver. Two samples collected from Eder test pits G-TP-66 and G-TP-75 contained cadmium above background levels, at 36.7 and 24.1 mg/kg, respectively. Cadmium was also found in GCL trench TR-4 at a concentration of 0.6 mg/kg.

### 3.2.3 Comparative Studies of Metals in Soil

The purpose of the comparative analysis is to determine the validity of anomalously high concentrations of some metals, primarily lead, that were identified in the Eder 1990 investigation. These anomalously high concentrations are considered suspect and may provide misleading input to the overall remedy selected for the site. In April 1996, GCL collected duplicate samples from as near as possible to selected Eder samples to confirm the level of metals concentrations. The GCL sample locations were selected to meet the following objectives:

- Provide a present-day comparison with previous representative metals concentrations from soil borings (B-1), hand-auger borings (B-HA-4), test pits (E-TP-26, F-TP-3), and surface samples (E-SS-4, and G-SS-8).
- Provide a comparison of the highest, moderate, and lowest concentrations of surface and subsurface metals from the earlier results obtained from Areas E, F, and G (E-SS-4, E-TP-26, F-SS-6, F-TP-34, G-SS-8, and G-TP-70), which are the areas previously indicating the highest metals impact.

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- Provide a comparison with moderate to low metals concentrations from areas A, B, C, and D, where the occurrence of metals in soil is less prevalent (B-1 and B-HA-4).

The results of the sampling are summarized below. GCL results are compared with the Eder investigation, followed by a brief discussion of any variance in the data. Table 11 includes data collected from selected locations by Eder in 1990, and by GCL in April 1996. For each location, data from each investigation are presented for comparison by each selected element. The elements selected are the eight Resource Conservation and Recovery Act (RCRA) metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. All analyte concentrations are in mg/kg (ppm). Table 11 also presents background metals concentrations that were obtained by GCL. Laboratory reports and quality assurance/quality control reports are included as an attachment to this report. An explanation summarizing differences is presented at the end of this section.

### *Area B*

- Location: B-HA-4
- Type of sample: shallow subsurface soil
- Sample depth: approximately 24 inches
- Sample method: hand auger
- Soil description: moist sand with no apparent odor or discoloration down to a depth of approximately 15 inches, below which the soil was black, petroleum saturated, with a strong petroleum odor

Eder detected 5.98 ppm arsenic at this location, while GCL's sample results for arsenic are 10 ppm. These results are within an order of magnitude and are comparable. Laboratory documentation for the Eder sample reported the analysis of the matrix spike for this sample was out of the acceptance range and the digested duplicate for this sample exceeded the 20 percent relative difference considered acceptable.

The Eder sample identified 860 ppm chromium, while GCL's sampling resulted in 9 ppm. The GCL result is two orders of magnitude lower than the Eder result.



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The Eder sample found 2,830 ppm lead, while GCL detected 75 ppm at this location. The GCL result is one and two orders of magnitude lower than the Eder result. Laboratory results for the Eder sample reported that the analysis of the matrix spike for this sample was out of the acceptance range.

The irregularities noted for Eder laboratory results are indicative of non-homogeneities or other anomalies in the sample matrix. The GCL samples are considered more accurate representations of actual subsurface conditions.

### Area D

- Location: B-1
- Type of sample: shallow subsurface soil
- Sample depth: approximately 24 inches
- Sample method: hand auger
- Soil description: black to gray soil with hydrocarbon odor

Eder detected 44.4 and 169.0 mg/kg cadmium and arsenic while GCL samples were nondetect and 11.0 mg/kg, respectively.

Eder detected 951.0 mg/kg copper and 887.0 mg/kg zinc; GCL did not analyze for these metals.

Eder detected 1,500 mg/kg lead while the GCL sample contained 154 mg/kg.

### Area E

- Location: E-TP-26
- Type of sample: shallow subsurface soil
- Sample depth: approximately 20 inches
- Sample method: hand auger
- Soil description: moist sand with no apparent odor or discoloration. Buried debris (brick, pipe, and rock) made obtaining sample difficult.

Eder detected 32.2 ppm arsenic at this location, while GCL's sample results for arsenic are 31 ppm.

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The Eder investigation did not analyze for chromium, while GCL's sampling resulted in 12 ppm.

The Eder investigation found 139,000 ppm lead, while GCL detected 18,300 ppm at this location. The GCL result is approximately one order of magnitude lower than the Eder result. The laboratory results for the Eder sample did report the analysis of the matrix spike for this sample was out of the acceptance range.

### *Area E*

- Location: E-SS-4
- Type of sample: surface soil
- Sample depth: approximately 6 inches
- Sample method: hand trowel
- Soil description: lightly moist sand with no apparent odor or discoloration

Eder did not sample for arsenic at this location. GCL's sample result for arsenic is 30 ppm.

The Eder investigation identified 75 ppm chromium, while GCL's sampling resulted in 14 ppm. The GCL result is nearly one order of magnitude lower than the Eder result.

The Eder investigation found 1,000 ppm lead, while GCL detected 1,100 ppm at this location. These results are essentially the same.

### *Area F*

- Location: F-TP-34
- Type of sample: shallow subsurface soil
- Sample depth: approximately 20 inches
- Sample method: hand auger
- Soil description: black, petroleum-saturated clay. Encountered buried red brick at 15 inches deep.

Eder did not sample for arsenic at this location. GCL's sample result for arsenic is 15 ppm.

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The Eder investigation did not analyze for chromium at this location, while GCL's sampling resulted in 13 ppm.

The Eder investigation found 377,000 ppm lead, while GCL detected 83 ppm at this location. The GCL result is four orders of magnitude lower than the Eder result. Laboratory documentation for the Eder sample reported that the digested duplicate for this sample was out of the 20 percent relative percent difference acceptance range. This indicates irregularities and/or non-homogeneity in the sample matrix. GCL believes the Eder result to be anomalously high. Order of magnitude variations would not be unexpected, but four orders of magnitude, as is the case for this comparative analysis, is excessive. The GCL sample is considered more reliable and representative of actual conditions.

### *Area F*

- Location: F-SS-6
- Type of sample: surface soil
- Sample depth: approximately 6 inches
- Sample method: hand trowel
- Soil description: discolored, reddish brown 4 inches deep

Eder did not sample for arsenic at this location. GCL's sample result for arsenic is 58 ppm.

The Eder investigation detected 8 ppm for chromium at this location, while GCL's sampling resulted in 13 ppm. These values are slightly different, but are within the same order of magnitude.

The Eder investigation found 260 ppm lead while GCL detected 1,500 ppm at this location. The GCL result is one order of magnitude greater than the Eder result.

### *Area G*

- Location: G-SS-8
- Type of sample: surface soil
- Sample depth: approximately 8 inches
- Sample method: hand trowel

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- Soil description: moist sand with no apparent odor or discoloration

Eder did not sample for arsenic at this location. GCL's sample result for arsenic is 13 ppm.

The Eder investigation identified 7 ppm chromium, while GCL's sampling resulted in 9 ppm. These results are essentially identical.

The Eder investigation found 24,000 ppm lead while GCL detected 36 ppm at this location. The GCL result is three orders of magnitude lower than the Eder result.

The only other results that can be compared are for mercury, which Eder reported 0.15 ppm in 1990 and GCL reports as non-detect.

### *Area G*

- Location: G-TP-70
- Type of sample: deep subsurface soil
- Sample depth: approximately 85 inches
- Sample method: hand auger
- Soil description: moist sand with no apparent odor or discoloration down to a depth of approximately 72 inches, below which the soil was black, petroleum saturated, with a strong petroleum odor

Eder did not sample for arsenic at this location. GCL's sample result for arsenic is 65 ppm.

The Eder investigation identified 97 ppm chromium, while GCL's sampling resulted in 104 ppm. These results are essentially the same.

The Eder investigation found 34,900 ppm lead, while GCL detected 7,200 ppm at this location. The GCL result is one order of magnitude lower than the Eder result. Laboratory documentation for the Eder sample reported that the analysis of the matrix spike for this sample was out of the acceptance range.

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### *Conclusion*

While much of the comparative sampling resulted in similar concentrations of metals in the soil, sufficient variations occurred to raise concern that anomalously high concentrations of metals (especially lead) reported by Eder (1990) are not representative of true site conditions. Irregularities identified for some of the Eder (1990) analyses indicate nonhomogeneity of the sample matrix, and therefore introduce some doubt as to accuracy and reproducibility of the results. Where single order of magnitude variances have been identified by comparative analysis, these are considered to reflect the normal range of concentrations in sampling a soil matrix. However, where three and four orders of magnitude variances occur together with irregularities in Eder (1990) analytical results in samples with unusually high concentrations, the Eder results are considered suspect. Comparative analysis of sample results for location F-TP-34 is an example; we believe the 83 ppm concentration for lead determined by GCL to be more reliable than the 337,000 ppm Eder result.

### 3.3 Groundwater

To document and determine trends in groundwater chemistry, groundwater samples were collected and free-phase hydrocarbon thicknesses have been measured on a quarterly basis from 1993 to 1995. These samples are briefly summarized below and more extensive discussions can be found in the Remedial Investigation Report (GCL, 1994).

#### *3.3.1 Free-Phase Hydrocarbon*

Based on the results of the 1990 investigation conducted by Eder, free-phase floating product was predicted to occur in the southern two-thirds of the site as a visible sheen or a measurable thickness (Eder, 1990, Plate 5). Since then, additional investigations by GCL have determined the actual extent of free-phase floating product to be discontinuous.

Free-phase hydrocarbon thickness has been measured on a quarterly basis since December 1993. A map showing the extent of free-phase hydrocarbons is shown on

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Figure 13. The occurrence of free-phase hydrocarbons and variations in thicknesses over time are shown in Table 12 for monitor wells and well points.

Free-phase hydrocarbon occurs locally and appears to be associated primarily with lenses of silt and fine sand. These lenses are discontinuous throughout the site, and, although somewhat conductive horizontally, have not been found to contain significant volumes of free-phase hydrocarbons. Hydrocarbons occurring in the subsurface in this manner are therefore effectively trapped in place.

The difference between GCL's current interpretation and Eder's initial projection of wider-spread free-phase is attributable to GCL's more detailed understanding of the site stratigraphy as described previously. Although free-phase product can be detected in various locations on the site, it is not valid to project it continuously. Table 12 shows results of product thickness measurements and clearly confirms the discontinuous nature of its occurrence in the subsurface.

### *3.3.2 Benzene, Toluene, Ethylbenzene, and Xylene Concentrations*

Quarterly analytical results for BTEX constituents are listed in Table 13; total BTEX concentrations versus time plots are shown in Appendix F; and benzene concentration contour maps can be found in Figure 14. Toluene, ethylbenzene, and xylenes were generally below WQCC action levels, therefore contour maps were not generated for these constituents. High and low seasonal trends of BTEX are variable at the site. However, MW-6S has shown several cycles with high concentrations in the summer months.

Well locations with high BTEX concentrations coincide with areas of known hydrocarbon occurrences in soil. They are associated with historic site operations in the former refinery areas near the west-central portion of the facility and the sludge pond area near the southern boundary of the site.

Monitor well MW-6S is an off-site groundwater monitor well located east of the southeastern portion of the site. This well is the only off-site well adjacent to the river that has fairly consistently shown the presence of benzene. The benzene found in MW-6S does not appear to have had an impact on sediments and surface water

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because benzene has not been observed in sediment and surface water samples (Tables 14 and 15).

GCL collected surface water samples from the Rio Grande adjacent to the site to determine if benzene from the site is impacting the Rio Grande (Table 14). Since sampling of the Rio Grande water has failed to detect benzene, direct sampling of soils immediately adjacent to MW-6S and from the nearby river bed was completed.

Samples from sediments near MW-6S could contain benzene due to sorption onto clay and silt size fractions within the sediment, if a pathway exists from the groundwater at MW-6S. The analytical results of 20 sediment samples indicate only one analyte, total xylenes, is present at the detection limit (ppb) in the sediments adjacent to the Rio Grande (Table 15). However, at this low level, xylenes are not a threat to human health or the environment.

### 3.3.3 *Polycyclic Aromatic Hydrocarbons, Phenols, Water Quality Control Commission Metals/Major Cations and Anions*

Samples collected during quarterly sampling events have also been analyzed for PAHs, phenols, WQCC metals, and major cations and anions.

#### *Polycyclic Aromatic Hydrocarbons*

PAHs have been detected in MW-5, MW-8, MW-11, and MW-15 and well points located in the interior of the site; results are summarized in Appendix G. PAH results for March 1995 are shown in Figure 15. Concentrations have ranged as high as 5,600 ppb at interior locations. Only one off-site well (MW-6S) has shown the presence of any PAHs, which was detected in only one sampling event (June 1995). Quarterly results for individual wells and detected PAH analytes can be found in Appendix G. Concentration versus time plots can be found in Appendix H.

#### *Phenols*

Phenols were detected in 10 on-site monitor wells at concentrations as high as 6,000 ppb during the investigation. Phenols have not been detected in off-site wells. Quarterly results for individual wells and analytes can be found in Appendix I.

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### *Metals*

Various WQCC metals have been detected in monitor wells during the investigation. The most significant finding from the metals analyses was that even though there was one TCLP exceedance for lead in soil, lead was totally absent from any monitor well on or off site. Among detected metals, arsenic, barium, cadmium, chromium, iron, manganese, mercury, and selenium in groundwater reached or exceeded WQCC groundwater standards, and aluminum, cobalt, copper, molybdenum, nickel, silver and zinc were below WQCC groundwater standards. Quarterly results are shown by monitor well (Table 16).

Arsenic concentrations in groundwater exceeding WQCC groundwater standards were found in MW-4, MW-5, MW-6S, MW-7, MW-8, MW-11, MW-14, MW-15 and MW-17, primarily in September 1994. MW-5 and MW-8 were the only two monitor wells in which arsenic concentrations were found exceeding WQCC groundwater standards in most recent sampling event. The highest arsenic concentration was 0.48 milligrams per liter in MW-6S in September 1994 sampling event.

Barium concentrations in groundwater exceeding WQCC groundwater standards were observed in MW-6S, MW-11, and MW-17. Barium concentrations in those three monitor wells all show some degree of a decreasing trend. No barium was detected above WQCC groundwater standards in most recent sampling event in those three monitor wells or in groundwater exceeding WQCC groundwater standards in any monitor well in most recent sampling event.

Cadmium concentrations were observed exceeding WQCC groundwater standards in MW-6D and MW-9S in the sampling event of December 1993, but were all below WQCC groundwater standards in most recent sampling event.

Chromium concentrations were found equal to WQCC groundwater standards only in MW-12 from the September 1994 sampling event.

Iron and manganese concentrations exceeded the WQCC groundwater standards in all monitor wells except MW-5. Based on available data, a decreasing trend was found for iron in MW-1, MW-3D, MW-3S, MW-6D, MW-6S, MW-7, MW-8, MW-



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9S, and MW-11, and only MW-6S, MW-8, and MW-9S were found to exceed WQCC groundwater standards in most recent sampling event. An increasing trend was observed in MW-15 for iron. The highest concentration of iron was 13.1 milligrams per liter in MW-14 in September 1994 sampling event.

A decreasing trend for manganese was found in MW-1 MW-3D, MW-3S, MW-4, MW-6D, MW-6S, and MW-9S. However, only MW-3S, MW-5, and MW-8 were found to be below WQCC groundwater standards in the most recent sampling event.

Mercury was found exceeding WQCC groundwater standards only once in MW-14, in the December 1994 sampling event.

Selenium was found to exceed WQCC groundwater standards once in MW-1, MW-3D, MW-3S, MW-5, MW-6S, and MW-8, and twice in MW-12. No selenium was detected in the most recent sampling event in December 1994.

Elevated concentrations of selected metals occur in all monitor wells at various times. Of those elevated metals, cadmium and selenium do not appear to correlate with petroleum hydrocarbons in groundwater. One elevated mercury occurrence in MW-14 in December 1994 may or may not be anomalous. Elevated concentrations of barium, iron, manganese, and arsenic may correlate with monitor wells that contain petroleum hydrocarbons. However, there are also elevated background concentrations of those two metals in the soil which may also account for their common occurrence at the site.

Results from the other metals follow a similar pattern. Therefore, following approval of NMOCD, this analytical suite was dropped from the quarterly monitoring program and replaced by an annual surveillance sampling event. Quarterly results for individual wells and WQCC metals can be found in Appendix J.

### *Anions/Cations*

All major anions and cations have been observed in wells at the site with the exception of nitrate. Chloride and sulfate are above WQCC groundwater standards. However, some of the highest observed concentrations of chloride and sulfate are observed in the upgradient well MW-12. Based on these observations, these

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parameters were dropped from the quarterly sampling. Quarterly results for individual wells and major ions can be found in Appendix J.

### *Summary*

Observed groundwater PAH and phenol detections coincide spatially with BTEX values and areas of known hydrocarbon occurrences in the soil. Off-site migration has been minimal and the age of the site (approximately 37 years) indicates that future impacts will be minimal. Metals do not pose a threat to groundwater and are tightly bound within the site soils. The shallow groundwater upgradient of the site is saline and sulfate-rich, suggesting that the shallow groundwater is not suitable as a drinking water source.

### 3.4 Analyses of Slug Tests at the Site

#### 3.4.1 Introduction

Aquifer slug tests were performed by GCL at the former Brickland Refinery site in July 1995 to determine the hydraulic conductivity of the saturated zone. The results of these slug tests were used to characterize groundwater flow and contaminant transport at the site, and help design a hydraulic model to test the potential off-site impacts that might occur due to the migration of contaminated groundwater.

#### 3.4.2 Local Hydrogeological Conditions

The shallow geology at the site is composed of Quaternary (Holocene) alluvium deposited by the Rio Grande. The sediments can be divided into two lithologies: a shallow, thin-bedded heterogeneous clastics lithology, and a deep, relatively homogeneous sand lithology. The shallow lithology extends from ground surface to about 10 to 15 feet bgs and consists of silty clay, sand, silty sand, and gravelly sand. The deep lithology consists of a thick, homogeneous, well-sorted, subrounded sand that appears to coarsen with depth. The shallow aquifer occurs under confined and unconfined conditions.

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### 3.4.3 General Well Information

Twenty monitor wells have been installed on and off site. Three of them (MW-3D, MW-6D, and MW-9D) located nearest to the Rio Grande were completed to approximately 35 feet bgs in the deep sand unit, while the other wells were completed to 15 to 20 feet bgs. The screen intervals of these wells are located either fully within the shallow unit, partially within the shallow unit, or fully within the deep unit. All boreholes were drilled with a 12-inch hollow-stem auger, and monitor wells were constructed using a 4-inch diameter PVC casing with 10 feet of screen. The annuli around screen sections of all wells were packed with #1C Lonestar sand that has an assumed porosity of 27 percent.

Slug tests were performed in monitor wells MW-1, MW-3S, MW-3D, MW-5, MW-6S, MW-6D, MW-8, MW-9S, MW-10, and MW-11. Wells MW-3D, MW-6D, and MW-10 are completed in gravelly sand or sandy gravel. Well MW-6S is completed within sand, and well MW-8 in silty clay. The other wells (MW-1, MW-3S, MW-5, and MW-11) are completed in silty clay, silty sand, and/or sand. These nine wells were selected to provide testing of a wide range of aquifer materials encountered all over the site.

### 3.4.4 Slug Test Theory

A slug test is comprised of observing the response of the water level in a monitor well over time after an induced perturbation. This involves quickly raising or lowering the static water level in a monitor well and recording the subsequent falling or rising water levels over time. The water level in a well is quickly raised by inserting a solid slug below the water table. The subsequent falling of water level versus time constitutes a falling-head slug test. Once the static conditions are achieved, the solid slug is quickly removed from the well. The subsequent rising of water level versus time constitutes a rising-head slug test.

The Bouwer and Rice analytical solution (Bouwer and Rice, 1976; Bouwer, 1989) was used to estimate hydraulic conductivity. The computer program AQTESOLV (Duffield, 1995) was used to perform the necessary calculations.

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### 3.4.5 Slug Test Instrumentation and Procedures

An in situ Hermit 1000 data logger was used to record water level versus time during all slug tests. For all tests, the time was set to minutes and water level to feet of water. Prior to each test, the static water level and the well depth were measured using a water level probe, and the height of the static water column in the well was calculated. An in situ 30-psig pressure transducer was set approximately 2 feet above the well bottom and connected to the data logger. All recorded water levels were the difference between the static water level and the instantaneous water level at a specific time during the test. Once the data logger and transducer were ready for testing, a stainless steel slug about 4-feet long and 2 inches in diameter was quickly submerged below the static water level coincident with starting the data logger. After a few minutes, the static water level difference was manually read from the data logger and recorded in the fieldbook. The test was stopped when the water level difference approached zero, showed fluctuation, or had a very small decrease ( $<0.01$  feet/2 minutes). Finally, the data logger was disconnected from the transducer and connected to a printer, and the results were printed.

### 3.4.6 Slug Test Results

The following basic data are needed to analyze a slug test:

- Casing radius,  $r_c$
- Screen length (L)
- Wellbore radius,  $r_w$
- Static height of water in well ( $H$  = well depth minus water level in well)
- Porosity of gravel pack around the casing screen ( $n$ )
- Saturated thickness of aquifer ( $b$ )
- Ratio of vertical to horizontal hydraulic conductivity ( $K_z/K_r$ ), as determined by local hydrogeological conditions (for homogeneous and isotropic aquifer,  $K_z/K_r=1$ )
- Initial water level ( $H_0$ )

Table 17 summarizes these data for all the slug tests performed at the former Brickland Refinery site.

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With these data, the computer program AQTESOLV was used to analyze the slug test data. During the analyses, the raw field data were imported into the program and the basic data were provided. A visual matching method was then used to locate the straight line section of the test data and calculate the hydraulic conductivity (Table 17). Finally, the plot of each test was printed (Appendix K).

Two distinct types of materials were slug tested at the site: relatively high conductivity materials (sand/silt/clay mixture) and relatively low conductivity materials (primarily tight clay/silt mixtures). For the latter materials, the water level response in many instances comprised a rapid early-time filter pack response (most noticeable in rising head tests) followed by later time longer-duration aquifer-characteristic response. The more conductive wells tested did not produce this early time filter pack response because the filter pack K is similar to the aquifer K.

On the other hand, with increasingly lower aquifer K compared to filter pack K (as in the latter clayey materials), this initial rapid filter pack response becomes significantly more pronounced, and is nonlinear, and longer in duration. These early time nonlinear data are representative of the filter pack response but impeded due to the very low aquifer K. The data following this filter pack response become linear at long times, and represent the aquifer response. The pronounced early time filter pack response is due to the inability of the clayey materials to accept water quickly. Therefore, more time is required for wellbore water to reach a steady-state inflow rate into the aquifer.

The curves selected for wells MW-1, MW-3D, MW-3S, MW-6D, MW-6S, MW-9S, and MW-10 are for early-time data, and are steep curves which give relatively high values of conductivity. The use of early-time data is appropriate because wells MW-6D and MW-9S are completed in relatively coarse material; however, well MW-1 was completed in relatively fine material, so a better choice would have been late-time data. However, use of early-time data for well MW-1 is a conservative choice, since it results in higher values of K and since using higher K values in the model overestimates groundwater flux into the Rio Grande, and hence overestimates contaminant input.

The curves selected for wells MW-5, MW-8, and MW-11 are for late-time data, and are shallow curves which give relatively low values of conductivity (0.14, 0.12, and 0.5 feet per day, which are the lowest values reported). These wells are also

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completed in some of the finest formations encountered (silty clay to very fine sand, silty clay, and silty clay, respectively). Note, these wells are completed across the water table in fine-grained formations. The response of the slug tests in these wells represents the "double straight line effect" of Bouwer, so the later-time data in these wells (which yields lower K values) is the correct choice.

In summary, the early versus late curves selected for all wells were appropriate based on the grain sizes and relative slug test response, with the exception of MW-1 for which late-time data may have been more appropriate. However, the result of using the later-time curve for MW-1 would be to decrease the value of K used in the model, which would not be a conservative option since it would result in less loading of chemicals into the Rio Grande.

An aquifer thickness was used in the analyses to take into consideration the partial penetration effect of wells. However, the results are not very sensitive to this additional parameter in the slug test analyses. As a result, quite a large range of aquifer thickness values may be used without influencing the final derived K values. Therefore, the method used to estimate aquifer K is of sufficient rigor since slug tests provide only approximate K aquifer values.

Table 17 shows that both falling- and rising-head test results for wells completed in the gravelly sand or sandy gravel formation (MW-3D, MW-6D, and MW-9S) have high conductivities (0.04-0.07 ft/min). The well completed fully in the silty clay formation (MW-8) has the lowest conductivity (0.00008 ft/min). Wells completed partially in silty clay or silty sand (MW-1, MW-3S, MW-5, MW-10 and MW-11) have intermediate conductivities (0.0001-0.004 ft/min). The only exception is well MW-6S, which was completed 100 percent in sand, but has a conductivity of 0.0009 ft/min. This is lower than the conductivity determined for MW-3S which is completed 10 percent in silty sand (0.0015 ft/min). The inconstancy, however, is relatively minor. It is possible that the sand grains at well MW-6S is finer than in the vicinity of MW-3S. Table 17 shows both falling- and rising-head tests in the same well yields similar conductivity values.

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### 3.4.7 Summary

Slug tests were performed in nine monitor wells at the former Brickland Refinery site. Results showed that wells completed partially in sandy gravel or gravelly sand (e.g., MW-3D, MW-6D, and MW-9S) have high conductivities (0.04-0.07 ft/min); wells completed partially in silty clay, silty sand, or in fine sand (e.g., MW-1, MW-3S, MW-5, MW-11, and MW-6S) have intermediate conductivities (0.0001-0.0015 ft/min); and the well completed fully in silty clay (e.g., MW-8) has the lowest conductivity (0.00008 ft/min). These results indicate the conductivities determined by the slug tests are consistent with the hydrogeological settings.

### 3.5 Transport Modeling

#### 3.5.1 Introduction

The concentration of benzene in the Rio Grande downstream of the site was determined using a two-step process. First, the benzene concentration in shallow groundwater that enters the river was determined. Second, shallow groundwater that enters the river was assumed to mix with upstream river water to determine a final downstream benzene concentration in the river. Because the amount of water flowing in the river affects the final downstream benzene concentration, high, low, and average flow conditions were used to estimate a range and an average for the final downstream benzene concentration in the river.

The benzene concentration entering the river was determined for the following current and future source conditions:

<u>Current Source Conditions:</u>	For current source conditions, the benzene concentration observed in MW-06S, located adjacent to the river, is assumed to be the concentration in groundwater that enters the river.
<u>Future Source Conditions:</u>	Future source conditions assume no remediation occurs, and that benzene enters the shallow groundwater in either of two scenarios. Representing a <i>worst case</i> scenario, the observed

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benzene concentrations in the free-phase hydrocarbons of MW-10, are assumed to represent the benzene concentration in groundwater that enters the river.

Representing a *realistic scenario*, the highest observed benzene concentrations in groundwater, primarily in the western portion of the site, are assumed to remain as a continuous source for the next 30 years. The concentration of benzene in groundwater that enters the river is calculated using an analytical model.

### 3.5.2 Conceptual Site Hydrogeologic Model

Prior to evaluating these scenarios, a conceptual site hydrogeologic model was formulated. A conceptual model is a simplified "picture" of the hydrogeology of a site using average values, or a range of values, for aquifer properties such as hydraulic conductivity, porosity, aquifer thickness, and hydraulic gradient. Also, the portion of aquifer through which impacted groundwater flows is quantified.

Based on the last four quarters of water level elevations, groundwater flows to the southeast under an average hydraulic gradient of about 0.0010 feet/foot (ft/ft). Groundwater is assumed to flow horizontally within the shallow aquifer. Since the shallow materials are interbedded clays, silts, and sands in this region, groundwater is observed to occur under confined to unconfined conditions.

Based on the results of slug tests performed in both shallow and deep monitor wells at the site (presented in Appendix K) the average hydraulic conductivity of the upper aquifer material is about 14 feet per day (ft/day). For clayey to sandy materials, this is a reasonable value. An average effective porosity of 25 percent is assumed to be representative of such materials.

Hydrocarbons occur primarily within the upper, fine-grained materials, with concentrations greatest in the shallow monitor wells completed within the upper 15 feet of the aquifer. Hydrocarbons are not detected in deep monitor wells screened



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within the upper 15 to 35 feet of the aquifer. Consequently, hydrocarbons are assumed to occur within the upper 15 feet of the aquifer.

The following hydrogeologic model was used as a basis for evaluating the various aquifer-to-river pathway scenarios:

- Groundwater beneath the site flows to the southeast toward the Rio Grande under confined to unconfined conditions with a hydraulic gradient of 0.001 ft/ft at a velocity of about 20 feet per year. Dissolved-phase hydrocarbons occur within the upper 15 feet of the aquifer and migrate at the velocity of groundwater.

### *3.5.3 Current Source Conditions*

The current source conditions scenario assumes that the current benzene concentration in MW-6S (220 ppb, June 1995) is the concentration in groundwater that enters the river. An assumed "worst case" length of groundwater containing benzene that potentially impacts the river bank is approximately 450 feet long. This recharge section is centered at MW-6S and lies between MW-08 and MW-09.

To estimate a range of downstream benzene concentrations in the river, the mixing cell equations shown on Figure 16 were used. A groundwater flow rate (Q) of 0.0011 cubic feet per second (cfs) was calculated using the mixing cell equation No. 2 ( $Q = KiA$ ) and the following parameters:

- Hydraulic conductivity (K) = 14 ft/day
- Hydraulic gradient (i) = 0.001 ft/ft
- Groundwater flow area (A) = 15 feet deep by 450 feet wide

The hydraulic conductivity and hydraulic gradient values discussed in the previous section were used to calculate the groundwater flow rate. The depth of 15 feet for the groundwater flow area corresponds to the upper 15 feet of the water table where hydrocarbons are detected. The width of 450 feet for the groundwater flow area is a "worst case" assumption of the length of potential impact to the river bank based on the current benzene concentration map. The downstream benzene concentrations for

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high, low and average river flow conditions, are calculated using the mixing cell equation No. 1 with the following parameters:

- Groundwater concentration ( $C_a$ ) = 220 ppb
- Groundwater flow rate ( $Q_a$ ) = 0.0011 cfs
- High upstream river flow rate ( $Q_r$ ) = 2,400 cfs
- Low upstream river flow rate ( $Q_r$ ) = 68 cfs
- Average upstream river flow rate ( $Q_r$ ) = 630 cfs

The high, low, and average upstream river flow rates are based on the maximum, minimum, and average streamflow rates for 20 years of record (1975 through 1995) at the Courchesne Bridge gaging station located approximately 2,000 feet upstream of the site (IBWC, 1996).

Assuming complete mixing, the calculated downstream benzene concentrations in the river for high, low and average river flow conditions are 0.0001, 0.0036 and 0.0004 ppb, respectively. These values are several orders of magnitude below the state of New Mexico Drinking Water Standard of 5 ppb.

### 3.5.4 Future Source Conditions - Realistic Case Scenario

The realistic case scenario for future source conditions assumes that the highest benzene concentrations observed in monitor wells MW-4, MW-5, MW-8, and MW-14 represent continuous benzene sources for groundwater. Groundwater concentrations are then predicted 30 years into the future. The resulting benzene concentration in groundwater that enters the river is used in the mixing equation to estimate the downstream benzene concentrations in the river at high, low and average flow conditions.

Based on the conceptual model for the site, a simple two-dimensional analytical solution to the problem of continuous sources injected into a relatively thin aquifer can be used. The analytical solution can be determined by the computer program PLUME2D (Beljin, 1989).

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Input requirements for the program include source injection rates, groundwater flow velocity, lateral and longitudinal dispersivity, aquifer thickness, and porosity. For this scenario, the following input parameters were used:

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Reference</u>
Injection rates	MW-4: .002	lbs/d	calculation
	MW-5: .009	lbs/d	calculation
	MW-8: .017	lbs/d	calculation
	MW-14: .025	lbs/d	calculation
Porosity	25	percent	assumption (McWhorter/Sunada, 1977)
Groundwater Velocity	0.055	ft/d	calculation
Aquifer Thickness	15	feet	observation
Duration	30	years	assumption
Longitudinal Dispersivity	100	feet	assumption (Neuman, 1990)
Transverse Dispersivity	10	feet	assumption (Neuman, 1990)
Retardation Factor	1	-	assumption
Decay	0	-	assumption

The injection rates were selected so that the observed benzene concentration at each well was recreated in the model. Retardation and decay are assumed negligible and are not used in the model. Therefore the model is conservative with respect to the final concentrations in groundwater that enter the river. Copies of the model input and output are included in Appendix L.

Based on the modeling results, an assumed "worst case" total benzene concentration in groundwater that enters the river bank equals 31,780 ppb (the individual model cell concentrations range from 30 ppb to 4,700 ppb) and an assumed "worst case" length of groundwater containing benzene that potentially impacts the river bank is 850 feet long.

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To estimate a range of downstream benzene concentrations in the river, the mixing cell equations shown on Figure 16 are used. A groundwater flow rate (Q) of 0.0021 cfs is calculated using the mixing cell equation No. 2 ( $Q = KiA$ ) and the following parameters:

- Hydraulic conductivity (K) = 14 ft/day
- Hydraulic gradient (i) = 0.001 ft/ft
- Groundwater flow area (A) = 15 feet deep by 850 feet wide

The hydraulic conductivity and hydraulic gradient values discussed in Section 3.5.2 were used to calculate the groundwater flow rate. The depth of 15 feet for the groundwater flow area corresponds to the upper 15 feet of the water table where hydrocarbons are detected. The width of 850 feet for the groundwater flow area is a "worst case" assumption of the length of potential impact to the river bank, which is based on the modeling results.

The downstream benzene concentrations, for high, low and average river flow conditions, are calculated using the mixing cell equation No. 1 with the following parameters:

- Groundwater concentration ( $C_a$ ) = 31,780 ppb
- Groundwater flow rate ( $Q_a$ ) = 0.0021 cfs
- High upstream river flow rate ( $Q_r$ ) = 2,400 cfs
- Low upstream river flow rate ( $Q_r$ ) = 68 cfs
- Average upstream river flow rate ( $Q_r$ ) = 630 cfs

Using the high, low and average river flow rates, the downstream benzene concentrations in the river are 0.028, 0.981 and 0.106 ppb. These calculated downstream benzene concentrations are at least one order of magnitude below the state of New Mexico Drinking Water Standard of 5 ppb.

### *3.5.5 Future Source Conditions - Worst Case Scenario*

The worst case scenario for future source conditions assumes that the free phase hydrocarbons observed in monitor wells in the southern portion of the site supply benzene directly to the river. The free-phase hydrocarbons in MW-10 was analyzed

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for BTEX compounds in August 1995. Benzene was not detected above the detection limits of 125,000 µg/kg (125,000 ppb). Therefore, the benzene concentration of 125,000 ppb in MW-10 is assumed to be the "worst possible" concentration in groundwater that enters the river.

The same approach used in the current source conditions scenario is used for this scenario, except that the value used for the benzene concentration is 125,000 ppb. The final downstream benzene concentration in the river are 0.057, 2.02 and 0.218 ppb at high, low and average river flow conditions, respectively. Even in the worst case scenario under low flow river conditions, the downstream benzene concentration in the river is below the state of New Mexico Drinking Water Standard of 5 ppb. The input parameters and calculated downstream benzene concentrations for the current and future source conditions are summarized in Table 18.

### 3.6 Surface Water

Chemical analyses of on-site soils document concentrations of metals and petroleum hydrocarbons in concentrations that exceed the recommended human health-based limits. Although New Mexico does not have specific standards for soils, EPA has published guidelines for screening lead in soil for residential land use. Based upon these criteria, on-site soils represent a potential threat to human health and the environment.

Because the site is secured by locked fences, the threat to human health and the environment from ingestion or dermal contact of site soils is extremely limited. The inhalation pathway is also limited because the impacted soil often is mixed with petroleum hydrocarbons, creating a surface that minimizes the formation of dust. Our study has concluded that stormwater runoff and groundwater flow from this site are the most likely routes of impact to the environment. Evaluation of the groundwater pathway is discussed in Sections 3.3, 3.5, and 3.6 of this report. Further evaluation of the surface water pathway is presented below.

The flow of surface water onto the site from upslope drainages is essentially uncontrolled. Cultural features such as the railroad and county road create a modification of natural flowpaths, but do not effectively divert flow toward or away

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from the site. Historically, flow from the site was controlled by four culverts to the Rio Grande. The northernmost culvert, Cul-4, is located just north of Area A. Cul-3 and Cul-2 are both in Area F, and Cul-1 drains Area G.

Table 19 presents off-site soils data obtained from the culverts and "background" locations up and downgradient of the site. Two soil samples were taken from Cul-3 and one from Cul-4. There is no record of any culvert samples from Cul-1 or Cul-2, nor are hydrocarbon analyses from these locations found in existing documents. Upgradient background samples are BG-2, MW-12, and NMEID. BG-1 is downgradient background. These data are compared to western U.S. data and regional data from the National Uranium Resource Evaluation Program (NURE).

The table shows most metals concentrations in soils taken from the culverts are below EPA recommended limits. Other "background" samples show this same relationship. The data also compare favorably with concentrations derived from the regional studies.

In May 1996, the IBWC closed the gates on the three southernmost culverts. These culverts have historically drained the southern one-half to two-thirds of the site. The northern-most culvert remains open.

### *3.6.1 Conclusions*

In the northern area of the site, soils transported through the culverts do not create a threat to human health or the environment, based upon available data.

No conclusions can be drawn about the quality of historical stormwater runoff to the Rio Grande since no water has accumulated in the samplers during GCL's investigation.

The gates to the culverts on the southern portion of the sites are closed and runoff will not occur.

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### *3.6.2 Recommendations*

As part of the Stage II Abatement Plan, we will provide a stormwater runoff model to show that stormwater runoff will not occur in the future.

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### 4.0 Conclusions

This site characterization at the Brickland Refinery site has determined the current extent and nature of hydrocarbon releases that occurred from approximately 1931 to 1959 and the metals concentrations that may be due to a combination of site activities and off-site metals refining operations. Constituents of concern have been confined to the site with the exception of low concentrations of BTEX in groundwater at MW-6S. The results of soil and groundwater sampling demonstrate that hydrocarbon releases from this site have not impacted water quality in the Rio Grande. Furthermore, contaminant transport modeling demonstrates that on-site hydrocarbon releases will not impact the Rio Grande in the future. The impact of periodic discharges of constituents of concern to the Rio Grande via a stormwater pathway has not been fully determined because there has not been enough runoff to accumulate water in the samplers placed in the culverts to provide a sample. However, this will not pose a problem as long as stormwater is contained on site.

Of the constituents of concern that have been detected to date, the following presented the greatest concerns and were critically examined in subsequent evaluations. GCL has critically evaluated the following constituents of concern that were detected on site:

#### Soil

- TPH is not regulated specifically, and the regulated constituents of TPH are addressed on a compound-specific basis.
- BTEX has been detected to varying degrees in soils.
- Soil samples collected at the site were analyzed for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Measured concentrations of arsenic, barium, chromium, and lead are above background ranges. However, TCLP testing and groundwater monitoring data demonstrate only one TCLP analysis resulted in an exceedance and the remainder of these elements have limited leaching potential.



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- The slight increase in background concentrations of some of the metals from the north to south of the site is probably due to the proximity of the Asarco smelter to the southern end of the site.
- In general, lead and arsenic concentrations detected at the Brickland Refinery site are believed to have resulted at least in part from smelter operations.
- PAHs and phenols have been detected in soils at the site.
- Hydrocarbon releases in on-site soils and groundwater are restricted to the southern two-thirds of the facility.
- Site security effectively breaks the pathway between the constituents of concern and receptors.

Groundwater

- Hydrocarbons exceeding WQCC standards have been observed off site only in MW-6S. However, the absence of hydrocarbon constituents in all other off-site wells, with the exception of sporadic occurrences of BTEX below WQCC standards and a single sample of total xylenes at the detection limit in a river sample, indicate on-site hydrocarbon compound migration is attenuated on site by the interbedded silty/clayey sediments, the relatively flat, shallow water table, and/or natural biodegradation/dispersion. The minor amount of hydrocarbon migration that occurs is attenuated by biodegradation and dispersion.
- Benzene has been detected in groundwater at concentrations greater than health-based standards at only one off-site location (MW-6S). The other BTEX compounds have either not been detected or have been below WQCC standards in off-site monitor wells.
- Free-phase hydrocarbon has been observed in monitor well MW-10, MW-11, and several well points in the immediate vicinity. The recent investigation determined that this free-phase hydrocarbon occurs locally in discontinuous pockets associated with thin, discontinuous, sand lenses. No free-phase hydrocarbons have been observed in off-site wells.

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- PAHs and phenols have been detected in the shallow aquifer at the site. None have been detected above regulatory standards in off-site monitor wells since the quarterly sampling program was initiated in December 1993 and only one sample detected PAHs below regulatory standards.
- Intrinsic remediation of the constituents of concern and current land use effectively breaks the pathway between the constituents of concern and receptors.

Surface Water

- No BTEX compounds have been detected in water samples collected from the Rio Grande at locations upgradient and downgradient from the site. Furthermore contaminant transport modeling has shown no significant risk of benzene entering the Rio Grande in the future.
- A monitoring program is required to determine if the surface water route completes a pathway between on-site constituents of concern and receptors.
- The gates to the three southernmost culverts are closed. There is no runoff in this area.
- Lead has not been detected in any on- or off-site monitor wells.
- Other metals have been detected sporadically in monitor wells. Arsenic, barium, iron, and manganese may correlate to metals found in site soils.

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**Table 1**  
**Monitoring Well and Well Point Elevation Data**  
(feet amsl)

Well ID	Ground Surface	Top of Casing	Top of Screen	Bottom of Screen
<i>Monitor Wells:</i>				
MW-1	3728.87	3730.57	3723.92	3712.17
MW-2	NA	3730.49	NA	NA
MW-3S	3727.81	3730.00	3723.50	3711.43
MW-3D	3727.93	3730.00	3707.00	3695.10
MW-4	3727.50	3728.86	3722.76	3711.76
MW-5	3728.29	3729.70	3725.20	3714.20
MW-6S	3728.46	3730.65	3724.05	3713.05
MW-6D	3728.59	3730.62	3703.12	3690.12
MW-7	3727.75	3728.96	3723.16	3711.50
MW-8	3727.72	3729.22	3724.52	3713.48
MW-9S	3728.24	3730.01	3724.31	3713.31
MW-9D	3728.59	3730.08	NA	NA
MW-10	3731.12	3732.54	3723.54	3712.54
MW-11	3729.84	3731.40	3721.60	3709.10
MW-12	3728.88	3730.35	3713.45	3701.45
MW-13	3729.53	3732.36	NA	NA
MW-14	3727.91	3730.46	3725.46	3709.86
MW-15	NA	3738.62	3724.92	3708.92
MW-16	3734.35	3736.78	3726.78	3710.78
MW-17	3731.98	3731.98	3726.58	3711.88
<i>Well Points:</i>				
WP-1	3730.15	3733.40	3726.99	3721.39
WP-2	3730.40	3731.65	3718.64	3713.04
WP-3	3728.50	3731.17	3726.77	3720.57
WP-4	3727.74	3731.85	3726.84	3721.14
WP-5	3727.58	3731.99	3726.92	3721.22
WP-6	3728.35	3731.70	3727.26	3721.56
WP-7	3730.70	3733.12	3720.71	3715.01
WP-8	3727.00	3729.67	3726.77	3722.07
WP-9	3727.24	3730.89	3725.87	3721.07
WP-10	3727.30	3731.37	3726.51	3722.81
WP-11	3727.49	3731.50	3726.61	3722.91
WP-12	3727.40	3731.35	3726.59	3722.89



**Table 1 (Cont'd)**  
**Monitoring Well and Well Point Elevation Data**  
 (feet amsl)

Well ID	Ground Surface	Top of Casing	Top of Screen	Bottom of Screen
<i>Well Points (Cont'd):</i>				
WP-13	3726.72	3730.82	3725.39	3721.69
WP-14	3727.38	3730.50	3726.42	3722.72
WP-15	3729.57	3732.97	3726.31	3722.61
WP-16	3728.60	3730.25	3726.20	3722.50
WP-17	3727.93	3731.28	3726.21	3722.51
WP-18	3727.34	3728.56	3718.34	3714.64
WP-19	3728.29	3729.65	3724.59	3720.87
WP-20	3727.60	3731.46	3726.57	3722.87
WP-21	3727.38	3730.38	3725.90	3722.20
WP-22	3727.50	3728.85	3718.70	3715.00
WP-23	3728.00	3729.11	3724.03	3720.33
WP-24	3727.40	3731.75	3726.77	3721.07
WP-25	3730.48	3733.54	3721.69	3715.99
WP-26S	3730.40	3732.44	3727.15	3721.65
WP-26D	3730.30	3733.28	3717.90	3714.40
WP-27S	3732.77	3736.82	3726.47	3720.97
WP-27D	3732.77	3736.86	3725.46	3721.96
WP-28	3727.39	3731.62	3726.39	3722.79
WP-29	3726.97	3731.19	3725.97	3722.37
WP-30	3729.60	3733.41	3725.20	3719.50
WP-31	3734.47	3737.21	3726.57	3720.97
WP-32	3735.30	3736.80	3726.30	3722.70
WP-33	3729.00	3732.74	3722.65	3716.95
WP-34	3727.20	3731.53	3726.34	3720.74
WP-35	3727.08	3728.71	3723.64	3720.04
WP-36	3726.87	3729.52	3724.50	3720.90
WP-37	3727.70	3730.13	3725.05	3721.45

Notes:

NA = Data not available.

amsl = Above mean sea level.

**Table 2**  
**Water Level Elevations in Monitoring Wells**  
**(feet amsl)**

Well ID	Jul. 93	Dec. 93	Mar. 94	Jul. 94	Sept. 94	Dec. 94	Mar. 95	Jun. 95	Sept. 95
MW-1	3725.78	3724.30	3725.27	3726.54	3725.37	3724.35	NM	3726.66	NM
MW-2	NM	NM	3726.39	3726.54	3725.89	3723.97	NM	3726.81	NM
MW-3S	3725.29	3723.27	3725.20	3725.87	3724.50	3723.44	3725.35	3725.68	3724.98
MW-3D	3725.22	3723.30	3725.10	3725.78	3724.42	3723.35	3725.26	3725.75	3724.97
MW-4	3725.21	3723.59	3725.36	3725.56	3724.68	3723.64	3725.56	3725.66	3725.40
MW-5	3725.11	3723.59	3725.30	3725.88	3724.70	3723.65	3725.40	3725.86	3725.39
MW-6S	3725.08	3723.78	3724.85	3725.55	3724.20	3723.03	3725.05	3725.53	3724.63
MW-6D	3725.00	3723.75	3724.82	3725.57	3724.22	3723.00	3725.02	3725.48	3724.57
MW-7	3725.16	3723.72	3725.16	3725.89	3724.46	3723.16	3725.36	3725.32	3725.23
MW-8	3725.10	3723.42	3725.12	3725.77	3724.49	3723.45	3725.42	3725.74	3724.33
MW-9S	3724.84	3723.52	3724.56	3725.29	3723.91	3722.81	3724.81	3725.21	3725.52
MW-10	P	P	P	P	P	P	P	P	NM
MW-11	3724.91	3722.90	3725.10	3725.75	P	3723.40	3725.35	3725.86	3724.98
MW-12	3726.09	3724.91	3726.45	3727.05	3725.70	3723.65	NM	3727.15	3726.39
MW-13	3725.22	NM	NM	3725.82	3724.71	3724.44	NM	3726.05	NM
MW-14	-	-	NM	3726.03	3724.61	3723.58	3725.56	3726.01	3725.31
MW-15	-	-	NM	3725.62	3724.28	3723.19	3724.97	3725.58	3724.87
MW-16	-	-	NM	3725.43	3724.06	3722.93	3724.88	3725.44	3724.54
MW-17	-	-	NM	3725.90	3724.46	3723.36	3725.38	3726.82	3726.05

Notes:

NM = Not measured.  
amsl = Above mean sea level.  
P = Product observed.  
- = Well was not yet drilled.

Table 3

## Background Concentrations of Metals in Soil

Sample Location	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
BG-1 (GCL 1996)	42	102	9.2	11	292	0.12	ND	ND
BG-2 (GCL 1996)	14	102	1.8	8	103	ND	ND	ND
NMEID (Lab SLD)	NA	77	NA	9	150	ND	NA	ND
NMEID (Lab AT)	71	NA	4.2	3	182	0.05	NA	1.2
NMEID (Lab IT)	NA	NA	NA	4.3	160	NA	0.8	NA
USGS Western US	<.01 - 97	NR	NR	3 - 2000	<10 - 700	<.01 - 4.6	NR	NR
Eder	<1.4	NA	0.9 - 5.5	7.5 - 23	6 - 270	<0.02 - 0.11	<1.3	<0.25 - 1.2

All Units are mg/Kg

NA = Not Analyzed

NR = Not Recorded

ND = Not Detected

N = Matrix spike out of acceptable range

\* = Digested duplicate out of 20% RPD (relative percent difference)

S = Performed by method of standard additions (MSA)

NMEID background data from **NMEID Listing Site Inspection, January 16, 1990.**

USGS Western US background data from **Shaklette, H.T. et. al, 1971**

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 4a

VOLATILE ORGANIC COMPOUNDS IN SOIL SAMPLES  
AREA A - UNITS (UG/KG)

<u>Compound</u>	<u>A-TP-65</u>
Benzene	ND
Ethylbenzene	ND
Toluene	ND
Xylenes	500
Non-Target Total BTEX Compounds	<u>500</u>
Total	51,000

NOTES:

ND - Not Detected

J - Estimated concentration

B - Detected in associated lab blank

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 4b

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "A"

<u>Parameter</u>	<u>A-TP-63</u>	<u>A-TP-64</u>	<u>A-TP-65</u>	<u>A-TP-87</u>	<u>A-TP-88</u>	<u>A-TP-89</u>	<u>A-TP-90</u>	<u>A-HA-5</u>
Mercury	NA	NA	0.06UN	NA	NA	NA	NA	NA
Silver	NA	NA	0.6U	NA	NA	NA	NA	NA
Cadmium	NA	NA	2.9	NA	NA	NA	NA	NA
Chromium	NA	NA	13.5	NA	NA	NA	NA	NA
Copper	169N	151N	112N	96.9N	74.5N	58.3N	107N	5.9N
Nickel	NA	NA	10.2	NA	NA	NA	NA	NA
Zinc	NA	NA	101	NA	NA	NA	NA	NA
Arsenic	NA	NA	19.8*NS	NA	NA	NA	NA	NA
Lead	284	270	139	NA	NA	NA	NA	15.4

NOTES:

- NA - Not analyzed
- U - Undetected at <Instrument Detection Limit (IDL)
- W - Analytical spike recovery out of range
- B - Undetected, <Contract Required Quantification Limit (CRQL)  
but > Instrument Detection Limit (IDL)
- E - Matrix interference
- N - Matrix spike out of acceptable range
- S - Performed by Method of Standard Additions (MSA)
- + - MSA correlation coefficient <.995
- \* - Digested duplicate out of 20% Relative Percent Difference (RPD)

Units - (mg/kg) for all analytes

Range of site background metals levels (mg/kg)

Mercury	<0.02-0.11
Silver	<0.25-1.2
Cadmium	0.9-5.5
Chromium	7.5-23
Copper	6-140
Nickel	5-10
Zinc	21-180
Arsenic	<1.4
Lead	6-270

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 5a

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "B"

<u>Parameter</u>	<u>B-TP-83</u>	<u>B-TP-84</u>	<u>B-TP-85</u>	<u>B-TP-86</u>	<u>B-HA-1</u>	<u>B-HA-2</u>	<u>B-HA-2</u>	<u>B-HA-4</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	0.41N
Silver	NA	NA	NA	NA	1.4	177	1.8	4.9
Cadmium	NA	NA	NA	NA	NA	NA	NA	4.7*N
Chromium	NA	NA	NA	NA	NA	NA	NA	860
Copper	NA	NA	NA	NA	390*N	35.5*N	37.2*N	1370*N
Nickel	NA	NA	NA	NA	NA	NA	NA	5.4
Zinc	NA	NA	NA	NA	251N	32.3N	30.9N	178N
Arsenic	NA	NA	NA	NA	NA	NA	NA	5.98*NS
Lead	NA	NA	NA	NA	427N	60N	77N	2830N

NOTES:

- NA - Not analyzed
- U - Undetected at <IDL
- W - Analytical spike recovery out of range
- B - Undetected, <CRQL but >IDL
- E - Matrix interference
- N - Matrix spike out of acceptable range
- S - Performed by MSA
- +
- MSA correlation coefficient <.995
- \*
- Digested duplicate out of 20% RPD
- Units - (mg/kg) for all analytes

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 6a

VOLATILE ORGANIC COMPOUNDS IN SOIL SAMPLES  
AREA C - UNITS (UG/KG)

<u>Compound</u>	<u>C-TP-1-2</u>	<u>C-TP-2-2</u>	<u>C-TP-4</u>
Benzene	ND	ND	14,700
Ethylbenzene	ND	ND	75,500
Toluene	ND	ND	ND
Xylenes	ND	ND	125,800
Non-Target Total BTEX Compounds	<u>ND</u>	<u>ND</u>	<u>216,000</u>
Total	ND	ND	410,900

NOTES:

ND - Not detected

J - Estimated concentration

B - Detected in associated lab blank

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 6b

SEMIVOLATILE ORGANICS IN SOIL SAMPLES - AREA "C"  
(ug/kg)

SEMIVOLATILE ORGANICS	C-TP-8-S	C-TP-1-2 (1)	C-TP-2-2
TARGET COMPOUNDS			
Naphthalene	2900	87 J (3)	ND
2-Methylnaphthalene	25300	48 J	ND
Phenanthrene	19800	81 J	ND
Anthracene	6100	ND	ND
Dibenzofuran	5200	45 J	ND
Fluorene	6700	87 J	ND
2,4-Dinitrotoluene	11200	ND	ND
Pyrene	18800	ND	ND
4-Nitrophenol	ND (2)	ND	ND
Acenaphthene	3200	34 J	ND
Chrysene	5500	ND	ND
Benzo(a)anthracene	4400	ND	ND
Acenaphthylene	ND	ND	ND
4-Chloroaniline	1400	ND	ND
O-Nitrotoluene	ND	ND	ND
M-Nitrotoluene	ND	ND	ND
Nitrobenzene	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	ND
Fluoranthene	2500	ND	ND
Benzo(a)pyrene	1600	ND	ND
2-Chloronaphthalene	ND	ND	ND
2,4-Dinitrophenol	ND	ND	ND
Isophorone	ND	ND	ND
4,6-Dinitro-2-methylphenol	1700	ND	ND
Benzo(k)fluoranthene	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND
Total	116300	382 J	ND
NON-TARGET COMPOUNDS			
Total	1117700	42380	12520

## NOTES:

(1) - samples suffixed with "-2" collected in July 1990.

(2) - not detected.

(3) - value is estimated because compound is present < CRQL.



OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 6c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "C"

<u>Parameter</u>	<u>C-TP-1</u>	<u>C-TP-2</u>	<u>C-TP-3</u>	<u>C-TP-4</u>	<u>C-TP-5</u>	<u>C-TP-6</u>	<u>C-TP-7</u>	<u>C-TP-8</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	0.06UN
Silver	NA	NA	NA	NA	NA	NA	NA	2.9
Cadmium	2.0	1.3	9.0	0.6	16.5	3.7	19.0	0.2B
Chromium	NA	NA	NA	NA	NA	NA	NA	7.5
Copper	25.5	28.0	184	21.3	280	142	197	4.8
Nickel	NA	NA	NA	NA	NA	NA	NA	10.2
Zinc	51.9	39.8	159	65.4	367	120	221	17.1
Arsenic	19.7	14.7	43.3	25.8*N+	129	14.7	50.9	5.0B*N+
Lead	121	98.1	278	22.7	683	166	328	5.0

NOTES:

- NA - Not analyzed
- U - Undetected at <IDL
- W - Analytical spike recovery out of range
- B - Undetected, <CRQL but >IDL
- E - Matrix interference
- N - Matrix spike out of acceptable range
- S - Performed by MSA
- +
- MSA correlation coefficient <.995
- \*
- Digested duplicate out of 20% RPD
- Units - (mg/kg) for all analytes

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 7a  
VOLATILE ORGANIC COMPOUNDS IN SOIL SAMPLES - AREA "D"  
(ug/kg)

COMPOUND	D-TP-3-2	D-TP-7-2	D-TP-51	D-TP-52	D-TP-53	D-TP-54
Benzene	900 JB	2000 B	2,300	5,100	13,700	17,900
Ethylbenzene	44,600	1,300	28,800	16,700	1,300	3,400
Toluene	ND	ND	ND	ND	ND	ND
Xylenes	9,200	ND	25,000	ND	ND	3,000
Total BTEX	54,700	3,300	56,100	21,800	15,000	24,300
NON-TARGET COMPOUNDS						
Total	44,500	15,900	282,200	205,100	338,600	278,000

NOTES:

ND - not detected in sample.

J - Estimated concentration.

B - Detected in associated lab blank.

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 7b

SEMIVOLATILE ORGANICS IN SOIL SAMPLES - AREA "D"  
(ug/kg)

SEMIVOLATILE ORGANICS	B-5	B-9	B-13	B-22	D-TP-51	D-TP-3-2 (1)	D-TP-7-2	MW-5-SS-04
TARGET COMPOUNDS								
Naphthalene	3000	1800	1270	13800	33000	16000 J (3)	21000	4300
2-Methylnaphthalene	8400	4200	2850	18500	96000	ND	91000	21600
Phenanthrene	200	1100	150	400	2000	2000 J	ND	ND
Anthracene	200	1100	150	400	2000	ND	ND	ND
Dibenzofuran	200	300	160	300	3300	3300 J	ND	ND
Fluorene	200	400	150	400	2200	ND	ND	ND
2,4-Dinitrotoluene	300	400	120	500	ND	ND	ND	ND
Pyrene	ND (2)	900	ND	200	ND	ND	ND	ND
4-Nitrophenol	200	500	100	200	ND	ND	ND	2500
Acenaphthene	ND	ND	50	ND	ND	ND	ND	ND
Chrysene	ND	400	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ND	400	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	100	ND	ND	ND	ND	ND	ND
4-Chloroaniline	400	100	ND	500	3400	ND	ND	ND
O-Nitrotoluene	600	ND	30	ND	ND	ND	ND	4100
M-Nitrotoluene	400	100	ND	ND	ND	ND	ND	ND
Nitrobenzene	ND	100	130	ND	4400	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	60	200	ND	ND	ND	ND
Fluoranthene	ND	100	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	600	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	2000	ND	ND	ND
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	ND	1980	ND	1300	ND	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND	60	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	100	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND
Total	14100	12700	7260	35400	149600	21300 J	112000	32500
NON-TARGET COMPOUNDS								
Total	223000	72500	50280	228300	2275000	1211600	1707000	619100

## NOTES:

(1) - samples suffixed with "-2" collected in July 1990.

(2) - not detected.

(3) - value is estimated because compound is present < CROL.

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 7c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "D"

<u>Parameter</u>	<u>B-1</u>	<u>B-2</u>	<u>B-3</u>	<u>B-4</u>	<u>B-5</u>	<u>B-6</u>	<u>B-7</u>	<u>B-8</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	44.4*N	13.8*N	4.6*N	8.7*N	0.2U*N	8.2*N	6.4*N	1.8U
Chromium	NA	NA	NA	NA	NA	NA	NA	NA
Copper	951*N	422*N	79.6*N	202*N	1.28*N	251*N	72*N	68.8
Nickel	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	887N	683N	68.3N	168N	11.1N	236N	97.9N	45.7
Arsenic	169	95.5	13.6	51.0	4.4	58.4	21.7	24.9*NS
Lead	1500N	913N	54.9N	287N	6.0N	65.9N	202N	62.2

<u>Parameter</u>	<u>B-9</u>	<u>B-10</u>	<u>B-11</u>	<u>B-12</u>	<u>B-13</u>	<u>B-14</u>	<u>B-15</u>	<u>B-16</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.56U	6.3U	1.3B	0.7U	5.1U	0.6U	10.3	1.2
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA
Copper	2.1B	119	122	22.6	216	81.1	7.1S	71.8
Nickel	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	11.2B*NS	22.0	21.7	11.1	55.6	14.1*NS	10.3B*NS	13.8
Lead	5.9	201	190	34.8	516	100	134	132

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 8a

VOLATILE ORGANIC COMPOUNDS IN SOIL SAMPLES - AREA "E"  
(ug/kg)

COMPOUND	E-TP-4-2	E-TP-5-2	E-TP-6-2	E-TP-8-2	E-TP-20
Benzene	3,100	1,400	1,500 B	ND	19,600
Ethylbenzene	4,800	8,300	4,100	ND	33,600
Toluene	100	ND	ND	ND	ND
Xylenes	1,700	5,500	3,100	ND	ND
Total BTEX	9,700	15,200	8,700	ND	53,200
NON-TARGET COMPOUNDS					
Total	37,200	43,000	67,910	8,793	1,952,700

COMPOUND	E-TP-22	E-TP-27	E-TP-32
Benzene	15,700	11,900	36,800
Ethylbenzene	30,100	18,300	45,800
Toluene	ND	ND	13,400
Xylenes	119,900	15,200	196,000
Total BTEX	165,700	45,400	292,000
NON-TARGET COMPOUNDS			
Total	1,253,300	722,600	670,100

## NOTES:

ND - not detected in sample.

J - Estimated concentration.

B - Detected in associated lab blank.

Table 8b

## SEMIVOLATILE ORGANICS IN SOIL SAMPLES - AREA "E"

(ug/kg)

SEMIVOLATILE ORGANICS	E-TP-9	E-TP-15	E-TP-21	E-TP-22	E-TP-25	E-TP-29	E-TP-31	E-TP-4-2 (1)	E-TP-5-2	E-TP-6-2	E-TP-8-2
TARGET COMPOUNDS											
Naphthalene	5900	32000	46000	ND	13000	2000	3400	41000	ND	14000	8000
2-Methylnaphthalene	29500	154000	150000	22000	41000	19000	10200	153000	ND	54000	32000
Phenanthrene	9600	ND	3000	12000	5000	27000	ND	ND	ND	ND	ND
Anthracene	ND (2)	ND	3000	2000	1000	5000	ND	ND	ND	ND	ND
Dibenzofuran	2400	ND	2000	1000	4000	1000	300	ND	ND	ND	ND
Fluorene	3700	ND	3000	2000	3000	5000	200	ND	ND	ND	ND
2,4-Dinitrotoluene	2000	ND	3000	3000	7000	ND	500	ND	ND	ND	ND
Pyrene	3900	ND	ND	11000	2000	18000	ND	ND	ND	ND	ND
4-Nitrophenol	4500	ND	ND	ND	1000	ND	500	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	1000	1000	1000	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	4000	ND	1000	ND	ND	ND	ND	ND
Benzo(a)anthracene	ND	ND	ND	3000	ND	1000	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	1000	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	3100	8000	ND	ND	3000	ND	400	ND	ND	ND	ND
O-Nitrotoluene	2700	ND	ND	ND	ND	ND	900	ND	ND	ND	ND
M-Nitrotoluene	ND	4000	6000	ND	ND	ND	400	ND	ND	ND	ND
Nitrobenzene	ND	15000	11000	ND	1000	ND	900	ND	ND	ND	ND
N-Nitrosodiphenylamine	3800	ND	ND	ND	2000	4000	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	2000	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND	ND	1000	2000	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	3000	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	2300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	5000	ND	ND	ND	ND	4200	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	1000	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	1000	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	73400	218000	227000	65000	85000	93000	21900	194000	ND	68300	40000
NON-TARGET COMPOUNDS											
Total	1016100	1375000	7592000	2293000	932000	962000	217700	2492000	17260	924000	1086000

## NOTES:

(1) - samples suffixed with "-2" collected in July 1990.

(2) - not detected.

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 8c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "E"

<u>Parameter</u>	<u>E-TP-9</u>	<u>E-TP-10</u>	<u>E-TP-11</u>	<u>E-TP-12</u>	<u>E-TP-13</u>	<u>E-TP-14</u>	<u>E-TP-15</u>	<u>E-TP-16</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	13.2	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	17.3	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	23.0*NS	33.8*NS	14.0	20.6*NS	10.6B*NW	5.6B*NW	7.7B*NW	9.6B*NS
Lead	NA	NA	NA	NA	NA	NA	NA	NA

<u>Parameter</u>	<u>E-TP-17</u>	<u>E-TP-18</u>	<u>E-TP-19</u>	<u>E-TP-20</u>	<u>E-TP-21</u>	<u>E-TP-21</u>	<u>E-TP-22</u>	<u>E-TP-23</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	4.2	NA	NA	NA
Cadmium	NA	NA	NA	NA	0.2U	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA

<u>Parameter</u>	<u>E-TP-25</u>	<u>E-TP-26</u>	<u>E-TP-27</u>	<u>E-TP-28</u>	<u>E-TP-29</u>	<u>E-TP-30</u>	<u>E-TP-31</u>	<u>E-TP-32</u>
Mercury	0.15N	0.16N	0.76N	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	5.2	NA	NA	NA
Copper	39.1	218	26.9	144*N	53.9*N	71.5*N	9.6B*N	123*N
Nickel	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	69.8	50.6	48.4	NA	NA	NA	NA	NA
Arsenic	9.0B*NS	33.2*NS	5.4B*N	NA	NA	NA	NA	NA
Lead	93.5	139000	71.5	160*	88.4*	184*	29.5*	686

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 8c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "E"

<u>Parameter</u>	<u>E-SS-4</u>	<u>E-SS-5</u>
Mercury	<0.02	<0.02
Silver	NA	NA
Cadmium	NA	NA
Chromium	75	55
Copper	190	300
Nickel	22	18
Zinc	NA	NA
Arsenic	NA	NA
Lead	1000	1100

NOTES:

- NA - Not analyzed
- U - Undetected at <IDL
- W - Analytical spike recovery out of range
- B - Undetected, <CRQL but >IDL
- E - Matrix interference
- N - Matrix spike out of acceptable range
- S - Performed by MSA
- +
- \* - MSA correlation coefficient <.995
- \* - Digested duplicate out of 20% RPD
- Units - (mg/kg) for all analytes



OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 9a

VOLATILE ORGANIC COMPOUNDS IN SOIL SAMPLES - AREA "F"  
(ug/kg)

COMPOUND	F-TP-9-2	F-TP-10-2	F-TP-34	F-TP-38	F-TP-42
Benzene	35,600	18,700	6,500	498,600	1,600
Ethylbenzene	111,400	92,700	18,100	3,800	5,600
Toluene	ND	ND	1,900	5,200	400
Xylenes	2,600	120,200	20,100	ND	7,000
Total BTEX	149,600	231,600	46,600	507,600	14,600
NON-TARGET COMPOUNDS					
Total	1,080,000	167,500	150,100	1,665,000	81,600

COMPOUND	F-TP-45	F-TP-48	F-TP-61	F-TP-91
Benzene	26,700	76,900	16,000	ND
Ethylbenzene	159,900	157,800	2,500	ND
Toluene	300	174,900	ND	ND
Xylenes	16,300	944,000	1,800	ND
Total BTEX	203,200	410,900	20,300	ND
NON-TARGET COMPOUNDS				
Total	260,700	5,438,600	416,300	ND

## NOTES:

ND - Not detected in sample.

J - Estimated concentration.

B - Detected in associated lab blank.

eder associates consulting engineers, p.  
OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 9b

SEMIVOLATILE ORGANICS IN SOIL SAMPLES - AREA "F"  
(ug/kg)

SEMIVOLATILE ORGANICS	F-TP-39	F-TP-40	F-TP-48	F-TP-50	F-TP-58	F-TP-9-2 (1)	F-TP-10-2
TARGET COMPOUNDS							
Naphthalene	15800	17700	15700	6500	9100	1100	53900
2-Methylnaphthalene	113900	60400	27700	59600	17800	3600	73700
Phenanthrene	10000	1800	22000	10000	4700	140	ND
Anthracene	9900	1700	3400	1500	800	ND	ND
Dibenzofuran	6700	1100	ND	2400	1400	ND	ND
Fluorene	8000	1300	4100	4700	2100	120	ND
2,4-Dinitrotoluene	7800	1400	1800	3000	2500	ND	ND
Pyrene	1600	500	6400	2300	2800	ND	ND
4-Nitrophenol	4900	1200	ND	5200	400	ND	ND
Acenaphthene	4800	500	ND	3400	500	ND	ND
Chrysene	ND (2)	ND	ND	ND	500	ND	ND
Benzo(a)anthracene	ND	ND	ND	ND	500	ND	ND
Acenaphthylene	2300	500	ND	1500	ND	ND	ND
4-Chloroaniline	ND	ND	ND	ND	500	ND	ND
o-Nitrotoluene	4100	ND	2000	ND	ND	ND	ND
m-Nitrotoluene	ND	2000	ND	ND	1000	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ND	800	5300	ND	2100	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	1900	ND	ND	ND	ND
2,4-Dinitrophenol	ND	ND	ND	ND	600	ND	ND
Isophorone	ND	2600	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	600	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND
Total	189800	93500	90300	100100	47900	4960	127600
NON-TARGET COMPOUNDS							
Total	2669300	768400	730500	872000	542000	35970	2747400

NOTES:

(1) - samples suffixed with "-2" collected in July 1990.

(2) - not detected.

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 9c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "F"

<u>Parameter</u>	<u>F-TP-33</u>	<u>F-TP-34</u>	<u>F-TP-35</u>	<u>F-TP-36</u>	<u>F-TP-37</u>	<u>F-TP-38</u>	<u>F-TP-39</u>	<u>F-TP-40</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	13.2	NA
Copper	163*N	233*N	585*N	162*N	172*N	33.1*N	270*N	132*N
Nickel	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	130	158	252	140	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA
Lead	180*	377000*	4860*	2470*	1090*	32.8*	890*	899*
<u>Parameter</u>	<u>F-TP-41</u>	<u>F-TP-42</u>	<u>F-TP-43</u>	<u>F-TP-44</u>	<u>F-TP-45</u>	<u>F-TP-46</u>	<u>F-TP-47</u>	<u>F-TP-48</u>
Mercury	0.06UN	1.9N	0.06UN	0.05UN	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	8.1	0.9B
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	45.4	34.3
Copper	310*N	247	174*N	9.2*N	61.5*N	72*N	647*N	422*N
Nickel	NA	NA	NA	NA	NA	NA	41.4	39.6
Zinc	NA	NA	NA	NA	376	115	1710	277
Arsenic	NA	NA	NA	NA	NA	NA	35.3	NA
Lead	1340	1400	764*	8.2*	268*	564*	628*	450*
<u>Parameter</u>	<u>F-TP-49</u>	<u>F-TP-50</u>	<u>F-TP-55</u>	<u>F-TP-56</u>	<u>F-TP-57</u>	<u>F-TP-58</u>	<u>F-TP-59</u>	<u>F-TP-60</u>
Mercury	NA	NA	NA	NA	NA	NA	0.26N	2.8N
Silver	6.1	7.5	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	25.4	17.4
Chromium	22.6	47.2	NA	NA	NA	NA	NA	NA
Copper	126*N	390*N	238N	763N	20.8N	153N	2230N	572N
Nickel	42.9	19.2	NA	NA	NA	NA	NA	NA
Zinc	845	525	NA	NA	NA	NA	2370	1380
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA
Lead	488*	676*	NA	NA	NA	NA	NA	NA

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 9c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "F"

<u>Parameter</u>	<u>F-TP-61</u>	<u>F-TP-62</u>	<u>B-27</u>	<u>B-28</u>	<u>F-SS-1</u>	<u>F-SS-2</u>	<u>F-SS-3</u>	<u>F-SS-6</u>	<u>F-TP-91</u>
Mercury	0.06UN	0.26N	NA	NA	8.0	10	3.7	0.1	0.03
Silver	NA	NA	NA	NA	NA	NA	NA	NA	0.45
Cadmium	1.3	10.2	NA	NA	NA	NA	NA	NA	0.85
Chromium	NA	NA	NA	NA	18	28	8.0	8.0	4.7
Copper	52.9	349N	255	206	34000	2300	4700	120	6.5
Nickel	NA	NA	NA	NA	20	13	13	8.0	7.0
Zinc	72.9	358	454	103	NA	NA	NA	NA	23
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	ND
Lead	95.5	718	547	333	320	1100	300	<u>260</u>	<u>17</u>

NOTES:

- ND - Not detected
- NA - Not analyzed
- U - Undetected at <IDL
- W - Analytical spike recovery out of range
- B - Undetected, <CRQL but >IDL
- E - Matrix interference
- N - Matrix spike out of acceptable range
- S - Performed by MSA
- +
- \* - MSA correlation coefficient <.995
- \* - Digested duplicate out of 20% RPD
- Units - (mg/kg) for all analytes

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 10a

VOLATILE ORGANIC COMPOUNDS IN SOIL SAMPLES - AREA "G"  
(ug/kg)

COMPOUND	G-TP-11-2	G-TP-12-2	G-TP-13-2	G-TP-14-2	G-TP-15-2
Benzene	42	54,000	ND	ND	49
Ethylbenzene	316	79,000	ND	ND	63
Toluene	32	ND	ND	ND	ND
Xylenes	347	120,000	ND	ND	94
Total BTEX	737	253,000	ND	ND	206
NON-TARGET COMPOUNDS					
Total	14,700	167,500	ND	11,506	11,365

COMPOUND	G-TP-16-2	G-TP-68	G-TP-70	G-TP-77	G-TP-80
Benzene	34	200	1,900	500	ND
Ethylbenzene	140	ND	10,800	3,200	300
Toluene	ND	ND	8,900	200	ND
Xylenes	290	ND	21,000	8,000	700
Total BTEX	464	200	42,600	11,900	1,000
NON-TARGET COMPOUNDS					
Total	1,155	455,200	43,000	136,400	17,700

COMPOUND	H-TP-81
Benzene	7,500
Ethylbenzene	45,300
Toluene	16,000
Xylenes	77,600
Total BTEX	146,400
NON-TARGET COMPOUNDS	
Total	439,100

## NOTES:

ND - Not detected in sample.

J - Estimated concentration.

B - Detected in associated lab blank.

H-TP-81 sample was collected in area "G", but noted as "H".

Table 10b

SEMIVOLATILE ORGANICS IN SOIL SAMPLES - AREA "G"  
 (ug/kg)

SEMIVOLATILE ORGANICS	G-TP-66	G-TP-68	G-TP-68-1 (5)	G-TP-80 (3)	G-TP-11-2 (1)	G-TP-12-2
TARGET COMPOUNDS						
Naphthalene	14000	4000	11000	ND	6500 J (3)	11140
2-Methylnaphthalene	40000	16400	41000	ND	19900 J	17800
Phenanthrene	12800	11800	8000	ND	11800	1170 J
Anthracene	2400	2000	1000	ND	3300 J	200 J
Dibenzofuran	3700	1000	4000	ND	ND	530 J
Fluorene	5800	3400	4000	ND	4700 J	600 J
2,4-Dinitrotoluene	ND (2)	5400	6000	ND	ND	ND
Pyrene	5200	6300	2000	ND	6400 J	430 J
4-Nitrophenol	600	1000	1000	ND	ND	ND
Acenaphthene	1700	1000	1000	ND	ND	ND
Chrysene	1100	1900	800	ND	ND	ND
Benzo(a)anthracene	900	1900	800	ND	ND	ND
Acenaphthylene	1000	400	ND	ND	ND	ND
4-Chloroaniline	800	ND	1000	ND	ND	ND
O-Nitrotoluene	ND	500	2000	ND	ND	ND
M-Nitrotoluene	1000	ND	4000	ND	ND	ND
Nitrobenzene	ND	1500	1000	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND
Fluoranthene	600	700	ND	ND	ND	ND
Benzo(a)pyrene	ND	1200	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	800	1200	900	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	500	5700	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	500	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	2200	6000	ND	ND	ND
Total	92900	70000	95500	ND	52600	31670
NON-TARGET COMPOUNDS						
Total	953300	1305000	1286900	792000	1262500	219440

NOTES:

- (1) - samples suffixed with "-2" collected in July 1990.
- (2) - not detected.
- (3) - value is estimated if compound is present < CRQL.
- (4) - sample was collected in area "G", but noted as "H".
- (5) - samples G-TP-68 and G-TP-68-1 were collected at different depths.

OLD BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO

Table 10c

SELECTED METALS ANALYSIS  
FROM UNIQUE SOIL SAMPLES IN AREA "G"

<u>Parameter</u>	<u>G-TP-66</u>	<u>G-TP-67</u>	<u>G-TP-68</u>	<u>G-TP-69</u>	<u>G-TP-70</u>	<u>G-TP-71</u>	<u>G-TP-72</u>	<u>G-TP-73</u>
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	36.7	3.3	0.4B	1.5	NA	NA	NA	NA
Chromium	20.0	16.4	16.3	14.2	97.0	16.7B	17.6	17.6
Copper	992N	101N	7.1N	38.8N	20100*N	18900*N	412*N	17.6*N
Nickel	14.5	9.9	9.2	8.2	41.2	13U	10.4	12.5
Zinc	985	671	33.7	80.9	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA
Lead	1260	336	19.6	78.3	34900N	18600N	1700N	29.9N
<u>Parameter</u>	<u>G-TP-74</u>	<u>G-TP-75</u>	<u>G-TP-76</u>	<u>G-TP-77</u>	<u>G-TP-78</u>	<u>G-TP-79</u>	<u>G-TP-80</u>	<u>H-TP-81</u>
Mercury	NA	NA	NA	0.06UN	NA	NA	NA	NA
Silver	NA	NA	NA	2.5	NA	NA	NA	NA
Cadmium	2U	24.1	1.5	0.3B*N	NA	NA	NA	NA
Chromium	NA	NA	NA	16.9	18.3	16.9	13.7	NA
Copper	19.6B*N	693*N	199*N	13.0*N	NA	NA	NA	NA
Nickel	23.5B	9.1	NA	7.7	NA	NA	NA	NA
Zinc	NA	NA	79.2N	41.3N	NA	NA	NA	NA
Arsenic	NA	NA	NA	29.9*NS	NA	NA	NA	NA
Lead	14.5N	1200N	2090N	18.4N	NA	NA	NA	NA
<u>Parameter</u>	<u>H-TP-82</u>	<u>G-SS-7</u>	<u>G-SS-8</u>	<u>G-SS-9</u>				
Mercury	NA	0.03	0.15	0.09				
Silver	NA	NA	NA	NA				
Cadmium	NA	NA	NA	NA				
Chromium	NA	9.5	7.0	89.5				
Copper	NA	3100	2000	800				
Nickel	NA	16	12	8.5				
Zinc	NA	NA	NA	NA				
Arsenic	NA	NA	NA	NA				
Lead	NA	3800	24000	800				

Table 11

## Results of Comparative Metals Sampling

Sample Location	Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver	
	Eder 1990	GCL 1996	Eder 1990	GCL 1996	Eder 1990	GCL 1996	Eder 1990	GCL 1996	Eder 1990	GCL 1996	Eder 1990	GCL 1996	Eder 1990	GCL 1996	Eder 1990	GCL 1996
B-1	169	11	NA	146	44.4*N	ND	NA	13	1500N	154	NA	ND	NA	ND	NA	ND
B-HA-4	5.98*NS	10	NA	142	4.7*N	0.9	860	9	2830N	75	0.41N	ND	NA	ND	4.9	ND
E-TP-26	32.2NS	31	NA	167	NA	2.5	NA	12	139000	18300	0.16N	4.48	NA	ND	NA	ND
E-SS-4	NA	30	NA	95	NA	4.8	75	14	1000	1170	ND	1.66	NA	ND	NA	ND
F-TP-34	NA	15	NA	165	NA	1	NA	13	377000*	83	NA	0.11	NA	ND	NA	ND
F-SS-6	NA	58	NA	101	NA	11.9	8	13	260	1500	0.1	0.31	NA	10	NA	ND
G-SS-8	NA	13	NA	119	NA	0.8	7.0	9	24000	36	0.15	ND	NA	10	NA	3
G-TP-70	NA	65	NA	533	NA	8.6	97.0	104	34900N	7200	NA	2.23	NA	20	NA	ND

## Background

BG-1 (GCL 1996)	42	102	9.2	11	292	0.12	ND	ND
BG-2 (GCL 1996)	14	102	1.8	8	103	ND	ND	ND
NMEID (Lab SLD)	NA	77	NA	9	150	ND	NA	ND
NMEID (Lab AT)	71	NA	4.2	3	182	0.05	NA	1.2
NMEID (Lab IT)	NA	NA	NA	4.3	160	NA	0.8	NA
USGS Western US	<.01 - 97	NR	NR	3 - 2000	<10 - 700	<.01 - 4.6	NR	NR
Eder	<1.4	NA	0.9 - 5.5	7.5 - 23	6 - 270	<0.02 - 0.11	<1.3	<0.25 - 1.2

All Units are mg/Kg

NA = Not Analyzed

NR = Not Recorded

ND = Not Detected

N = Matrix spike out of acceptable range

\* = Digested duplicate out of 20% RPD (relative percent difference)

S = Performed by method of standard additions (MSA)

NMEID background data from **NMEID Listing Site Inspection, January 16, 1990.**

USGS Western US background data from **Shaklette, H.T. et. al, 1971**



Table 12  
Free Phase Hydrocarbon Thickness in Monitoring Wells and Well Points  
(feet)

Well ID	Sept. 93	Dec. 93	Mar. 94	Jul. 94	Sept. 94	Dec. 94	Mar. 95	Jun. 95
MW-1	-	-	NP	NP	NP	NP	-	NP
MW-2	-	-	NP	NP	NP	NP	-	NP
MW-3S	-	-	NP	NP	NP	NP	NP	NP
MW-3D	-	-	NP	NP	NP	NP	NP	NP
MW-4	-	-	NP	NP	NP	NP	NP	NP
MW-5	-	-	NP	NP	NP	NP	NP	NP
MW-6S	-	-	NP	NP	NP	NP	NP	NP
MW-6D	-	-	NP	NP	NP	NP	NP	NP
MW-7	-	-	NP	NP	NP	NP	NP	NP
MW-8	-	-	NP	NP	NP	NP	NP	NP
MW-9S	-	-	NP	NP	NP	NP	NP	NP
MW-10	5.42	3.58	-	3.45	2.40	2.46	-	2.29
MW-11	-	-	NP	NP	0.05	-	-	0.16
MW-12	-	-	NP	NP	NP	NP	-	NP
MW-13	-	-	-	NP	NP	NP	-	NP
MW-14	-	-	-	NP	NP	NP	NP	NP
MW-15	-	-	-	NP	NP	NP	NP	NP
MW-16	-	-	-	NP	NP	NP	NP	NP
MW-17	-	-	-	NP	NP	NP	NP	NP
WP-1	-	-	-	NP	NP	NP	-	0.16
WP-2	-	-	-	NP	NP	NP	-	NP
WP-3	-	-	-	NP	NP	NP	-	NP
WP-4	-	-	-	NP	NP	NP	-	NP
WP-5	-	-	-	NP	NP	NP	-	NP
WP-6	-	-	-	NP	NP	NP	-	NP
WP-7	-	-	-	NP	NP	NP	-	Trace
WP-8	-	-	-	NP	NP	NP	-	NP
WP-9	0.01	-	-	NP	NP	NP	-	NP
WP-10	-	-	-	NP	0.20	Dry	-	NP
WP-11	0.01	-	-	NP	Dry	Dry	-	Thick
WP-12	-	-	-	NP	Dry	-	-	NP

Table 12 (Cont'd)  
Free Phase Hydrocarbon Thickness in Monitoring Wells and Well Points  
(feet)

Well ID	Sept. 93	Dec. 93	Mar. 94	Jul. 94	Sept. 94	Dec. 94	Mar. 95	Jun. 95
WP-13	-	-	-	NP	NP	NP	-	NP
WP-14	-	-	-	NP	Tar	-	-	0.14
WP-15	-	-	-	NP	NP	NP	-	NP
WP-16	-	-	-	NP	In Silt	In Silt	-	NP
WP-17	-	-	-	NP	Dry	Dry	-	NP
WP-18	-	-	-	NP	NP	NP	-	NP
WP-19	-	0.01	-	NP	NP	NP	-	NP
WP-20	-	-	-	NP	Product	NP	-	NP
WP-21	-	-	-	NP	NP	NP	-	NP
WP-22	-	-	-	NP	NP	NP	-	NP
WP-23	-	-	-	NP	NP	NP	-	NP
WP-24	-	-	-	NP	NP	NP	-	NP
WP-25	0.05	0.05	-	0.22	Product	0.20	-	1.56
WP-26S	-	0.12	-	2.20	2.59	1.53	-	NP
WP-26D	-	-	-	NP	NP	NP	-	NP
WP-27S	-	-	-	NP	NP	NP	-	Trace
WP-27D	-	-	-	0.11	0.45	0.49	-	Trace
WP-28	-	-	-	NP	NP	NP	-	NP
WP-29	-	-	-	NP	NP	NP	-	NP
WP-30	-	-	-	NP	NP	NP	-	NP
WP-31	-	-	-	NP	NP	NP	-	NP
WP-32	-	-	-	Dry	Dry	Dry	-	Dry
WP-33	-	-	-	NP	NP	NP	-	NP
WP-34	-	-	-	NP	NP	NP	-	NP
WP-35	-	-	-	NP	NP	NP	-	NP
WP-36	-	-	-	NP	NP	NP	-	NP
WP-37	-	-	-	NP	NP	NP	-	NP

Notes: NP = Not present.  
- = Not measured.

**Table 13**  
**Brickland Refinery Site**  
**Quarterly Analytical Results**  
(All results in µg/L except TPH in mg/L)

**MW-1**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	ND	ND	1.3	ND	ND	NS	NS	NS
Toluene	750	0.1 µg/L	ND	ND	ND	ND	ND	NS	NS	NS
Ethyl Benzene	750	0.5 µg/L	ND	ND	ND	ND	ND	NS	NS	NS
Xylenes	620	0.5 µg/L	ND	ND	ND	ND	ND	NS	NS	NS
TPH	None	0.1 mg/L	0.1	ND	NA	NA	NA	NS	NS	NS

**MW-2**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	NS	ND	ND	ND	ND	NS	NS	NS
Toluene	750	0.1 µg/L	NS	18	ND	ND	ND	NS	NS	NS
Ethyl Benzene	750	0.5 µg/L	NS	3.2	ND	ND	ND	NS	NS	NS
Xylenes	620	0.5 µg/L	NS	49	ND	ND	ND	NS	NS	NS
TPH	None	0.1 mg/L	NS	0.5	NA	NA	NA	NS	NS	NS

**MW-3S**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/25/94	07/12/94	09/28/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	ND	ND	0.8	ND	ND	ND	ND	ND
Toluene	750	0.1 µg/L	ND	4.9	ND	ND	ND	ND	ND	ND
Ethyl Benzene	750	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	620	0.5 µg/L	ND	18	ND	ND	ND	ND	ND	ND
TPH	None	0.1 mg/L	0.1	ND	NA	NA	NA	NA	NA	NA

**Table 13**  
**Brickland Refinery Site**  
**Quarterly Analytical Results**  
 (All results in µg/L except TPH in mg/L)

**MW-3D**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	07/12/94	09/28/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	ND	ND	0.6	ND	ND	ND	ND	ND
Toluene	750	0.1 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	750	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	620	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
TPH	None	0.1 mg/L	0.1	ND	NA	NA	NA	NA	NA	NA

**MW-4**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	NS	130,110	1800	2000	220	220	NS	2200
Toluene	750	0.1 µg/L	NS	ND,ND	12	ND	ND	ND	NS	ND
Ethyl Benzene	750	0.5 µg/L	NS	2.5,1.6	50	ND	ND	6	NS	ND
Xylenes	620	0.5 µg/L	NS	ND,ND	ND	ND	ND	ND	NS	ND
TPH	None	0.1 mg/L	NS	ND,ND	NA	NA	NA	NA	NS	NA

**MW-5**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/24/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	9/25/95
Benzene	10	0.5 µg/L	NS	7100	5000,4200	5600	4600	4700	NS	4400
Toluene	750	0.1 µg/L	NS	160	ND,ND	ND	84	100	NS	ND
Ethyl Benzene	750	0.5 µg/L	NS	53	ND,ND	ND	ND	70	NS	ND
Xylenes	620	0.5 µg/L	NS	420	130,130	160	140	280	NS	ND
TPH	None	0.1 mg/L	NS	12	NA,NA	NA	NA	NA	NS	NA

**Table 13**  
**Brickland Refinery Site**  
**Quarterly Analytical Results**  
 (All results in µg/L except TPH in mg/L)

**MW-6S**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/25/94	07/12/94	09/28/94	12/13/94	03/28/95	06/21/95	9/25/95
Benzene	10	0.5 µg/L	71	74	110	4.8	59	110	NS	180
Toluene	750	0.1 µg/L	ND	ND	ND	2.8	ND	7	NS	120
Ethyl Benzene	750	0.5 µg/L	52	12	30	34	ND	32	NS	ND
Xylenes	620	0.5 µg/L	ND	7.6	88	16	ND	43	NS	30
TPH	None	0.1 mg/L	2.9	1.8	NA	NA	NA	NA	NS	NA

**MW-6D**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	07/12/94	09/28/94	12/13/94	03/28/95	06/21/95	9/25/95
Benzene	10	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND,ND
Toluene	750	0.1 µg/L	ND	ND	ND	ND	ND	ND	ND	ND,ND
Ethyl Benzene	750	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND,ND
Xylenes	620	0.5 µg/L	ND	1.6	ND	ND	ND	ND	ND	ND,ND
TPH	None	0.1 mg/L	0.1	ND	NA	NA	NA	NA	NA	NA

**MW-7**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/24/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	NS	31	ND	ND	36	100	NS	4.9
Toluene	750	0.1 µg/L	NS	ND	ND	ND	ND	ND	NS	ND
Ethyl Benzene	750	0.5 µg/L	NS	2.1	ND	3.6	ND	ND	NS	ND
Xylenes	620	0.5 µg/L	NS	0.6	3.2	1.3	ND	ND	NS	ND
TPH	None	0.1 mg/L	NS	ND	NA	NA	NA	NA	NS	NA

**Table 13**  
**Brickland Refinery Site**  
**Quarterly Analytical Results**  
**(All results in µg/L except TPH in mg/L)**

**MW-8**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/24/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	9/25/95
Benzene	10	0.5 µg/L	NS	9600	2400	13000	5300	14000	NS	13000
Toluene	750	0.1 µg/L	NS	ND	ND	ND	ND	ND	NS	300
Ethyl Benzene	750	0.5 µg/L	NS	ND	ND	ND	ND	ND	NS	ND
Xylenes	620	0.5 µg/L	NS	720	ND	ND	140	1100	NS	800
TPH	None	0.1 mg/L	NS	ND	NA	NA	NA	NA	NS	NA

**MW-9S**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/25/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	750	0.1 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	750	0.5 µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	620	0.5 µg/L	ND	ND	0.6	ND	ND	0.6	ND	ND
TPH	None	0.1 mg/L	0.1	ND	NA	NA	NA	NA	NA	NA

**MW-11**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/25/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	9/25/95
Benzene	10	0.5 µg/L	NS	120	ND	15	15	0.6	NS	80
Toluene	750	0.1 µg/L	NS	0.7	ND	2.3	ND	ND	NS	ND
Ethyl Benzene	750	0.5 µg/L	NS	4.7	ND	8.9	ND	ND	NS	ND
Xylenes	620	0.5 µg/L	NS	4.4	ND	9.4	2.5	ND	NS	10
TPH	None	0.1 mg/L	NS	1.0	ND	NA	NA	NA	NS	NA

**Table 13**  
**Brickland Refinery Site**  
**Quarterly Analytical Results**  
 (All results in µg/L except TPH in mg/L)

**MW-12**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	06/27/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	ND	ND	1.9	ND	ND	15	NS	NS
Toluene	750	0.1 µg/L	ND	ND	ND	ND	ND	ND	NS	NS
Ethyl Benzene	750	0.5 µg/L	ND	ND	ND	ND	ND	ND	NS	NS
Xylenes	620	0.5 µg/L	ND	ND	ND	ND	ND	ND	NS	NS
TPH	None	0.1 mg/L	0.1	ND	ND	NA	NA	NA	NS	NS

**MW-14**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	07/12/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	--	--	23000	2900	930	1100	NS	5.7
Toluene	750	0.1 µg/L	--	--	ND	ND	ND	ND	NS	ND
Ethyl Benzene	750	0.5 µg/L	--	--	ND	ND	ND	25	NS	ND
Xylenes	620	0.5 µg/L	--	--	ND	ND	ND	ND	NS	ND
TPH	None	0.1 mg/L	--	--	NA	NA	NA	NA	NS	NA

**MW-15**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	06/28/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	--	--	34	270	290	NA	NS	90
Toluene	750	0.1 µg/L	--	--	ND	ND	ND	NA	NS	ND
Ethyl Benzene	750	0.5 µg/L	--	--	13	21	ND	NA	NS	ND
Xylenes	620	0.5 µg/L	--	--	13	60	ND	NA	NS	ND
TPH	None	0.1 mg/L	--	--	NA	NA	NA	NA	NS	NA

**Table 13**  
**Brickland Refinery Site**  
**Quarterly Analytical Results**  
**(All results in µg/L except TPH in mg/L)**

**MW-16**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	06/28/94	09/27/94	12/13/94	03/28/95	06/21/95	9/25/95
Benzene	10	0.5 µg/L	--	--	ND,ND	ND	ND	ND	ND	ND
Toluene	750	0.1 µg/L	--	--	ND,ND	ND	ND	ND	ND	ND
Ethyl Benzene	750	0.5 µg/L	--	--	ND,ND	ND	ND	ND	ND	ND
Xylenes	620	0.5 µg/L	--	--	2,11	ND	ND	ND	ND	ND
TPH	None	0.1 mg/L	--	--	NA	NA	NA	NA	NA	NA

**MW-17**

Parameter	WQCC Std.	Detection Limit	12/08/93	03/23/94	06/28/94	09/27/94	12/13/94	03/28/95	06/21/95	09/26/95
Benzene	10	0.5 µg/L	--	--	17	46,68	460	67	NS	390
Toluene	750	0.1 µg/L	--	--	ND	21,25	ND	ND	NS	ND
Ethyl Benzene	750	0.5 µg/L	--	--	19	35,41	10	ND	NS	ND
Xylenes	620	0.5 µg/L	--	--	30	8,9.2	10	ND	NS	ND
TPH	None	0.1 mg/L	--	--	NA	NA	NA	NA	NS	NA

Notes: -- = Well did not exist

NA = Not available

ND = Not detected

NS = Not sampled

TPH = Total petroleum hydrocarbon

µg/L = Micrograms per liter

mg/L = Milligrams per liter



**Table 14**  
**Results of Surface Water Sampling for BTEX from the Rio Grande**

Well ID	Mar. 94	June 94	Sept. 94	Dec. 94	Mar. 95	June 95
US MW-12					ND	ND
DS MW-3D					ND	ND
DS MW-6D					ND	ND
DS MW-9D						ND

Table 15

## Results of Sediment Sampling from the Rio Grande

Location	Benzene	Toluene	Ethylbenzene	Xylenes
SS-1	ND	ND	ND	ND
SS-2	ND	ND	ND	ND
SS-3	ND	ND	ND	ND
SS-4	ND	ND	ND	1
SS-5	ND	ND	ND	ND
SS-6	ND	ND	ND	ND
SS-7	ND	ND	ND	ND
SS-8	ND	ND	ND	ND
SS-9	ND	ND	ND	ND
SS-10	ND	ND	ND	ND
SS-11	ND	ND	ND	ND
SS-12	ND	ND	ND	ND
SS-13	ND	ND	ND	ND
SS-14	ND	ND	ND	ND
SS-15	ND	ND	ND	ND
SS-16	ND	ND	ND	ND
SS-17	ND	ND	ND	ND
SS-18	ND	ND	ND	ND
SS-19	ND	ND	ND	ND
SS-20	ND	ND	ND	ND

Units are in  $\mu\text{g/L}$ 

ND = Not Detected

\\Rexwork\trivsed.xls

**Table 16**  
**Results of Metals Analyses Based on Quarterly Sampling of Monitoring Wells**

Well ID	Sample Date	Aluminum	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
NM WQCC Std.		5.0	0.1	1.0	0.01	0.05	0.05	1.0	1.0	0.05	0.2	0.002	1.00	0.2	0.05	0.1	10.0
MW-1	Dec-93	NA	0.07	0.14	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-1	Mar-94	NA	0.07	0.11	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-1	Jun-94	1.2	ND	0.18	ND	ND	ND	0.01	1.96	ND	1.42	ND	ND	ND	ND	ND	0.01
MW-1	Sep-94	0.11	ND	0.13	ND	ND	ND	ND	0.08	ND	1.12	ND	ND	ND	0.1	ND	ND
MW-1	Dec-94	0.10	ND	0.12	ND	ND	ND	0.02	0.03	ND	0.21	0.0002	ND	ND	ND	ND	ND
MW-2	Mar-94	NA	ND	0.01	ND	0.01	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-2	Jun-94	ND	ND	ND	ND	ND	ND	ND	1.83	ND	7.47	ND	ND	ND	ND	ND	ND
MW-2	Sep-94	0.12	0.05	0.03	ND	ND	ND	ND	0.05	ND	8.07	ND	ND	ND	ND	ND	0.03
MW-2	Dec-94	ND	ND	ND	ND	ND	ND	0.01	0.18	ND	1.95	ND	ND	ND	ND	ND	ND
MW-3D	Dec-93	NA	ND	0.04	ND	ND	ND	0.02	NA	ND	NA	ND	ND	0.04	0.1	ND	0.01
MW-3D	Mar-94	NA	ND	0.04	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-3D	Jun-94	0.23	ND	0.04	ND	ND	ND	ND	2.41	ND	3.25	ND	ND	ND	ND	ND	ND
MW-3D	Sep-94	0.1	ND	0.06	ND	ND	ND	ND	0.1	ND	2.75	ND	ND	ND	ND	0.01	0.02
MW-3D	Dec-94	0.09	ND	0.04	0.006	ND	ND	0.01	0.08	ND	1.27	ND	ND	ND	ND	ND	ND
MW-3S	Dec-93	NA	ND	0.08	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	0.1	ND	NA
MW-3S	Mar-94	NA	ND	0.08	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-3S	Jun-94	2.32	ND	0.13	ND	ND	ND	0.01	3.91	ND	1.12	ND	ND	ND	ND	ND	0.09
MW-3S	Sep-94	0.19	0.08	0.08	ND	ND	ND	ND	0.16	ND	0.51	ND	ND	ND	ND	ND	ND
MW-3S	Dec-94	0.13	ND	0.08	ND	ND	ND	0.01	0.12	ND	0.06	ND	ND	ND	ND	ND	ND
MW-4	Mar-94	NA	0.07	0.05	ND	0.01	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-4	Jun-94	ND	ND	0.2	ND	ND	ND	ND	1.78	ND	3.21	ND	ND	ND	ND	ND	ND
MW-4	Sep-94	0.11	0.11	0.39	ND	ND	ND	ND	0.86	ND	3.21	ND	ND	ND	ND	ND	0.01
MW-4	Dec-94	0.12	ND	0.17	ND	ND	ND	ND	1.99	ND	2.43	ND	ND	ND	ND	ND	ND
MW-5	Mar-94	NA	ND	0.31	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	0.1	ND	ND
MW-5	Jun-94	ND	ND	0.25	ND	ND	ND	ND	0.06	ND	0.01	ND	ND	ND	ND	ND	ND
MW-5	Sep-94	0.12	0.08	0.18	ND	ND	ND	ND	0.17	ND	0.03	ND	ND	ND	ND	ND	0.02
MW-5	Dec-94	0.06	0.13	0.22	ND	ND	ND	ND	0.09	ND	0.03	ND	ND	ND	ND	ND	ND

**Table 16 (Continued)**  
**Results of Metals Analyses Based on Quarterly Sampling of Monitoring Wells**

Well ID	Sample Date	Aluminum	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
NM WQCC Std		5.0	0.1	1.0	0.01	0.05	0.05	1.0	1.0	0.05	0.2	0.002	1.00	0.2	0.05	0.1	10.0
MW-6D	Dec-93	NA	ND	0.05	0.029	ND	ND	0.02	NA	ND	NA	ND	ND	0.04	ND	ND	0.02
MW-6D	Mar-94	NA	ND	0.02	ND	ND	ND	ND	NA	ND	NA	ND	ND	0.04	ND	ND	ND
MW-6D	Jun-94	0.06	ND	0.03	ND	ND	ND	ND	1.30	ND	4.20	ND	ND	ND	ND	ND	ND
MW-6D	Sep-94	0.09	ND	0.05	ND	ND	ND	ND	0.28	ND	3.1	ND	ND	ND	ND	ND	0.02
MW-6D	Dec-94	0.07	ND	0.03	ND	ND	ND	0.01	0.11	ND	2.19	ND	ND	ND	ND	ND	ND
MW-6S	Dec-93	NA	ND	0.04	ND	ND	ND	0.02	NA	ND	NA	ND	ND	0.04	0.1	ND	0.01
MW-6S	Mar-94	NA	0.27	1.07	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-6S	Jun-94	0.08	0.08	1.16	ND	ND	ND	ND	4.78	ND	1.08	ND	ND	ND	ND	ND	ND
MW-6S	Sep-94	0.1	0.48	0.98	ND	ND	ND	ND	4.68	ND	0.59	0.0003	ND	ND	ND	0.01	0.02
MW-6S	Dec-94	0.08	0.08	0.73	ND	ND	ND	ND	1.88	ND	0.46	ND	ND	ND	ND	ND	0.01
MW-7	Mar-94	NA	0.08	0.22	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	0.01
MW-7	Jun-94	0.07	ND	0.35	ND	ND	ND	ND	1.92	ND	0.80	ND	ND	ND	ND	0.01	ND
MW-7	Sep-94	0.11	0.28	0.36	ND	ND	ND	ND	0.97	ND	0.87	0.0005	ND	ND	ND	ND	ND
MW-7	Dec-94	0.10	ND	0.41	ND	ND	ND	ND	0.45	ND	0.64	0.0006	ND	ND	ND	ND	ND
MW-8	Mar-94	NA	0.22	0.52	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	0.2	ND	0.01
MW-8	Jun-94	0.12	0.08	0.70	ND	ND	ND	0.01	5.79	ND	0.23	ND	ND	ND	ND	ND	0.02
MW-8	Sep-94	0.21	0.18	0.74	ND	ND	ND	0.01	5.1	ND	0.18	ND	ND	ND	ND	0.01	0.03
MW-8	Dec-94	0.19	0.14	0.68	ND	ND	ND	0.02	2.06	ND	0.18	ND	ND	ND	ND	ND	ND
MW-9S	Dec-93	NA	ND	0.07	0.014	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	0.01
MW-9S	Mar-94	NA	ND	0.04	ND	ND	ND	ND	NA	ND	NA	0.0002	ND	ND	ND	ND	ND
MW-9S	Jun-94	ND	ND	0.04	ND	ND	ND	ND	4.80	ND	3.20	ND	ND	ND	ND	ND	ND
MW-9S	Sep-94	0.12	ND	0.06	0.006	ND	ND	ND	4.66	ND	3.11	ND	ND	ND	ND	0.01	0.01
MW-9S	Dec-94	0.06	ND	0.04	0.005	ND	ND	ND	2.25	ND	2.30	ND	ND	ND	ND	ND	ND
MW-11	Mar-94	NA	0.1	1.0	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-11	Jun-94	0.10	0.07	1.10	0.009	ND	ND	0.01	4.68	ND	0.67	ND	ND	ND	ND	0.01	0.01
MW-11	Sep-94	0.12	0.15	1.03	0.009	ND	ND	ND	4.27	ND	0.75	0.0003	ND	ND	ND	ND	0.01
MW-11	Dec-94	0.09	0.05	0.84	ND	ND	ND	ND	1.58	ND	0.51	ND	ND	ND	ND	ND	ND

**Table 16 (Continued)**  
**Results of Metals Analyses Based on Quarterly Sampling of Monitoring Wells**

Well ID	Sample Date	Aluminum	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
NM WQCC Std.		5.0	0.1	1.0	0.01	0.05	0.05	1.0	1.0	0.05	0.2	0.002	1.00	0.2	0.05	0.1	10.0
MW-12	Dec-93	NA	ND	0.04	0.005	ND	ND	ND	NA	ND	NA	ND	ND	0.05	ND	0.03	ND
MW-12	Mar-94	NA	0.08	0.03	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	0.2	ND	0.02
MW-12	Jun-94	ND	ND	0.02	ND	ND	ND	ND	3.89	ND	5.90	ND	ND	ND	ND	ND	0.01
MW-12	Sep-94	0.23	ND	0.11	0.009	0.05	ND	0.01	5.85	ND	10.8	ND	0.05	ND	0.4	0.03	0.04
MW-12	Dec-94	0.08	ND	0.03	ND	ND	ND	0.02	1.10	ND	6.18	ND	ND	ND	ND	ND	ND
MW-14	Jun-94	ND	0.05	0.67	ND	ND	ND	ND	4.78	ND	4.13	ND	ND	0.07	ND	ND	ND
MW-14	Sep-94	0.2	0.17	0.78	ND	ND	ND	ND	13.1	ND	7.59	0.0009	ND	ND	ND	0.02	0.02
MW-14	Dec-94	0.08	ND	0.22	ND	ND	ND	ND	10.3	ND	5.46	0.0024	ND	ND	ND	ND	ND
MW-15	Jun-94	0.32	ND	0.28	ND	ND	ND	ND	0.52	ND	1.06	ND	ND	ND	ND	ND	ND
MW-15	Sep-94	0.42	0.14	0.78	ND	ND	ND	ND	2.33	ND	2.9	ND	ND	ND	ND	0.02	0.01
MW-15	Dec-94	0.36	ND	0.38	ND	ND	ND	ND	3.69	ND	1.66	ND	ND	ND	ND	0.09	ND
MW-16	Jun-94	ND	ND	0.31	ND	ND	ND	ND	ND	ND	2.77	ND	ND	ND	ND	ND	ND
MW-16	Sep-94	0.12	0.05	0.09	ND	ND	ND	ND	2.05	ND	5.21	ND	ND	0.06	ND	ND	0.02
MW-16	Dec-94	0.11	ND	0.07	ND	ND	ND	ND	1.70	ND	4.15	ND	ND	0.05	ND	ND	ND
MW-17	Jun-94	0.05	ND	1.24	ND	ND	ND	ND	0.21	ND	3.16	ND	ND	0.05	ND	ND	ND
MW-17	Sep-94	0.22	0.16	2.11	ND	ND	0.03	ND	9.7	ND	8.48	ND	ND	ND	ND	0.02	0.02
MW-17	Dec-94	0.10	ND	0.42	ND	ND	ND	ND	8.47	ND	3.37	ND	ND	ND	ND	ND	ND

NMWQCC = New Mexico Water Quality Control Commission

Note: ND = Not Detected

NA = Not Analyzed

All units are in milligrams per liter (mg/L)

**Table 17**

**Analyses of Aquifer Slug Test Using Bouwer-Rice Method**

PVC Casing radius, $r_c$ =	0.167 ft
Wellbore radius, $r_w$ =	0.5 ft
Saturated Aquifer Thickness, $b$ =	80 ft
Screen Length, $L$ =	10 ft
Gravel Pack Porosity, $n$ =	0.27
Conductivity ratio, $K_z/K_r$ =	1

Well Name	Lithologic Description	$H_o$ ft	$H$ ft	$Y_o$ ft	$K$ ft/min
MW-6D-F	70% sand, 15% gravel sand, 15% silty clay	0.86	32.60	1.48	0.07000
MW-6D-R	70% sand, 15% gravel sand, 15% silty clay	1.69	32.60	3.65	0.07000
MW-3D-F	60% sand, 20% silty sand, 20% gravel sand	0.98	33.43	1.43	0.04500
MW-9S-R	75% sand, 25% sandy gravel	1.66	11.39	2.10	0.04200
MW-9S-F	75% sand, 25% sandy gravel	1.68	11.39	1.90	0.04000
MW-10-R	90% sand, 10% sandy clay	2.22	12.48	1.79	0.00400
MW-3S-F	90% sand, 10% silty sand	1.64	12.59	1.55	0.00150
MW-6S-F	100% sand	1.78	11.89	1.40	0.00090
MW-6S-R	100% sand	1.80	11.89	1.67	0.00086
MW-1-F	50% silty clay, 50% silty sand	1.94	12.26	1.81	0.00069
MW-11-F	50% sand, 50% silty clay	1.77	14.94	1.23	0.00034
MW-5-F	60% sand, 40% silty clay	1.68	10.65	0.95	0.00010
MW-8-F	100% silty clay	2.08	11.25	0.78	0.00008

Notes:

- D - deep well,
- S - shallow well,
- F - falling-head test,
- R - rising-head test,
- $H_o$  - initial displacement,
- $H$  - static water column height in well,
- $Y_o$  - intersection with y axis.
- $K$  - conductivity.

Table 18

Estimated Downstream Benzene Concentrations (Ct) in the Rio Grande

Parameter	Current Conditions			Future Conditions Realistic Case			Future Conditions Worst Case		
	Low Flow	Avg Flow	High Flow	Low Flow	Avg Flow	High Flow	Low Flow	Avg Flow	High Flow
Qa (cfs)	0.0011	0.0011	0.0011	0.0021	0.0021	0.0021	0.0011	0.0011	0.0011
K (ft/day)	14	14	14	14	14	14	14	14	14
i (ft/ft)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
A (ft <sup>2</sup> )	6,750	6,750	6,750	12,750	12,750	12,750	6,750	6,750	6,750
flow width	450	450	450	850	850	850	450	450	450
flow depth	15	15	15	15	15	15	15	15	15
Ca (ppb)	MW-6S = 220			Total Ca for the model cells = 31,780 (individual model cells Ca: 30 to 4,700)			MW-10 = 125,000 (Benzene concentration in free product)		
Qr (cfs) <sup>a</sup>	68	630	2,400	68	630	2,400	68	630	2,400
Ct (ppb)	0.0036	0.0004	0.0001	0.981	0.106	0.028	2.022	0.218	0.057

<sup>a</sup> Low, average, and high river flow rates were taken from recording years 1975 through 1995 at Courchesne Bridge gaging station (IBWC, 1996).

Table 19

## Comparison of Background Soil Samples with Culvert Soil Samples

Sample Location	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
Background													
BG-1 (GCL 1996)	NA	42	NA	9.2	11	NA	292	0.12	NA	ND	ND	NA	NA
BG-2 (GCL 1996)	NA	14	NA	1.8	8	NA	103	ND	NA	ND	ND	NA	NA
NMEID (Lab SLD)	NA	NA	NA	NA	9	NA	150	ND	NA	NA	ND	NA	NA
NMEID (Lab AT)	NA	71	NA	4.2	3	NA	182	0.05	NA	NA	1.2	NA	NA
NMEID (Lab IT)	NA	NA	NA	NA	4.3	NA	160	NA	NA	0.8	NA	NA	NA
MW-12	< 1.1	< 1.4	2.2	5.5	11	140	270	0.11	8	< 1.3	< 0.25	< 0.65	180
USGS Western US	< 1-2.6	< 0.1-97	< 1-13	NR	3-2000	2-300	< 10-700	< 0.01-4.6	< 5-700	NR	NR	2.4-31	< 20-1500
NURE													

## Culverts

Cul 4-1	< 1.1	< 1.4	0.9	4.2	23	90	75	0.04	10	< 1.3	0.9	< 0.65	120
Cul 3-1	< 1.1	< 1.4	0.7	0.9	7.5	6	6	< 0.02	5	< 1.3	< 0.25	< 0.65	21
Cul 3-2	< 1.1	< 1.4	1.6	2.3	12	13	8	< 0.02	9.5	< 1.3	< 0.25	< 0.65	30

## Standards

New Jersey*	340	20 (a)	1 (b)	100	NA	600 (d)	600 (f)	270	2400 (c)(e)	3100 (e)	4100 (e)	2 (b)	1500 (d)
US EPA**	30	80	0.2	40	400	NA	NA	20	2000	NA	200	NA	NA

All Units are mg/Kg

NA = Not Analyzed

ND = Not Detected

NR = Not Recorded

a) cleanup standard proposal was based on natural background.

b) health based criterion is lower than analytical limits; cleanup criterion based on practical quantitative level.

c) criterion based on inhalation exposure pathway which yielded a more stringent criterion than the incidental ingestion exposure pathway.

d) criterion based on ecological (phytotoxicity) effects.

e) level of the human health based criterion is such that evaluation for potential environmental impacts on a site by site basis is recommended.

f) criterion was derived from a model developed by the Society of Environmental Geochemistry and Health and was designed to be protective for adults in the workplace.

NMEID background data from NMEID Listing Site Inspection, January 16, 1990.

USGS Western US background data from Shaklette, H.T. et. al, 1971

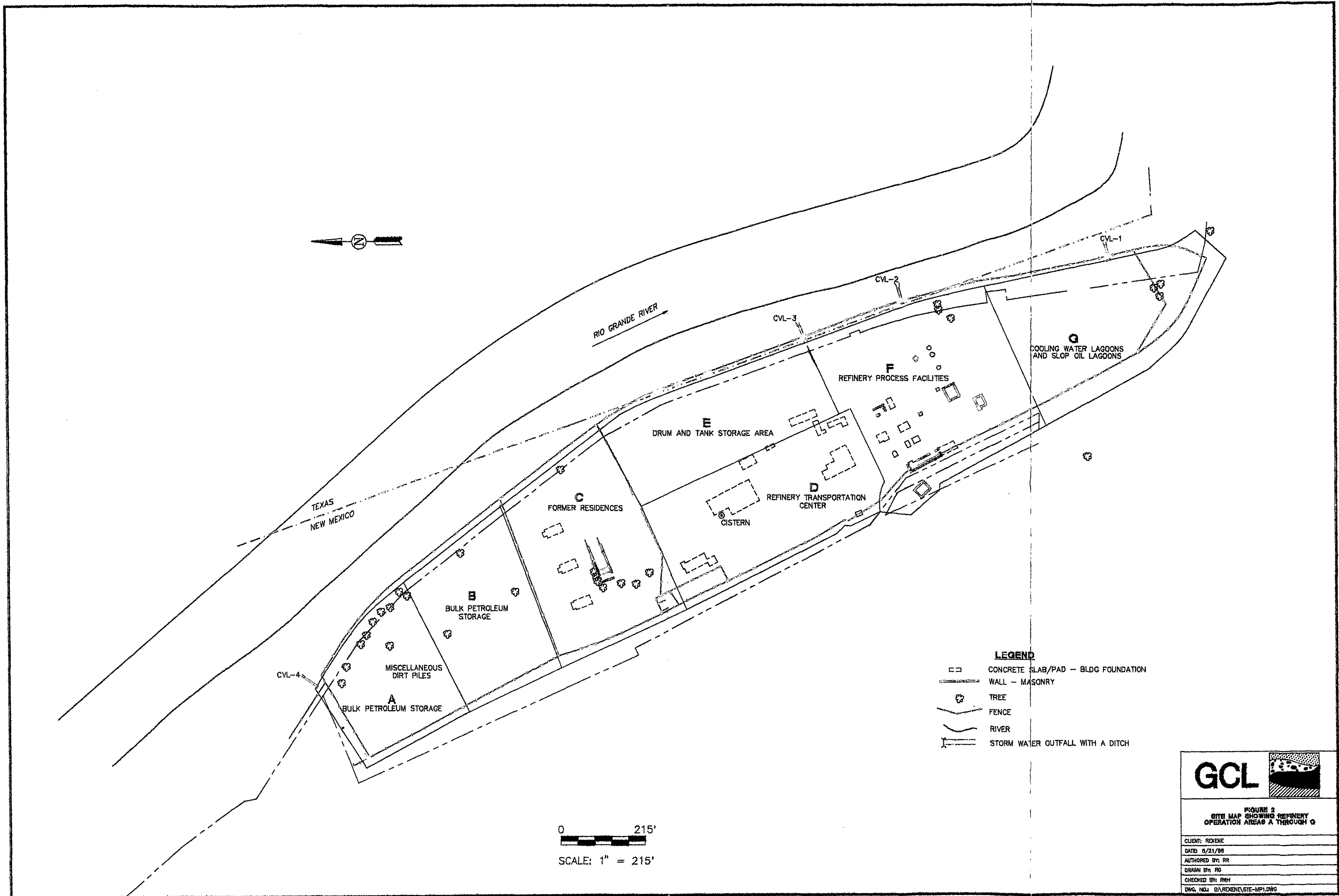
\* "Cleanup Standards for Contaminated Sites," N.J.A.C. 7:26D, Department of Environmental Protection. Non-residential direct contact soil cleanup criteria.

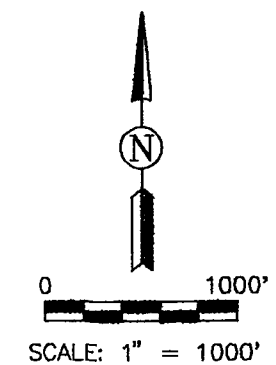
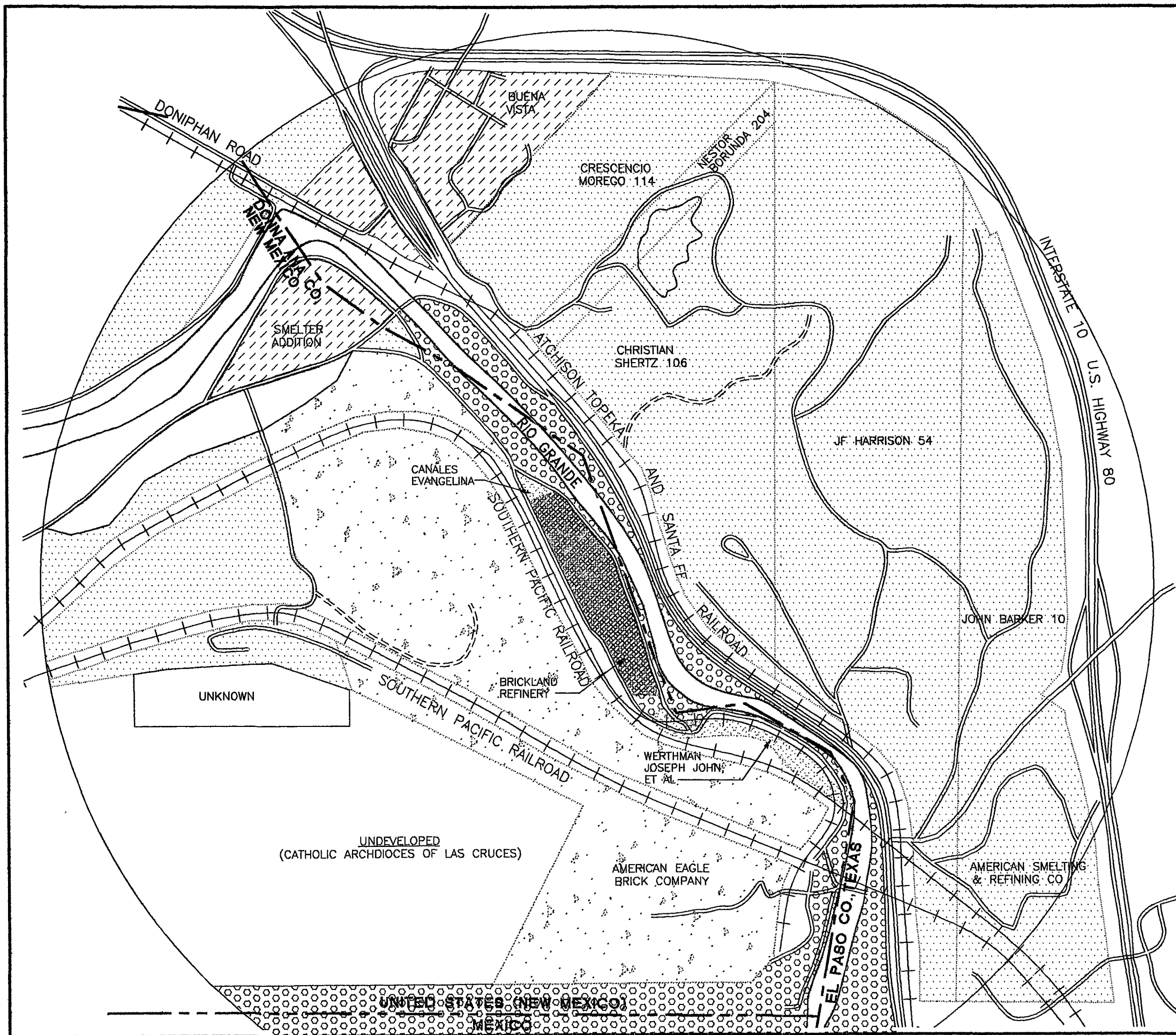
1) Criteria are health-based using an incidental ingestion exposure pathway except where noted.

2) Criteria are subject to change based on site specific factors (e.g. aquifer characteristics, soil type, natural background, environmental impacts, etc.

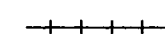








\*\* Corrective Action for Solid Waste Management Units (SWMU) at Hazardous Waste Management Facilities. 40 CFR 264.521 (a)(2)(i-iv), action levels.







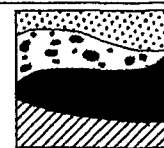
# LEGEND

-  RAILROAD
-  GENERAL SITE BOUNDARY
-  RESIDENTIAL
-  PRIVATE PARCELS
-  INTERNATIONAL BOUNDARY AND WATER COMMISSION
-  COMMERCIAL/INDUSTRIAL
-  RAILROAD OR HIGHWAY RIGHT OF WAY
-  MIXED RESIDENTIAL/COMMERCIAL
-  AMERICAN EAGLE BRICK COMPANY

SOURCE:  
SMELTERTOWN QUADRANGLE  
7.5 MINUTE SERIES  
1955, PHOTOREVISED 1961 AND 1973

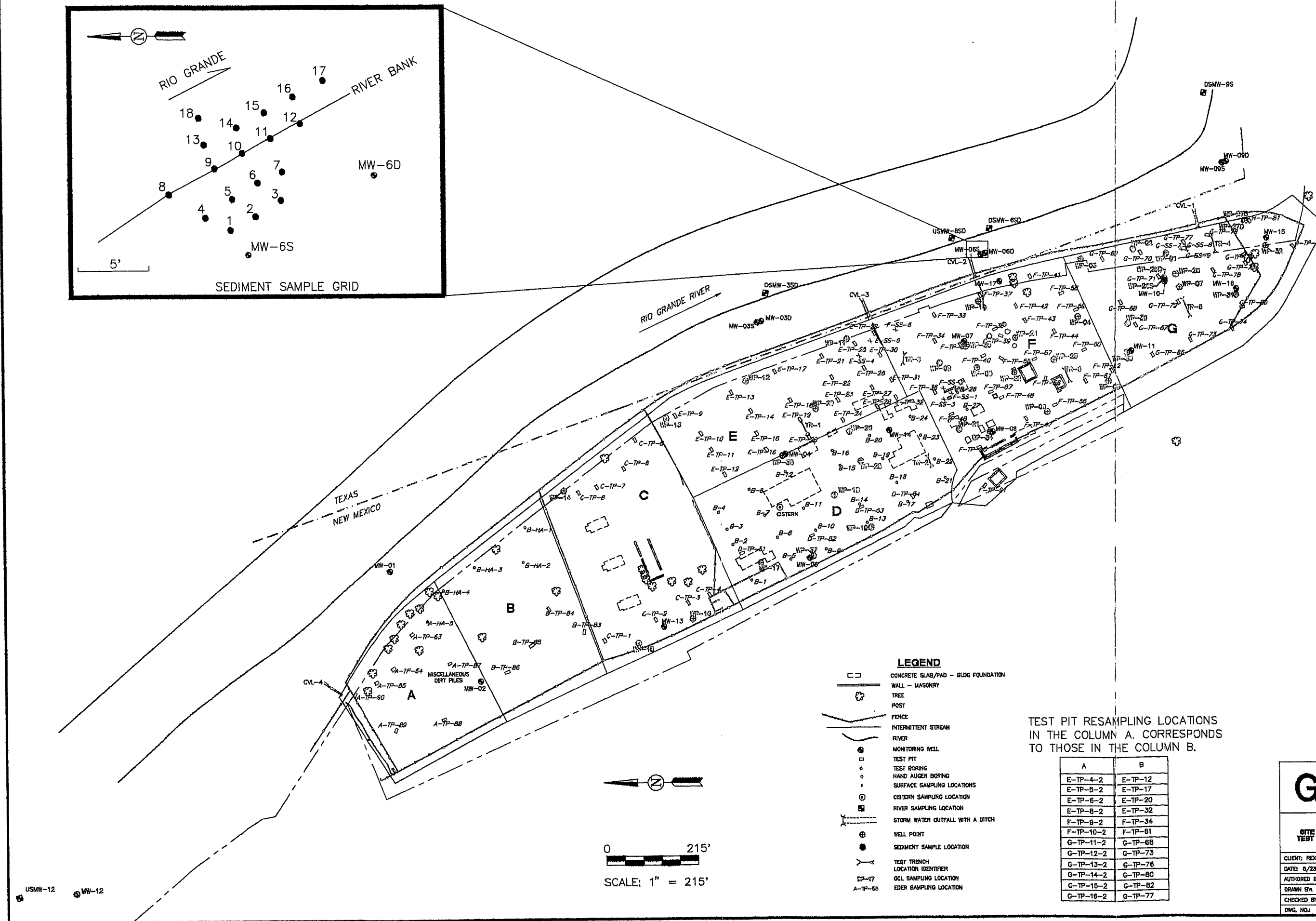
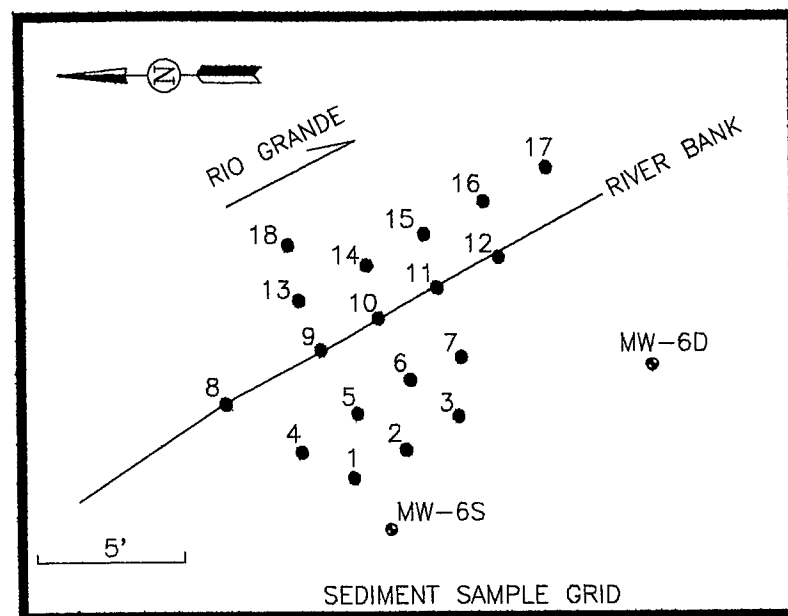
NOTES:  
ALL BOUNDARIES AND LOCATIONS ARE APPROXIMATE.  
FOR PROPERTY OWNERSHIP IN TEXAS, REFER TO APPENDIX

**GCL**



**FIGURE 3**  
**LAND OWNERSHIP IN THE VICINITY**

CLIENT: REXENE	
AUTHOR: RWH	DATE: 5-1-96
DRAWN BY: SAS5-1-96	REV. NO.: 0
CHECKED BY: MS	FILE: REX-1.DWG



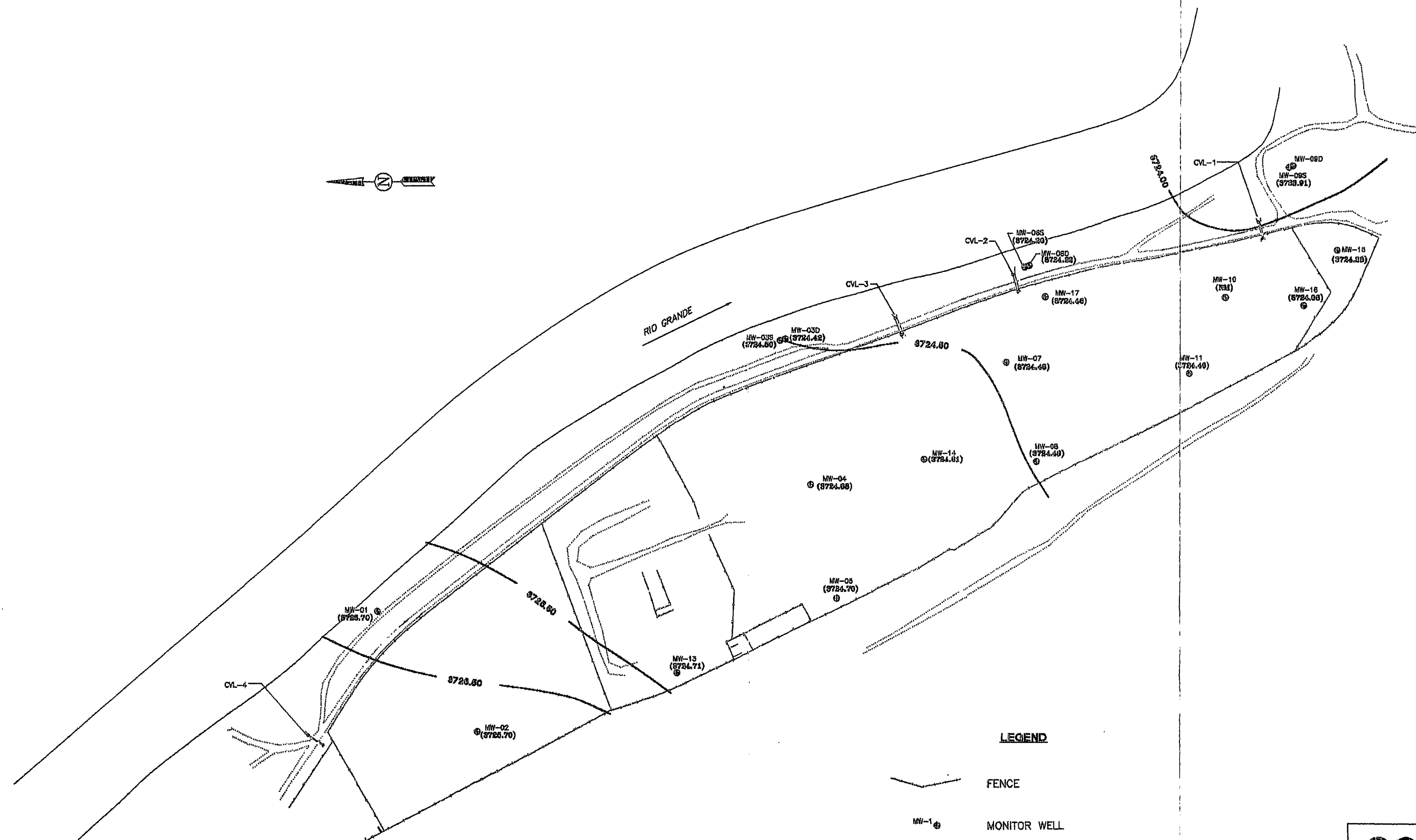
TEST PIT RESAMPLING LOCATIONS  
IN THE COLUMN A. CORRESPONDS  
TO THOSE IN THE COLUMN B.

A	B
E-TP-4-2	E-TP-12
E-TP-5-2	E-TP-17
E-TP-6-2	E-TP-20
E-TP-8-2	E-TP-32
F-TP-9-2	F-TP-34
F-TP-10-2	F-TP-61
G-TP-11-2	G-TP-68
G-TP-12-2	G-TP-73
G-TP-13-2	G-TP-76
G-TP-14-2	G-TP-80
G-TP-15-2	G-TP-82
G-TP-16-2	G-TP-77





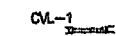



FIGURE 4  
SITE MAP SHOWING LOCATIONS OF  
TEST PITS, BORINGS, MONITOR WELLS,  
WELL POINTS.

CLIENT: REHENE  
DATE: 6/23/96  
AUTHORED BY: JH  
DRAWN BY: RG  
CHECKED BY: MWS  
DWG. NO.: D:\REHENE\ROBASE2.DWG

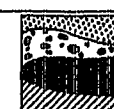


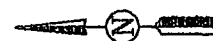
0 215'  
SCALE: 1" = 215'

**LEGEND**

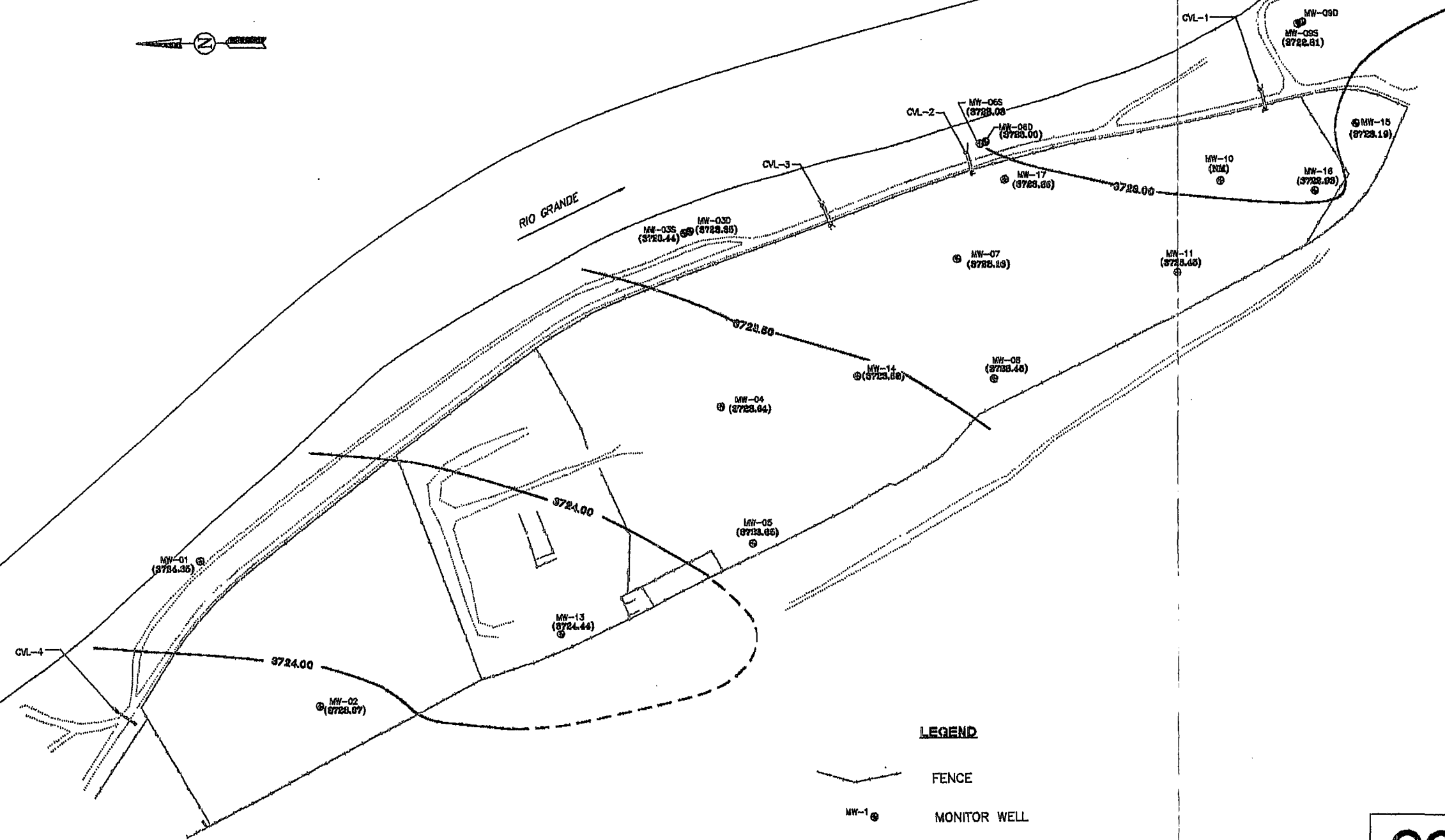
-  FENCE
-  MONITOR WELL
-  CULVERT
-  (3724.51) WATER LEVEL ELEVATION IN FEET AMSL
-  3724.50 WATER LEVEL CONTOUR IN FEET AMSL
-  (NM) NOT MEASURED

MW-12  
(3725.70)

<b>GCL</b>	
<b>FIGURE 5</b> <b>GROUNDWATER ELEVATION</b> <b>CONTOUR MAP (SEPTEMBER 1994)</b> <b>BRICKLAND REFINERY SITE</b>	
CLIENT: REXENE	
DATE: 5/21/98	
AUTHORED BY: BR/RWH	
DRAWN BY: RG	
CHECKED BY: MWS	
DWG. NO.: \REXENE\GWES04.DWG	



RIO GRANDE



**LEGEND**

- FENCE
- MONITOR WELL
- CULVERT
- (3724.01) WATER LEVEL ELEVATION IN FEET AMSL
- 3724.00 WATER LEVEL CONTOUR IN FEET AMSL
- (NM) NOT MEASURED

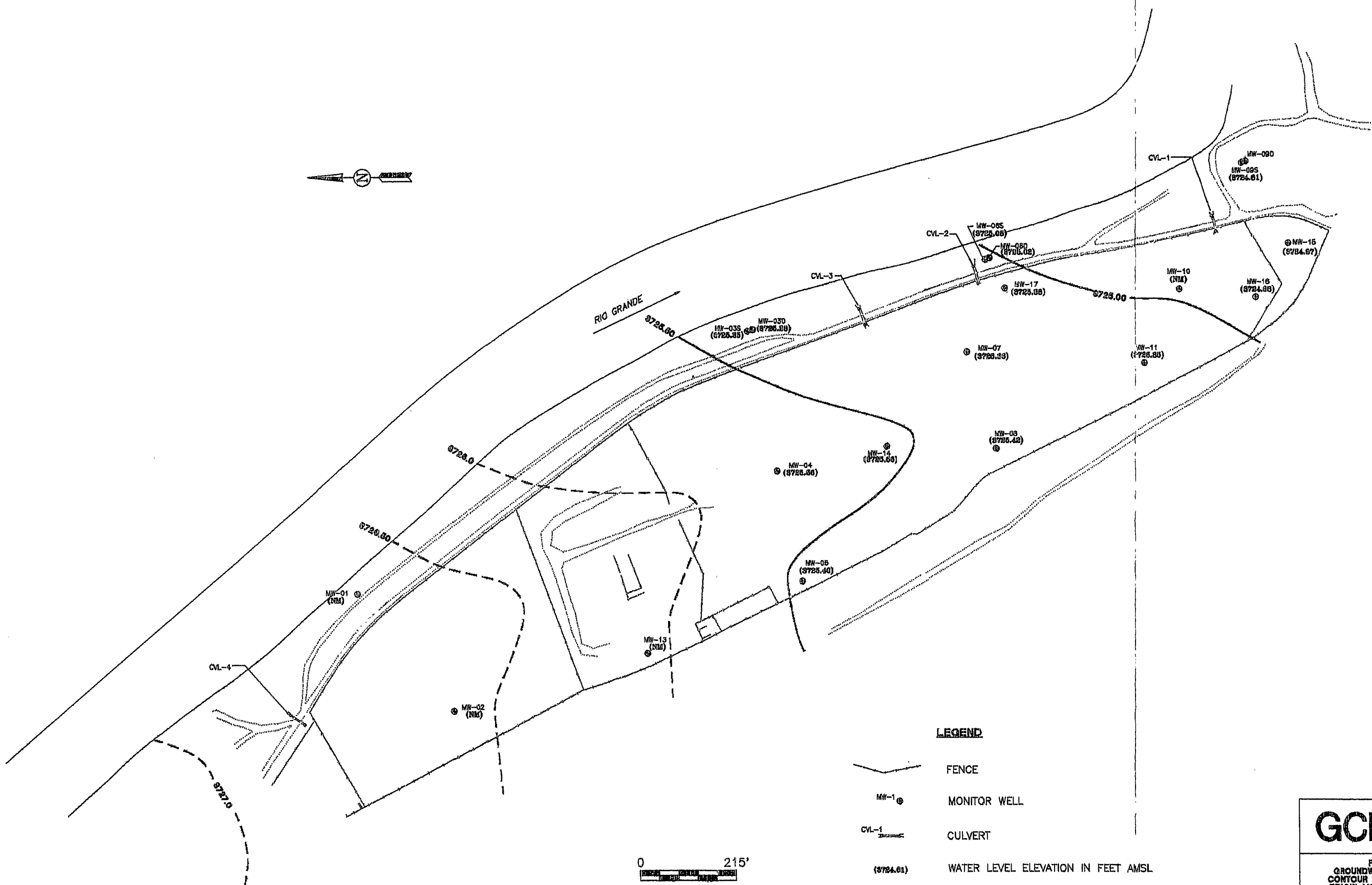
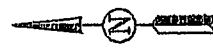
0 215'  
SCALE: 1" = 215'

MW-12  
(3723.05)

**GCL**

**FIGURE 6**  
GROUNDWATER ELEVATION  
CONTOUR MAP (DECEMBER 1994)  
BRICKLAND REFINERY SITE

CLIENT	REXENE
DATE	5/22/96
AUTHORED BY	BR/RWH
DRAWN BY	RG
CHECKED BY	MWS
DWG. NO.	REXENE\GWED94.DWG



0 215'  
SCALE: 1" = 215'

**LEGEND**

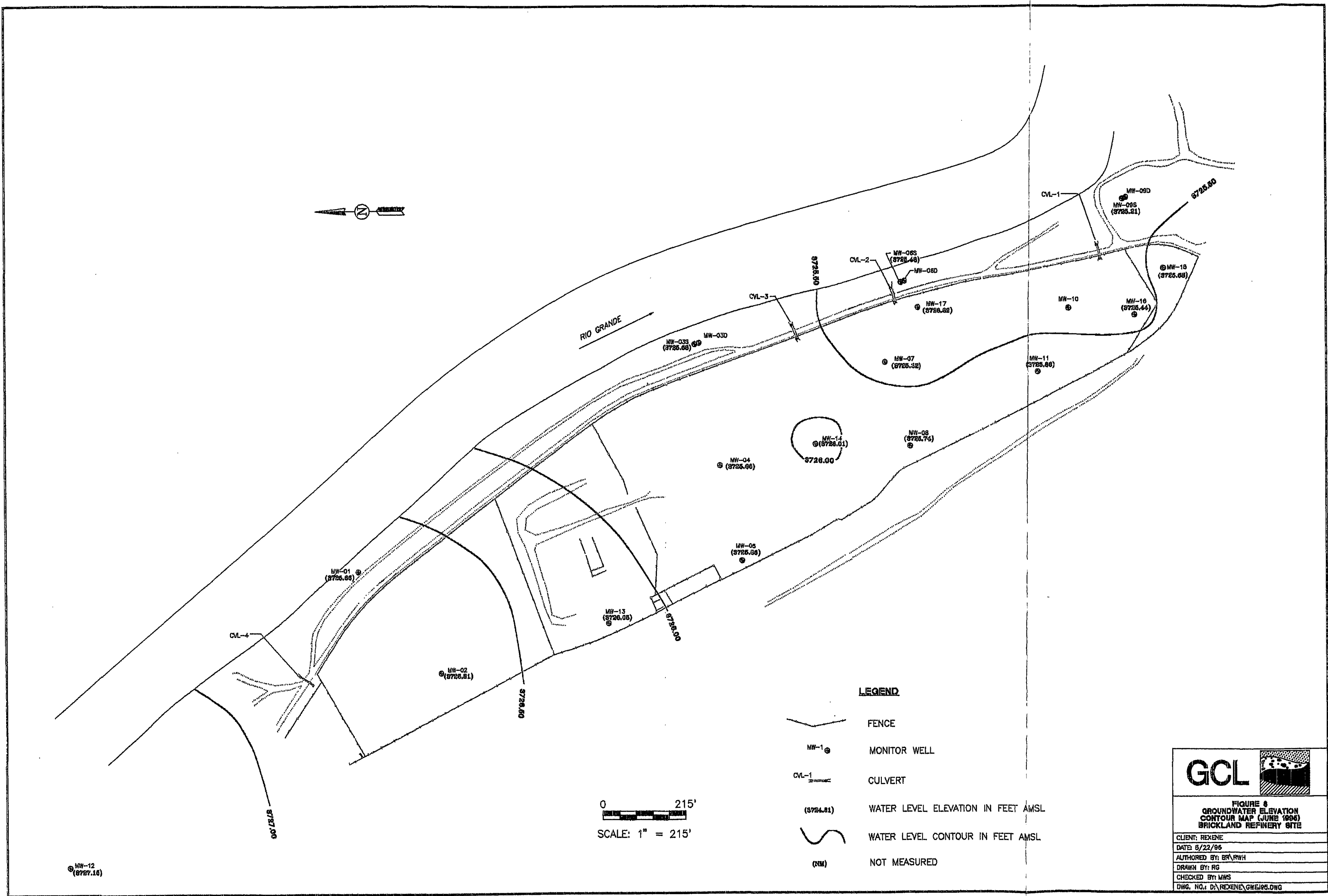
- FENCE
- MONITOR WELL
- CULVERT
- WATER LEVEL ELEVATION IN FEET AMSL
- WATER LEVEL CONTOUR IN FEET AMSL
- NOT MEASURED



**FIGURE 7**  
**GROUNDWATER ELEVATION**  
**CONTOUR MAP (MARCH 1996)**  
**BRICKLAND REFINERY SITE**

CLIENT: REXENE
DATE: 5/22/96
AUTHORED BY: BR, RWH
DRAWN BY: RG
CHECKED BY: MWS
DWG. NO.: DA\REXENE\GHEM05.DWG

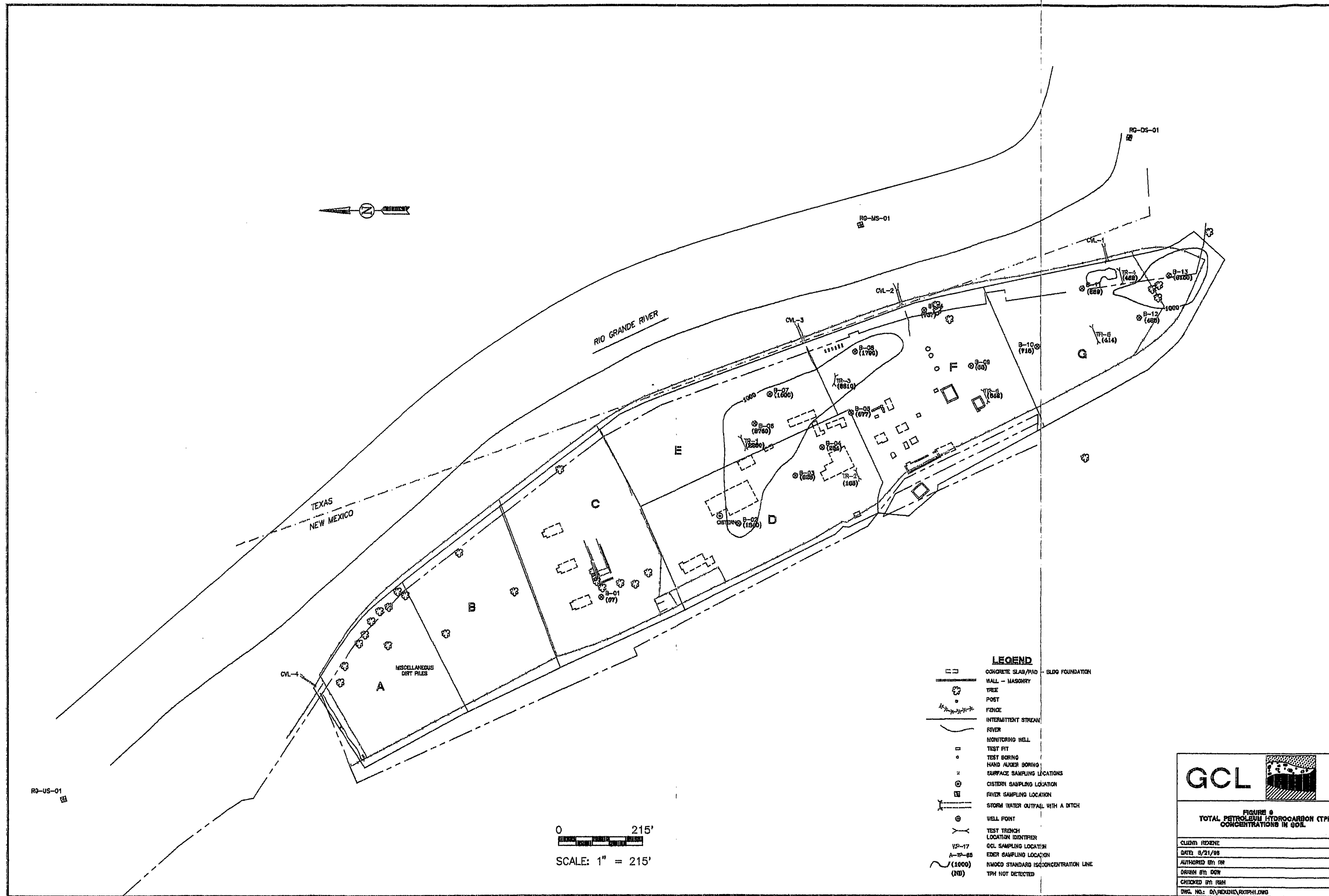
MW-12  
(NM)



**GCL**

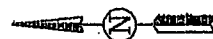
**FIGURE 8**  
GROUNDWATER ELEVATION  
CONTOUR MAP (JUNE 1996)  
BRICKLAND REFINERY SITE

CLIENT: REXENE
DATE: 5/22/96
AUTHORED BY: BRV/RWH
DRAWN BY: RG
CHECKED BY: MWS
DWG. NO.: D:\REXENE\GWEL96.DWG









TR-03	2-4 FEET
As	6 mg/Kg
Ba	138 mg/Kg
Cd	<0.5 mg/Kg
Cr	6 mg/Kg
Pb	7 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-03	4-6 FEET
As	<5 mg/Kg
Ba	137 mg/Kg
Cd	<0.5 mg/Kg
Cr	7 mg/Kg
Pb	6 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-08	4-6 FEET
As	0.11 mg/L
Ba	0.8 mg/L
Cd	0.12 mg/L
Cr	<0.01 mg/L
Pb	82 mg/L
Hg	<0.003 mg/L
Se	<0.01 mg/L
Ag	<0.01 mg/L

B-14	6-8 FEET
As	<0.05 mg/L
Ba	3.0 mg/L
Cd	<0.01 mg/L
Cr	<0.01 mg/L
Pb	<0.07 mg/L
Hg	<0.003 mg/L
Se	<0.1 mg/L
Ag	<0.08 mg/L

B-11	8-10 FEET
As	<0.05 mg/Kg
Ba	132-148 mg/Kg
Cd	<0.5 mg/Kg
Cr	7-8 mg/Kg
Pb	8-9 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-04	2-4 FEET
As	<5 mg/Kg
Ba	83 mg/Kg
Cd	<0.5 mg/Kg
Cr	4 mg/Kg
Pb	6 mg/Kg
Hg	0.14 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-04	4-6 FEET
As	13 mg/Kg
Ba	178 mg/Kg
Cd	0.6 mg/Kg
Cr	9 mg/Kg
Pb	14 mg/Kg
Hg	0.19 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-12	8-10
As	<0.05 mg/L
Ba	0.8 mg/L
Cd	<0.01 mg/L
Cr	<0.01 mg/L
Pb	<0.05 mg/L
Hg	<0.003 mg/L
Se	<0.1 mg/L
Ag	0.02 mg/L

B-13	8-10 FEET
As	5 mg/Kg
Ba	87 mg/Kg
Cd	<0.5 mg/Kg
Cr	8 mg/Kg
Pb	13 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-08	2-4 FEET
As	<5 mg/Kg
Ba	88 mg/Kg
Cd	<0.5 mg/Kg
Cr	4 mg/Kg
Pb	8 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-08	4-6 FEET
As	<5 mg/Kg
Ba	38 mg/Kg
Cd	<0.5 mg/Kg
Cr	4 mg/Kg
Pb	8 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-10	8-10 FEET
As	<5 mg/Kg
Ba	138 mg/Kg
Cd	<0.5 mg/Kg
Cr	7 mg/Kg
Pb	<5 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-04	2-4 FEET
As	21 mg/Kg
Ba	183 mg/Kg
Cd	1.1 mg/Kg
Cr	11 mg/Kg
Pb	48 mg/Kg
Hg	0.41 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-04	6-8 FEET
As	<5 mg/Kg
Ba	204 mg/Kg
Cd	<0.5 mg/Kg
Cr	8 mg/Kg
Pb	9 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-02	2-4 FEET
As	12 mg/Kg
Ba	127 mg/Kg
Cd	0.5 mg/Kg
Cr	10 mg/Kg
Pb	85 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-01	2-4 FEET
As	<5 mg/Kg
Ba	89-100 mg/Kg
Cd	<0.5 mg/Kg
Cr	6-7 mg/Kg
Pb	8-10 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

TR-01	6-8 FEET
As	22 mg/Kg
Ba	145 mg/Kg
Cd	0.8 mg/Kg
Cr	10 mg/Kg
Pb	53 mg/Kg
Hg	0.14 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-02	6-8 FEET
As	<0.5 mg/Kg
Ba	2.1 mg/Kg
Cd	<0.01 mg/Kg
Cr	<0.01 mg/Kg
Pb	<0.08 mg/Kg
Hg	<0.003 mg/Kg
Se	<0.1 mg/Kg
Ag	<0.01 mg/Kg

B-02	6-8 FEET
As	<0.05 mg/L
Ba	2.1 mg/L
Cd	<0.01 mg/L
Cr	<0.01 mg/L
Pb	<0.05 mg/L
Hg	<0.003 mg/L
Se	<0.1 mg/L
Ag	<0.01 mg/L

B-01	2-4 FEET
As	18 mg/Kg
Ba	137 mg/Kg
Cd	<0.5 mg/Kg
Cr	10 mg/Kg
Pb	74 mg/Kg
Hg	0.14 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

B-01	4-6 FEET
As	<5 mg/Kg
Ba	179 mg/Kg
Cd	<0.5 mg/Kg
Cr	9 mg/Kg
Pb	7 mg/Kg
Hg	<0.10 mg/Kg
Se	<10 mg/Kg
Ag	<1 mg/Kg

\*\*\* FENCE

⊕ WELL POINT

⊕ MONITOR WELL

⊕ SOIL BORING

— TEST TRENCH

MW-01 LOCATION IDENTIFIER

+ VALUE EXCEEDS REGULATORY LIMIT

TCLP - Metals  
Maximum Concentration Limits  
(40 CFR 261)

As 5.0 mg/L  
Ba 100 mg/L  
Cd 1.0 mg/L  
Cr 5.0 mg/L  
Pb 5.0 mg/L  
Hg 0.2 mg/L  
Se 1.0 mg/L  
Ag 5.0 mg/L

As - Arsenic  
Ba - Barium  
Cd - Cadmium  
Cr - Chromium  
Pb - Lead  
Hg - Mercury  
Se - Selenium  
Ag - Silver



FIGURE 6A  
ROCK METALS AND TCLP SOIL SAMPLE  
RESULTS FOR THE  
FORMER BRICKLAND REFINERY SITE  
(AUGUST 1994 SAMPLING EVENT)

CLIENT: HENNE  
DATE: 8/23/98  
AUTHORED BY: RR  
DRAWN BY: NO  
CHECKED BY: RHH/MS  
DATA NO.: \HENNE\SAMPLE-04.DWG

0 215'  
SCALE: 1" = 215'

⊕ MW-12



TR-05	10-11 FEET
1-METHYLNAPHTHALENE	1600 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	1600 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	1600 $\mu\text{g}/\text{Kg}$

B-14	6-8 FEET
1-METHYLNAPHTHALENE	2200 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	3800 $\mu\text{g}/\text{Kg}$
NAPHTHALENE	2100 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	8100 $\mu\text{g}/\text{Kg}$

TR-03	3 FEET
1-METHYLNAPHTHALENE	7700;7100 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	11000;10000 $\mu\text{g}/\text{Kg}$
NAPHTHALENE	5800;4400 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	24,300;21,500 $\mu\text{g}/\text{Kg}$

TR-01	2-4 FEET
1-METHYLNAPHTHALENE	1800 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	3000 $\mu\text{g}/\text{Kg}$
NAPHTHALENE	2400 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	7200 $\mu\text{g}/\text{Kg}$

TR-04	6 FEET
1-METHYLNAPHTHALENE	8300 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	1700 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	7000 $\mu\text{g}/\text{Kg}$

B-11	8-10 FEET
1-METHYLNAPHTHALENE	78000 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	180000 $\mu\text{g}/\text{Kg}$
NAPHTHALENE	51000 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	280,000 $\mu\text{g}/\text{Kg}$

B-10	10-12 FEET
1-METHYLNAPHTHALENE	4700 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	3000 $\mu\text{g}/\text{Kg}$
PHENANTHRENE	2300 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	10,000 $\mu\text{g}/\text{Kg}$

B-05	4-6 FEET
1-METHYLNAPHTHALENE	3700;8800 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	8000;13000 $\mu\text{g}/\text{Kg}$
NAPHTHALENE	1800;5300 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	11,500;26,900 $\mu\text{g}/\text{Kg}$

TR-02	4-6 FEET
1-METHYLNAPHTHALENE	12000 $\mu\text{g}/\text{Kg}$
2-METHYLNAPHTHALENE	12600 $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	24,600 $\mu\text{g}/\text{Kg}$

B-01	4-6 FEET
PAH(a)	ND $\mu\text{g}/\text{Kg}$
TOTAL PAH(a)	ND $\mu\text{g}/\text{Kg}$

#### LEGEND

- \*\*\*\*\* FENCE
- ⊕ WELL POINT
- ⊙ MONITOR WELL
- ⊙ SOIL BORING
- TEST TRENCH
- MW-01 LOCATION IDENTIFIER

0 215'  
SCALE: 1" = 215'

#### ANALYTE LIST

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Benzo(ghi)perylene  
Benzo(a)pyrene  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Flourene  
Indeno(1,2,3-cd)pyrene  
1-Methylnaphthalene  
2-Methylnaphthalene  
Naphthalene  
Phenanthrene  
Pyrene

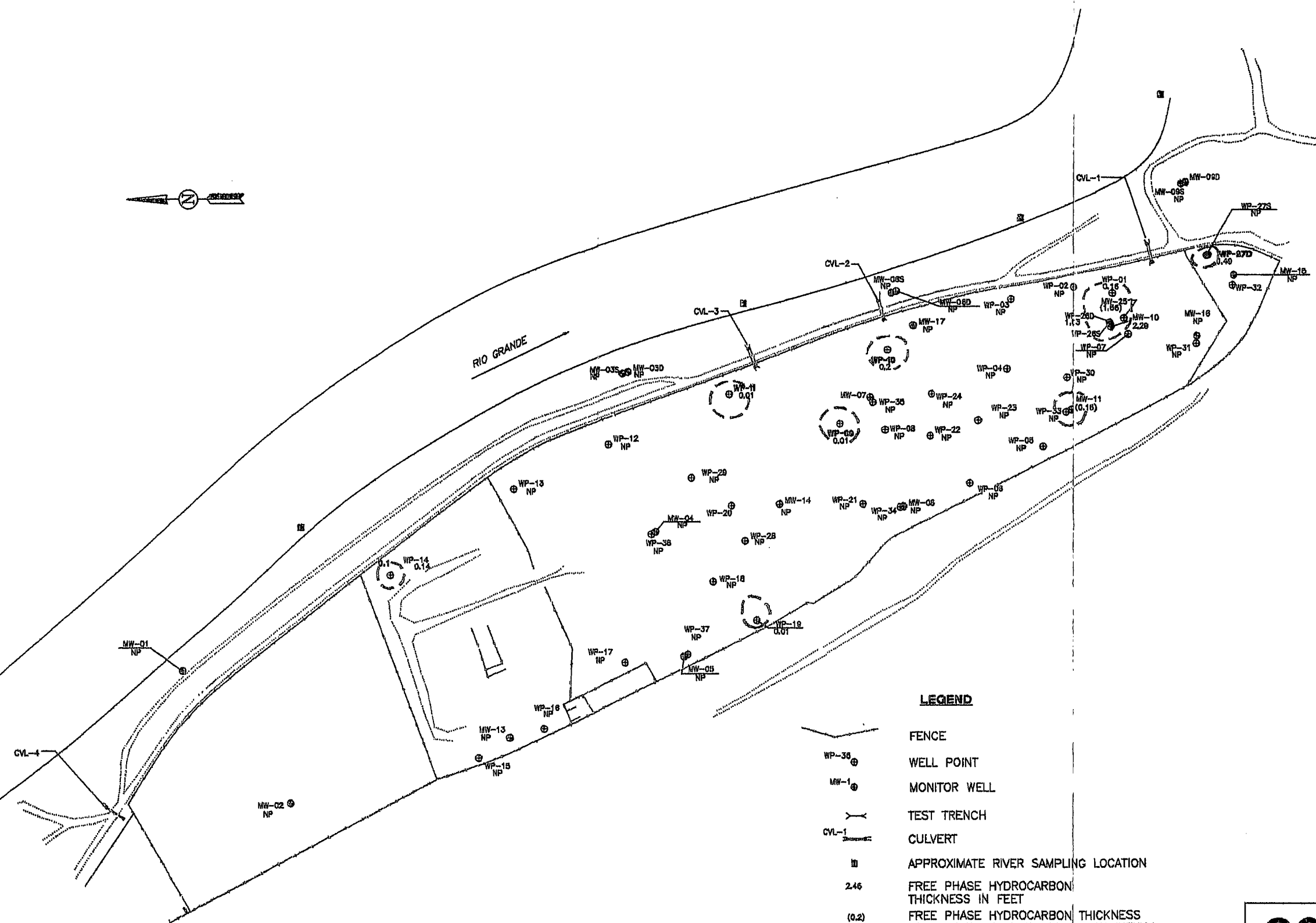


FOURTH QUARTER  
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ANALYSIS  
COLL. SAMPLE RESULTS  
FOR THE  
FOURTH QUARTER REPORTING SITE  
(SEE 2004 SAMPLING REPORT)

CLIENT: REDENE  
DATE: 9/23/05  
AUTHORED BY: RR  
DRAWN BY: RO  
CHECKED BY: MMY/MSB  
DWG. NO.: \RENEDE\SAMPLE-04.DWG

MONITOR WELL/ WELL POINT	FREE PHASE HYDROCARBONS THICKNESS (FEET)	MEASUREMENT DATE
MW-01	NP	12-12-94
MW-02	NP	12-12-94
MW-03S	NP	03-27-95
MW-03D	NP	03-28-95
MW-04	NP	03-27-95
MW-05	NP	03-27-95
MW-06S	NP	03-28-95
MW-06D	NP	03-28-95
MW-07	NM	-
MW-08	NP	03-28-95
MW-09	NP	03-28-95
MW-09D	NM	-
MW-10	2.29	06-20-95
MW-11	0.16	06-20-95
MW-12	NM	-
MW-13	NP	12-12-94
MW-14	NP	03-27-95
MW-15	NP	03-27-95
MW-16	NP	03-27-95
MW-17	NP	03-27-95
WP-01	0.16	06-20-95
WP-02	NP	12-12-94
WP-03	NP	12-12-94
WP-04	NP	12-12-94
WP-05	NP	12-12-94
WP-06	NP	12-12-94
WP-07	NP	12-12-94
WP-08	NP	12-12-94
WP-09	0.01	10-06-93
WP-10	0.20	09-26-94
WP-11	0.01	10-06-93
WP-12	NP	07-11-94
WP-13	NP	12-12-94
WP-14	0.14	06-20-95
WP-15	NP	12-12-94
WP-16	NP	07-11-94
WP-17	NP	07-11-94
WP-18	NP	12-12-94
WP-19	0.01	12-03-93
WP-20	NP	09-26-94
WP-21	NP	12-12-94
WP-22	NP	12-12-94
WP-23	NP	12-12-94
WP-24	NP	12-12-94
WP-25	1.56	06-20-95
WP-26D	1.63	12-12-94
WP-27S	NP	12-12-94
WP-27D	0.40	12-12-94
WP-28	NP	12-12-94
WP-29	NP	12-12-94
WP-30	NP	12-12-94
WP-31	NP	12-12-94
WP-32	NM	-
WP-33	NP	12-12-94
WP-34	NP	12-12-94
WP-35	NP	12-12-94
WP-36	NP	12-12-94
WP-37	NP	12-12-94

NP = NO FREE PHASE HYDROCARBONS DETECTED  
NM = NOT MEASURED



#### LEGEND

- FENCE
- WELL POINT
- MONITOR WELL
- TEST TRENCH
- CULVERT
- APPROXIMATE RIVER SAMPLING LOCATION
- 2.46 FREE PHASE HYDROCARBON THICKNESS IN FEET
- (0.2) FREE PHASE HYDROCARBON THICKNESS IN PARENTHESES FOR WELLS WITH DEEPER SCREENED INTERVAL
- ZERO CONTOUR

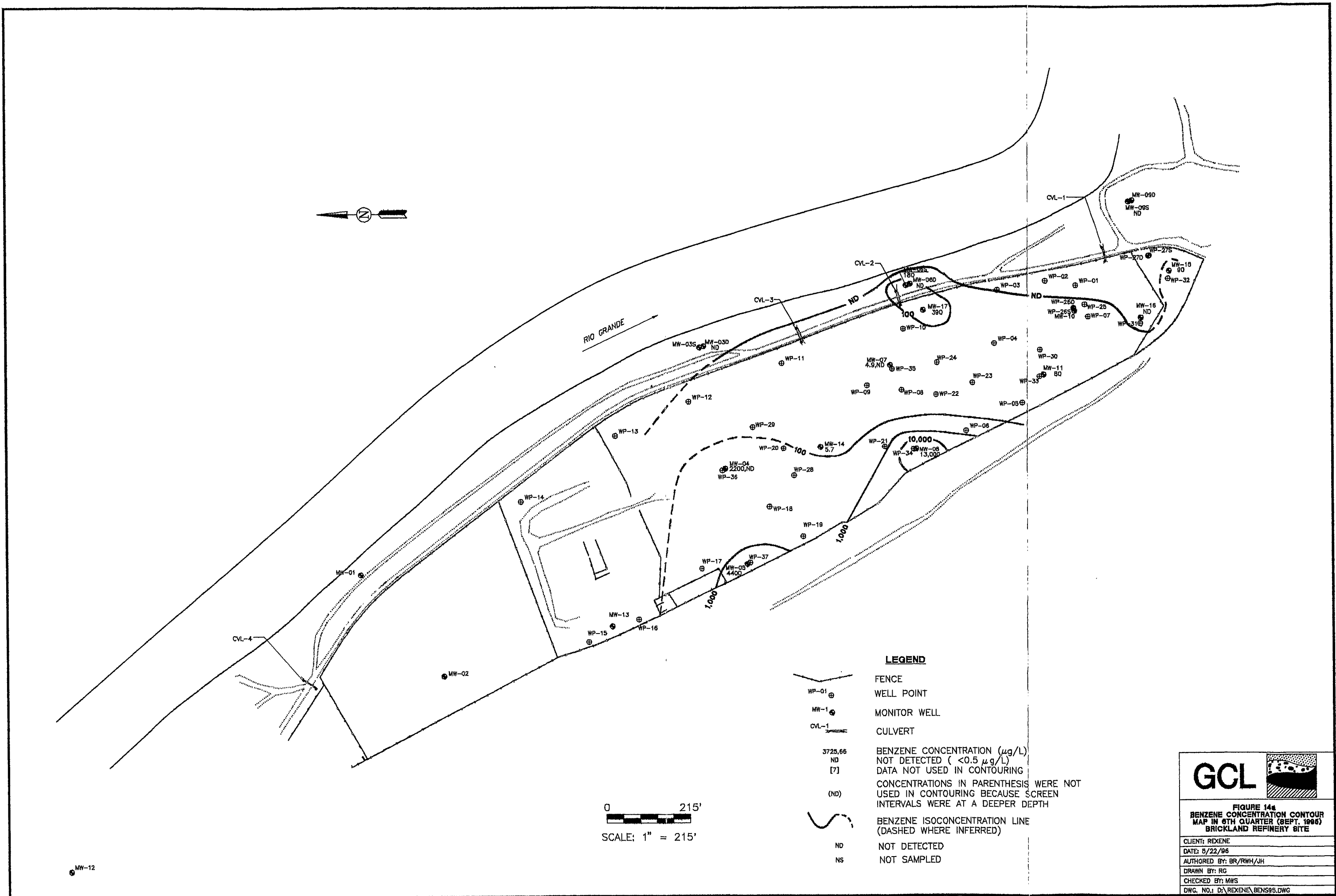
0 215'  
SCALE: 1" = 215'

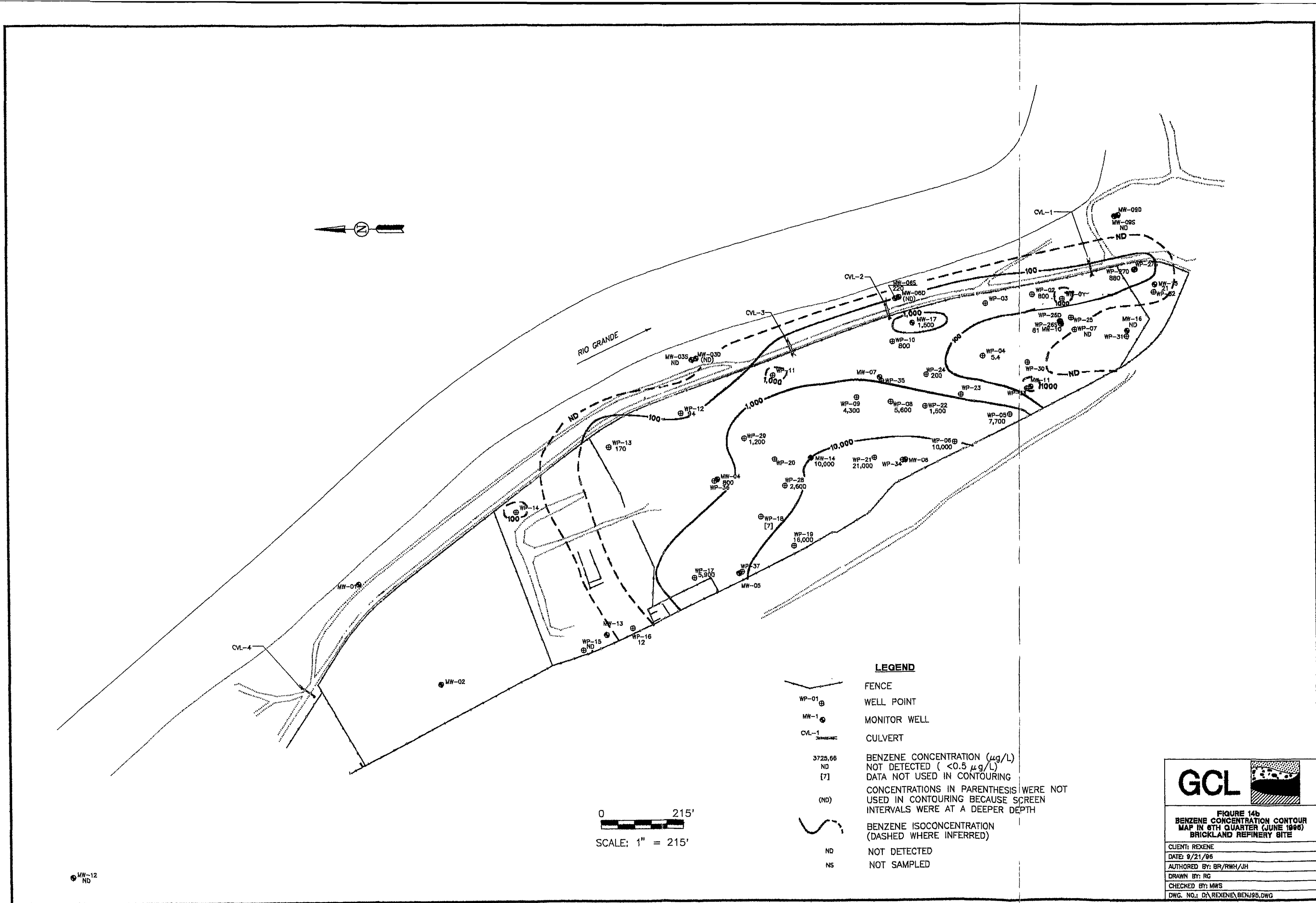
NOTE: DATA COLLECTED DURING QUARTERLY  
GROUNDWATER SAMPLING EVENTS (1993-1995).

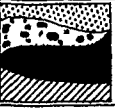


FIGURE 18  
FREE PHASE HYDROCARBON  
THICKNESS MAP  
BRICKLAND REFINERY SITE

CLIENT: REKENE  
DATE: 9/13/95  
AUTHORED BY:  
DRAWN BY: MP  
CHECKED BY: TS/SAL  
DWG. NO.: \REKENE\FPRDCT2.DWG

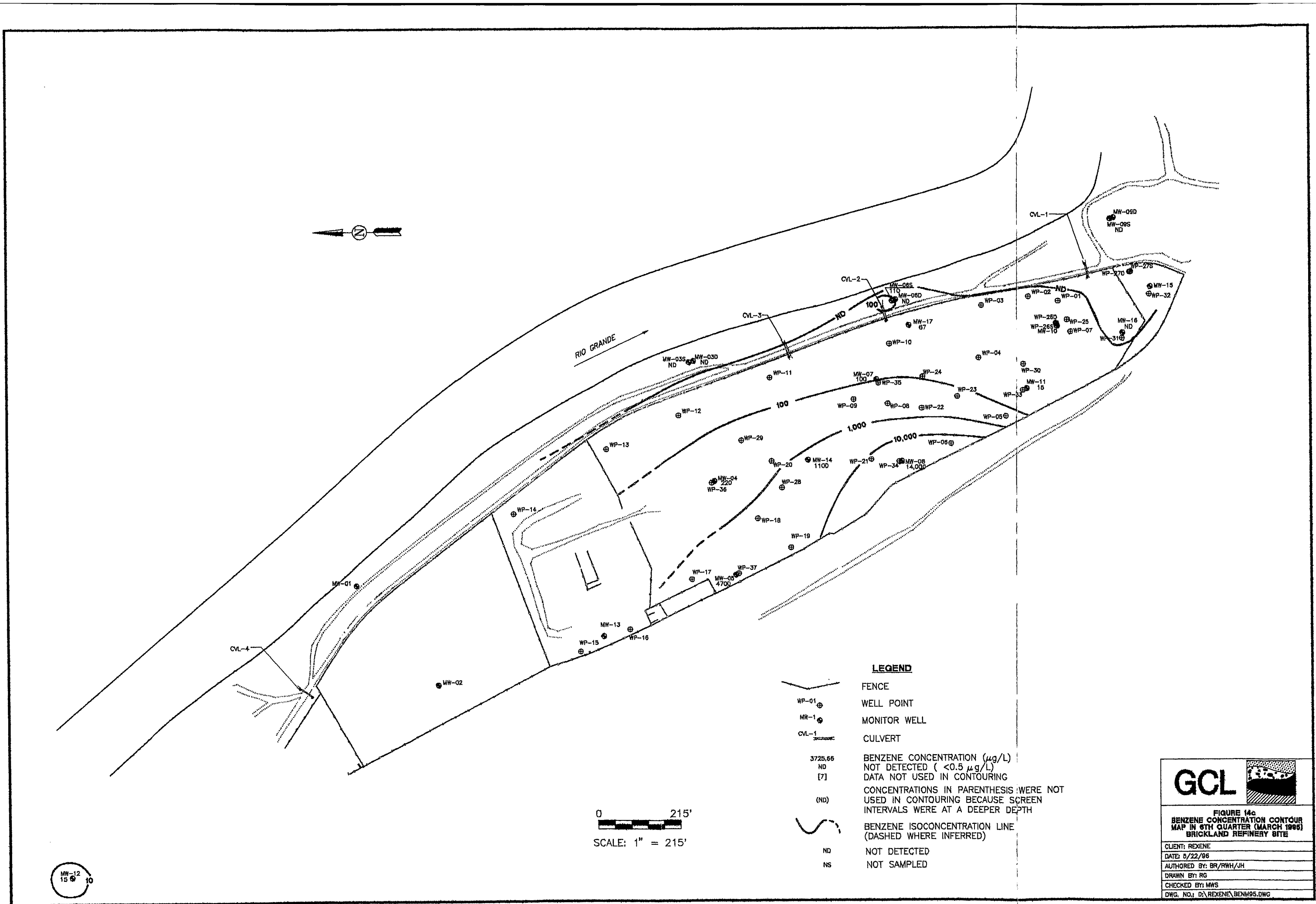


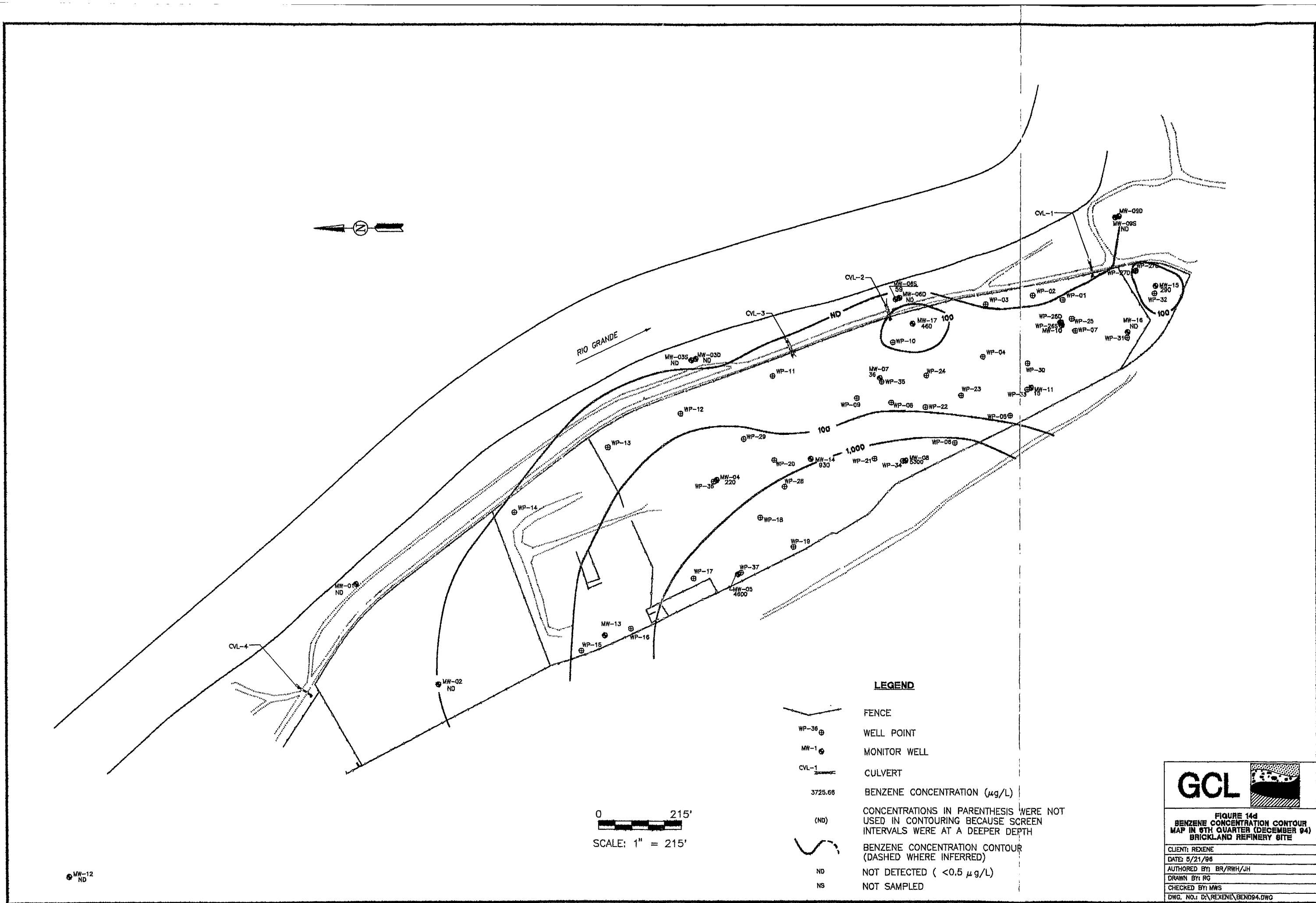


**GCL**

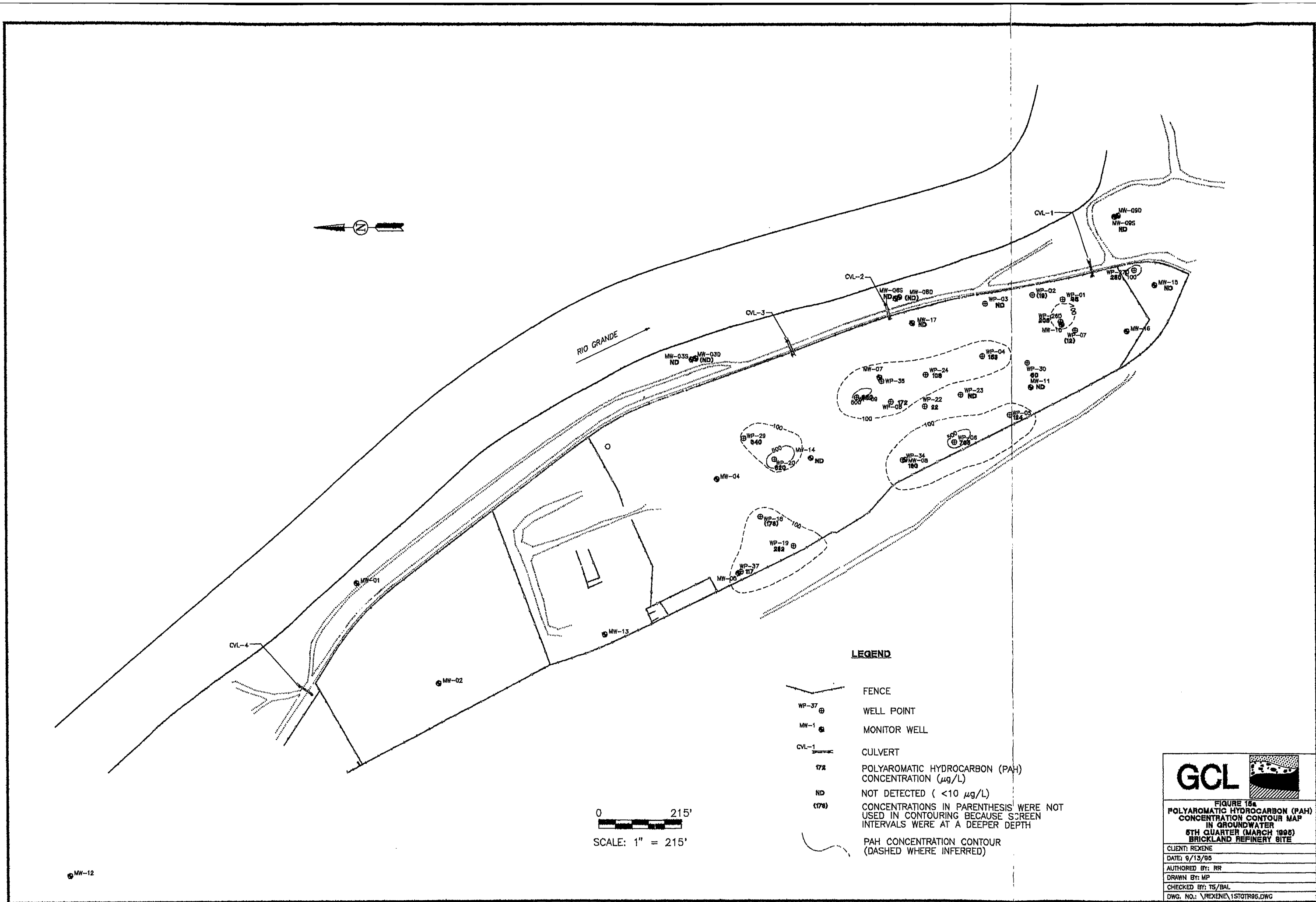
**FIGURE 14b**  
**BENZENE CONCENTRATION CONTOUR**  
**MAP IN 8TH QUARTER (JUNE 1996)**  
**BRICKLAND REFINERY SITE**

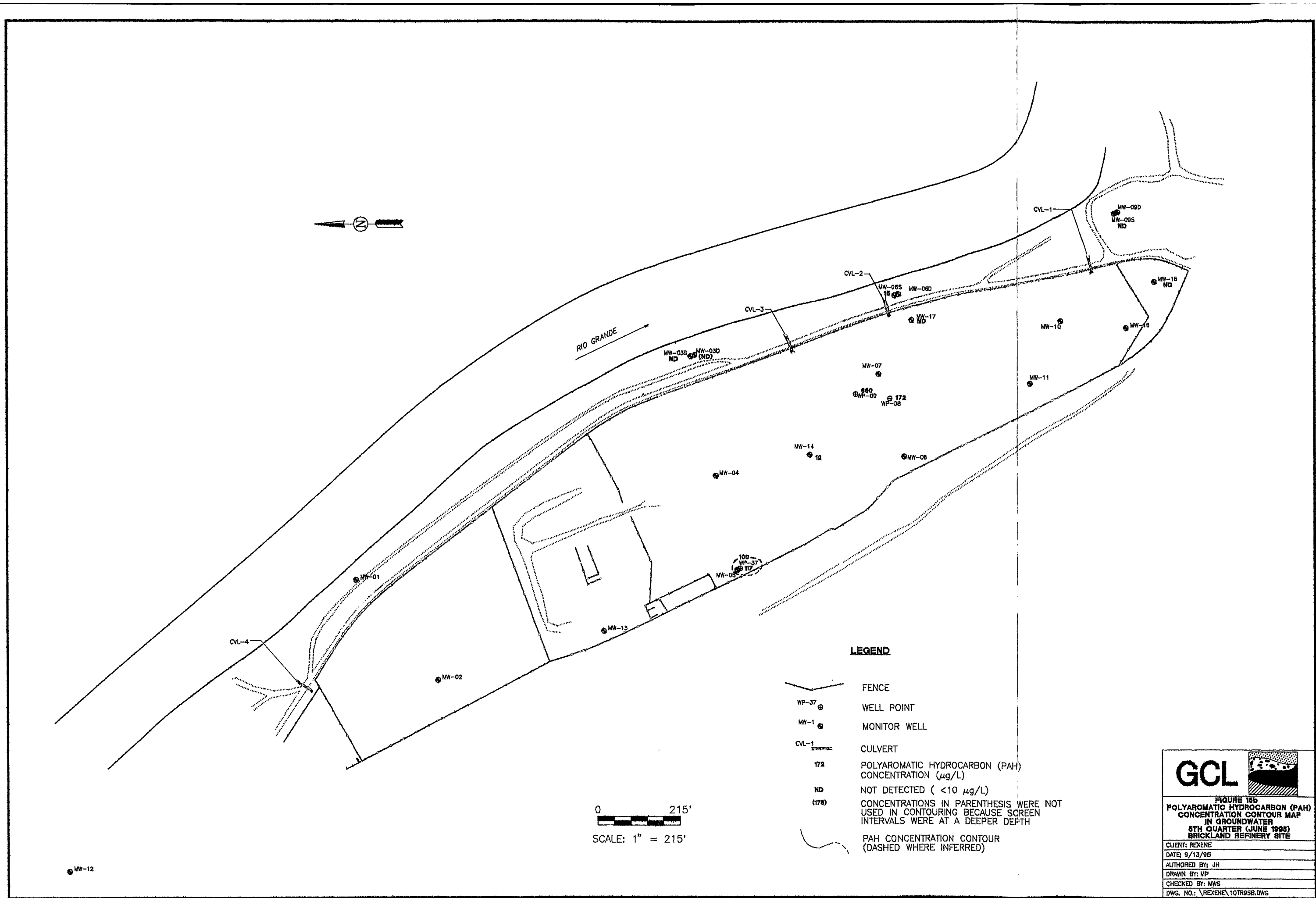
CLIENT: REXENE
DATE: 9/21/96
AUTHORED BY: BR/RWH/JH
DRAWN BY: RG
CHECKED BY: MWS
DWG. NO.: 04\REXENE\BENJ96.DWG

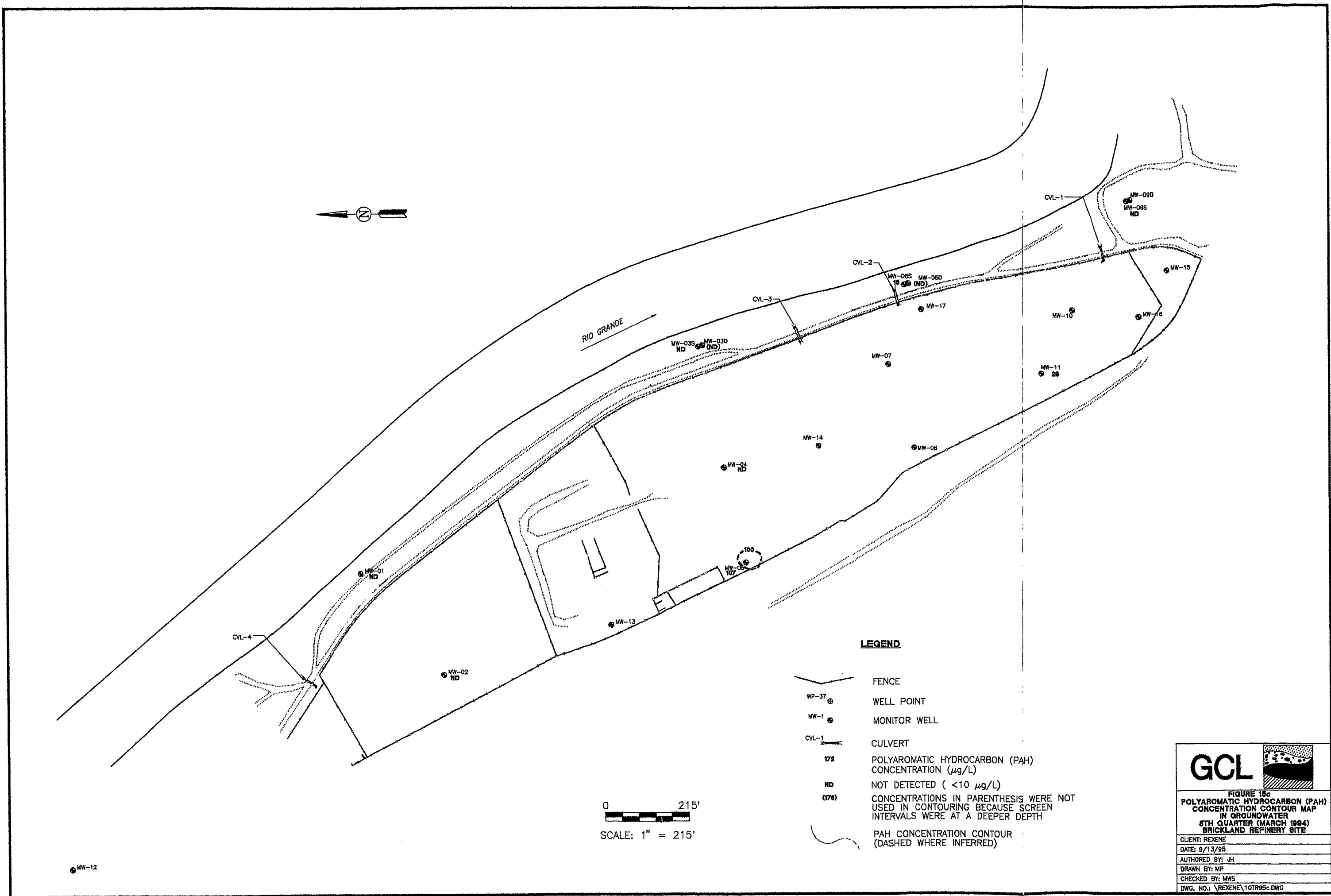


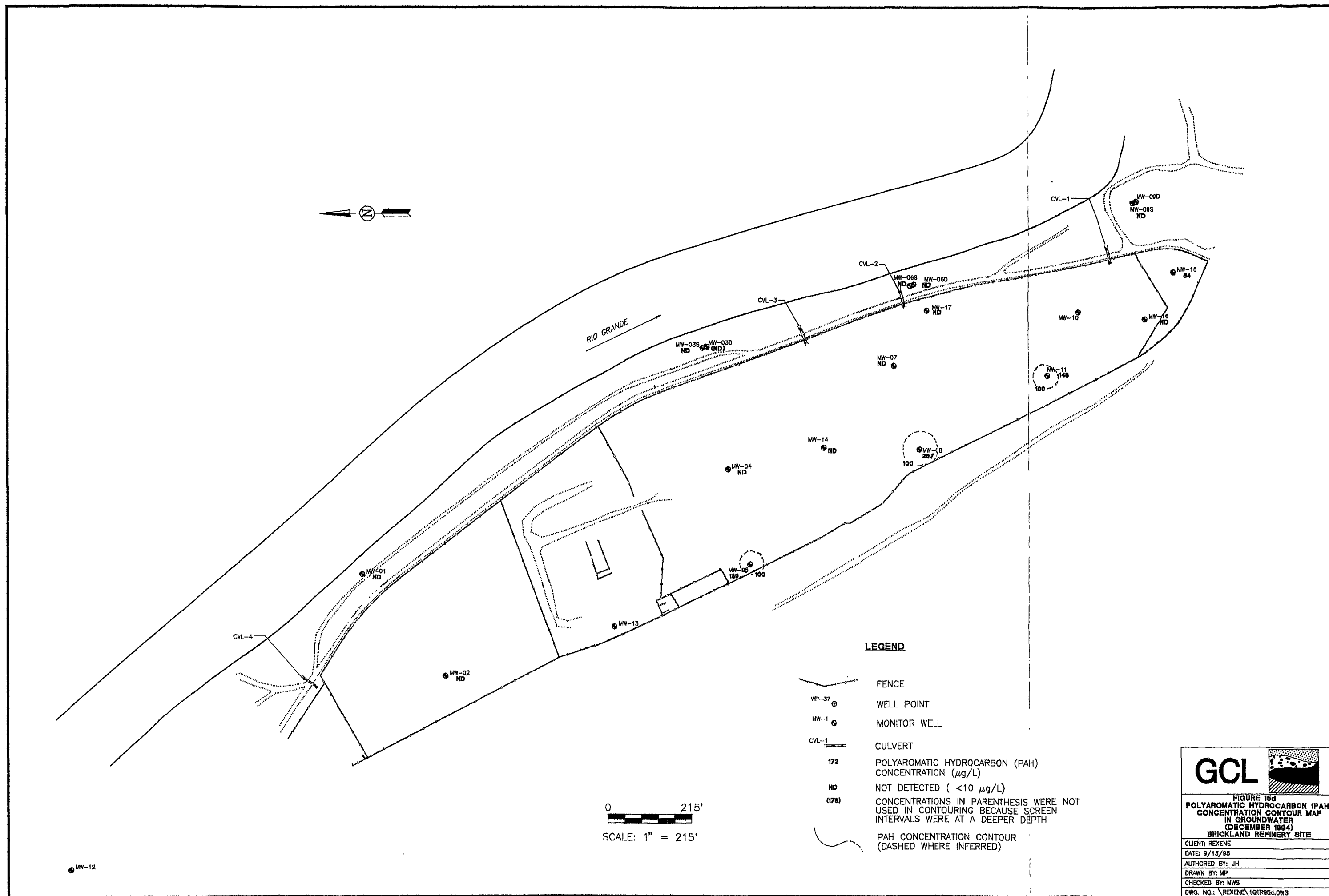










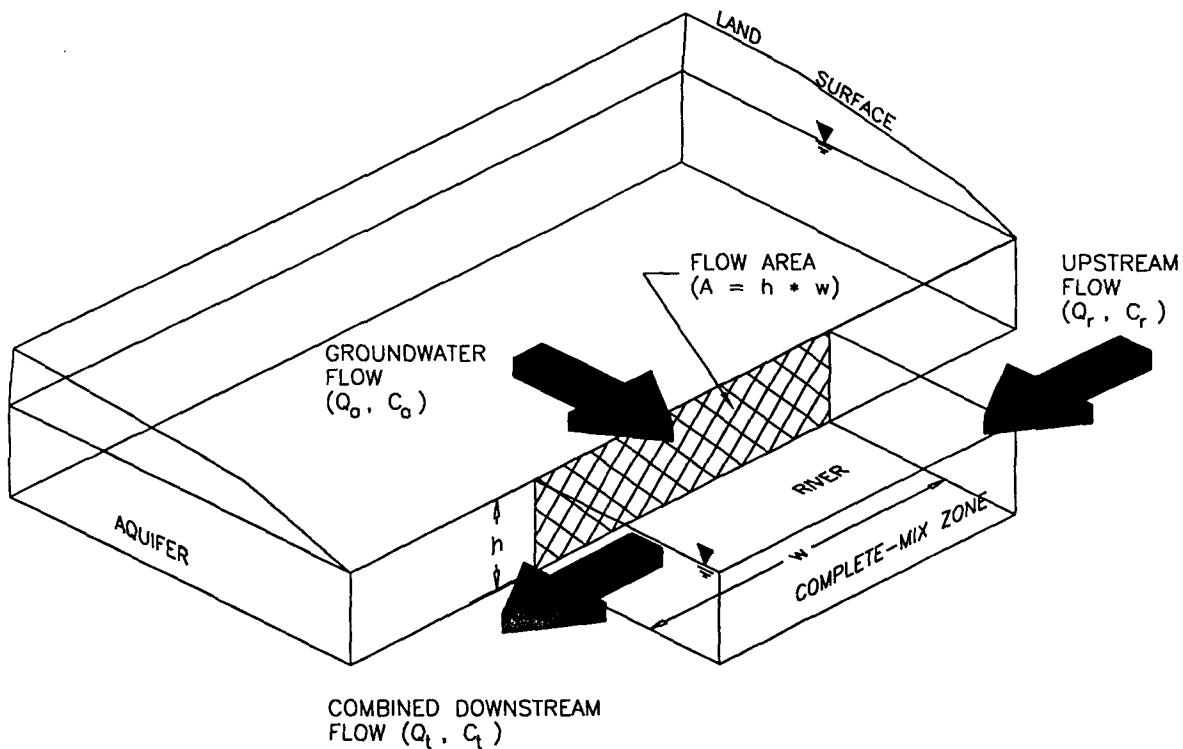


**GCL**

FIGURE 15d  
POLYAROMATIC HYDROCARBON (PAH)  
CONCENTRATION CONTOUR MAP  
IN GROUNDWATER  
(DECEMBER 1994)  
BRICKLAND REFINERY SITE

CLIENT: REXENE
DATE: 9/13/95
AUTHORED BY: JH
DRAWN BY: MP
CHECKED BY: MWS
DWG. NO.: \REXENE\10TR95d.DWG

D:\ACAD\REXENE\10TR95d.DWG



MIXING ZONE MODEL EQUATION  $C_t Q_t = C_r Q_r + C_o Q_o$

WHERE  $C_t$  = DOWNSTREAM CONCENTRATION IN RIVER  
 $Q_t$  = DOWNSTREAM RIVER FLOW RATE  
 $C_r$  = UPSTREAM CONCENTRATION IN RIVER  
 $Q_r$  = UPSTREAM RIVER FLOW RATE  
 $C_o$  = CONCENTRATION IN GROUNDWATER  
 $Q_o$  = GROUNDWATER FLOW RATE

TO FIND DOWNSTREAM CONCENTRATION, ( $C_t$ ) ASSUME  $C_r = 0$ ,  $Q_t = Q_r + Q_o$ , AND THEN SOLVE FOR  $C_t$ .

$$C_t = \frac{C_o Q_o}{Q_r + Q_o} \quad \text{NO. 1}$$

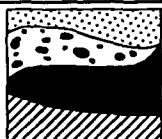
TO FIND THE GROUNDWATER FLOW RATE  
 USE THE FOLLOWING EQUATION

$$Q = K i A \quad \text{NO. 2}$$

WHERE  $Q$  = GROUNDWATER FLOW RATE  
 $K$  = AQUIFER HYDRAULIC CONDUCTIVITY  
 $i$  = HYDRAULIC GRADIENT  
 $A$  = AREA OF FLOW PERPENDICULAR TO FLOW DIRECTION

NOTE : RIVER FLOW RATES TAKEN FROM UPSTREAM GAGING STATION

**GCL**



CLIENT: REXENE

DATE: 9/13/95

AUTHOR: BAL

CK'D BY: BAL

REV. NO.: 0

DRAWN BY: MP

FILE: MXNGZN

**FIGURE 16  
 MIXING ZONE MODEL**

**Appendix A**

**Property Owners in Vicinity of the Site**

Included are survey abstracts for the Texas properties.  
Detailed information for the New Mexico properties to follow.

EL PASO (CAD), TX.

K02

TRW-REDI

Nationwide 1-800-345-7334

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PARCEL NUMBER	DIST	ZONE	LAND USE PROPERTY CLASS	BUILDING FEATURES EXEMPTIONS	STATISTICAL DATA	SALE PRICE SALE DATE	TOTAL VALUE-TV LAND VALUE-LV
OWNERS NAME MAILING ADDRESS *PROPERTY LOCATION LEGAL DESC		TAX DISTRICTS	PROPERTY TYPE LAND AREA EXTRA FEATURES			D -S -F CDS BOOK-PAGE	IMPRV VALUE-IV BLDG VALUE-BV AGRIC VALUE-AV

X134-999-0000-6100 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
JOHN WHITAKER SURV 134 ABST 2715 LAND AREA- 79.518AC  
TR 3-D (79.5188 ACRES) CARRIED  
WITH TOWN & COUNTRY  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-0100 34 R-4 Z9-U S A TOPO -ROLLING \$24,228-TV  
U S RECLAMATION SERVICE R-RESIDENTIAL UTILITY-ELECTRICITY \$24,228-LV  
109 N OREGON ST LAND AREA- 5.562AC EXEMPT -G GOVT ENTITY  
EL PASO TX 79901-1148  
ANDREW STOUT SURV 135 ABST 2695  
TR 1 (5.562 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-999-0000-0500 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
R G E P & S F RAILROAD CO REF-REFERENCE ACCT ONLY  
310 SANTA FE BLDG  
AMARILLO TX 79110-6646  
RAILROAD  
ANDREW STOUT SURV 135 ABST 2695  
TR 2 (2.227 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-999-0000-0900 34 R-4 Z7-PEOPLE OF STATE OF TX ROAD TY-NEIGHBORHOOD  
PEOPLE OF THE STATE OF TEXAS C-COMMERCIAL EXEMPT -G GOVT ENTITY  
ANDREW STOUT SURV 135 ABST 2695 LAND AREA- 1.781AC  
TR 3 (1.761 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

L02

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PARCEL NUMBER	DIST	ZONE	LAND USE PROPERTY CLASS	BUILDING FEATURES EXEMPTIONS	STATISTICAL DATA	SALE PRICE SALE DATE	TOTAL VALUE-TV LAND VALUE-LV
OWNERS NAME MAILING ADDRESS							

EL PASO

TRI

PARCEL

\*PROPEI

X146

X146-00

\*271

X146-00

\*150

X146-00

\*151

EL PASO

TRI

PARCEL



EL PASO (CAD), TX.

L02

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Copyright 1996  
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OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTSLAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURESBUILDING FEATURES  
EXEMPTIONSSTATISTICAL  
DATASALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D-S-F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-1300 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
ANDREW STOUT SURV 135 ABST 2695  
TR 4 (0.23 ACRE) CARRIED WITH 5  
TO 8 OF 1 BUENA VISTA  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSPX135-999-0000-1700 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
ANDREW STOUT SURV 135 ABST 2695  
TR 5 (35.576 ACRES) CARRIED WITH  
BUENA VISTA  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSPX135-999-0000-2100 34 R-4 C1-RES VAC LOT/TR < 5AC TOPO -ARROYO \$795-TV  
R-RESIDENTIAL ROAD TY-PAVED \$795-LV  
LAND AREA- .265AC  
SANDERSON ANTIS U  
226 MARICOPA DR  
EL PASO TX 79912-4402  
ANDREW STOUT SURV 135 ABST 2695  
TR 6 (0.265 ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSPX135-999-0000-2500 34 R-4 C1-RES VAC LOT/TR < 5AC FOUND -CONCRETE SLAB 01/79 \$2,346-TV  
R-RESIDENTIAL TOPO -HIGH 963-0350 \$2,346-LV  
LAND AREA- .702AC ROAD TY-DIRT  
UTILITY-ELEC GAS SEPT  
VILLALOBOS DAVID & MIGUEL  
VILLALOBOS PHIL  
815 N PIEDRAS ST  
EL PASO TX 79903-4007  
CALLE SANTA ROSA ST  
ANDREW STOUT SURV 135 ABST 2695  
TR 7-A (0.782 ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTSLAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURESBUILDING FEATURES  
EXEMPTIONSSTATISTICAL  
DATASALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D-S-F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

EL PASO

TRW

PARCEL 1

\*PROPER

X146

X146-001

\*151

X146-001

PHONE  
\*271

X146-001

\*141

X146-001

PHONE  
\*283

EL PASO

TRW

PARCEL 1

\*PROPER

EL PASO (CAD), TX.

M02

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

## X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-2900	34	R-4	C1-RES VAC LOT/TR < 5AC	TOPO -HIGH		01/79	\$594-TV
VILLALOBOS DAVID & MIGUEL			R-RESIDENTIAL	ROAD TY-DIRT		963-0350	\$594-LV
VILLALOBOS PHIL			LAND AREA- .198AC	UTILITY-ELEC GAS SEPT			
315 N PIEDRAS ST							
EL PASO TX 79903-4007							
ANDREW STOUT SURV 135 ABST 2695							
TR 7-B (0.198 ACRE)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X135-999-0000-3300	34	R-4	A1-RES SINGLE FAMILY	FOUND -CONCRETE SLAB	BATHS - 2.0		\$24,471-TV
CARMONA VICENTE & REBECCA F			003-RES CLASS 003	EXT FIN-STUCCO/MASONRY	FIREPL - 1		\$1,566-LV
335 NOPAL AVE			R-RESIDENTIAL	RF TYPE-GABLE			\$22,905-IV
EL PASO TX 79922-1508			LAND AREA- 1,355SF	RF MAT -COMPOSITION SHG			
NOPAL AVE			LAND AREA- .522AC	HEATING-GAS STOVE			
ANDREW STOUT SURV 135 ABST 2695			MAIN BLDG- 1,355SF	COOLING-EVAPORATIVE-AIR			
TR 8 (0.143 ACRE) & TR 9-B (0.379			ADJ BLDG- 1,355SF	INT FIN-PLASTER			
ACRE)			EX FRPL 3 4 7	FLOOR -TILE			
IEP-EL PASCO I.S.D.				EXEMPT -HD HS & SS DIS			
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X135-999-0000-3700	34		A1-RES SINGLE FAMILY	FOUND -PIER AND BEAM	BATHS - 1.0	12/80	\$19,992-TV
HERNANDEZ PILAR			002--CLS 002- NO EVAP	EXT FIN-ADOBE		1135-0722	\$1,770-LV
329 SANTA ROSA ST			R-RESIDENTIAL	EXT FIN-STUCCO SIDING		Prior:	\$18,222-IV
EL PASO TX 79922-1512			LAND AREA- 543SF	RF TYPE-FLAT		04/04/77	
CALLE SANTA ROSA ST			LAND AREA- .590AC	RF MAT -COMPOSITION SHG		779-0301	
ANDREW STOUT SURV 135 ABST 2695			MAIN BLDG- 543SF	HEATING-SPACE HEATING			
TR 9-A (0.590 ACRE)			ADJ BLDG- 543SF	COOLING-EVAPORATIVE-AIR			
IEP-EL PASCO I.S.D.				INT FIN-PLASTER			
CEP-CITY OF EL PASO				FLOOR -TILE			
SCC-EL PASO COMM COLLEGE				TOPO -LEVEL			
SHO-THOMASON GEN HOSP				ROAD TY-PAVED			
				EXEMPT -H HOMESTEAD			

			A1-RES SINGLE FAMILY	FOUND -PIER AND BEAM	CARD NO- 2		\$5,261-BV
			002--CLS 002- NO EVAP	EXT FIN-ADOBE	BATHS - 1.0		
			R-RESIDENTIAL	EXT FIN-STUCCO SIDING			
			LAND AREA- 1,008SF	RF TYPE-FLAT			
			LAND AREA- .590AC	RF MAT -COMPOSITION SHG			
			MAIN BLDG- 936SF	HEATING-SPACE HEATING			
			ADJ BLDG- 936SF	COOLING-EVAPORATIVE-AIR			
			COVERED PATIO 290SF	INT FIN-PLASTER			
				FLOOR -TILE			
				TOPO -LEVEL			
				ROAD TY-PAVED			
				EXEMPT -H HOMESTEAD			

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

PHONE #1  
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EL PASO (C

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PARCEL NUM	OWN	M	PROPERTY	LE
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## X146-

X146-000-0	SHI	7	C	
*228	W	1	3-E	

X146-000-0	CAR	2	E	
*234	W	1	3-E	

X146-000-0	LEW	1	E	
*240	W	1	3-E	

X146-000-0	HECK	1	AN	
*241	W	1	3-B	

EL PASO (CA

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PARCEL NUM

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PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

## X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-3700  
HERNANDEZ PILAR  
\*329 CALLE SANTA ROSA ST

A1-RES SINGLE FAMILY  
002--CLS 002- NO EVAP  
R-RESIDENTIAL  
LAND AREA- 1,270SF  
LAND AREA- 1,590AC  
MAIN BLDG- 1,222SF  
ADJ BLDG- 1,222SF  
COVERED PATIO 195SF

FOUND -PIER AND BEAM  
EXT FIN-ADOBE  
EXT FIN-STUCCO SIDING  
RF TYPE-FLAT  
RF MAT -COMPOSITION SHG  
HEATING-SPACE HEATING  
COOLING-EVAPORATIVE-AIR  
INT FIN-PLASTER  
FLOOR -TILE  
TOPO -LEVEL  
ROAD TY-PAVED  
EXEMPT -H HOMESTEAD

CARD NO- 3 \*CONTINUED\*  
BATHS - 1.0

\$19,992-TV  
\$1,770-LV  
\$10,104-BV

X135-999-0000-3900 34  
9 REFERENCE  
ANDREW STOUT SURV 135 ABST 2695  
TR 9-B (0.379 ACRE) CARRIED WITH  
8

Y9-REFERENCE  
REF-REFERENCE ACCT ONLY

EXEMPT -R REFER ACCT

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-999-0000-4100 34  
FIERRO SEVERO & ROSARIO LE  
CABRALEZ BENJAMIN  
163 COURCHESNE RD  
EL PASO TX 79922-1505  
\*335 CALLE SANTA ROSA ST  
ANDREW STOUT SURV 135 ABST 2695  
TR 10 (.189 ACRE)

A1-RES SINGLE FAMILY  
002--CLS 002- NO EVAP  
R-RESIDENTIAL  
LAND AREA- 737SF  
LAND AREA- 1,89AC  
MAIN BLDG- 499SF  
ADJ BLDG- 499SF  
STORAGE 476SF

FOUND -PIER AND BEAM  
EXT FIN-ADOBE  
EXT FIN-STUCCO SIDING  
RF TYPE-FLAT  
RF MAT -ROLL COMPOSITH  
HEATING-SPACE HEATING  
COOLING-EVAPORATIVE-AIR  
INT FIN-PLASTER  
FLOOR -CONCRETE  
FLOOR -TILE  
TOPO -LEVEL

BATHS - 1.0 06/10/85  
1574-1431

\$7,790-TV  
\$567-LV  
\$7,223-IV

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

A1-RES SINGLE FAMILY  
002--CLS 002- NO EVAP  
R-RESIDENTIAL  
LAND AREA- 796SF  
LAND AREA- 1,89AC  
MAIN BLDG- 635SF  
ADJ BLDG- 635SF  
OPEN PORCH 161SF

FOUND -PIER AND BEAM  
EXT FIN-ADOBE  
EXT FIN-STUCCO SIDING  
RF TYPE-FLAT  
RF MAT -ROLL COMPOSITH  
HEATING-SPACE HEATING  
COOLING-EVAPORATIVE-AIR  
INT FIN-PLASTER  
FLOOR -CONCRETE  
FLOOR -TILE  
TOPO -LEVEL

CARD NO- 2  
BATHS - 1.0

\$3,364-BV

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PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

## X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-4500 34 R-4

J3-UTILS/ELECTRIC CO

ROAD TY-NEIGHBORHOOD

\$6,795-TV

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X146-000  
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X146-000  
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X146-000  
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X146-000  
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PARCEL N  
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X146-000  
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1996  
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VALUE-TV  
VALUE-LV  
VALUE-IV  
VALUE-BV  
VALUE-AV

1996  
Copyright

1996  
Copyright

1996  
Copyright

VALUE-TV  
VALUE-LV  
VALUE-IV  
VALUE-BV  
VALUE-AV

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-4500	34	R-4	J3-UTILS/ELECTRIC CO C-COMMERCIAL LAND AREA- 3.120AC	ROAD TY-NEIGHBORHOOD			\$6,795-TV \$6,795-LV
* EL PASO ELECTRIC CO 303 N OREGON ST EL PASO TX 79901-1329 NOPAL AVE ANDREW STOUT SURV 135 ABST 2695 TR 11 (3.120 ACRES) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							
X135-999-1000-4900	34	R-4	A1-RES SINGLE FAMILY 007+-RES CLASS 007+ R-RESIDENTIAL LAND AREA- 2,206SF LAND AREA- .213AC MAIN BLDG- 1,641SF ADJ BLDG- 1,641SF CARPORT 1,014SF OPEN PORCH 189SF OPEN PORCH 168SF	FOUND -CONCRETE SLAB EXT FIN-STUCCO/MASONRY RF TYPE-FLAT RF MAT-ROLL COMPOSITN HEATING-GAS STOVE COOLING-EVAPORATIVE-AIR INT FIN-SHEET ROCK FLOOR -ASPHALT TILE TOPO -SLOPE ROAD TY-DIRT UTILITY-ELEC GAS SEPT EXEMPT -HZ HS/65+/TX D	YR BLT -1955 BATHS - 2.0 D - FIREPL - 1	06/07/61	\$38,609-TV \$639-LV \$37,970-IV
*361 RAMIREZ DANIEL & ADELINA R 361 SANTA ROSA ST EL PASO TX 79922-1512 CALLE SANTA ROSA ST ANDREW STOUT SURV 135 ABST 2695 TR 12 (0.213 ACRE) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							
X135-999-0000-5300	34	R-4	A1-RES SINGLE FAMILY 002--CLS 002- NO EVAP R-RESIDENTIAL LAND AREA- 1,112SF LAND AREA- .510AC MAIN BLDG- 1,002SF ADJ BLDG- 1,002SF OPEN PORCH 110SF	FOUND -CONCRETE SLAB EXT FIN-ADOBE EXT FIN-STUCCO SIDING RF TYPE-FLAT RF MAT-ROLL COMPOSITN HEATING-GAS STOVE COOLING-EVAPORATIVE-AIR INT FIN-SHEET ROCK FLOOR -TILE TOPO -SLOPE ROAD TY-DIRT UTILITY-ELEC GAS SEPT EXEMPT -H HOMESTEAD	YR BLT -1940 BATHS - 1.0		\$8,708-TV \$1,530-LV \$7,178-IV
*365 ROBLES DANIEL F 365 SANTA ROSA ST EL PASO TX 79922-1512 PHONE #(915)-501-6156 CALLE SANTA ROSA ST ANDREW STOUT SURV 135 ABST 2695 TR 13-A (0.510 ACRE) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							
X135-999-0000-5700	34	R-4	A1-RES SINGLE FAMILY 002--CLS 002- NO EVAP R-RESIDENTIAL LAND AREA- 901SF LAND AREA- .099AC MAIN BLDG- 789SF ADJ BLDG- 709SF EX FRPL 1 2 6 1UN OPEN PORCH 126SF OPEN PORCH 81SF	FOUND -PIER AND BEAM EXT FIN-STUCCO SIDING RF TYPE-GABLE RF MAT-ROLL COMPOSITN HEATING-GAS STOVE COOLING-EVAPORATIVE-AIR INT FIN-PLASTER FLOOR -TILE TOPO -SLOPE ROAD TY-DIRT UTILITY-ELEC GAS SEPT	YR BLT -1955 BATHS - 1.0 Q - FIREPL - 1	10/07/92 2484-0966 PRIOR: 10/23/91 H - - 2484-0968	\$4,847-TV \$297-LV \$4,550-IV
*369 ANDRADE EDUARDO & LORENZO 4227 TYLER ST RIVERSIDE CA 92503-3405 CALLE SANTA ROSA ST ANDREW STOUT SURV 135 ABST 2695 TR 13-B (0.099 ACRE) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-6100	34	R-4	22-CHURCHES 003--RES CLASS 003- R-RESIDENTIAL LAND AREA- 1.0000	FOUND -CONCRETE SLAB EXT FIN-STUCCO/MASONRY RF TYPE-GABLE	BATHS - 1.0	09/83 1382-0739	\$16,608-TV \$603-LV \$16,005-IV
CATHOLIC DIOCESE OF EL PASO 499 SAINT MATTHEWS ST EL PASO TX 79907-0214							

TRI

PARCEL

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X14:

X146-00

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X146-00

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EL PASO

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X146-001

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

## X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-6100	34	R-4	Z2-CHURCHES	FOUND -CONCRETE SLAB	BATHS - 1.0	09/83	\$16,608-TV
CATHOLIC DIOCESE OF EL PASO			003--RES CLASS 003-	EXT FIN-STUCCO/MASONRY		1382-0739	\$603-LV
499 SAINT MATTHEWS ST			R-RESIDENTIAL	RF TYPE-GABLE			\$16,005-IV
EL PASO TX 79907-4214			LAND AREA- 1,624SF	RF MAT -COMPOSITION SHG			
*3400 ZAPAL AVE			LAND AREA- .201AC	HEATING-SPACE HEATING			
ANDREW STOUT SURV 135 ABST 2695			MAIN BLDG- 700SF	COOLING-EVAPORATIVE-AIR			
TR 14 (0.201 AC)			ADJ BLDG- 700SF	INT FIN-PLASTER			
IEP-EL PASCO I.S.D.			OPEN PORCH 84SF	FLOOR -TILE			
CEP-CITY OF EL PASO			CANOPY 280SF	TPO -LEVEL			
SCC-EL PASO COMM COLLEGE			CANOPY 560SF	UTILITY-ELEC GAS WATER			
SHO-THOMASON GEN HOSP				EXEMPT -P PARSN/CHRCH			

X135-999-0000-6600	34	R-4	Z1-ALL ENTITIES	ROAD TY-NEIGHBORHOOD		02/77	
CITY OF EL PASO			C-COMMERCIAL	EXEMPT -G GOVT ENTITY		758-0527	
2 CIVIC CENTER PLZ			LAND AREA- 3.215AC				
EL PASO TX 79901-1124							
ANDREW STOUT SURV 135 ABST 2695							
PT OF TR 15 (3.215 ACRES)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X135-999-0000-6900	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
9 REFERENCE			REF-REFERENCE ACCT ONLY				
ANDREW STOUT SURV 135 ABST 2695			LAND AREA- 4.111AC				
TR 16 (4.1112 ACRES) CARRIED WITH							
BUENA VISTA							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X135-999-0000-7300	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
EL PASO ELECTRIC CO			REF-REFERENCE ACCT ONLY				
303 N OREGON ST			LAND AREA- .815AC				
EL PASO TX 79901-1329							
ANDREW STOUT SURV 135 ABST 2695							
TR 17 (0.815 ACRE) ACREAGE							
CARRIED WITH TR 3 IN W C MORGAN							
SUR 237							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

Q02

TRW-REDI

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

EL PASO (CA)

TRW-F

PARCEL NUMB	OWNER
MA	MA
*PROPERTY L	LEC

## X146-1

X146-000-00	ACUN
C/	40
EL	
W F	
3-B	

X146-000-00	MCDC
27	AN
*283	
W F	
3-B	

X146-000-00	MC D
27	AN
*277	
W F	
3-B	

X146-000-00	FRAN
25	AN
*259	
W F	
3-B	

EL PASO (CA)

TRW-F

PARCEL NUMB	OWNER
MA	MA
*PROPERTY L	LEG

EL PASO (CAD), TX.

Q02

EL PASO (CA

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-7700	34	Y9-REFERENCE	EXEMPT -R	REFER ACCT
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9 REFERENCE

ANDREW STOUT SURV 135 ABST 2695  
TR 18 (1.136 ACRES) CARRIED WITH  
BUENA VISTAIEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-999-0000-8100	34	R-4	21-ALL ENTITIES	ROAD TV-NEIGHBORHOOD	06/78
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CITY OF EL PASO

2 CIVIC CENTER PLZ

EL PASO TX 79901-1124

ANDREW STOUT SURV 135 ABST 2695

TR 19 2.5579 ACRES

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-999-0000-6500	34	Y9-REFERENCE	EXEMPT -R	REFER ACCT
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EL PASO ELECTRIC CO

303 N OREGON ST

EL PASO TX 79901-1329

ANDREW STOUT SURV 135 ABST 2695

TR 20 (1.328 ACRES) ACREAGE  
CARRIED WITH TR 3 W C MORGAN SUR  
237IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X135-999-0000-8900	34	R-4	C1-RES VAC LOT TR < 5AC	TOPO -ROLLING	\$2,826-TV
--------------------	----	-----	-------------------------	---------------	------------

COSTA LOURDES F

2509 V F W ST

EL PASO TX 79922-6646

ANDREW STOUT SURV 135 ABST 2695

TR 21 (0.942 ACRE)

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

R02

EL PASO (CAD

TRW·F

PARCEL NUMBER	OWNERS NAME	MAILING ADDRESS	*PROPERTY LOCATION	LEGAL
---------------	-------------	-----------------	--------------------	-------

X146-1

X146-000-00

COLE

60

EL

\*7874

W F

ONL

X146-000-00

GRAY

ST

AN

\*171

WF

3-B

X146-000-00

JOHNS

C/C

586

EL

PHONE #(9)

\*161

WF

3-B

GRID PARCEL NUMBER

B02 X132-999-0000-0100

C02 X132-999-0000-0100

D02 X132-999-0000-0100

E02 X132-999-0000-0100

GRID PARCEL NUMBER

K02 X134-999-0000-0400

L02 X134-999-0000-0100

M02 X135-999-0000-1300

N02 X135-999-0000-2900

GRID PARCEL

B05 X135-99

C05 X140-99

D05 X140-99

E05 X140-99

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AL VALUE-TV  
ND VALUE-LV  
RV VALUE-IV  
DS VALUE-BV  
IC VALUE-AV

\$158,156-TV  
\$434,118-LV  
\$724,038-IV

\$260,800-TV  
\$176,418-LV  
\$84,382-IV

\$56,851-TV  
\$56,851-LV

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AL VALUE-TV  
ND VALUE-LV  
RV VALUE-IV  
DS VALUE-BV  
IC VALUE-AV

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	DATE	VALUE-LV	
MAILING ADDR			PROPERTY TYPE			-S -F CDS	IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG	VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC	VALUE-AV

X135-ANDREW STOUT SURV 135 ABST 2695

X135-999-0000-9300	34	R-4	C1-RES VAC LOT/TR < 5AC	TOPO -ROLLING				\$315-TV
COSTA LOURDES F			R-RESIDENTIAL	UTILITY-ELECTRICITY				\$315-LV
2569 V F H ST			LAND AREA- .105AC					
EL PASO TX 79922-6646								
ANDREW STOUT SURV 135 ABST 2695								
TR 22 (0.105 ACRES)								
IEP-EL PASCO I.S.D.								
CEP-CITY OF EL PASO								
SCC-EL PASO COMM COLLEGE								
SHO-THOMASON GEN HOSP								

X140-AL WALTON SURV 140 ABST 2714

X140-999-0000-0100	34	M-2	Z9-U S A	EXEMPT -G	GOVT ENTITY			
U S RECLAMATION SERVICE			R-RESIDENTIAL					
109 N OREGON ST								
EL PASO TX 79901-1148								
AL WALTON SURV 140 ABST 2714 TR 1								
(1.607 ACRES)								
IEP-EL PASCO I.S.D.								
CEP-CITY OF EL PASO								
SCC-EL PASO COMM COLLEGE								
SHO-THOMASON GEN HOSP								

X140-999-0000-1100	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT			
R G E P & S F RAILROAD CO			REF-REFERENCE ACCT ( 1Y					
310 SANTA FE BLDG								
AMARILLO TX 79110-6646								
RAILROAD								
AL WALTON SURV 140 ABST 2714 TR 2								
(1.623 ACRES)								
IEP-EL PASCO I.S.D.								
CEP-CITY OF EL PASO								
SCC-EL PASO COMM COLLEGE								
SHO-THOMASON GEN HOSP								

X140-999-0000-2100	34	M-2	Z7-PEOPLE OF STATE OF TX	EXEMPT -G	GOVT ENTITY			
PEOPLE OF THE STATE OF TEXAS			C-COMMERCIAL					
AL WALTON SURV 140 ABST 2714 TR 3			LAND AREA- 1.603AC					
(1.603 ACRES)								
IEP-EL PASCO I.S.D.								
CEP-CITY OF EL PASO								
SCC-EL PASO COMM COLLEGE								
SHO-THOMASON GEN HOSP								

EL PASO (CAD), TX.

B03

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	DATE	VALUE-LV	
MAILING ADDRESS			PROPERTY TYPE					

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TOTAL VALUE-TV  
LAND VALUE-LV  
IMPRV VALUE-IV  
BLDG VALUE-BV  
AGRIC VALUE-AV

\$26,357-TV  
\$4,762-LV  
\$21,595-IV

\$871,200-TV  
\$871,200-LV

\$6,600-TV  
\$6,600-LV

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

### X008-F NEVE SURV 08 ABST 162

X008-999-000B-9100 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE  
F NEVE SURV 8 ABST #162 TR 6-C  
(0.943 ACRE) CARRIED WITH  
UNPLATTED PORTION  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X008-999-000B-9600 34 M-1 Z3-CHARITABLE INSTS ROAD TY-INTERSTATE HWY \$746,184-TV  
CITY-COUNTY HOSPITAL C-COMMERCIAL EXEMPT -C CHARIT INST \$746,184-LV  
PO BOX 20009  
EL PASO TX 79998-0009  
\* ALAMEDA AVE  
F NEVE SURV 8 ABST #162 (5.71  
ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

### X010-BARKER SURV 10 ABST 07

X010-999-0000-0100 34 F2-INDUSTRIAL BLDGS BASEMNT-UNFINISHED BSMT \$9,018,010-TV  
A S A R C O INC I-INDUSTRIAL \$4,753,010-LV  
C/O FERREL JOHN L CO LAND AREA- 718.645AC \$4,265,000-IV  
PO BOX 26903  
EL PASO TX 79926-6903  
\*3125 W PAISANO DR  
BARKER SURV 10 ABST 7 1 & 2-A &  
12-A & 20-A & 24 & 25 (718.6450  
AC)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-0150 34 Y9-REFERENCE EXEMPT -R REFER ACCT \$3,764,782-TV  
A S A R C O INC REF-REFERENCE ACCT ONLY \$3,764,782-IV  
C/O THE LEAVELL CO  
4401 N MESA ST #200  
EL PASO TX 79902-1146  
BARKER SURV 10 ABST #7 1 & 2-A &  
12-A & 20-A & 24 & 25 (IMPS ONLY)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

B13

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

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TOTAL VALUE-TV  
LAND VALUE-LV  
IMPRV VALUE-IV  
BLDG VALUE-BV  
AGRIC VALUE-AV



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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE				IMPRV VALUE-TV
*PROPERTY LOCATION			LAND AREA				BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-0200	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
9 REFERENCE							
BARKER SURV 10 ABST #7 TR 2-A							
(390.928 ACRES) CARRIED WITH 1							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X010-999-0000-0205	34	M-3	Z2-CHURCHES	TOPO -LEVEL			\$387-TV
CATHOLIC DIOCESE OF EL PASO			C-COMMERCIAL	ROAD TV-NEIGHBORHOOD			\$387-LV
499 SAINT MATTHEWS ST			LAND AREA-	UTILITY-ELECTRICITY			
EL PASO TX 79907-4214			.089AC	EXEMPT -X	CEMETARIES		
EXECUTIVE CENTER							
BARKER SURV 10 ABST #7 PT OF TR							
2-C (0.089 ACRE)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X010-999-0000-0210	34	M-3	Z2-CHURCHES	TOPO -LEVEL	06/70		\$2,787-TV
METZGER S M			C-COMMERCIAL	ROAD TV-NEIGHBORHOOD	300-0009		\$2,787-LV
C/O CATHOLIC DIOCESE OF EL PASO			LAND AREA-	UTILITY-ELECTRICITY			
499 SAINT MATTHEWS ST			.640AC	EXEMPT -P	PARSN/CHRCH		
EL PASO TX 79907-4214							
EXECUTIVE CENTER							
BARKER SURV 10 ABST #7 TR 2-B							
(0.640 ACRE)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X010-999-0000-0220	34	M-3	C2-COMMERCIAL	VACANT LOT	08/76		\$9,245-TV
A S A R C O INC			C-COMMERCIAL	ROAD TV-NEIGHBORHOOD	1223-1506		\$9,245-LV
C/O PO BOX 26903			LAND AREA-				
EL PASO TX 79926-6903			.283AC				
EXECUTIVE CENTER							
BARKER SURV 10 ABST #7 TR 2-C							
(0.283 ACRE)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE				IMPRV VALUE-TV
*PROPERTY LOCATION			LAND AREA				BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

## X010-BARKER SURV 10 ABST 07

X010-999-0000-0300	34	M-1	C2-COMMERCIAL VACANT LOT	TOPO -ROLLING		06/81	\$116,518-TV
LIVINGSTON JOHN H			C-COMMERCIAL	ROAD TY-NEIGHBORHOOD		1182-1473	\$116,518-LV
PO BOX 1180			LAND AREA- 17.832AC	UTILITY-ELECTRICITY			

SUNLAND PARK NM 88063-1180  
 \* INTERSTATE 10  
 BARKER SURV #10 TR 3 (17.8326 AC)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X010-999-0000-0310	34	M-1	C2-COMMERCIAL VACANT LOT	TOPO -ROLLING		08/02/89	\$39,686-TV
MBANK			C-COMMERCIAL	ROAD TY-NEIGHBORHOOD		F - -	\$39,686-LV
C/O BATKIN MIKE			LAND AREA- 5.694AC	UTILITY-ELECTRICITY		2082-0848	

PO BOX 1072  
 EL PASO TX 79958-0001  
 \* INTERSTATE 10  
 BARKER SURV 10 ABST #7 TR 3-A  
 (24.804 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X010-999-0000-0400	34	M-3	C2-COMMERCIAL VACANT LOT	TOPO -ROLLING		06/81	\$120,387-TV
LIVINGSTON JOHN H			C-COMMERCIAL	ROAD TY-NEIGHBORHOOD		1182-1473	\$120,387-LV
PO BOX 1180			LAND AREA- 6.909AC	UTILITY-ELECTRICITY		PRIOR:	

SUNLAND PARK NM 88063-1180  
 \* INTERSTATE 10  
 BARKER SURV #10 TR 4 (6.9093 AC)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X010-999-0000-0500	34	M-3	Z6-EL PASO PUBLIC SVC BD	TOPO -ROUGH		08/12/83	
EL PASO PUBLIC SERVICE BOARD			C-COMMERCIAL	ROAD TY-INTERSTATE HWY			
320 S CAMPBELL ST			LAND AREA- 23.065AC	UTILITY-ELEC GAS WATER			

EL PASO TX 79901-2840  
 \* INTERSTATE 10  
 BARKER SURV 10 ABST #7 TR 5  
 23.0658 ACRES  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

EL PASO

TRW

PARCEL

\*PROPER

X01

X011-99

X011-99

X011-99

X011-99

PHONE  
#320

EL PASO

TRW

PARCEL

\*PROPERT

EL PASO (CAD), TX.

D13

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-0550	34	M-3	C2-COMMERCIAL VACANT LOT ROAD TY-BUSINESS CLUSTER			03/10/88	\$432,511-TV
JOBE CONCRETE PRODUCTS INC			C-COMMERCIAL			W -AB-B	\$432,511-LV
1 MCKELLIGON CANYON RD			LAND AREA-	99.290AC		1901-0764	
EL PASO TX 79930-2634						PRIOR:	

\*  
INTERSTATE 10  
BARKER SURV 10 ABST #7  
5-A(10.4272AC)812-B(9.594AC)8  
HARRISON SURV 54(301.34AC)8  
CHRISTIANSCHERTZ SUR 106(111.15AC)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

03/10/88  
W -AB-B  
1901-0764  
PRIOR:  
\$62,500  
03/31/87  
W -D -  
1806-0170

X010-999-0000-0600	34	M-3	Z6-EL PASO PUBLIC SVC BD TOPO -LEVEL			08/12/83	
EL PASO PUBLIC SERVICE BOARD			C-COMMERCIAL	ROAD TY-INTERSTATE HWY			
320 S CAMPBELL ST			LAND AREA-	33.843AC			
EL PASO TX 79901-2840				UTILITY-NONE			

\*  
INTERSTATE 10  
BARKER SURV 10 ABST #7 TR 6  
(33.8435 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-0601	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT	07/01/85	\$141,423-TV
GENERAL TRK LEASING & RENTAL			REF-REFERENCE ACCT ONLY				\$141,423-IV
777 EXECUTIVE CENTER BLVD							
EL PASO TX 79922							

BARKER SURV #10 IMPS ONLY ON TR 6  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-0603	34		Z6-EL PASO PUBLIC SVC BD EXEMPT -G	GOVT ENTITY		07/14/87	\$67,591-TV
EL PASO PUBLIC SERVICE BOARD			C-COMMERCIAL			PRIOR:	\$67,591-IV
320 S CAMPBELL ST			LAND AREA-	4.218AC		12/24/85	
EL PASO TX 79901-2840							

\*  
INTERSTATE 10  
BARKER SURV 10 ABST #7 4.2185  
ACRES OUT OF TR 6 4.2185 ACRES  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

E13

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV

EL PASO

TRW

PARCEL 1

\*PROPER

X011

X011-999

X011-999

X011-999

X011-999

EL PASO

TRW

PARCEL N

O

EL PASO (CAD), TX.

E13

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-0700	34	M-3	C2-COMMERCIAL VACANT LOT	TOPO -ROLLING		12/10/91	\$89,288-TV
COCA ERNEST & BERTHA			C-COMMERCIAL	ROAD TY-BUSINESS CLSTR			\$89,288-LV
8761 ALAMEDA AVE			LAND AREA- 4.658AC	UTILITY-ELECTRICITY		2405-0429	
EL PASO TX 79907-6233						PRIOR:	
* EXECUTIVE CENTER						\$90,000	
BARKER SURV 10 ABST #7 TR 7-A						11/30/89	
(4.6586 AC)						*P-BF-F	
IEP-EL PASCO I.S.D.						2123-1977	
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X010-999-0000-0705	34	M-3	Z1-ALL ENTITIES	TOPO -ROLLING		11/26/90	\$314-TV
CITY OF EL PASO			C-COMMERCIAL	ROAD TY-BUSINESS CLSTR			\$314-LV
2 CIVIC CENTER PLZ			LAND AREA- .016AC	UTILITY-ELECTRICITY		2246-1399	
EL PASO TX 79901-1124				EXEMPT -G GOVT ENTITY		PRIOR:	
* EXECUTIVE CENTER						11/25/90	
BARKER SURV 10 ABST #7 TR 7-A-1							
(0.0164 AC)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X010-999-0000-0710	34	M-3	Z3-CHARITABLE INSTS	ROAD TY-INTERSTATE HWY			
CATHOLIC DIOCESE OF EL PASO			C-COMMERCIAL	EXEMPT -C CHARIT INST			
499 SAINT MATTHEWS ST			LAND AREA- 6.390AC				
EL PASO TX 79907-4214							
* EXECUTIVE CENTER							
BARKER SURV 10 ABST #7 TR 7-B							
(6.390 ACRES)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X010-999-0000-0800	34	R-3	J3-UTILS/ELECTRIC CG	ROAD TY-NEIGHBORHOOD			\$34,281-TV
EL PASO ELECTRIC CO			C-COMMERCIAL				\$34,281-LV
303 N OREGON ST			LAND AREA- 3.935AC				
EL PASO TX 79901-1329							
* INTERSTATE 10							
BARKER SURV 10 ABST #7 TR 8							
(3.935 ACRES)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE				

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND	VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG	VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC	VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-0900 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY

BARKER SURV 10 ABST #7 TR 9  
(11.634 ACRES) & 10 (6.212 ACRES)  
8 11 (14.249 ACRES) CAR- RIED  
WITH EXECUTIVE PARK  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1200 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY

BARKER SURV 10 ABST #7 TR 12-A  
(5.552 ACRES) CARRIED WITH 1  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1211 34 M-3 F1-COMM OTHR THAN F2-F9 BASEMNT-UNFINISHED BSMT 03/19/93 \$7,690-TV  
METRO MOBILE CTS PF EL PASO C-COMMERCIAL ROAD TV-BUSINESS CLUSTR \$7,690-IV  
C/O BRENNAN PATRICK J LAND AREA- 560SF  
645 EXECUTIVE CENTER BLVD MAIN BLDG- 560SF  
EL PASO TX 79922-1602 ADJ BLDG- 560SF  
\*645 EXECUTIVE CENTER BLVD YRD PAV BLK TOP 7,532SF  
BARKER SURV 10 ABST #7 IMPS ONLY SEC FENC BARBED 1,824SF  
ON TR 12-B SEC FENC MASON 255SF

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1300 34 M-3 C2-COMMERCIAL VACANT LOT ROAD TV-BUSINESS CLUSTR \$24,584-TV  
KNAPP R E & R A C-COMMERCIAL \$24,584-LV  
13781 HORIZON BLVD LAND AREA- .750AC  
EL PASO TX 79927-5802

" EXECUTIVE CENTER  
BARKER SURV 10 ABST #7 TR 13  
(0.75 ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1400 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY

BARKER SURV 10 ABST #7 TR 14 (1  
ACRE) CARRIED WITH 4 & E 20.82 FT  
OF 5 OF A EXECUTIVE PARK  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND	VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG	VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC	VALUE-AV

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X010-999-0000-1400 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
BARKER SURV 10 ABST #7 TR 14 (1  
ACRE) CARRIED WITH 4 & E 20.82 FT  
OF 5 OF A EXECUTIVE PARK  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-1500 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
BARKER SURV 10 ABST #7 TR 15-A  
(0.349 ACRE) CARRIED WITH 1 OF A  
EXECUTIVE PARK  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1510 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
BARKER SURV 10 ABST #7 TR 15-B  
(1.157 ACRES) CARRIED WITH E O  
DRYER SURV 132  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1520 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
BARKER SURV 10 ABST #7 TR 15-B-1  
(0.579 ACRE) CARRIED WITH 2 & 3  
OF A EXECUTIVE PARK  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP  
08/30/79  
PRIOR:  
08/04/79  
1015-1416

X010-999-0000-1600 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
BARKER SURV 10 ABST #7 TR 16  
(0.515 ACRES) CARRIED WITH LA  
CALAVERA SETTLEMENT  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1700 34 M-3 F1-COMM OTHR THAN F2-F9 EXT FIN-BRICK YR BLT -1975 10/07/92 \$187,751-TV  
HERNANDEZ JAMES ENDL-BAR LOUNGE FRAME RF TYPE-GABLE W - - \$105,680-LV  
533 EXECUTIVE CENTER BLVD C-COMMERCIAL RF MAT -ASPHALT SHINGLE 2495-2451 \$82,071-IV  
EL PASO TX 79902-1010 LAND AREA- 3,972SF HEATING-FORCED AIR PRIOR:  
EXECUTIVE CENTER LAND AREA- .828AC COOLING-EVAP COOLING \$325,000  
BARKER SURV 10 ABST #7 TR 17-A MAIN BLDG- 3,972SF INT FIN-FIN, OPEN AREA 04/01/87  
(0.162 ACRE) & TR 17-E (0.645 ADJ BLDG- 3,972SF FLOOR -CARPETING \*P-AU-  
ACRE) & TR 17-K (0.021 ACRE) OFFICE AREA MTL 160SF FLOOR -COMPOSITN TILE 1785-0624  
IEP-EL PASCO I.S.D. YRD PAV BLK TOP 15,876SF BASEMNT-UNFINISHED BSMT  
CEP-CITY OF EL PASO SEC FENC MASON 180SF TOPO -SLOPE  
SCC-EL PASO COMM COLLEGE SEC FENC MASON 160SF ROAD TY-BUSINESS CLSTR  
SHO-THOMASON GEN HOSP ANCIILL BLDG BR 1,634SF UTILITY-ELEC GAS WATER

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
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X010-999-0000-1705 34 M-3 F3-COMM OFFICE BUILDING EXT FIN-BRICK YR BLT -1972 12/31/90 \$141,322-TV  
KOGER EQUITY OF TEXAS INC PFCL-182 STRY DET MASONRY RF TYPE-FLAT W - - \$111,400-LV  
3986 BOULEVARD CENTER DR # 101 C-COMMERCIAL 2272-1266 \$29,922-IV  
JACKSONVILLE FL 32207-2838 LAND AREA- 4,096SF HEATING-FORCED AIR PRIOR: 10/80  
EXECUTIVE CENTER LAND AREA- .511AC COOLING-CENTRAL AIR 1121-0559  
BARKER SURV 10 ABST 7 TR 17-B MAIN BLDG- 4,096SF INT FIN-FIN, DIV AREA  
(0.341 ACRE) & W 49.51 FT OF LOT 7 ADJ BLDG- 4,096SF FLOOR -CARPETING  
BLK A EXECUTIVE PARK YRD PAV BLK TOP 8,468SF FLOOR -COMPOSITN TILE  
IEP-EL PASCO I.S.D. YRD PAV CONC 900SF BASEMNT-UNFINISHED BSMT  
CEP-CITY OF EL PASO RETAIN WALL ROC 900SF TOPO -LEVEL  
SCC-EL PASO COMM COLLEGE ROAD TY-BUSINESS CLUSTR  
SHO-THOMASON GEN HOSP UTILITY-ELEC GAS WATER

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL DATA	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS		SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-1705 34 M-3 F3-COMM OFFICE BUILDING EXT FIN-BRICK YR BLT -1972 12/31/90 \$141,322-TV  
KOGER EQUITY OF TEXAS INC PFCL-182 STRY DET MASONRY RF TYPE-FLAT W - - \$111,400-LV  
3986 BOULEVARD CENTER DR # 101 C-COMMERCIAL 2272-1266 \$29,922-IV  
JACKSONVILLE FL 32207-2838 LAND AREA- 4,096SF HEATING-FORCED AIR PRIOR: 10/80  
EXECUTIVE CENTER LAND AREA- .511AC COOLING-CENTRAL AIR 1121-0559  
BARKER SURV 10 ABST 7 TR 17-B MAIN BLDG- 4,096SF INT FIN-FIN, DIV AREA  
(0.341 ACRE) & W 49.51 FT OF LOT 7 ADJ BLDG- 4,096SF FLOOR -CARPETING  
BLK A EXECUTIVE PARK YRD PAV BLK TOP 8,468SF FLOOR -COMPOSITN TILE  
IEP-EL PASCO I.S.D. YRD PAV CONC 900SF BASEMNT-UNFINISHED BSMT  
CEP-CITY OF EL PASO RETAIN WALL ROC 900SF TOPO -LEVEL  
SCC-EL PASO COMM COLLEGE ROAD TY-BUSINESS CLUSTR  
SHO-THOMASON GEN HOSP UTILITY-ELEC GAS WATER

X010-999-0000-1705 34 V9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY  
BARKER SURV 10 ABST #7 TR 17-B-1  
(0.106 ACRE) CARRIED WITH 17-F  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1708 34 M-3 C2-COMMERCIAL VACANT LOT TOPO -LEVEL 10/03/89 \$87,486-TV  
ASARCO INC C-COMMERCIAL W - - \$87,486-LV  
C/O PLANT MANAGER LAND AREA- .772AC ROAD TY-BUSINESS CLUSTR 2104-0980  
PO BOX 1111 UTILITY-ELEC GAS WATER  
EL PASO TX 79999-1111  
EXECUTIVE CENTER  
BARKER SURV 10 ABST #7 17-C  
(0.3090 AC) & 17-D-1 (0.4634 AC)  
(0.7724 AC)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1711 34 F3-COMM OFFICE BUILDING RF TYPE-GABLE \$163,015-TV  
KNAPP R E & R A C-COMMERCIAL RF MAT -COMPOS B-U REG \$145,807-LV  
13781 HORIZON BLVD LAND AREA- 1,344SF HEATING-FORCED AIR \$17,208-IV  
EL PASO TX 79927-5802 LAND AREA- 4.632AC COOLING-EVAP COOLING  
EXECUTIVE CENTER MAIN BLDG- 1,344SF INT FIN-FIN, OPEN AREA  
BARKER SURV 10 ABST #7 TR 17-D ADJ BLDG- 1,344SF FLOOR -COMPOSITN TILE  
(4.6324 AC) SEC FENC BARBED 12,600SF BASEMNT-UNFINISHED BSMT  
IEP-EL PASCO I.S.D. ANCILL BLDG WD 1,120SF TOPO -LEVEL  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

ANCILL BLDG WD

1,120SF TOPO -LEVEL

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
Mailing Address			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-1715	34	M-3	C2-COMMERCIAL VACANT LOT ROAD TY-BUSINESS CLSTR			04/26/91	\$11,464-TV
SCHUSTER LEO JR			C-COMMERCIAL			W - -	\$11,464-LV
501 EXECUTIVE CENTER BLVD			LAND AREA-			2321-1746	
EL PASO TX 79902-1037			.263AC				

EXECUTIVE CENTER  
BARKER SURV 10 ABST #7 TR 17-D-2  
(0.2632 AC)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1720	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT
9 REFERENCE			REF-REFERENCE ACCT ONLY		

BARKER SURV 10 ABST #7 TR 17-E  
(0.645 ACRE) CARRIED WITH 17-A  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-1725	34	M-3	F1-COMM OTHR THAN F2-F9	EXT FIN-CONCRETE BLOCK	YR BLT -1974	07/29/94	\$418,089-TV
EL PASO CENTER OF THE DEAF INC			MRCL-RET STORE MASONRY	RF TYPE-FLAT		W - -	\$210,006-LV
1005 E VANDELL DR			C-COMMERCIAL	RF MAT -TAR & GRAVEL		2774-0178	\$208,083-IV

\*511 EL PASO TX 79903-5429  
EXECUTIVE CENTER  
BARKER SURV 10 ABST #7 TR 17-E-1  
(0.708 ACRE) & TR 17-H (0.096 ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

LAND AREA- 10,287SF  
LAND AREA- .803AC  
MAIN BLDG- 10,287SF  
ADJ BLDG- 10,287SF  
YRD PAV BLK TOP 19,569SF  
YRD PAV CONC 1,610SF  
SEC FENC MASON 1,504SF

INT FIN-FIN, OPEN AREA  
FLOOR -CARPETING  
FLOOR -COMPOSITN TILE  
BASEMNT-UNFINISHED BSMT  
TOPO -LEVEL  
ROAD TY-BUSINESS CLSTR  
UTILITY-ELEC GAS WATER

X010-999-0000-1730	34	M-3	F3-COMM OFFICE BUILDING	EXT FIN-BRICK	YR BLT -1986	12/01/86	\$381,129-TV
SCHUSTER MANAGEMENT CORP			PFCA-182 STRY DET MASONRY	RF TYPE-FLAT		W -SD-	\$134,334-LV
501 EXECUTIVE CENTER BLVD			C-COMMERCIAL	RF MAT -TAR & GRAVEL		1753-0279	\$246,795-IV

\*501 EL PASO TX 79902-1037  
EXECUTIVE CENTER  
BARKER SURV 10 ABST #7 TR 17-E-2  
(0.499 ACRE) & TR 17-J (0.015 ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

LAND AREA- 14,823SF  
LAND AREA- .514AC  
MAIN BLDG- 4,606SF  
ADJ BLDG- 9,212SF  
OFFICE AREA MTL 368SF  
OFFICE AREA MTL 1,071SF  
OFFICE AREA MTL 434SF  
YRD PAV BLK TOP 9,537SF  
YRD PAV CONC 775SF  
SEC FENC MASON 624SF  
SVC CANOP FIN S 264SF  
SVC CANOP FIN S 324SF  
ADDIT TO MAIN 5,611SF

HEATING-FORCED AIR  
COOLING-CENTRAL AIR  
INT FIN-FIN, DIV AREA  
INT FIN-FIN, DIV AREA  
FLOOR -CARPETING  
FLOOR -COMPOSITN TILE  
BASEMNT-UNFINISHED BSMT  
TOPO -LEVEL  
ROAD TY-BUSINESS CLSTR  
UTILITY-ELEC GAS WATER

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
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SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP  
YRD PAV BLK TOP  
YRD PAV CONC  
SEC FENC MASON  
SVC CANOP FIN S  
SVC CANOP FIN S  
ADDIT TO MAIN  
MIL  
434SF  
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MT  
9,537SF  
TOPO  
-LEVEL  
775SF  
ROAD TY-BUSINESS CLSTR  
624SF  
UTILITY-ELEC GAS WATER  
264SF  
324SF  
5,611SF

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND	VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG	VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC	VALUE-AV

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X010-BARKER SURV 10 ABST 07

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X010-999-0000-1735	34	M-3	F3-COMM OFFICE BUILDING	EXT FIN-BRICK	YR BLT -1975	12/31/90	\$262,720-TV
KOGER EQUITY OF TEXAS INC			PFCA-182 STRY DET MASONRY	RF TYPE-FLAT			\$189,920-LV
3986 BOULEVARD CENTER DR # 101			C-COMMERCIAL	RF MAT -TAR & GRAVEL			\$72,800-IV
JACKSONVILLE FL 32207-2838			LAND AREA- 7,171SF	HEATING-FORCED AIR		2272-1266	
*445 EXECUTIVE CENTER			LAND AREA- .872AC	COOLING-CENTRAL AIR		PRIOR:	
BARKER SURV 10 ABST #7 TR 17-F			MAIN BLDG- 7,171SF	INT FIN-FIN, DIV AREA		10/80	
(0.663 ACRE) & TR 17-G (0.023			ADJ BLDG- 7,171SF	FLOOR -CARPETING		1121-0559	
ACRE) & TR 17-B-1 (0.186 ACRE)			YRD PAV BLK TOP 12,847SF	FLOOR -COMPOSITN TILE			
IEP-EL PASCO I.S.D.			YRD PAV CONC 1,775SF	BASEMNT-UNFINISHED BSMT			
CEP-CITY OF EL PASO				TOPO -LEVEL			
SCC-EL PASO COMM COLLEGE				ROAD TY-BUSINESS CLSTR			
SHO-THOMASON GEN HOSP				UTILITY-ELEC GAS WATER			
X010-999-0000-1740	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
9 REFERENCE			REF-REFERENCE ACCT ONLY				
BARKER SURV 10 ABST #7 TR 17-G							
(0.023 ACRE) CARRIED WITH 17-F							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X010-999-0000-1742	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
9 REFERENCE			REF-REFERENCE ACCT ONLY				
BARKER SURV 10 ABST #7 TR 17-H							
(0.096 ACRE) CARRIED WITH 17-E-1							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X010-999-0000-1744	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
9 REFERENCE			REF-REFERENCE ACCT ONLY				
BARKER SURV 10 ABST #7 TR 17-J							
(0.015 ACRE) CARRIED WITH 17-E-2							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X010-999-0000-1746	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
9 REFERENCE			REF-REFERENCE ACCT ONLY				
BARKER SURV 10 ABST #7 TR 17-F							
(0.021 ACRE) CARRIED WITH 17-A							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X011-999-0  
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X011-999-0  
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AC

EL PASO (CAD), TX.

K13

EL PASO (C/

TRW-REDI

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TRW-I

PARCEL NUMBER DIST ZONE LAND USE BUILDING FEATURES STATISTICAL SALE PRICE TOTAL VALUE TV

PARCEL NUM

AKER 10 A 10 V IR  
(0.021 ACRES) CARRIED WITH 17-A  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D - S - F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-1800	34	M-3	Z1-ALL ENTITIES C-COMMERCIAL LAND AREA- 5.740AC	TOPO -ROUGH ROAD TY-NEIGHBORHOOD UTILITY-ELEC GAS WATER EXEMPT -G GOVT ENTITY		\$34,400 05/29/87 W -D - 1806-0167	\$17,502-TV \$17,502-LV
CITY OF EL PASO 2 CIVIC CENTER PLZ EL PASO TX 79901-1124 INTERSTATE 10 BARKER SURV 10 ABST #7 TR 18 5.7400 ACRES IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							

X010-999-0000-1900	34	M-3	J3-UTILS/ELECTRIC CO C-COMMERCIAL LAND AREA- 8.949AC	ROAD TY-NEIGHBORHOOD			\$19,490-TV \$19,490-LV
EL PASO ELECTRIC CO 303 N OREGON ST EL PASO TX 79901-1329 INTERSTATE 10 BARKER SURV 10 ABST #7 TR 19 (8.949 ACRES) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							

X010-999-0000-2000	34		Y9-REFERENCE REF-REFERENCE ACCT ONLY	EXEMPT -R	REFER ACCT		
9 REFERENCE BARKER SURV 10 ABST #7 TR 20-A (196.009 ACRES) CARRIED WITH 1 IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							

X010-999-0000-2005	34	M-3	C2-COMMERCIAL VACANT LOT ROAD TY-COMM/IND PARK C-COMMERCIAL LAND AREA- 5.710AC			09/30/92 W - - 2486-0668 PRIOR: 09/28/90 W - - 2240-0681	\$62,182-TV \$62,182-LV
CK PROPERTIES LC 4487 N MESA ST # 204 EL PASO TX 79902-1149 N MESA ST BARKER SURV 10 ABST #7 20-A-1(3.264 AC) & 20-B (2.446 AC) (5.7100 AC) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

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PARCEL NUMBER

DIST

ZONE

LAND USE

BUILDING FEATURES

STATISTICAL DATA

EL PASO (CAD)

TRW-RI

PARCEL NUMBER  
OWNER:  
MAIL:  
\*PROPERTY LOC:  
LEGAL:

X011-E

X011-999-0001  
JOS EI  
535:  
EL I  
\*5355 EI  
E BEI  
ACRE:

X011-999-0001  
PASCH:  
808  
EL I  
\*143 CI  
E BEI  
ACRE:

EL PASO (CAD)

TRW-RI

PARCEL NUMBER

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

## X010-BARKER SURV 10 ABST 07

X010-999-0000-2010	34	M-3	C2-COMMERCIAL VACANT LOT ROAD TY-COMM/IND PARK				\$21,976-TV
A S A R C O INC			C-COMMERCIAL				\$21,976-LV
C/O PO BOX 26903			LAND AREA-	2.018AC			
EL PASO TX 79926-6903							
N MESA ST							
BARKER SURV 10 ABST #7 TR 20-C							
(2.018 ACRES)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X010-999-0000-2015	34	C-4	C2-COMMERCIAL VACANT LOT ROAD TY-COMM/IND PARK			09/30/92	\$6,908-TV
CK PROPERTIES L C			C-COMMERCIAL			W - -	\$6,908-LV
4487 N MESA ST # 204			LAND AREA-	.634AC		2725-2131	
EL PASO TX 79902-1149						PRIOR:	
N MESA ST						09/30/92	
BARKER SURV 10 ABST #7 TR 20-B-1						W - -	
(0.6344 AC)						2486-0668	
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X010-999-0000-2100	34	M-3	D7-DESERT ACREAGE <5AC	TOPO -ROLLING		10/01/90	\$11,764-TV
ARROYO HOLDINGS LTD			R-RESIDENTIAL			W - -	\$11,764-LV
C/O FRASER MARY A & 2			LAND AREA-	2.352AC		2228-2171	
114 CASTELLANO DR						PRIOR:	
EL PASO TX 79912-6170						02/23/84	
BARKER SURV 10 ABST #7 TR 21						1426-1380	
(2.3528 ACRES)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X010-999-0000-2200	34	M-3	J3-UTILS/ELECTRIC CO	ROAD TY-NEIGHBORHOOD			\$1,117-TV
EL PASO ELECTRIC CO			C-COMMERCIAL				\$1,117-LV
303 N OREGON ST			LAND AREA-	.513AC			
EL PASO TX 79901-1329							
EXECUTIVE CENTER							
BARKER SURV 10 ABST #7 TR 22-A							
(0.513 ACRE)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
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EL PASO

TRW

PARCEL N  
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\*PROPERTY

X011

X011-999

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#143

X011-999

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X011-999

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#119

EL PASO

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PARCEL N  
O

BARKER SURV 10 ABST #7 TR 22-B  
(0.513 ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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TRW-REDI

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X010-BARKER SURV 10 ABST 07

X010-999-0000-2205 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY

BARKER SURV 10 ABST #7 TR 22-B  
(0.509 ACRE) CARRIED WITH E O  
DRYER SURV 132  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-2300 34 C-4 J3-UTILS/ELECTRIC CO ROAD TY-NEIGHBORHOOD  
EL PASO ELECTRIC CO C-COMMERCIAL  
303 N OREGON ST LAND AREA- 1.563AC  
EL PASO TX 79901-1329

\* EXECUTIVE CENTER  
BARKER SURV 10 ABST #7 TR 23  
(1.563 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-2400 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
9 REFERENCE REF-REFERENCE ACCT ONLY

BARKER SURV 10 ABST #7 TR 24 (0.5  
ACRE) & 25 (3.722 ACRES) CARRIED  
WITH 1  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-2600 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
SOUTHERN PACIFIC RAILROAD CO REF-REFERENCE ACCT ONLY  
C/O O SULLIVAN R R

PO BOX 1319  
HOUSTON TX 77251-1319

\* RR ROW  
BARKER SURV 10 ABST #7 TR 26  
(33.22 ACRES)

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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X011-

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X011-

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EL PASO (CAD), TX.

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PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

## X010-BARKER SURV 10 ABST 07

X010-999-0000-2750 34  
SANTA FE RAILROAD CO  
TAX DEPT  
AMARILLO TX 79171-6600

Y9-REFERENCE  
REF-REFERENCE ACCT ONLY

EXEMPT -R REFER ACCT

" RR RCW  
BARKER SURV 10 ABST #7 TR 27  
(11.03 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X010-999-0000-2800 34 C-4  
UNITED STATES GOVERNMENT  
BARKER SURV 10 ABST #7 TR 28  
(11.879 ACRES)

Z9-U S A  
C-COMMERCIAL  
LAND AREA- 11.879AC

EXEMPT -G GOVT ENTITY

\$51,744-TV  
\$51,744-LV

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

## X011-E BENNETT SURV 11

X011-999-000A-0100 34 M-1  
BROWN DRUCE W  
C/O CAUGHRAN KERRY B  
415 N MESA ST # 210  
EL PASO TX 79901-1244  
N CONCEPCION ST  
\*300 E BENNETT SURV 11 TR 1 (2.567 AC)  
8 ALL BLKS 11&12 S 81.3 FT OF 13  
BRENTWOOD HTS & CLSD ST S ALY S  
IN&BTW(2.033 AC)

F7-COMMERCIAL WAREHSES  
ISCL-STG WHS MASONRY  
C-COMMERCIAL  
LAND AREA- 17,451SF  
LAND AREA- 5.000AC  
MAIN BLDG- 17,351SF  
ADJ BLDG- 17,351SF  
LOAD DOCK CONC 720SF  
AUTO DOCK LEVEL 3UN  
SVC CNPY EXP SO 1,986SF  
SPRINK SYS EXPD 32,659SF  
SEC FENC BARBED 15,300SF  
ADJUSTED VALUE 1UN  
ADDIT TO MAIN

EXT FIN-PRE-CAST CONC YR BLT -1967  
RF TYPE-FLAT  
RF MAT -METAL  
HEATING-FORCED AIR  
COOLING-CENTRAL AIR  
INT FIN-SEMI-FINISHED  
FLOOR -UNFINISHED  
BASEMNT-UNFINISHED BSMT

08/04/90 \$2,332,748-TV  
W - - \$490,050-LV  
2612-0642 \$1,842,698-IV  
PRIOR:  
07/31/86  
1703-0645

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

F7-COMMERCIAL WAREHSES  
IZCL-COLD STORAGE STR B  
C-COMMERCIAL  
LAND AREA- 36,673SF  
LAND AREA- 5.000AC  
MAIN BLDG- 36,673SF  
ADJ BLDG- 36,673SF  
ADJUSTED VALUE 1UN

EXT FIN-PRE-CAST CONC CARD NO- 2  
RF TYPE-FLAT YR BLT -1967  
RF MAT -METAL  
HEATING-FORCED AIR  
COOLING-CENTRAL AIR  
INT FIN-SEMI-FINISHED  
FLOOR -UNFINISHED  
BASEMNT-UNFINISHED BSMT

\$486,945-BV

EL PASO (CAD), TX.

013

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PARCEL NUMBER DIST ZONE  
OWNERS NAME

LAND USE  
PROPERTY CLASS

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

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TOTAL VALUE-TV  
LAND VALUE-LV  
IMPRV VALUE-IV  
BLDG VALUE-BV  
AGRIC VALUE-AV

\$2,087,932-TV  
\$1,041,846-LV  
\$128,655-BV

\$76,042-BV

\$553,725-TV  
\$304,731-LV  
\$248,994-IV

\$72,351-TV  
\$72,351-LV

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TOTAL VALUE-TV  
LAND VALUE-LV

## X204-NESTOR BORUNDA SURV 204 ABST 6152

X204-999-0000-0100 34 M-1 Z9-U S A EXEMPT -G GOVT ENTITY  
 UNITED STATES GOVERNMENT  
 NESTOR BORUNDA SURV 204 ABS 6152  
 TR 1 (1.050 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X204-999-0000-0300 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
 REF-REFERENCE ACCT ONLY  
 R G E P & S F RAILROAD CO  
 310 SANTA FE BLDG  
 AMARILLO TX 79110-6646

\* RAILROAD  
 NESTOR BORUNDA SURV 204 ABS 6152  
 TR 2 (0.469 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X204-999-0000-0500 34 M-1 Z7-PEOPLE OF STATE OF TX ROAD TY-NEIGHBORHOOD  
 PEOPLE OF THE STATE OF TEXAS C-COMMERCIAL EXEMPT -G GOVT ENTITY  
 NESTOR BORUNDA SURV 204 ABS 6152 LAND AREA- .413AC  
 TR 3 (0.413 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X204-999-0000-0700 34 M-1 F1-COMM OTHR THAN F2-F9 BASEMNT-UNFINISHED BSMT 10/76 \$40,713-TV  
 SMITH REX B C-COMMERCIAL 729-1204 \$35,022-LV  
 3350 DONIPHAN DR LAND AREA- 6,832SF  
 EL PASO TX 79922-1640 LAND AREA- 13.400AC  
 \*3350-REAR DONIPHAN DR MAIN BLDG- 6,832SF  
 NESTOR BORUNDA SURV 204 ABS 6152 ADJ BLDG- 6,832SF  
 TR 4 (10.712 ACRES) & TR 6 (2.689 YRD PAV CONC 1,120SF  
 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X204-999-0000-0900 34 M-1 J3-UTILS/ELECTRIC CO ROAD TY-NEIGHBORHOOD \$2,178-TV  
 EL PASO ELECTRIC CO C-COMMERCIAL \$2,178-LV  
 303 N OREGON ST LAND AREA- 1.000AC  
 EL PASO TX 79901-1329  
 NESTOR BORUNDA SURV 204 ABS 6152  
 TR 5 (0.997 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

G14

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PARCEL NUMBER DIST ZONE  
 OWNERS NAME  
 MAILING ADDRESS  
 \*PROPERTY LOCATION  
 LEGAL DESC TAX DISTRICTS

LAND USE  
 PROPERTY CLASS  
 PROPERTY TYPE  
 LAND AREA  
 EXTRA FEATURES

BUILDING FEATURES  
 EXEMPTIONS

STATISTICAL  
 DATA

SALE PRICE TOTAL VALUE-TV  
 SALE DATE LAND VALUE-LV  
 D -S -F CDS IMPRV VALUE-IV  
 BOOK-PAGE BLDG VALUE-BV  
 AGRIC VALUE-AV

X204-999-0000-1100 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
 REF-REFERENCE ACCT ONLY  
 NESTOR BORUNDA SURV 204 ABS 6152  
 TR 6 (2.689 ACRES) CARRIED WITH 4  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X209-F M COLLINS SURV 209 ABST 2260

X209-999-0000-0100

X210

X210-999  
CX210-999  
S

\*7304

X210-999  
HX210-999  
C

EL PASO

TRW

PARCEL NO

\*PROPERTY

X210

X210-999  
9X210-999  
9

LAND VALUE-LV  
PRV VALUE-IV  
LDG VALUE-BV  
RIC VALUE-AV

PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS  
STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

## X045-GUADALUPE LUCERO SURV 45

X045-999-0000-3500  
LULAC HOMES TRUST  
\*6301 DELTA DR

B2-RES MULTI FAMILY APTS EXT FIN-BRICK  
PFCL-182 STRY DET MASONRY BASEMNT-UNFINISHED BSMT  
C-COMMERCIAL  
LAND AREA- 840SF  
LAND AREA- 4.790AC  
MAIN BLDG- 840SF  
ADJ BLDG- 840SF

CARD NO- 12  
YR BLT -1964

\*CONTINUED\*

\$1,653,252-TV  
\$365,141-LV  
\$12,729-BV

B2-RES MULTI FAMILY APTS EXT FIN-BRICK  
IKDL-SMALL SHOP FRAME BASEMNT-UNFINISHED BSMT  
C-COMMERCIAL  
LAND AREA- 1,200SF  
LAND AREA- 4.790AC  
MAIN BLDG- 1,200SF  
ADJ BLDG- 1,200SF

CARD NO- 13  
YR BLT -1964

\$10,755-BV

## X054-HARRISON SURV 54 ABST 2804

X054-999-000A-0100 34 M-3  
A S A R C O INC  
C/O PO BOX 26903  
EL PASO TX 79926-6903  
HARRISON SURV 54 ABST 2804 (8.484  
ACRES)

C2-COMMERCIAL VACANT LOT ROAD TY-NEIGHBORHOOD  
C-COMMERCIAL  
LAND AREA- 8.484AC

\$147,825-TV  
\$147,825-LV

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X054-999-000A-5000 34 M-3  
ASARCO INC  
PO BOX 1111  
EL PASO TX 79999-1111  
HARRISON SURV 54 ABST 2804  
(0.8397 AC)

C2-COMMERCIAL VACANT LOT ROAD TY-INDUSTRIAL SITE  
C-COMMERCIAL  
LAND AREA- .839AC

07/26/88  
W -D -  
1949-1484

\$36,577-TV  
\$36,577-LV

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

## X054-HARRISON SURV 54 ABST 2804

X054-999-000D-0100 34  
TAYLOR HENRY L  
PO BOX 220462  
EL PASO TX 79913-2462  
\*2650 W PAISANO DR  
HARRISON SURV 54 ABST 2804  
(2.0410 AC) (2.0410 AC)

F2-COMMERCIAL WAREHOUSES  
ISDA-SIG WHS FRAME  
C-COMMERCIAL  
LAND AREA- 1,710SF  
LAND AREA- 2.041AC  
MAIN BLDG- 1,710SF

EXT FIN-METAL SIDING  
RF TYPE-GABLE  
RF MAT -METAL  
HEATING-NO HEAT  
COOLING-NO COOLING  
INT FIN-UNFINISHED

YR BLT -1986

12/82  
1313-0795  
PRIOR:  
01/04/81  
1138-1329

\$51,831-TV  
\$22,226-LV  
\$29,605-IV

\$42,864-TV  
\$42,864-LV

EL PASO (CAD), TX.

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OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTSLAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURESBUILDING FEATURES  
EXEMPTIONSSTATISTICAL  
DATASALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D-S-F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

## X054-HARRISON SURV 54 ABST 2804

X054-999-000D-0100	34		F7-COMMERCIAL WAREHSES	EXT FIN-METAL SIDING	YR BLT -1986	12/82	\$51,831-TV
TAYLOR HENRY L			ISDA-STG WHS FRAME	RF TYPE-GABLE		1313-0795	\$22,226-LV
PO BOX 220462			C-COMMERCIAL	RF MAT -METAL		PRIOR:	\$29,605-IV
EL PASO TX 79913-2462			LAND AREA- 1,710SF	HEATING-NO HEAT		01/04/81	
*2650 W PAISANO DR			LAND AREA- 2.041AC	COOLING-NO COOLING		1138-1329	
HARRISON SURV 54 ABST 2804			MAIN BLDG- 1,710SF	INT FIN-UNFINISHED			
(2.0410 AC) (2.0410 AC)			ADJ BLDG- 1,710SF	FLOOR -UNFINISHED			
IEP-EL PASCO I.S.D.			DOCK CANOPY OPN 240SF	BASEMNT-UNFINISHED BSMT			
CEP-CITY OF EL PASO			LOAD DOCK DIRT 840SF	TOPO -LEVEL			
SCC-EL PASO COMM COLLEGE			OFFICE AREA MTL 450SF				
SHO-THOMASON GEN HOSP			HALF BATH 2UN				
			YRD PAV CONC 576SF				
			SEC FENC BARBED 6,160SF				
			SVC CANOP UNFIN 576SF				
			ADJUSTED VALUE 1UN				
X054-999-000D-0200	34	M-3	C2-COMMERCIAL VACANT LOT	TOPO -LEVEL		02/23/90	\$13,808-TV
ASARCO INC			C-COMMERCIAL	ROAD TY-INDUSTRIAL SITE		W - -	\$13,808-LV
5032 COUNTRY CLUB PL			LAND AREA- 1.268AC	UTILITY-ELEC GAS WATER		2153-0602	
EL PASO TX 79922-2014							
HARRISON SURV 54 ABST 2804							
(1.2680 AC) (1.2680 AC)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							
X054-999-000D-0300	34	M-3	F7-COMMERCIAL WAREHSES	EXT FIN-CORR SIDING	YR BLT -1960	02/01/90	\$64,861-TV
ASARCO INC			C-COMMERCIAL	RF MAT -METAL		W - -	\$11,587-LV
PO BOX 1111			LAND AREA- 2,100SF	HT/AC -ROOM UNITS		2209-1691	\$53,274-IV
EL PASO TX 79999-1111			LAND AREA- 1.064AC	INT FIN-UNFINISHED		PRIOR:	
*2700 PAISANO DR			MAIN BLDG- 2,100SF	FLOOR -UNFINISHED		04/11/85	
HARRISON SURV 54 ABST 2804 (1.064			ADJ BLDG- 2,100SF	FLOOR -COMPOSITN TILE		1581-0907	
ACRES)			SVC CNPY EXP SO 1,700SF	BASEMNT-UNFINISHED BSMT			
IEP-EL PASCO I.S.D.			SEC FENC CYCLN 6,440SF	ROAD TY-INTERSTATE HWY			
CEP-CITY OF EL PASO			ADJUSTED VALUE 1UN				
SCC-EL PASO COMM COLLEGE			ADJUSTED VALUE 1UN				
SHO-THOMASON GEN HOSP							
X054-999-000D-1000	34	M-3	Z1-ALL ENTITIES	ROAD TY-MAJOR STRIP		01/77	
CITY OF EL PASO			C-COMMERCIAL	EXEMPT -G GOVT ENTITY		835-1061	
2 CIVIC CENTER PLZ			LAND AREA- 1.451AC				
EL PASO TX 79901-1124							
HARRISON SURV 54 ABST 2804 1.451							
ACRES							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

EL PASO (CAD), TX.

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OWNERS NAME

DIST ZONE

LAND USE

BUILDING FEATURES

STATISTICAL

SALE PRICE TOTAL VALUE-TV



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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

## X054-HARRISON SURV 54 ABST 2804

X054-999-000E-0200	34	M-3	J3-UTILS/ELECTRIC CO	ROAD TV-NEIGHBORHOOD			\$18,055-TV
EL PASO ELECTRIC CO			I-INDUSTRIAL				\$18,055-LV
303 N OREGON ST			LAND AREA- 8.290AC				
EL PASO TX 79901-1329							
HARRISON SURV 54 ABST 2804 (8.29 ACRES)							

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X054-999-000E-0300	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
E P & S W RAILROAD CO			REF-REFERENCE ACCT ONLY				
SOUTHERN PACIFIC BLDG							
EL PASO TX 79901-6600							
HARRISON SURV 54 ABST 2804 (2.502 ACRES)							

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X054-999-000E-0400	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
T & N O RAILROAD CO			REF-REFERENCE ACCT ONLY				
PO BOX 10685							
EL PASO TX 79996-6605							
HARRISON SURV 54 ABST 2804 (4.26 ACRES)							

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X054-999-000E-0500	34		Y9-REFERENCE	EXEMPT -R	REFER ACCT		
R G E P & S F RAILROAD CO			REF-REFERENCE ACCT ONLY				
310 SANTA FE BLDG							
AMARILLO TX 79110-6646							
HARRISON SURV 54 ABST 2804 (13.24 ACRES)							

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

X054-999-000E-0600	34	M-3	Z7-PEOPLE OF STATE OF TX	ROAD TV-MAJOR STRIP			
PEOPLE OF THE STATE OF TEXAS			C-COMMERCIAL	EXEMPT -G	GOVT ENTITY		
DONIPHAN DR			LAND AREA- 6.575AC				
HARRISON SURV 54 ABST 2804 (6.575 ACRES)							

IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

## X054-HARRISON SURV 54 ABST 2804

Copyright 1996  
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LAND VALUE-LV  
RV VALUE-IV  
DG VALUE-BV  
IC VALUE-AV\$2,976-TV  
\$2,976-LV\$3,843-TV  
\$3,843-LV\$1,863-TV  
\$1,863-LV\$28,071-TV  
\$28,071-LV

EL

PAI

\*PI

X1

X05

\*39

X09

X09

\*39

EL P

PARC

\*PRO

X0

EL PASO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X054-HARRISON SURV 54 ABST 2804

X054-999-000E-0700	34	M-3	C2-COMMERCIAL VACANT LOT ROAD TY-INDUSTRIAL SITE				\$269,723-TV
A S A R C O INC			C-COMMERCIAL				\$269,723-LV
C/O PO BOX 26903			LAND AREA- 21.180AC				
EL PASO TX 79926-6903							
HARRISON SURV 54 ABST 2804							
(21.180 ACRES)							
IEP-EL PASCO I.S.D.							
CEP-CITY OF EL PASO							
SCC-EL PASO COMM COLLEGE							
SHO-THOMASON GEN HOSP							

X054-999-000E-1501	34		F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	VR BLT -1935		\$105,498-TV
SOUTHWESTERN PORTLAND CEMENT			PFCL-182 STRY DET MASONRY	RF TYPE-FLAT			\$71,626-LV
PO BOX 1547			I-INDUSTRIAL	RF MAT -TAR & GRAVEL			\$33,872-IV
ODESSA TX 79760-1547			LAND AREA- 24,046SF	HEATING-NO HEAT			
W PAISANO DR			LAND AREA- 27,405AC	COOLING-NO COOLING			
HARRISON SURV 54 ABST 2804			MAIN BLDG- 10,054SF	INT FIN-UNFINISHED			
(27.4052 AC)			ADJ BLDG- 20,108SF	FLOOR -COMPOSITN TILE			
IEP-EL PASCO I.S.D.			UNGRND STRG TNK 2,500SF	BASEMNT-UNFINISHED BSMT			
CEP-CITY OF EL PASO			GARAGES CONC BL 1,428SF				
SCC-EL PASO COMM COLLEGE			RAILROAD SIDING 5,500SF				
SHO-THOMASON GEN HOSP			YRD PAV BLK TOP 33,250SF				
			SEC FENC CYCLN 6,940SF				
			ANCILL BLDG CON 5,853SF				
			ANCILL BLDG CON 4,990SF				
			ANCILL BLDG CON 270SF				
			ANCILL BLDG MTL 552SF				
			ADDIT TO MAIN 3,938SF				

F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 2	\$5,929-BV
IMCL-MFG MASONRY	RF TYPE-FLAT	VR BLT -1935	
I-INDUSTRIAL	RF MAT -TAR & GRAVEL		
LAND AREA- 9,369SF	HEATING-NO HEAT		
LAND AREA- 27,405AC	COOLING-NO COOLING		
MAIN BLDG- 9,369SF	INT FIN-UNFINISHED		
ADJ BLDG- 9,369SF	FLOOR -COMPOSITN TILE		
	BASEMNT-UNFINISHED BSMT		

F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 3	\$986-BV
IMCL-MFG MASONRY	RF TYPE-FLAT	VR BLT -1935	
I-INDUSTRIAL	RF MAT -TAR & GRAVEL		
LAND AREA- 1,559SF	HEATING-NO HEAT		
LAND AREA- 27,405AC	COOLING-NO COOLING		
MAIN BLDG- 1,559SF	INT FIN-UNFINISHED		
ADJ BLDG- 1,559SF	FLOOR -COMPOSITN TILE		
	BASEMNT-UNFINISHED BSMT		

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X054-HARRISON SURV 54 ABST 2804

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

X054-HARRISON SURV 54 ABST 2804

X054-999-000E-1501			F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 4	*CONTINUED*	\$105,498-TV
SOUTHWESTERN PORTLAND CEMENT			IMCL-MFG MASONRY	RF TYPE-FLAT	YR BLT -1935		\$71,626-LV
*2825			I-INDUSTRIAL	RF MAT -TAR & GRAVEL			\$5,611-BV

LAND AREA- 8,865SF  
 LAND AREA- 27.405AC  
 MAIN BLDG- 8,865SF  
 ADJ BLDG- 8,865SF

HEATING-NO HEAT  
 COOLING-NO COOLING  
 INT FIN-UNFINISHED  
 FLOOR -COMPOSITN TILE  
 BASEMNT-UNFINISHED BSMT

F2-INDUSTRIAL BLDGS  
 ISCL-STG WHS MASONRY  
 I-INDUSTRIAL  
 LAND AREA- 6,729SF  
 LAND AREA- 27.405AC  
 MAIN BLDG- 6,729SF  
 ADJ BLDG- 6,729SF  
 LOAD DOCK CONC 550SF

EXT FIN-CONCRETE BLOCK  
 RF TYPE-FLAT  
 RF MAT -TAR & GRAVEL  
 HEATING-NO HEAT  
 COOLING-NO COOLING  
 INT FIN-UNFINISHED  
 FLOOR -COMPOSITN TILE  
 BASEMNT-UNFINISHED BSMT

CARD NO- 5  
 YR BLT -1935

\$3,715-BV

X054-999-000E-1503	34	M-3	Z1-ALL ENTITIES	ROAD TY-INDUSTRIAL SITE	09/26/90		\$14,232-TV
CITY OF EL PASO			C-COMMERCIAL	EXEMPT -G GOVT ENTITY	Q - -		\$14,232-LV
2 CIVIC CENTER PLZ			LAND AREA- .816AC		2227-1030		
EL PASO TX 79901-1124							
HARRISON SURV 54 ABST 2804							
(0.8168 AC)							

IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X054-999-000E-1505	34	M-3	D7-DESERT ACREAGE <5AC				\$4,971-TV
A S A R C O INC			R-RESIDENTIAL				\$4,971-LV
C/O PO BOX 26903			LAND AREA- 1.657AC				
EL PASO TX 79926-6903							
HARRISON SURV 54 ABST 2807 (1.657							
ACRES)							

IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

EL PASO (CAD), TX.

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

EL PASO (CAD), TX.

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PARCEL NUMBER	OWNERS NAME	DIST	ZONE	LAND USE	PROPERTY CLASS	BUILDING FEATURES	EXEMPTIONS	STATISTICAL DATA	SALE PRICE	TOTAL VALUE-TV
*PROPERTY LOCATION	MAILING ADDRESS			PROPERTY TYPE					SALE DATE	LAND VALUE-LV
LEGAL DESC	TAX DISTRICTS			LAND AREA	EXTRA FEATURES				D -S -F CDS	IMPRV VALUE-IV
									BOOK-PAGE	BLDG VALUE-BV
										AGRIC VALUE-AV

X054-HARRISON SURV 54 ABST 2804

X054-999-000E-1507	34	F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	YR BLT -1935	09/14/94	\$424,098-TV
GRANDE PORTLAND CEMENT CORP		IMCL-MFG MASONRY	RF TYPE-FLAT			\$48,421-LV
11783 STATE HIGHWAY 14 SOUTH		M-MANUFACTURING	HEATING-SUSP SPACE HTRS		2791-0501	\$375,677-TV
TIJERAS NM 87059		LAND AREA- 6,423SF	COOLING-EVAP COOLING		PRIOR:	
HARRISON SURV 54 ABST 2804		LAND AREA- 11.116AC	INT FIN-UNFINISHED		12/11/92	
(11.1160 AC)		MAIN BLDG- 4,783SF	FLOOR -UNFINISHED			
IEP-EL PASCO I.S.D.		ADJ BLDG- 4,783SF	BASEMNT-UNFINISHED BSMT			
CEP-CITY OF EL PASO		DOCK CANOPY ENC 944SF				
SCC-EL PASO COMM COLLEGE		DOCK CANOPY ENC 1,860SF				
SHO-THOMASON GEN HOSP		LOAD DOCK CONC 297SF				
		OFFICE AREA MTL 135SF				
		TRCKWLL CONC 2 1UN				
		STRG COMML GR 5,152SF				
		ANCILL BLDG CON 1,080SF				
		ANCILL BLDG WD 1,056SF				
		ADDIT TO MAIN 1,640SF				
		F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 2		\$37,817-BV
		IMCL-MFG MASONRY	RF TYPE-FLAT	YR BLT -1935		
		M-MANUFACTURING	HEATING-SUSP SPACE HTRS			
		LAND AREA- 16,762SF	COOLING-EVAP COOLING			
		LAND AREA- 11.116AC	INT FIN-UNFINISHED			
		MAIN BLDG- 16,762SF	FLOOR -UNFINISHED			
		ADJ BLDG- 16,762SF	BASEMNT-UNFINISHED BSMT			
		F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 3		\$33,651-BV
		IMCL-MFG MASONRY	RF TYPE-FLAT	YR BLT -1935		
		M-MANUFACTURING	HEATING-SUSP SPACE HTRS			
		LAND AREA- 14,916SF	COOLING-EVAP COOLING			
		LAND AREA- 11.116AC	INT FIN-UNFINISHED			
		MAIN BLDG- 4,972SF	FLOOR -UNFINISHED			
		ADJ BLDG- 9,944SF	BASEMNT-UNFINISHED BSMT			
		ADDIT TO MAIN 4,972SF				
		F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 4		\$39,870-BV
		IMCL-MFG MASONRY	RF TYPE-FLAT	YR BLT -1935		
		M-MANUFACTURING	HEATING-SUSP SPACE HTRS			
		LAND AREA- 18,044SF	COOLING-EVAP COOLING			
		LAND AREA- 11.116AC	INT FIN-UNFINISHED			
		MAIN BLDG- 6,800SF	FLOOR -UNFINISHED			
		ADJ BLDG- 13,600SF	BASEMNT-UNFINISHED BSMT			
		ADDIT TO MAIN 4,444SF				
		F2-INDUSTRIAL BLDGS	EXT FIN-CONCRETE BLOCK	CARD NO- 5		\$36,161-BV
		IMCL-MFG MASONRY	RF TYPE-FLAT	YR BLT -1935		
		M-MANUFACTURING	HEATING-SUSP SPACE HTRS			
		LAND AREA- 16,028SF	COOLING-EVAP COOLING			
		LAND AREA- 11.116AC	INT FIN-UNFINISHED			
		MAIN BLDG- 16,028SF	FLOOR -UNFINISHED			
		ADJ BLDG- 16,028SF	BASEMNT-UNFINISHED BSMT			

\$43,022-BV

\$170,647-TV  
\$51,923-LV  
\$110,724-IV

\$738,900-TV  
\$271,888-LV  
\$467,012-IV

EL PASO (CAD), TX.

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FILE PRICE TOTAL VALUE-TV  
FILE DATE LAND VALUE-LV  
D-S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D-S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

X054-HARRISON SURV 54 ABST 2804

X054-999-000E-1800 34 M-3  
SANCHEZ SERGIO L & PATRICI  
28 SAN MARCOS DR  
EL PASO TX 79922-1661  
\*28 SAN MARCOS DR  
HARRISON SURV 54 1.4 ACRES  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

F1-COMM OTHR THAN F2-F9  
I-INDUSTRIAL  
LAND AREA- 3,000SF  
LAND AREA- 1,400AC  
MAIN BLDG- 3,000SF  
ADJ BLDG- 3,000SF  
SEC FENC BARBED 4,500SF

BASEMNT-UNFINISHED BSMT  
ROAD TY-NEIGHBORHOOD

03/27/89 \$21,406-TV  
W - - \$15,246-LV  
2035-0650 \$6,160-IV  
PRIOR:  
03/02/88  
W - A -  
1974-1918

X054-999-000E-2000 34  
9 REFERENCE  
HARRISON SURV 54 ABST 2804 63.057  
ACRES N OF IS 10 CARRIED WITH I &  
2 RUBIN HEIGHTS  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

V9-REFERENCE  
REF-REFERENCE ACCT ONLY

EXEMPT -R REFER ACCT

X054-999-000E-3000 34 M-3  
JOBE CONCRETE PRODUCTS INC  
1 MCKELLIGON CANYON RD  
EL PASO TX 79930-2634  
\*762 EXECUTIVE CENTER  
HARRISON SURV 54 ABST 2804 (2.066  
ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

F7-COMMERCIAL WAREHSES  
C-COMMERCIAL  
LAND AREA- 2.066AC

RF TYPE-FLAT  
RF MAT -TAR & GRAVEL  
HEATING-FORCED AIR  
COOLING-NO COOLING  
INT FIN-FIN, OPEN AREA  
FLOOR -COMPOSITN TILE  
BASEMNT-UNFINISHED BSMT  
ROAD TY-SECONDARY STRIP

06/09/94 \$14,799-TV  
W - - \$8,999-LV  
2750-1673 \$5,800-IV  
PRIOR:  
08/16/90  
W - -  
2211-0229

X054-999-000E-4000 34  
ARMSTRONG C E TR  
102 N KANSAS ST  
EL PASO TX 79901-1408  
HARRISON SURV 54 ABST 2804 (22.5  
ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

V9-REFERENCE  
REF-REFERENCE ACCT ONLY  
LAND AREA- 22.500AC

EXEMPT -R REFER ACCT

12/75 \$101,250-TV  
648-1929 \$101,250-LV

X054-999-000E-5000 34 M-3  
CITY OF EL PASO  
2 CIVIC CENTER PLZ  
EL PASO TX 79901-1124  
HARRISON SURV 54 ABST 2804 (0.014  
ACRE)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

Z1-ALL ENTITIES  
C-COMMERCIAL  
LAND AREA- .014AC

ROAD TY-INTERSTATE HWY  
EXEMPT -G GOVT ENTITY

EL PASO (CAD), TX.

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FILE PRICE TOTAL VALUE-TV  
FILE DATE LAND VALUE-LV  
D-S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION  
LEGAL DESC TAX DISTRICTS

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D-S -F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

X054-HARRISON SURV 54 ABST 2804

X054-999-000E-5000

7/01/91 \$1,248,597-TV

2352-1874  
PRIOR:  
09/30/91  
2352-1865

101,  
\$1,146,887-IV

\$90,658-BV

\$446,862-BV

\$10,036-BV

MBANK PLAZA  
EL PASO TX 79901  
HARRISON SURV 54 ABST 2804  
(25.728 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

LAND AREA- 25.728AC

X054-999-000E-7500 34 M-3 F7-COMMERCIAL WAREHSES  
A S A R C O INC  
C/O PO BOX 26903  
EL PASO TX 79926-6903  
V F W ST  
HARRISON SURV 54 ABST 2804 (2.152 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

ISCL-STG WHS MASONRY  
C-COMMERCIAL  
LAND AREA- 22,721SF  
LAND AREA- 2.152AC  
MAIN BLDG- 22,721SF  
ADJ BLDG- 22,721SF

EXT FIN-BRICK  
RF TYPE-GABLE  
RF MAT -ASPHALT SHINGLE  
HEATING-NO HEAT  
COOLING-NO COOLING  
INT FIN-UNFINISHED  
FLOOR -UNFINISHED  
BASEMNT-PART FIN BSMT  
TOPO -LEVEL  
ROAD TY-INDUSTRIAL SITE  
UTILITY-ELEC GAS WATER

\$85,174-TV  
\$23,435-LV  
\$61,739-IV

X054-999-000E-8500 34 Y9-REFERENCE  
9 REFERENCE  
HARRISON SURV 54 ABST 2804 7.255  
ACRES CARRIED WITH WEST SIDE PARK  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

REF-REFERENCE ACCT ONLY

EXEMPT -R REFER ACCT

X054-999-000E-9500 34 M-3 D7-DESERT ACREAGE <5AC  
MBANK  
MBANK PLAZA  
EL PASO TX 79901  
HARRISON SURV 54 ABST 2804  
(25.128 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

R-RESIDENTIAL  
LAND AREA- 25.128AC

06/04/91  
F -  
2320-0136  
PRIOR:  
07/16/86  
W -AD-D  
1695-0547

\$192,606-TV  
\$192,606-LV

EL PASO (CAD), TX.

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SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
-S-F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

PARCEL NUMBER DIST ZONE  
OWNERS NAME  
MAILING ADDRESS  
\*PROPERTY LOCATION TAX DISTRICTS  
LEGAL DESC

LAND USE  
PROPERTY CLASS  
PROPERTY TYPE  
LAND AREA  
EXTRA FEATURES

BUILDING FEATURES  
EXEMPTIONS

STATISTICAL  
DATA

SALE PRICE TOTAL VALUE-TV  
SALE DATE LAND VALUE-LV  
D -S-F CDS IMPRV VALUE-IV  
BOOK-PAGE BLDG VALUE-BV  
AGRIC VALUE-AV

10/01/84 \$6,401-TV  
496-0353 \$1,610-LV  
PRIOR: \$4,791-IV  
00/83  
372-6365

X064-999-0000-0100 34 Y9-REFERENCE  
E P & N E RAILROAD CO  
PO BOX 1319  
HOUSTON TX 77251-1319  
RAILROAD  
PIERCE-ALLEN-SAVAGE #64 ABS 2323  
(2.10 ACRES)  
IEP-EL PASCO I.S.D.  
CEP-CITY OF EL PASO  
SCC-EL PASO COMM COLLEGE  
SHO-THOMASON GEN HOSP

REF-REFERENCE ACCT ONLY

EXEMPT -R REFER ACCT

X064-PIERCE ALLEN SAVAGE 64 ABST 2323

X064 999-0000 0500 34 PMD D5 UTILS/ELECTRIC CO  
EL PASO ELECTRIC CO  
303 N OREGON ST  
C-COMMERCIAL

ROAD TY-NEIGHBORHOOD

\$84,774-TV  
\$84,774-LV

999-0000-4600	34	M-1	F3-COMM OFFICE BUILDING PFCL-182 STRY DET MASONRY C-COMMERCIAL	EXT FIN-BRICK RF TYPE-FLAT KF MAT -COMPOS B-U REG	YR BLT -1955 YR EFF -1982	\$144,912-TV \$42,917-LV \$101,995-IV
SMITH REX D & MARY H 3350 DONIPHAN DR EL PASO TX 79922-1648 DONIPHAN DR CRECENCIO MOREGO SUR 114 AB 2679 TR 6 (3.941 ACRES) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHJ-THOMASON GEN HOSP						
999-0000-5500	34	R-4	C2-COMMERCIAL VACANT LOT C-COMMERCIAL	ROAD TY-INTERSTATE HWY		03/10/88 \$71,618-TV \$71,618-LV
JOBE CONCRETE PRODUCTS INC 1 MCKELLIGON CANYON RD EL PASO TX 79930-2634 DONIPHAN DR CRECENCIO MOREGO SUR 114 AB 2679 7 (26.2976 AC) & 7-A (1.2479 AC) (27.5455 AC) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP						
999-0000-6400	34	R-4	J3-UTILS/ELECTRIC CO C-COMMERCIAL	ROAD TY-NEIGHBORHOOD		\$10,132-TV \$10,132-LV
EL PASO ELECTRIC CO 303 N OREGON ST EL PASO TX 79901-1329 DONIPHAN DR CRECENCIO MOREGO SUR 114 AB 2679 TR 8 (4.562 ACRES) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP						
999-0000-7300	34		C2-COMMERCIAL VACANT LOT C-COMMERCIAL	ROAD TY-INTERSTATE HWY		03/10/88 \$68,905-TV \$68,905-LV
JOBE CONCRETE PRODUCTS INC 1 MCKELLIGON CANYON RD EL PASO TX 79930-2634 CRECENCIO MOREGO SUR 114 AB 2679 9(15.6052AC(810(1.3451AC)811-B (3.0592AC)815-A(6.493AC) IN ANDREW STOUT SURV 135(26.5023AC) IEP-EL PASCO I.S.D. CEP-CITY OF EL PASO SCC-EL PASO COMM COLLEGE SHO-THOMASON GEN HOSP						

EL PASO (

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NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL VALUE-TV
OWNER NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV VALUE-IV
LOCATION			LAND AREA			BOOK-PAGE	BLDG VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC VALUE-AV

99-0000-7400 34 R-4 Z1-ALL ENTITIES ROAD TY-INTERSTATE HWY

CITY OF EL PASO C-COMMERCIAL EXEMPT -G GOV'T ENTITY  
 2 CIVIC CENTER PLZ LAND AREA- .393AC  
 EL PASO TX 79901-1124  
 CRECENCIO MOREGO SUR 114 AB 2679  
 TR 11-A .393 ACRE  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

JOSE GUADARAMA SURV 124 ABST 2652

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND	VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG	VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC	VALUE-AV

X091-999-000B-8300 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
 R G E P & S F RAILROAD CO  
 310 SANTA FE BUILDING  
 AMARILLO TX 79110-6646  
 GEORGE L WILSON SUR 91 ABST 2716  
 4.203 ACRES (NO TRACT NOS)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X106-CHRISTIAN SCHERTZ 106 ABST 2692

X106-999-0000-3300 34 M-3 J3-UTILS/ELECTRIC CO ROAD TY-NEIGHBORHOOD \$2,570-TV  
 EL PASO ELECTRIC CO C-COMMERCIAL \$2,570-LV  
 303 N OREGON ST  
 EL PASO TX 79901-1329  
 LAND AREA- 1.180AC  
 PAISANO DR  
 CHRISTIAN SCHERTZ #106 ABST 2692  
 (1.18 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X106-999-0000-6600 34 M-3 Z1-ALL ENTITIES ROAD TY-NEIGHBORHOOD  
 CITY OF EL PASO C-COMMERCIAL EXEMPT -G GOVT ENTITY  
 2 CIVIC CENTER PLZ  
 EL PASO TX 79901-1124  
 LAND AREA- .981AC  
 CHRISTIAN SCHERTZ #106 ABST 2692  
 (0.981 ACRE)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

X106-999-0000-6700 34 Y9-REFERENCE EXEMPT -R REFER ACCT  
 R G E P & S F RAILROAD CO  
 310 SANTA FE BLDG  
 AMARILLO TX 79110-6646  
 CHRISTIAN SCHERTZ #106 ABST 2692  
 (14.21 ACRES)  
 IEP-EL PASCO I.S.D.  
 CEP-CITY OF EL PASO  
 SCC-EL PASO COMM COLLEGE  
 SHO-THOMASON GEN HOSP

TRW-REDI

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PARCEL NUMBER	DIST	ZONE	LAND USE	BUILDING FEATURES	STATISTICAL	SALE PRICE	TOTAL	VALUE-TV
OWNERS NAME			PROPERTY CLASS	EXEMPTIONS	DATA	SALE DATE	LAND	VALUE-LV
MAILING ADDRESS			PROPERTY TYPE			D -S -F CDS	IMPRV	VALUE-IV
*PROPERTY LOCATION			LAND AREA			BOOK-PAGE	BLDG	VALUE-BV
LEGAL DESC	TAX DISTRICTS		EXTRA FEATURES				AGRIC	VALUE-AV

X112-C A ENGELSFREUND SURV 112 ABST 2640

X112-999-0000-3100 34 R-4 C1-RES VAC LOT/TR < 5AC 07/01/85 \$31,028-TV  
 INTERNATIONAL CITY DEVELOPERS R-RESIDENTIAL W -AB-B \$31,028-LV  
 1796 A LEE TOWING DR OFF 264

TRW

PARCEL 1

\*PROPER

X132

X132-999

\*4201

X132-999

X132-999

X132-999

X132-999

EL PASO

TRW

PARCEL N  
O

\*PROPERT

X132

X132-999

P.



**Appendix B**

Lithologic Logs of Monitoring Wells MW-1 through MW-12  
(Eder and Associates, 1990)



## BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, WI. 53704

## REPORT

SHEET 1 OF 1

DATE STARTED : 4-5-90

DATE FINISHED : 4-5-90

BORING No. MW-2

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK,

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" x 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0				M				RED/BROWN V.FINE SANDY SILT	
	○		0-2	M	2.0	1-1 2-1			
				M					
5	○		2-4	M	2.0	3-4 4-4		RED/BROWN CLAY (STIFF)	
				M					
				M					
10	○		4-6	M	.75	3-3 4-4		RED/BROWN V.FINE SAND W/TRACE SILT - NATURAL BLACK + IRON STAINING.	
				W					
	○		6-8	W	2.0	8-8 8-9			
				W					
15	○		8-10	W	2.0	6-7 9-10			
20	○		13-15	W	1.5	7-8 12		EOB @ 15.0	

## BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, WI. 53704

## REPORT

SHEET 1 OF 2

DATE STARTED : 4-9-90

DATE FINISHED : 4-9-90

BORING No. MW-3

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" x 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0								TAN V.FINE SAND	
	O		0-2	M	1.2	4-8 14-15			
	O		2-4	M	2.0	9-7 7-6		RED/BROWN SILTY V.FINE SAND	
5									
	O		4-6	W	2.0	3-6 4-5		RED/BROWN V.FINE SAND	
	O		6-8						
								RED/BROWN V.FINE SAND	
10	O		8-10	W	2.0	WR-WR 1-2			
								RED/BROWN V.FINE SAND	
	O		13-15	W	2.0	14-23 27-26		RED/BROWN V.FINE SAND	
15									
								AS ABOVE W/SOME MED TO COARSE SAND/TRACE GRAVEL.	
	O		18-20	W	2.0	17-14 16-16			
20									



## BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, WI. 53704

## REPORT

SHEET 1 OF 1

DATE STARTED : 3-27-90

DATE FINISHED : 3-28-90

BORING No. MW-4

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO.

REMARKS: APPROXIMATELY 75-100 GALLONS POTABLE WATER WERE ADDED DURING  
DRILLING TO PREVENT SAND HEAVING.

DRILLING CONTRACTOR : I. T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" x 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0				D				TOPSOIL / FILL	
	223		0-2	M	2.0	11-1 15-1		GRAY/BROWN SILTY V. FINE SAND - HEAVILY CONTAMINATED W/BLACK PETROLEUM. STRONG GASOLINE ODOR	
			2-4	W	2.0	8-6 7-6			
5									
	356		4-6	W	1.7	7-9 11-10			
			6-8	W	1.8	4-5 6-7		GREY SILT W/TRACE V. FINE SAND.	
10	85		8-10	W	1.5	4-4 6-6			
			10-12	W	1.4	6-7 9-11			
15								EOB @ 15.0'	
20									

BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, WI. 53704

REPORT

SHEET 1 OF 1

DATE STARTED : 3-28-90

DATE FINISHED : 3-28-90

BORING No. MW-5

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" X 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OYA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0								TAN DRY SAND W/PETBBLES.	
	130		0-2	M	1.7	4-11 4-6		BLACK STAINED SILT - ODOR (CRUD)	
5	140		2-4	M	2.0	3-4 5-6		GREY/BROWN STAINED SILTY CLAY W/STRONG ODOR.	
				W					
10	145		4-6	W	2.0	2-2 3-4		GREY/BROWN STAINED V. FINE SAND W/ODORS FROM LIGHTER PETROLEUM FRACTIONS.	
			6-8	W	1.8	4-8 9-13			
	145		8-10	W	2.0	6-9 3-7			
15									
			10-12	W	2.0	6-8 7-4			
20								EOB @ 15.0'	

BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, W. 53704

REPORT

SHEET 1 OF 2

DATE STARTED : 4-8-90

DATE FINISHED : 4-8-90

BORING No. MW-6

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :

CASING :

SOIL SAMPLER :

SPLIT SPOON

CORE  
BARREL

AUGER

MON. WELL (MW)

PIPE

CAP

DRILL RIG  
AND METHOD

TYPE :

STD.

SIZE :

3" X 24"

HAMMER  
WT / FALL

140/30"

BIT

MOBILE  
B-61

HSA

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT

FT. AFTER

HRS.

FT. AFTER

HRS.

DEPTH BELOW GRADE	OYA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY			
0	510		0-2	M	1.2	3-10 4-15		TAN V. FINE SILTY SAND W/DK. GREY → BLACK PETRO STAINING.
	518		2-4	M	2.0	8-3 9-5		
5	560		4-6	W	2.0	4-6 5-3		
	495		6-8	W	2.0	2-2 1-4		RED/BROWN V. FINE SAND W/TRACE SILT AND GREY PETRO STAINING.
10	80		8-10	W	2.0	3-2 1-1		
15	38		13-15	W	2.0	11-6 6-7		
20	24		18-20	W	2.0	14-18 17-20		



PROJECT NAME: PHASE 1 - BRICKLAND BORING No. MW-6

SHEET 2 of 2

[illegible]

## BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, W. 53704

## REPORT

SHEET 1 OF 1

DATE STARTED : 3-30-90

DATE FINISHED : 3-30-90

BORING No. MW-7

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY : K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61
SIZE :		3" X 24"						HSA
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0								TAN & FINE SAND (FILL)	
	341		0-2	M	1.0			BLACK STAINED CLAY ↓ STRONG ODOR. GREY STAINED SILTY CLAY	
			2-4	M	2.0				
5				W					
	324		4-6	W	1.75			RED/BROWN SILTY BROWN CLAY W/STRONG PETRO ODOR.	
			6-8	W	2.0				
10	212		8-10	W	2.0				
			10-12	W	2.0				
								EOB @ 14.0'	
15									
20									

BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, W. 53704

REPORT

SHEET 1 OF 1

DATE STARTED : 3-28-90

DATE FINISHED : 3-28-90

BORING No. MW-8

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" x 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0								FILL	
	70		0-2	M	1.1			Dk Brown Clay.	
								GREY STAINED SILTY CLAY. GAS ODOR	
			2-4	M	2.0				
5				W					
	150		4-6	W	2.0			BROWN SILTY CLAY w/GAS ODOR.	
			6-8	W	2.0				
10	250		8-10	W	2.0				
15									
								EOB @ 14.0'	
20									

BORING



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85 FOREST AVENUE LOCUST VALLEY, N.Y. 11560  
2317 INTERNATIONAL LANE MADISON, W. 53704

REPORT

SHEET 1 OF 2

DATE STARTED : 4-6-90

DATE FINISHED : 4-6-90

BORING No. MW-9

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS : This boring log will be used for MW-95.

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" x 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OYA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0								DARK BROWN SILTY CLAY.	
	○		0-2	M	1.5	6-6 26-16		RED/BROWN SILTY V.FINE SAND W/GRAVEL + PEBBLES	
	○		2-4	M	2.0	3-8 5-7			
5				W					
	○		4-6	W	2.0	3-3 1-3			
	○		6-8	W	2.0	5-3 2-3		RED/BROWN V.FINE TO FINE SAND	
10	○		8-10	W	2.0	8-5 5-8			
15	○		13-15	W	2.0	9-13 15			
20	○		18-20	W	2.0	13-18 11-18			

PROJECT NAME: PHASE 1 - BRICKLAND

BORING No. MW-9D

PROJECT No. 604-9

SHEET 2 of 2

[illegible]

## BORING



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2317 INTERNATIONAL LANE MADISON, WI. 53704

## REPORT

SHEET 1 OF 1

DATE STARTED : 4-6-90

DATE FINISHED : 4-6-90

BORING No. MW-10

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" X 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY	BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
0				D				TAN V.FINE SAND	
	0		0-2	M		4-6 11-14		AS ABOVE	
				M					
	167		2-4	M		9-8 7-6		BLACK STAINED SILTY CLAY	
5				W					
	431		4-6	W		3-4 3-3			
	310		6-8	W		3-5 7-12		RED/BROWN CLAY (STIFF) W/PRODUCT.	
10	366		8-10	W		6-6 12-15			
				M					
15	83		13-15	W		2-6 7-9		RED/BROWN DENSE CLAY.	
20			18-20	W				RED/BROWN V.FINE SAND W/TRACE PRODUCT	

## BORING



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2317 INTERNATIONAL LANE MADISON, WI. 53704

## REPORT

SHEET 1 OF 1

DATE STARTED : 4-5-90

DATE FINISHED : 4-5-90

BORING No. MW-11

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61
SIZE :		3" X 24"						HSA
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	OVA READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0				D				TAN V.FINE SAND (FILL)	
	0		0-2	M	1.5	3-11 11-12			
	376		2-4	M	1.0	17-21 17-10			
5								RED/BROWN SANDY SILT W/GREY STAINING.	
	416		4-6	M	1.5	1-3 4-3			
	435		6-8	M	1.5	5-2 2-2			
10								RED/BROWN SILTY CLAY W/PETROLEUM PRODUCT.	
	464		8-10	M	2.0	3-2 4-3			
								RED/BROWN SILTY V.FINE SAND	
15								RED/BROWN V.FINE SAND W/PEBBLE FRAGMENTS.	
	52		13-15	W	2.0	3-3 5-5			
								RED/BROWN V.FINE SAND W/PEBBLE FRAGMENTS.	
20								RED/BROWN V.FINE SAND W/PEBBLE FRAGMENTS.	
	0		18-20	W	2.0	17-10 19-21			

## BORING



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2317 INTERNATIONAL LANE MADISON, WI. 53704

## REPORT

SHEET 1 OF 2

DATE STARTED : 4-11-90

DATE FINISHED : 4-11-90

BORING No. MW-12

CLIENT : REXENE

PROJECT No : 604-9

PROJECT NAME &amp; LOCATION : PHASE 1 INVESTIGATION - SUNLAND PARK, NEW MEXICO

REMARKS:

DRILLING CONTRACTOR : I.T.

LOGGED BY: K. McHALE

DRILLER : T. DAVIS

EQUIPMENT :	CASING :	SOIL SAMPLER :		CORE BARREL	AUGER	MON. WELL (MW)		DRILL RIG AND METHOD
		SPLIT SPOON				PIPE	CAP	
TYPE :		STD.						MOBILE B-61 HSA
SIZE :		3" x 24"						
HAMMER WT / FALL		140/30"		BIT				

SURFACE ELEVATION :

SURFACE CONDITIONS :

WATER LEVEL AT		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE	O.V.A READINGS	SAMPLE				BLOWS / 6" OR CORE TIME	STRATA DEPTH / ELEV.	DESCRIPTION AND REMARKS TRACE=0-10% LITTLE=10-20% SOME=20-30% AND=35-50%	
		TYPE AND No.	DEPTH (FROM - TO)	MOISTURE CONTENT	RECOVERY				
0								RED/BROWN SILTY CLAY.	
	0		0-2	M	1.5	4-4 4-6			
	0		2-4	M	2.0	3-2 3-3			
5									
	0		4-6	W	2.0	2-2 4-6		RED/BROWN CLAY (STIFF)	
			6-8					RED BROWN SILTY CLAY	
								RED/BROWN CLAY (STIFF)	
10	0		8-10	W	2.0	5-4 4-7			
15	0		13-15	W	2.0	15-14 15-17		RED/BROWN V. FINE SAND	
20	0		18-20	W	2.0	7-10 7-16		MED SAND AND GRAVEL	



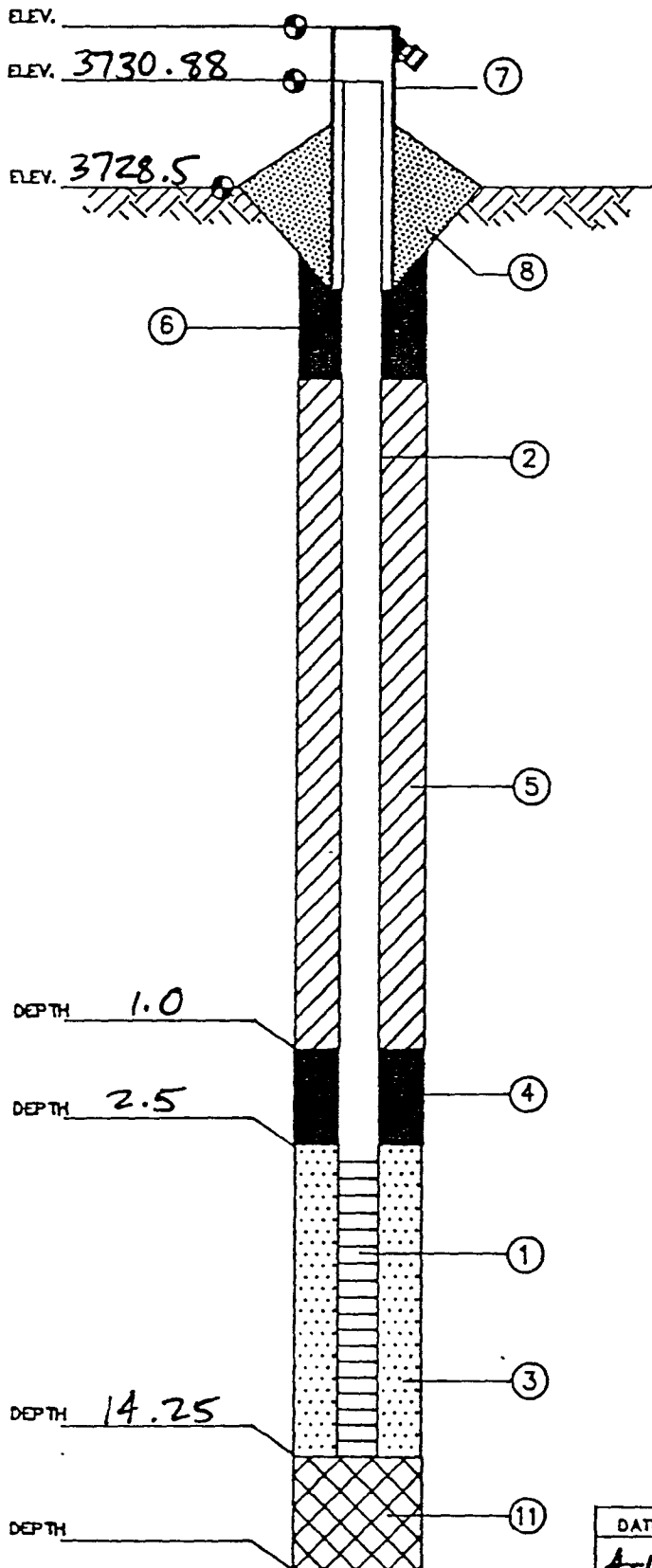
PROJECT NAME: REXENE - BRICKLAND BORING No. MW-12

PROJECT NO. 604-9

SHEET 2 of 2

[illegible]

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE  
LOCATION SUNLAND PARK, NEW MEXICO  
DATE 4-10-90 WELL No. MW-1  
HYDROGEOLOGIST KEVIN McHALE  
DRILLING CONTRACTOR I.T.

- 1.) SCREEN TYPE PVC  
SLOTTED LENGTH 10.0' ft.  
SLOT SIZE 0.010 in.
- 2.) SOLID PIPE TYPE PVC  
SOLID PIPE LENGTH 6.25 ft.  
PIPE & SCREEN DIA. 4.0" in.  
JOINT TYPE - SLIP/GLUED THREADED ☒
- 3.) TYPE OF BACKFILL AROUND SCREEN #1C LONESTAR SAND
- 4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS
- 5.) TYPE OF BACKFILL NONE  
HOW INSTALLED \_\_\_\_\_
- 6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE
- 7.) PROTECTIVE CASING - YES ☒ NO \_\_\_\_\_  
LOCKING CAP YES ☒ NO \_\_\_\_\_
- 8.) CONCRETE SEAL - YES ☒ NO \_\_\_\_\_
- 9.) DRILLING METHOD HOLLOW STEM AUGER

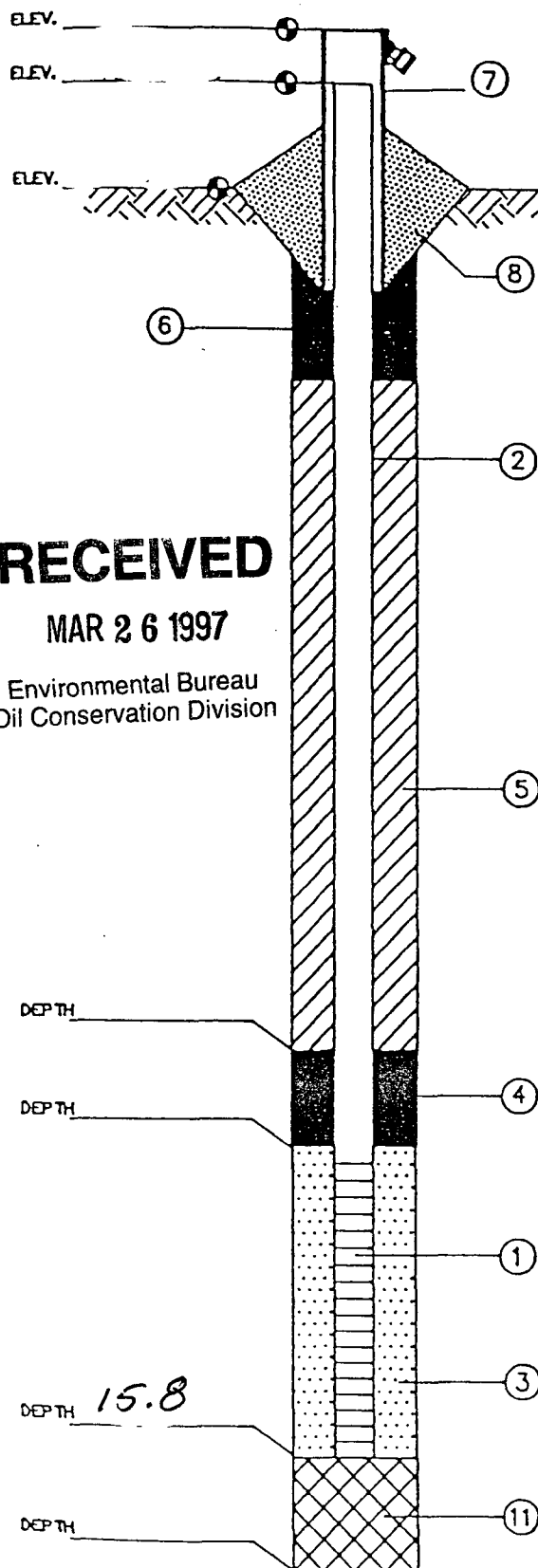
- 10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS
- 11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-12	1040	5.97	
4-13	1206	5.69	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



**RECEIVED**

**MAR 26 1997**

Environmental Bureau  
Oil Conservation Division

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**MONITORING WELL CONSTRUCTION INFORMATION**

JOB No. 604-9 CLIENT REXENE  
LOCATION SUNLAND PARK, NEW MEXICO  
DATE - -90 WELL No. MW-2  
HYDROGEOLOGIST KEVIN McHALE  
DRILLING CONTRACTOR I.T.

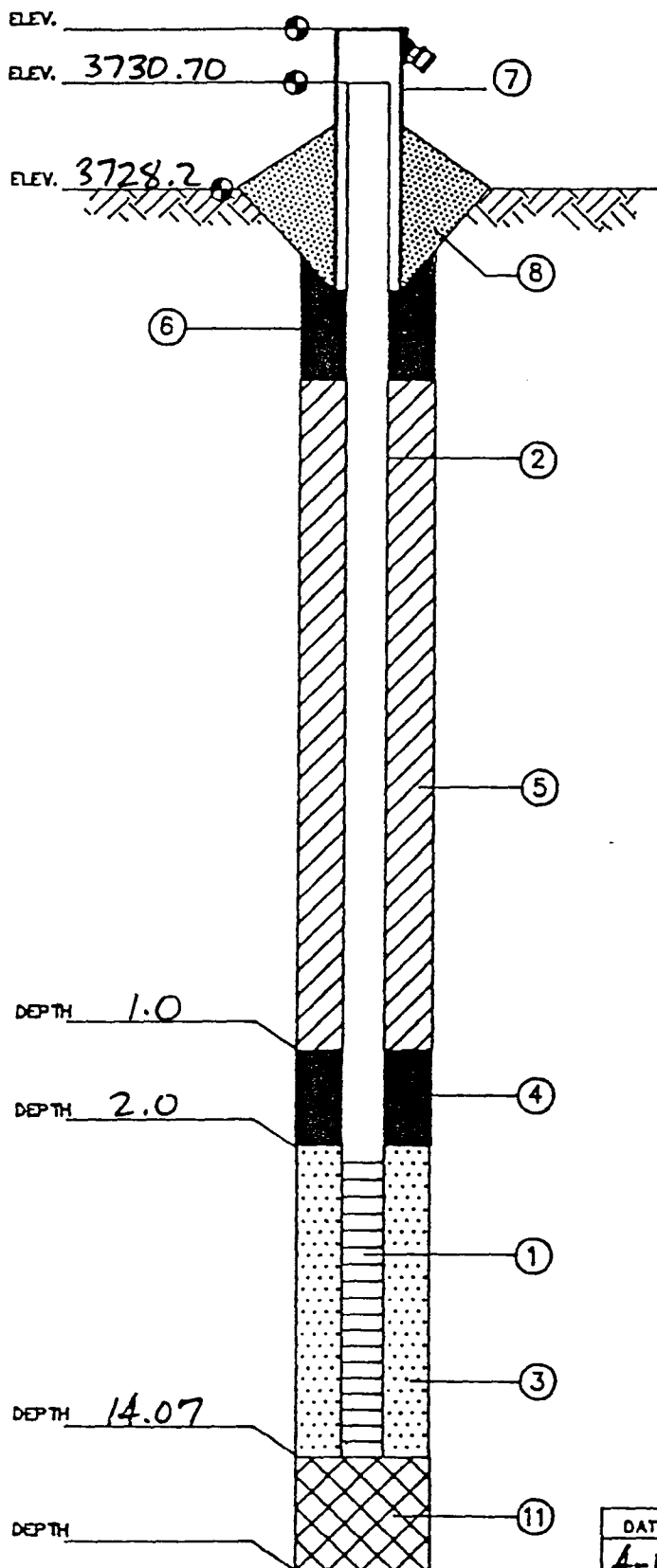
- 1.) SCREEN TYPE PVC  
SLOTTED LENGTH 10.0' ft.  
SLOT SIZE 0.010 in.
- 2.) SOLID PIPE TYPE PVC  
SOLID PIPE LENGTH \_\_\_\_\_ ft.  
PIPE & SCREEN DIA. 4.0" in.  
JOINT TYPE - SLIP/GLUED \_\_\_\_\_ THREADED ☒
- 3.) TYPE OF BACKFILL AROUND SCREEN \_\_\_\_\_  
#10 LONESTAR SAND
- 4.) TYPE OF LOWER SEAL (IF INSTALLED)  
BENTONITE PELLETS
- 5.) TYPE OF BACKFILL NONE  
HOW INSTALLED \_\_\_\_\_
- 6.) TYPE OF SURFACE SEAL (IF INSTALLED)  
NONE
- 7.) PROTECTIVE CASING - YES ☒ NO \_\_\_\_\_  
LOCKING CAP YES ☒ NO \_\_\_\_\_
- 8.) CONCRETE SEAL - YES ☒ NO \_\_\_\_\_
- 9.) DRILLING METHOD HOLLOW STEEL AUGER
- 10.) ADDITIVES USED (IF ANY) POTABLE WATER  
TO PREVENT SAND HEAVING INTO AUGER
- 11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 4-9-90 WELL No. MW-35

HYDROGEOLOGIST KEVIN MCHALE

DRILLING CONTRACTOR I. T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 6.5' ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED ☐ THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN #10 LONESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS

5.) TYPE OF BACKFILL NONE

HOW INSTALLED

6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE

7.) PROTECTIVE CASING - YES ☒ NO ☐

LOCKING CAP YES ☒ NO ☐

8.) CONCRETE SEAL - YES ☒ NO ☐

9.) DRILLING METHOD HOLLOW STEM AUGER

10.) ADDITIVES USED (IF ANY) POTABLE WATER

TO PREVENT SAND HEAVING INTO AUGER

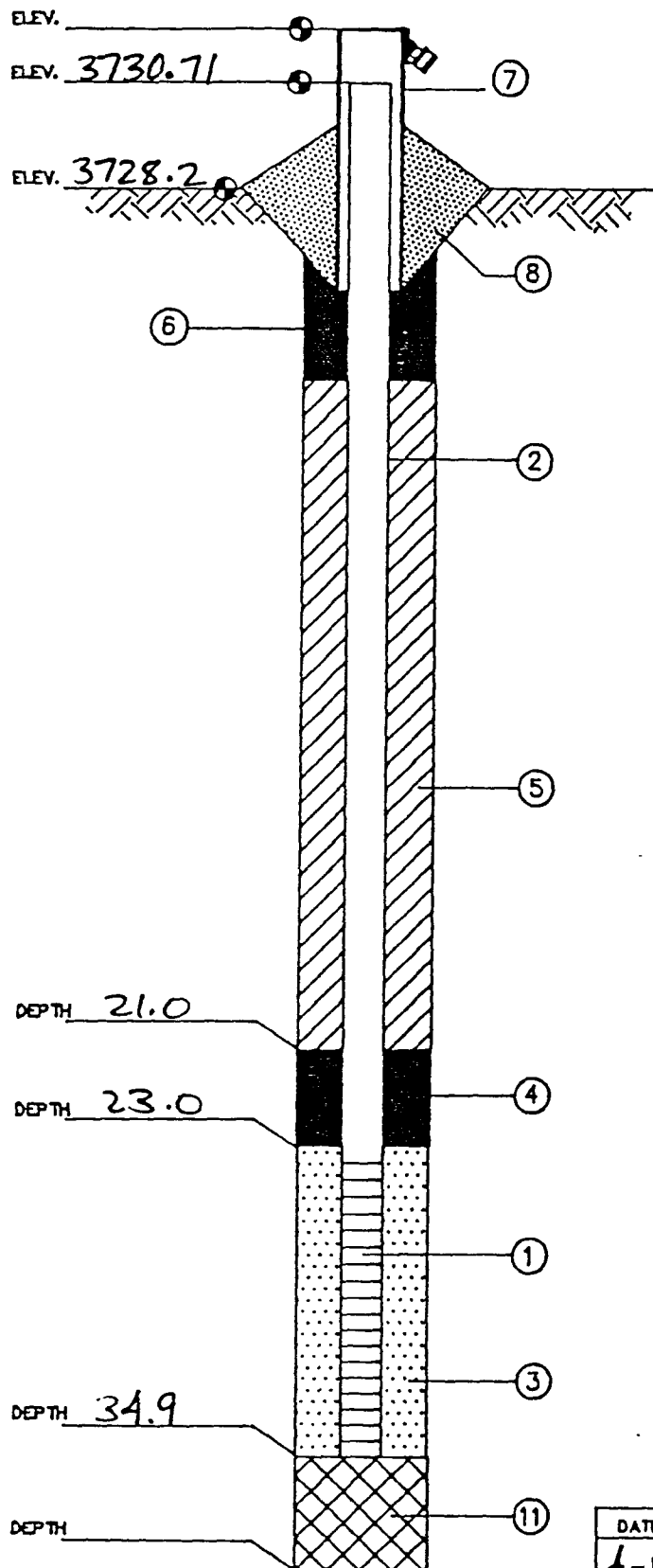
11.) TYPE OF BACKFILL

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	2235	6.34	
4-13	1213	6.20	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE  
LOCATION SUNLAND PARK, NEW MEXICO  
DATE 4-9-90 WELL No. MW-3D  
HYDROGEOLOGIST KEVIN McHALE  
DRILLING CONTRACTOR I.T.

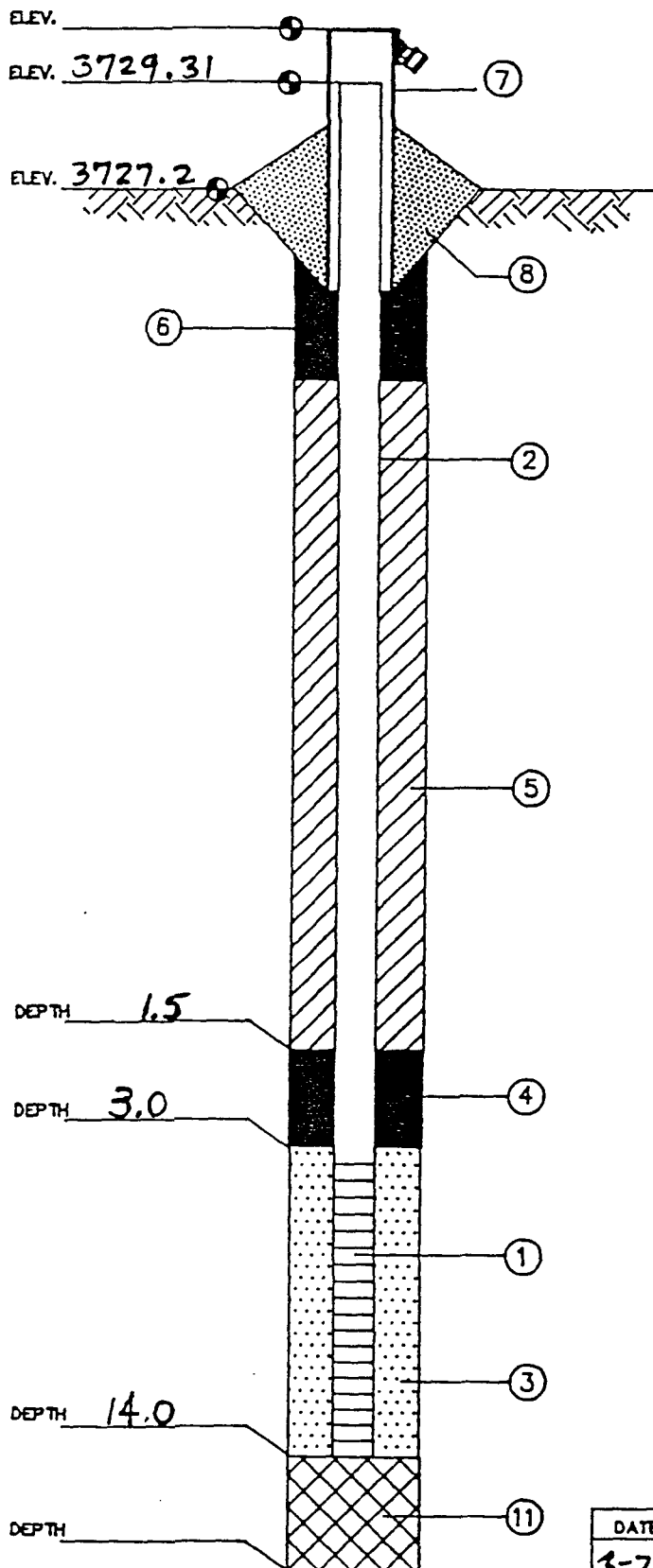
- 1.) SCREEN TYPE PVC  
SLOTTED LENGTH 10.0' ft.  
SLOT SIZE 0.010 in.
- 2.) SOLID PIPE TYPE PVC  
SOLID PIPE LENGTH 27.5 ft.  
PIPE & SCREEN DIA. 4.0" in.  
JOINT TYPE - SLIP/GLUED ☐ THREADED ☒
- 3.) TYPE OF BACKFILL AROUND SCREEN # 10 LONESTAR SAND
- 4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS
- 5.) TYPE OF BACKFILL BENTONITE GROUT  
HOW INSTALLED TREMIE PIPE
- 6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE
- 7.) PROTECTIVE CASING - YES ☒ NO ☐  
LOCKING CAP YES ☒ NO ☐
- 8.) CONCRETE SEAL - YES ☒ NO ☐
- 9.) DRILLING METHOD HOLLOW STEM AUGER
- 10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS
- 11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	2125	6.79	
4-13	1215	6.31	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 3-28-90 WELL No. MW-4

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 8 ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN #1-C LOWESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED)

BENTONITE PELLETS

5.) TYPE OF BACKFILL NONE

HOW INSTALLED

6.) TYPE OF SURFACE SEAL (IF INSTALLED)

NONE

7.) PROTECTIVE CASING - YES ☒ NO

LOCKING CAP YES ☒ NO

8.) CONCRETE SEAL - YES ☒ NO

9.) DRILLING METHOD HOLLOW STEM AUGER

10.) ADDITIVES USED (IF ANY) POTABLE WATER

TO PREVENT SAND HEAVING INTO AUGERS.

11.) TYPE OF BACKFILL NONE

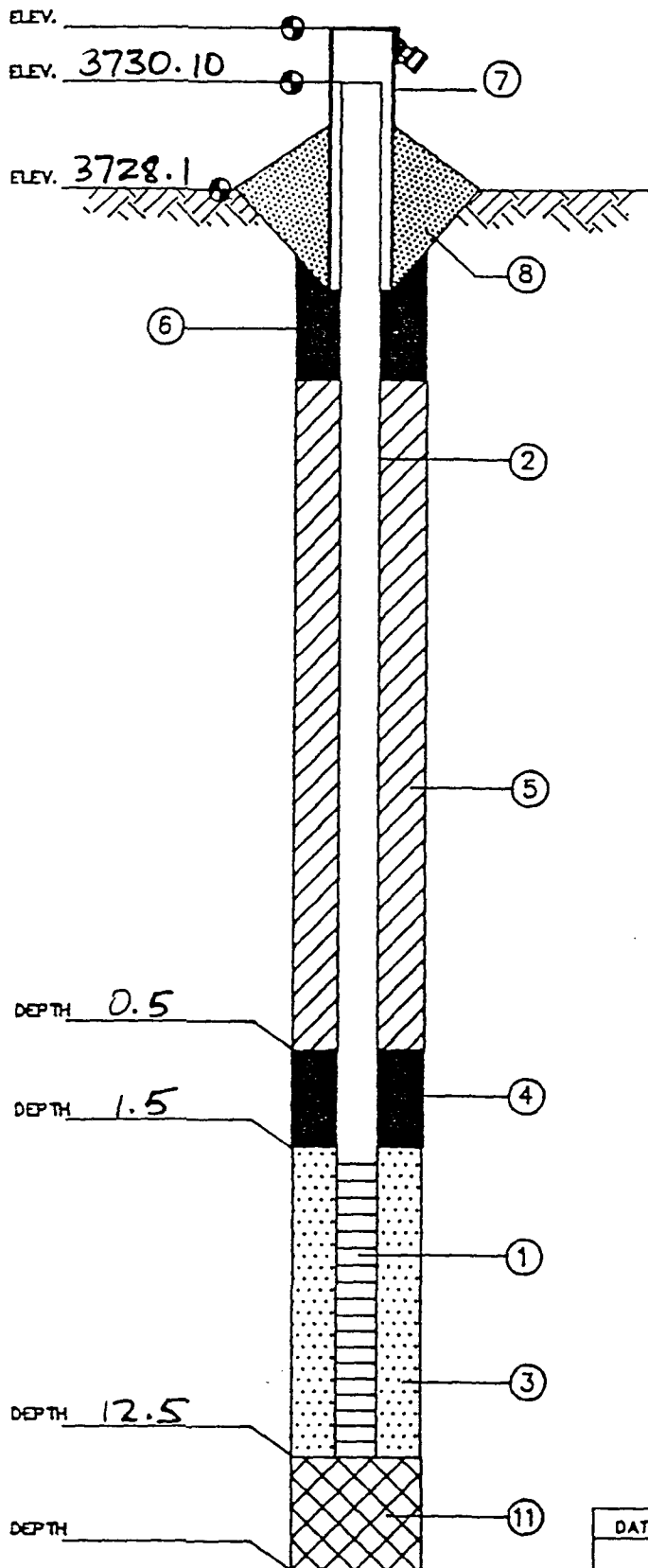
WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
3-27	1800	3.0'	INSIDE H.S.A.
4-12	1700	5.04'	T.O.C.
4-13	1038	4.87	T.O.C.

\* FROM TOP OF WELL CASING

MONITORING WELL CONSTRUCTION INFORMATION

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 3-29-90 WELL No. MW-5

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 5.0' ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN #10-LOWESTAR SAND.

4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS.

5.) TYPE OF BACKFILL NONE

HOW INSTALLED

6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE

7.) PROTECTIVE CASING - YES ☒ NO

LOCKING CAP YES ☒ NO

8.) CONCRETE SEAL - YES ☒ NO

9.) DRILLING METHOD HOLLOW STEM AUGERS

10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS

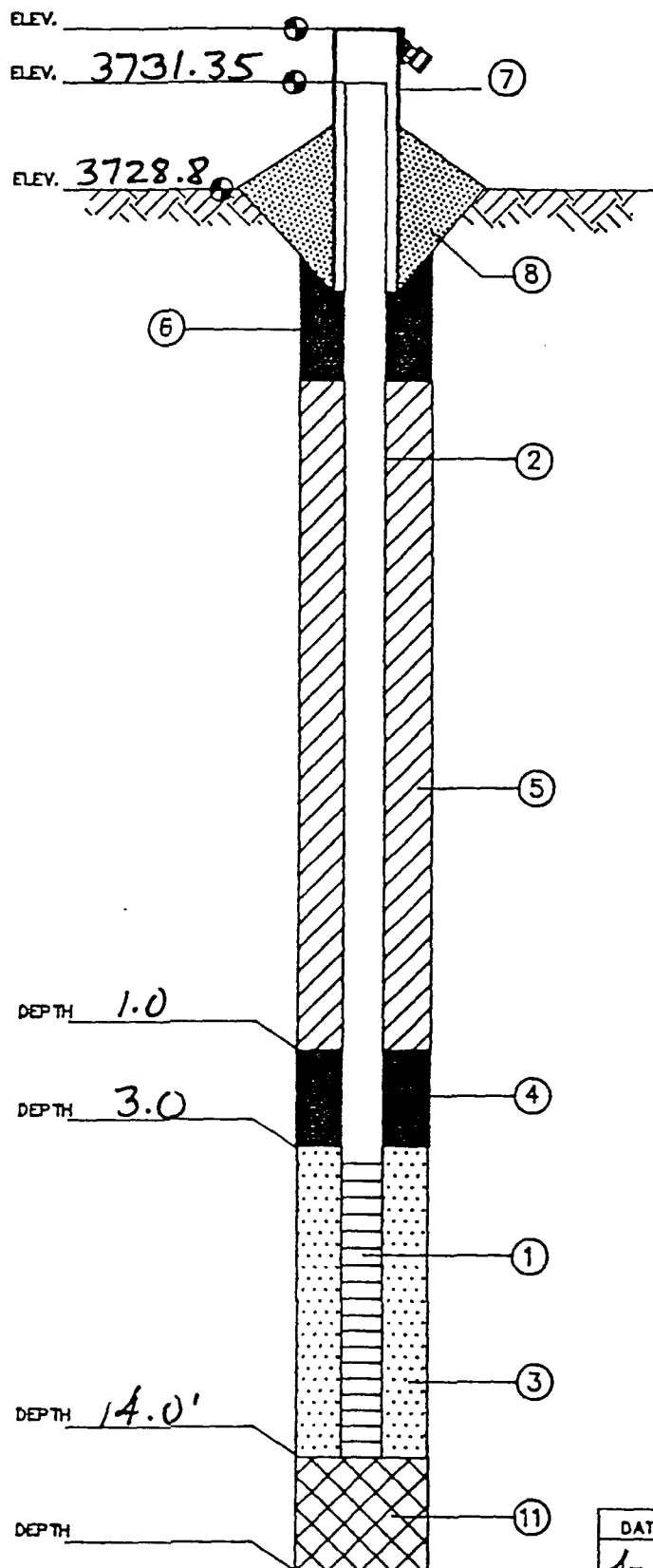
11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE  
LOCATION SUNLAND PARK, NEW MEXICO.  
DATE 4-8-90 WELL No. MW-65  
HYDROGEOLOGIST KEVIN McHALE  
DRILLING CONTRACTOR I.T.

- 1.) SCREEN TYPE PVC  
SLOTTED LENGTH 10.0' ft.  
SLOT SIZE 0.010 in.
- 2.) SOLID PIPE TYPE PVC  
SOLID PIPE LENGTH 7.0' ft.  
PIPE & SCREEN DIA. 4.0" in.  
JOINT TYPE - SLIP/GLUED ☐ THREADED ☒
- 3.) TYPE OF BACKFILL AROUND SCREEN #10 - LONESTAR SAND.
- 4.) TYPE OF LOWER SEAL (IF INSTALLED)  
BENTONITE PELLETS.
- 5.) TYPE OF BACKFILL NONE  
HOW INSTALLED \_\_\_\_\_
- 6.) TYPE OF SURFACE SEAL (IF INSTALLED)  
NONE
- 7.) PROTECTIVE CASING - YES ☒ NO ☐  
LOCKING CAP YES ☒ NO ☐
- 8.) CONCRETE SEAL - YES ☒ NO ☐
- 9.) DRILLING METHOD HOLLOW STEM AUGER.

- 10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS.
- 11.) TYPE OF BACKFILL \_\_\_\_\_

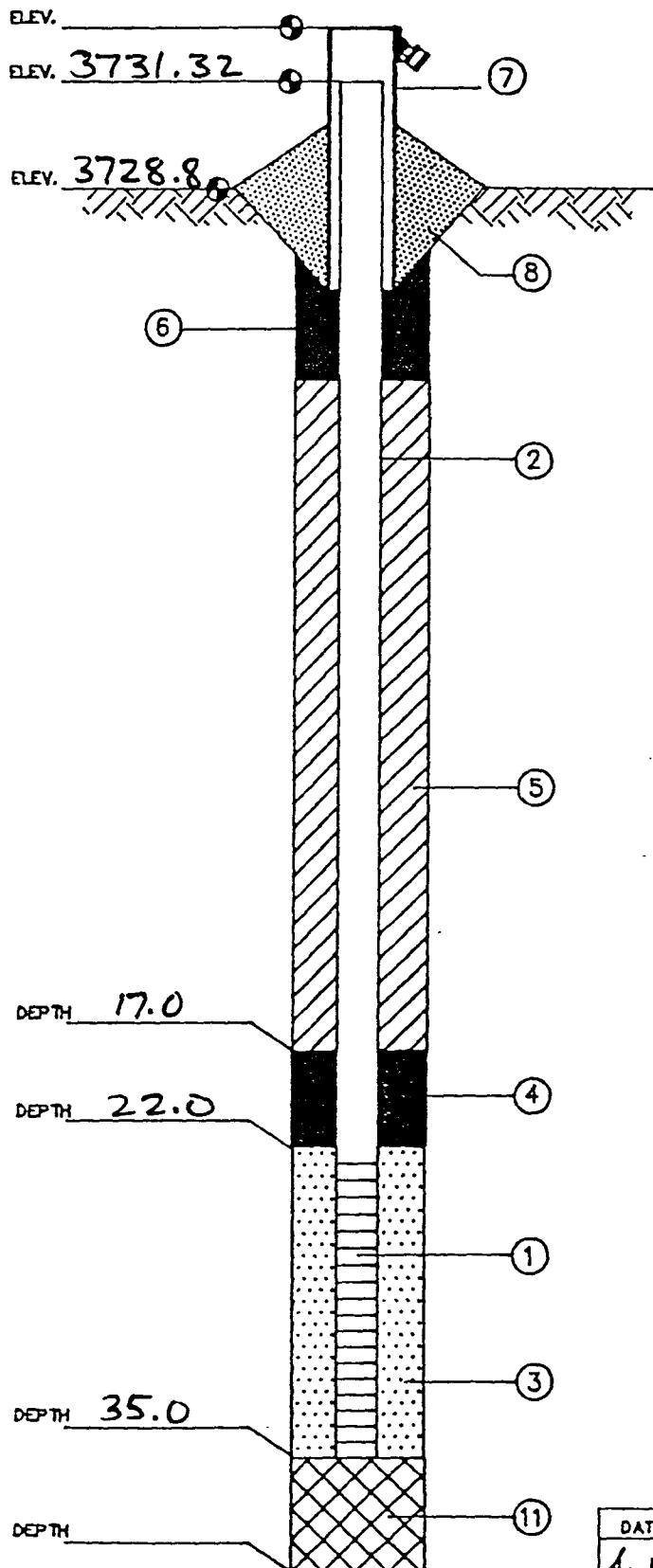
WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	1545	7.28	
4-13	1227	7.21	

\* FROM TOP OF WELL CASING



ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 4-8-90 WELL No. MW-6D

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I. T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 28 ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED ☐ THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN #10- LONESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS

5.) TYPE OF BACKFILL BENTONITE GROUT

HOW INSTALLED TREMIE PIPE

6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE

7.) PROTECTIVE CASING - YES ☒ NO ☐

LOCKING CAP YES ☒ NO ☐

8.) CONCRETE SEAL - YES ☒ NO ☐

9.) DRILLING METHOD HOLLOW STEM AUGERS

10.) ADDITIVES USED (IF ANY) POTABLE WATER

TO PREVENT SAND HEAVING INTO AUGERS.

11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

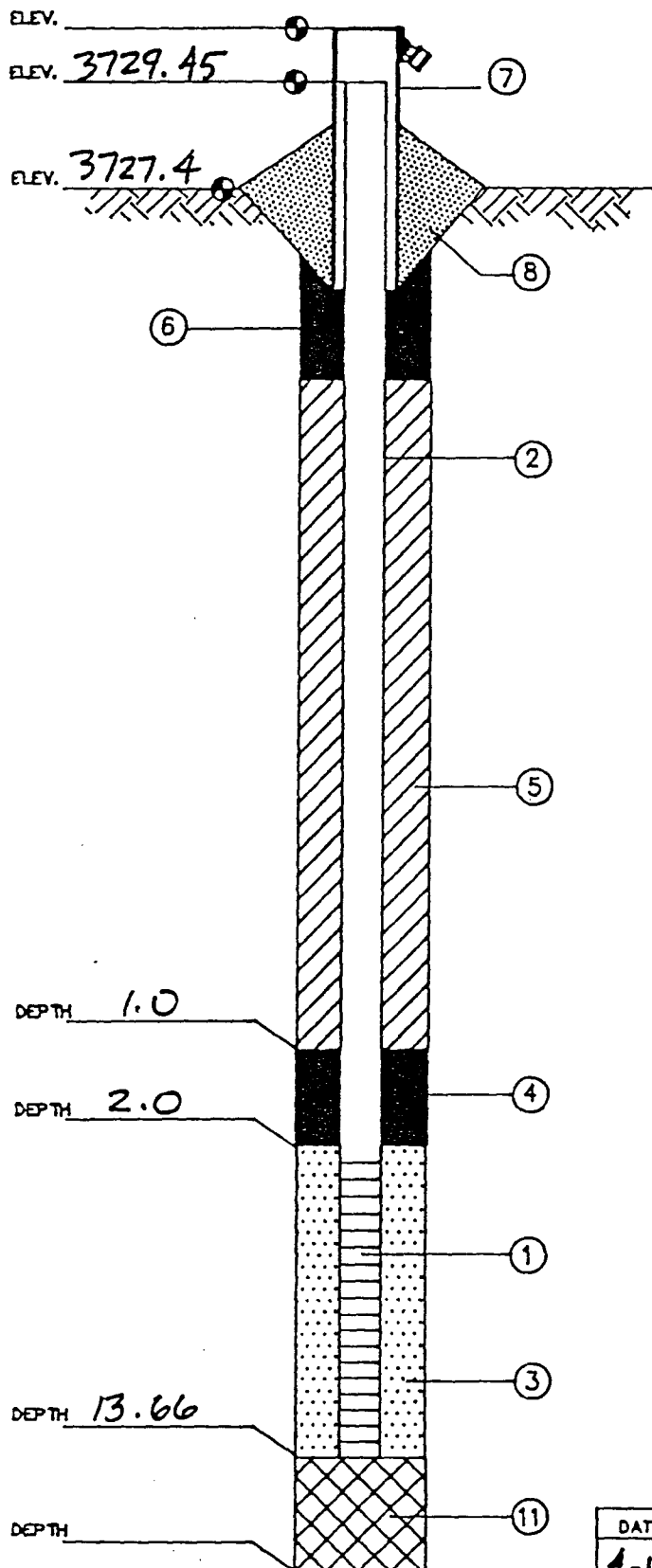
DATE	TIME	DEPTH TO WATER	REMARKS
4-11	1515	7.24	
4-13	1229	7.21	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE

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MONITORING WELL CONSTRUCTION INFORMATION



JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 3-28-90 WELL No. MW-7

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 5.5 ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED ☐ THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN #10 LOWESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS

5.) TYPE OF BACKFILL NONE

HOW INSTALLED

6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE

7.) PROTECTIVE CASING - YES ☒ NO ☐

LOCKING CAP YES ☒ NO ☐

8.) CONCRETE SEAL - YES ☒ NO ☐

9.) DRILLING METHOD HOLLOW STEM AUGER

10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS.

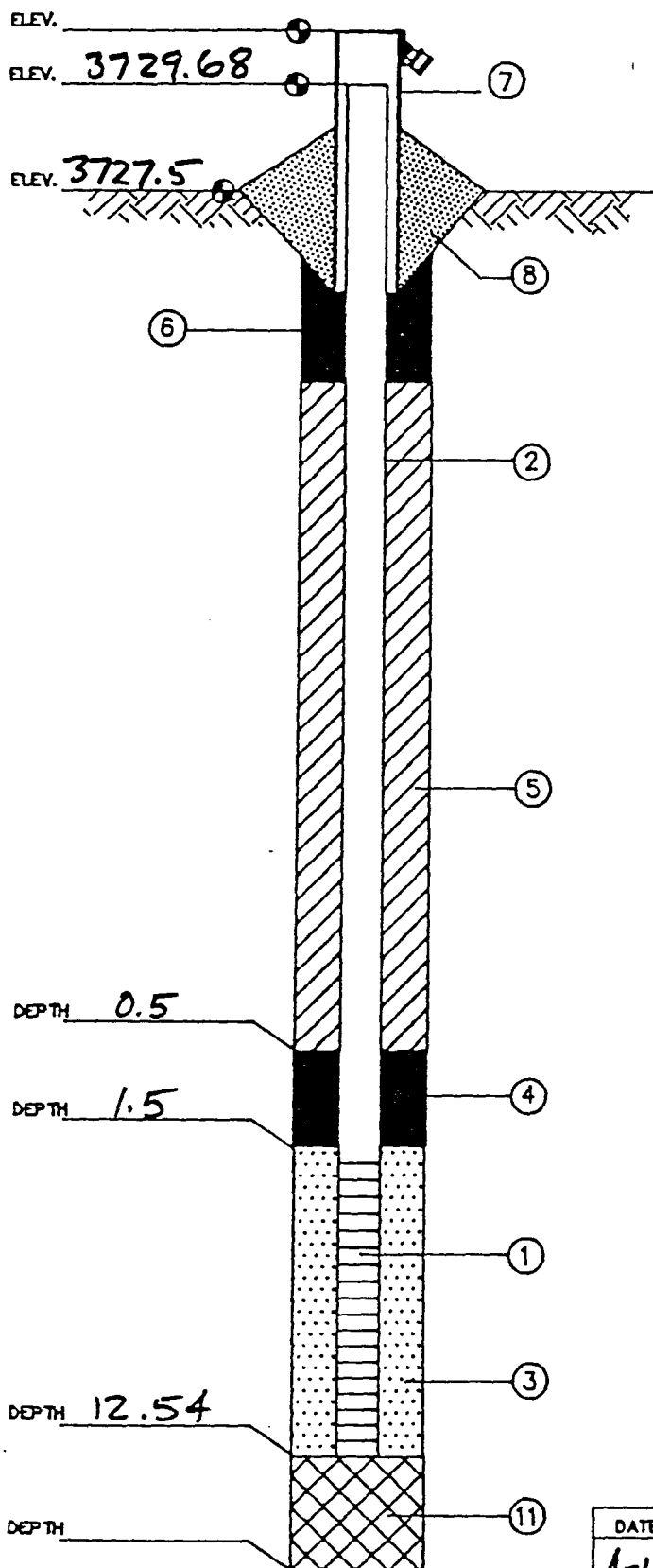
11.) TYPE OF BACKFILL NONE.

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	1255	5.29	
4-13	1042	5.18	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REKENE  
LOCATION SUNLAND PARK, NEW MEXICO.  
DATE 3-29-90 WELL No. MAW-8  
HYDROGEOLOGIST KEVIN MCHALE  
DRILLING CONTRACTOR I. T.

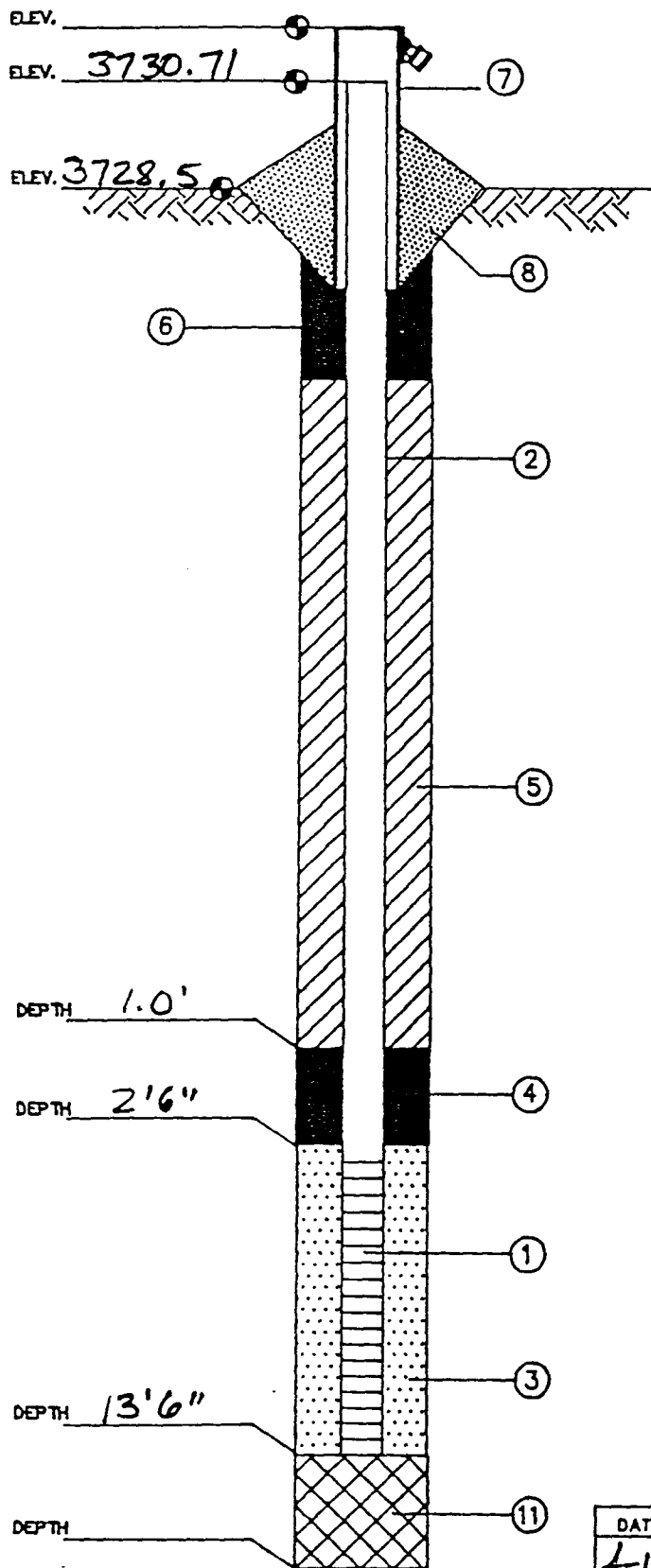
- 1.) SCREEN TYPE PVC  
SLOTTED LENGTH 10.0' ft.  
SLOT SIZE 0.010 in.
- 2.) SOLID PIPE TYPE PVC  
SOLID PIPE LENGTH 5.0' ft.  
PIPE & SCREEN DIA. 4.0" in.  
JOINT TYPE - SLIP/GLUED ☐ THREADED ☒
- 3.) TYPE OF BACKFILL AROUND SCREEN #10 LONESTAR SAND
- 4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS
- 5.) TYPE OF BACKFILL NONE  
HOW INSTALLED \_\_\_\_\_
- 6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE
- 7.) PROTECTIVE CASING - YES ☒ NO ☐  
LOCKING CAP YES ☒ NO ☐
- 8.) CONCRETE SEAL - YES ☒ NO ☐
- 9.) DRILLING METHOD HOLLOW STEM AUGER
- 10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS
- 11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	1330	5.35	
4-13	1045	5.36	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 4-8-90 WELL No. NW-95

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 5.5' ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED ☐ THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN

# 10 - LOWESTAR SAND.

4.) TYPE OF LOWER SEAL (IF INSTALLED)

BENTONITE PELLETS

5.) TYPE OF BACKFILL NONE

HOW INSTALLED

6.) TYPE OF SURFACE SEAL (IF INSTALLED)

NONE

7.) PROTECTIVE CASING - YES ☒ NO ☐

LOCKING CAP YES ☒ NO ☐

8.) CONCRETE SEAL - YES ☒ NO ☐

9.) DRILLING METHOD HOLLOW STEEL AUGER

10.) ADDITIVES USED (IF ANY) POTABLE WATER

TO PREVENT SAND HEAVING INTO AUGERS.

11.) TYPE OF BACKFILL NONE

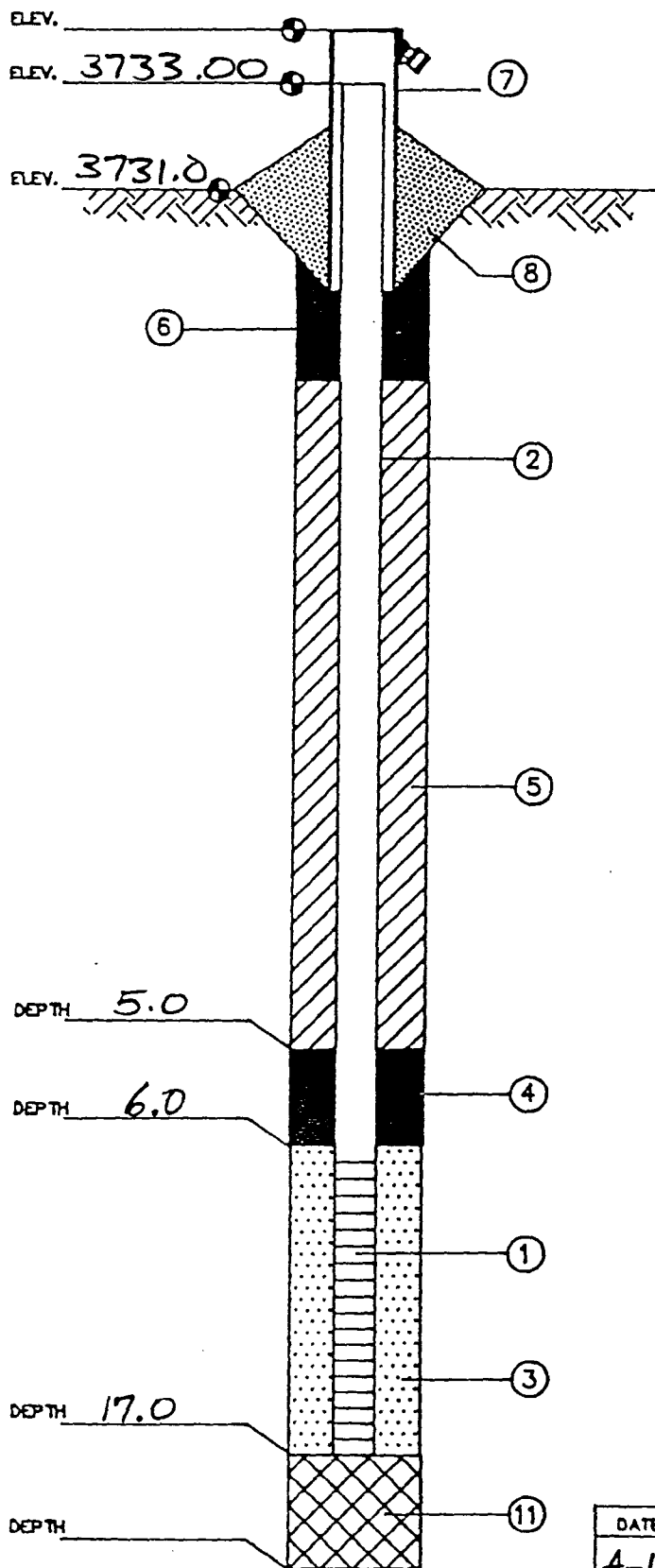
WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-12	0945	6.96	
4-13	1237	6.89	

\* FROM TOP OF WELL CASING

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO

DATE 4-6-90 WELL No. MW-10

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 9.0 ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN #1 C LONESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED) BENTONITE PELLETS

5.) TYPE OF BACKFILL NONE

HOW INSTALLED

6.) TYPE OF SURFACE SEAL (IF INSTALLED) NONE

7.) PROTECTIVE CASING - YES ☒ NO

LOCKING CAP YES ☒ NO

8.) CONCRETE SEAL - YES ☒ NO

9.) DRILLING METHOD HOLLOW STEM AUGERS

10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS

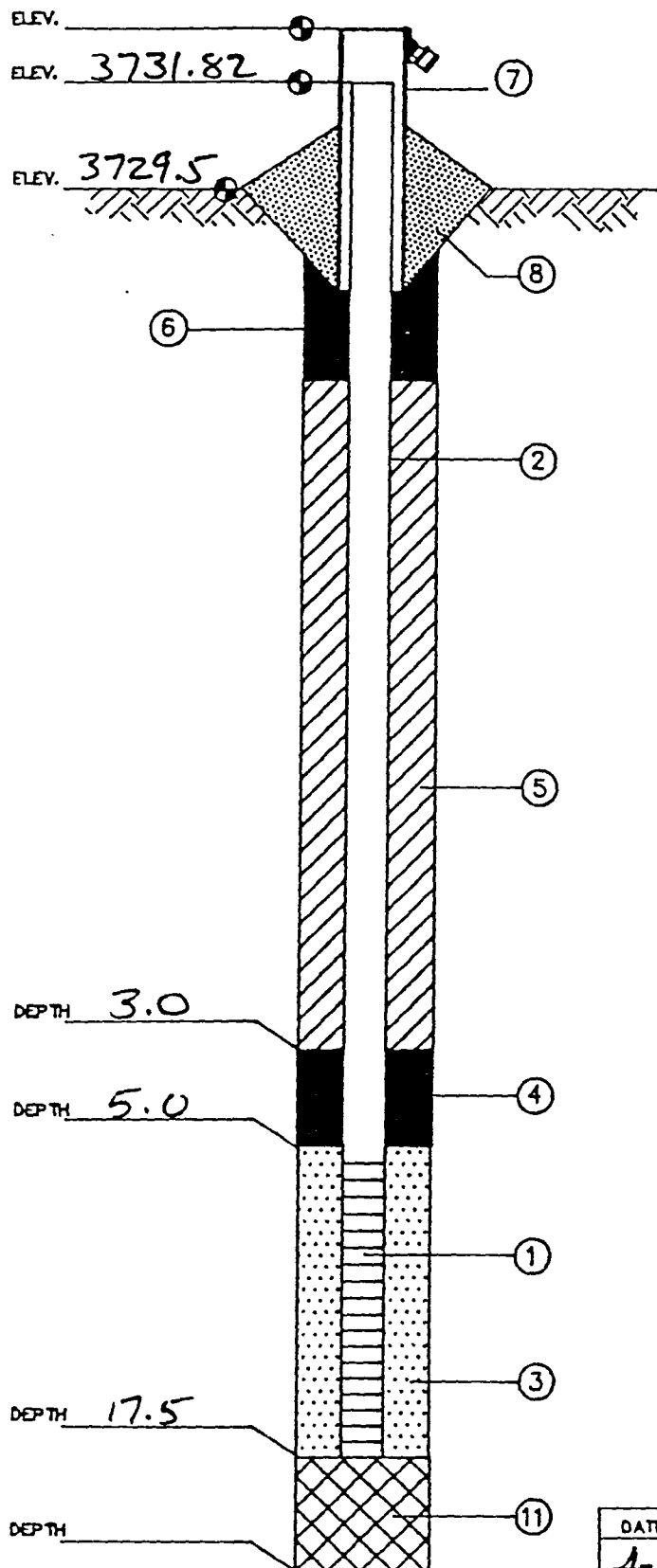
11.) TYPE OF BACKFILL

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	2130	9.19	Floating black prod-
4-13	1058	8.99	uct found in borehole.

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE  
LOCATION SUNLAND PARK, NEW MEXICO  
DATE 4-5-90 WELL No. MW-11  
HYDROGEOLOGIST KEVIN McHALE  
DRILLING CONTRACTOR I.T.

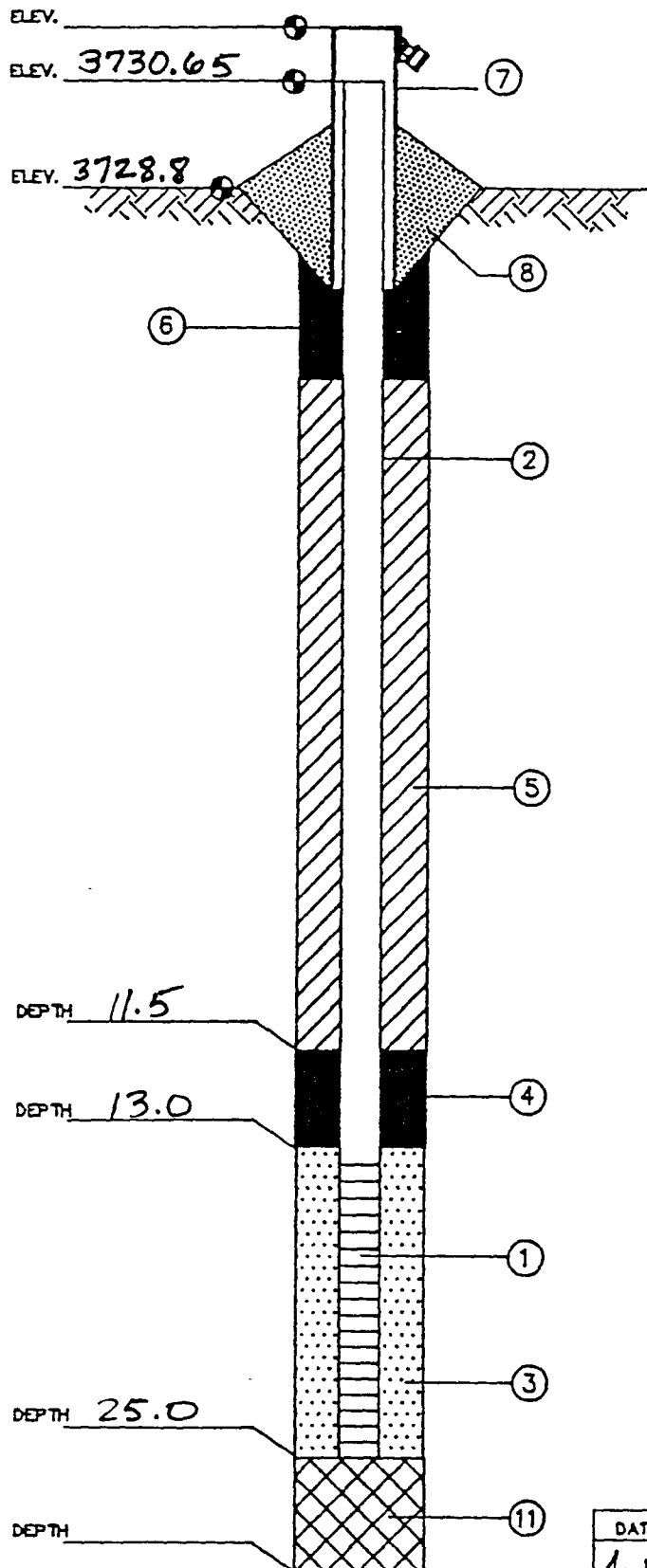
- 1.) SCREEN TYPE PVC  
SLOTTED LENGTH 10.0' ft.  
SLOT SIZE 0.010 in.
- 2.) SOLID PIPE TYPE PVC  
SOLID PIPE LENGTH 10.0' ft.  
PIPE & SCREEN DIA. 4.0" in.  
JOINT TYPE - SLIP/GLUED ☐ THREADED ☒
- 3.) TYPE OF BACKFILL AROUND SCREEN #10 LOWESTAR SAND.
- 4.) TYPE OF LOWER SEAL (IF INSTALLED)  
BENTONITE PELLETS
- 5.) TYPE OF BACKFILL NONE  
HOW INSTALLED \_\_\_\_\_
- 6.) TYPE OF SURFACE SEAL (IF INSTALLED)  
NONE
- 7.) PROTECTIVE CASING - YES ☒ NO ☐  
LOCKING CAP YES ☒ NO ☐
- 8.) CONCRETE SEAL - YES ☒ NO ☐
- 9.) DRILLING METHOD HOLLOW STEM AUGERS
- 10.) ADDITIVES USED (IF ANY) POTABLE WATER TO PREVENT SAND HEAVING INTO AUGERS.
- 11.) TYPE OF BACKFILL NONE.

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	2110	7.63	
4-13	1049	7.94	

\* FROM TOP OF WELL CASING

ALL DEPTHS MEASURED  
FROM GROUND SURFACE



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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO.

DATE 4-10-90 WELL No. MW-12

HYDROGEOLOGIST KEVIN MCHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 18.0' ft.

PIPE & SCREEN DIA. 4.0" In.

JOINT TYPE - SLIP/GLUED ☐ THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN \_\_\_\_\_

# 10- LONESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED)

BENTONITE PELLETS

5.) TYPE OF BACKFILL BENTONITE GROUT.

HOW INSTALLED TREMIE PIPE.

6.) TYPE OF SURFACE SEAL (IF INSTALLED)

NONE

7.) PROTECTIVE CASING - YES ☒ NO ☐

LOCKING CAP YES ☒ NO ☐

8.) CONCRETE SEAL - YES ☒ NO ☐

9.) DRILLING METHOD HOLLOW STEM AUGER

10.) ADDITIVES USED (IF ANY) POTABLE WATER

TO PREVENT SAND HEAVING INTO AUGERS.

11.) TYPE OF BACKFILL NONE

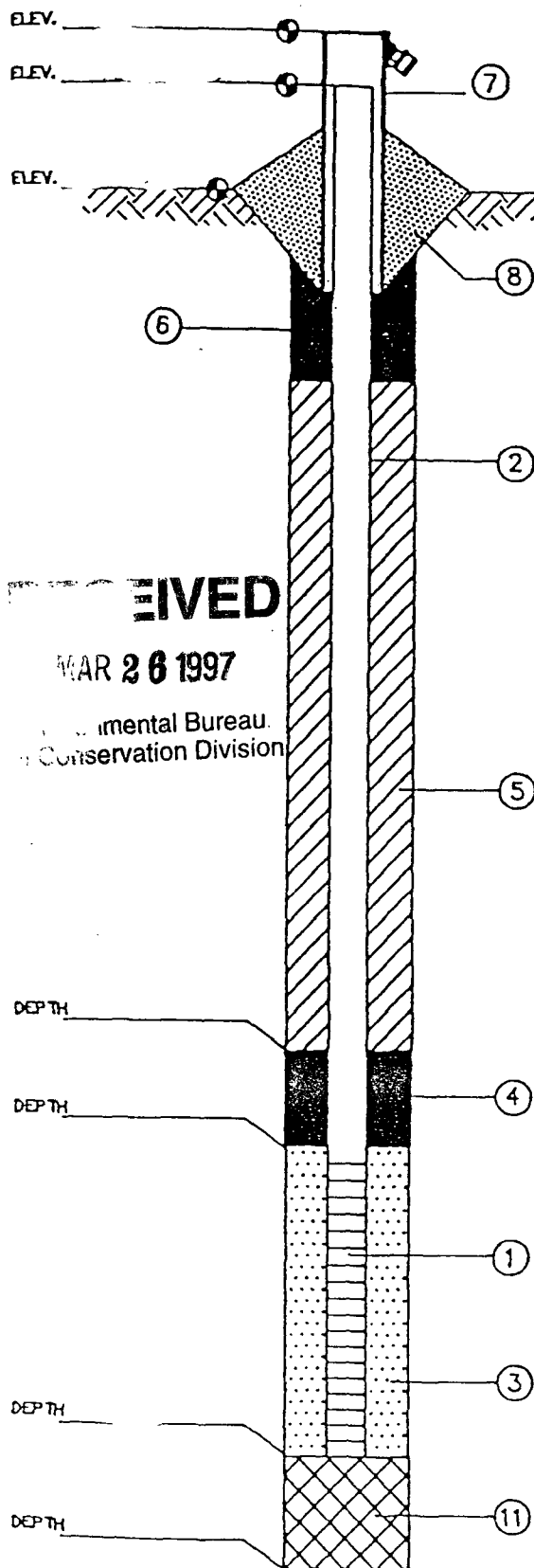
WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS
4-11	1645	7.12	15 min. after well was developed.
4-13	1202	5.04	True static level.

\* FROM TOP OF WELL CASING



ALL DEPTHS MEASURED  
FROM GROUND SURFACE



RECEIVED

MAR 26 1997

Environmental Bureau  
Conservation Division

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MONITORING WELL CONSTRUCTION INFORMATION

JOB No. 604-9 CLIENT REXENE

LOCATION SUNLAND PARK, NEW MEXICO

DATE - -90 WELL No. MW-13

HYDROGEOLOGIST KEVIN McHALE

DRILLING CONTRACTOR I.T.

1.) SCREEN TYPE PVC

SLOTTED LENGTH 10.0' ft.

SLOT SIZE 0.010 in.

2.) SOLID PIPE TYPE PVC

SOLID PIPE LENGTH \_\_\_\_\_ ft.

PIPE & SCREEN DIA. 4.0" in.

JOINT TYPE - SLIP/GLUED \_\_\_\_\_ THREADED ☒

3.) TYPE OF BACKFILL AROUND SCREEN \_\_\_\_\_

#10 LONESTAR SAND

4.) TYPE OF LOWER SEAL (IF INSTALLED)

BENTONITE PELLETS

5.) TYPE OF BACKFILL NONE

HOW INSTALLED \_\_\_\_\_

6.) TYPE OF SURFACE SEAL (IF INSTALLED)

NONE

7.) PROTECTIVE CASING - YES ☒ NO \_\_\_\_\_

LOCKING CAP YES ☒ NO \_\_\_\_\_

8.) CONCRETE SEAL - YES ☒ NO \_\_\_\_\_

9.) DRILLING METHOD HOLLOW STEEL AUGER

10.) ADDITIVES USED (IF ANY) POTABLE WATER

TO PREVENT SAND HEAVING INTO AUGER

11.) TYPE OF BACKFILL NONE

WATER LEVEL CHECKS \*

DATE	TIME	DEPTH TO WATER	REMARKS

\* FROM TOP OF WELL CASING

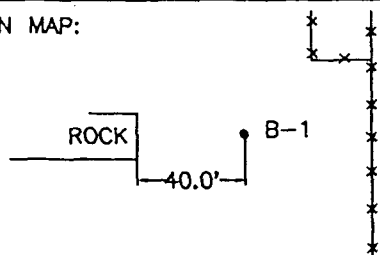
## **Appendix C**

Lithologic Logs of Monitoring Wells, Boreholes, and Trenches (GCL, 1994)

# LITHOLOGIC LOG (CORE)

Page 1 of 1

## LOCATION MAP:



SITE ID: REXENE LOCATION ID: B-1  
 SITE COORDINATES (ft.):  
 N E  
 GROUND ELEVATION (ft. MSL):                       
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM LEXAN TUBE  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/17/94 DATE COMPLETED: 6/17/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: ONE FOOT AWAY FROM ATTEMPT MADE 6/16/94

1/4 1/4 1/4 1/4 S    T    R   

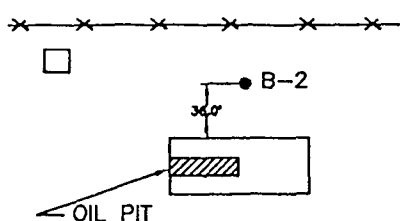
## LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1			PUSH W/ DRILL-ING	0	2	30		SILT AND CLAY LT. BROWN, OR ANGULAR GRAVEL W/ ORGANIC MATERIAL.
2								
3			PUSH W/ DRILL-ING	2	4	60		CLAY REDDISH BRN TO DK BRN. W/O LITTLE < 5% UFN GR SAND, NO STRINGERS OF SAND. MOIST CLAY.
4								
5			PUSH W/ DRILL-ING	4	6	100		CLAY BROWN W/ SOME VERY SMALL SAND POCKETS, AND SOME APPARENT N.C. STAINS UFN. OR SD. (NOT CONTINUOUS LAYERS) MOIST
6								
7			PUSH W/ DRILL-ING	6	8	70		CLAY DK. BROWN, INCREASING SAD, UFN GR, W/S, SUB-ANGULAR, IN POORLY DEFINED LENSES WITHIN THE CLAY, WET
8								* SAMPLE WET BELOW ~ 6.0' FL IN WELL 3.8' BELOW SURFACE BORING TO BE PLUGGED
9								
10								

# LITHOLOGIC LOG

Page 1 of 1

LOCATION MAP:



SITE ID: REXENE LOCATION ID: B-2  
 SITE COORDINATES (ft.):  
 N \_\_\_\_\_ E \_\_\_\_\_  
 GROUND ELEVATION (ft. MSL): \_\_\_\_\_  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM LEXAN TUBE  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/17/94 DATE COMPLETED: 6/17/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: BORING TO BE PLUGGED

1/4 1/4 1/4 1/4 S     T     R    

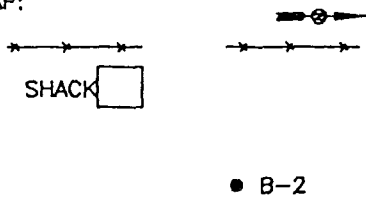
LOCATION DESCRIPTION: \_\_\_\_\_

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1								GRAVEL FILL 6" SILT W/ ANGULAR FRAG OF GRAVEL LT BRN 10 YR 6/2
2			AUGER PUSH	6"	2'	60		CLAY W/ <5% FN GR SAND, BLK, HEAVY STAIN AND ODOR. N2
3			AUGER PUSH	2'	4'	60		CLAY (AS ABOVE) LESS STAIN AND ODOR SLIGHTLY W/ DEPTH, NO SAND STRINGERS N2
4								SAND ( AT 4-1/2 FT.) WITH CLAY ~30% DK. BRN, (HC STAIN) FN GRAIN, W/S, SUB ROUNDED-ROUNDED, (WTR SAND) BTM OF SAND AT 5.75 (WET) SY 4/1
5			AUGER PUSH	4'	6'	100		
6								CLAY, BRN-DK BRN, < 5% SAND INC. W/ DEPTH (WET) TD LITH HOLE AT 8' 5YR 5/2
7			AUGER PUSH	6'	8'	70		
8								CLAY, 5YR 5/2, < 5% SAND, FN GR W/S , SUBANGULAR
9			AUGER PUSH	8'	10'	50		
10								FLUID LEVEL IN HOLE RECOVERED TO ~

# LITHOLOGIC LOG (CORE)

Page 1 of 1

## LOCATION MAP:



SITE ID: REXENE LOCATION ID: B-3  
 SITE COORDINATES (ft.):  
 N 289061.96163 E 1551880.27191  
 GROUND ELEVATION (ft. MSL): 3131.71  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM LEXAN TUBE  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/17/94 DATE COMPLETED: 6/17/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: \_\_\_\_\_

1/4 1/4 1/4 1/4 S    T    R   

## LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1			PUSH WITH AUGER	6"	2'	40		GRAVEL, DEBRIS, FILL
2								SANDY SILT V. FN GR ~10% SD DRY, LT BRN 10YR 6/2, ANGULAR, W/G, ROUNDED TO ANGULAR GRAVEL, DEC. W/ DEPTH
3								SAND, FN GRAIN- V. FN GRAIN, ~15% CLAY MOIST, PALE BRN. 5YR 5/2, SUB RND, W/S, RELATIVELY CLEAN.
4								CLAY, NO GRAINS, < 5% SD, MOIST, BLACK, HEAVY STAIN, AND HEAVY ODOR, DENSE, STICKY.
5			PUSH WITH AUGER	2'	4'	40		
6								SILTY SAND, V. VN. GR, 10-20% SILT, WITH MINOR CLAY, WET, PALE BRN 5YR 5/2, SUB RND-SUB ANG., WELL SORTED, UNCONSOLID. H.C. ODOR. (SLIGHT)
7			PUSH WITH AUGER	4'	6'	100		
8								SILTY CLAY, V FN., 10% SILTY, WET PALE BROWN. 5YR 5/2, SAME HYDROC STAINING
9			PUSH WITH AUGER	6'	8'	90		
10								SILTY SAND, V FN, GRN, 20-30% SILT, W/ MINOR CLAY, WET, PALE BRN 5YR 5/2, SUB RND-SUB ANG.
								TD = 8' WATER LEVEL RECOVERED TO ~ 2' BELOW SURF.

# LITHOLOGIC LOG

Page 1 of 2

LOCATION MAP:

SITE ID: REXENE LOCATION ID: B-4(MW-14)

SITE COORDINATES (ft.):

N 2888993.83608 E 1551953.24319

GROUND ELEVATION (ft. MSL): 3730.40

STATE: NEW MEXICO COUNTY: DONA ANA

DRILLING METHOD: HOLLOW STEM AUGER

DRILLING CONTR.: GEO PROJECTS

DATE STARTED: 6/19/94 DATE COMPLETED: 6/19/94

FIELD REP.: DALE LITTLEJOHN

COMMENTS: MUST MOVE SAND IN THIS WELL, CONVERT TO MONITOR WELL #14

1/4 1/4 1/4 1/4 S    T    R   

LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE						LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW-COUNT	NUMBER OR PID READING	
2				6"	2'	20			GRAVEL, FILL, DEBRIS
4				2'	4'	70			SILT, V FN GR, < 10% SAND, 20% GRAVEL DRY, PALE YELLOW BRN (10YR 6/2), ANG, POOR SORT, CONSOLID.
6				4'	6'	80			SILTY CLAY, 20% SILT, <10% SAND, DRY (10TR 5/2) HC STAIN, ANG, CONSOLID.
8				6'	8'	100			SILTY SAND, 40% SILT, <10% SAND, DRY YELLOWISH BRN, (10YR 4/20) ANG TO SUB-RNDED, W/S, MOD. CONSOLID, NO STAIN/ODOR CLAY, EWT, PALE BRN (5YR 5/2) CONSOLID.
10				8'	10'	90			SILTY SAND (AS 3.5-5) NO STAIN OR ODOR
12				10'	12'	50			SILTY SAND, V FN GR, 20% SILT, WET (5YR 5/2) RND, W/S UNCONSOLID.
14									SILTY CLAY (SEE 2')
16									SAND, FN GRN, TO MED GR, WET DK, YELLOWISH BRN, (10YR 4/20) SUB RND, W/S, UNCONSOLID (FLOW SAND)
18									GREAT DIFFICULTY CATCHING SPLIT SPOON SAMPLE
20									SAND, MED GR, WET, DK YELLOWISH BRN, 910YR 4/2, RND-SUB RND, WELL SORTED, UNCONSOLID, 80% QTZ. (FLOW SAND)

(Continued)

Page 2 of 2

LOCATION ID: B-4(MW-14)

[illegible]

# LITHOLOGIC LOG (CORE)








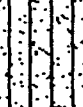
Page 1 of 1

LOCATION MAP: SEE SITE MAP

SITE ID: REXENE LOCATION ID: B-5  
 SITE COORDINATES (ft.):  
 N \_\_\_\_\_ E \_\_\_\_\_  
 GROUND ELEVATION (ft. MSL): \_\_\_\_\_  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM LEXAN TUBE  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/17/94 DATE COMPLETED: 6/17/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: \_\_\_\_\_

1/4 1/4 1/4 1/4 S    T    R   

LOCATION DESCRIPTION: \_\_\_\_\_

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1			AUGER PUSH	6"	2'	30		GRAVEL, FILL AND DEBRIS SANDY SILT, V. FN FRN, < 10% SAND, WITH ~10% CLAY, DRY, LT BRN, (10YR 6/2), ANGULAR, M/5, SAME SMALL GRAVEL
2								
3			AUGER PUSH	2'	4'	40		SILTY CLAY, V. FN GRN, ~ 20-30% SILT, DRY, PALE BRN. (5YR 5/2), SUBRND. W/S, DENSE, STICKY. STAINED (HC) AT TOP OF UNIT, AND AT BASE, REL. CLEAN
4								
5			AUGER PUSH	4'	6'	90		CLAYEY SILT, V FN GRN, ~ 50% CLAY, MOIST, DK BRN (HC STAINED), ROUNDED, W/S, STRONG HC ODOR.
6								
7			AUGER PUSH	6'	8'			SILTY SAND, V FN GRN, ~ 40% SILT, WET, GRAYISH BRN (5YR 3/2), SUB-RND TO ANG, WELL SORTED, UNCONSOL. HC ODOR.
8								
9								
10								



## LITHOLOGIC LOG (CORE)

Page 1 of 1

LOCATION MAP: SEE MAP

SITE ID: REXENE LOCATION ID: B-6  
 SITE COORDINATES (ft.):  
 N 289167.85159 E 1552005.02334  
 GROUND ELEVATION (ft. MSL): 3731.37  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM AUGER  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/18/94 DATE COMPLETED: 6/18/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: ADJACENT TO WP # 29

1/4 1/4 1/4 1/4 S    T    R   

LOCATION DESCRIPTION: \_\_\_\_\_

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1	WELL POINT 29 SCREEN			6"	2'	30		GRAVEL, DEBRIS AND FILL SANDY SILT, V FN GRAIN, ~ 20% SILT, DRY, LT BRN (10YR 6/2) ANGULAR, M/S, CONSOLID. ANGULAR GRAVEL, SALT.
2								SILTY CLAY, V. FN GRAIN, < 10% SILT, MOIST NEAR BOTTOM, GRAYISH BRN, (5YR 3/2) SUB-RND, W/S, HS ODOR NO SIGNIF. STAINING.
3				2'	4'	100		SILTY SAND, V. FN. GR. 20-30% SILT, WET, PALE BRN (3YR 5/2) SUB-ANG, W/S, (HC ODOR) UNCONSOLID, NO SIGNIF. STAIN.
4								
5				4'	6'	80		SILTY CLAY V FN. GR. ~ 20% SILT, WET PALE BRN (5YR 5/2) SUB-RND, W/S. SILTY SAND (AS ABOVE 3-5')
6								SILTY CLAY (AS 5-5.5')
7				6'	8'	100		SAND, FN GRAIN, < 10% SILT, WET, PALE BRN (5YR 5/2) RND, W/S, HC ODOR, NO STAIN.
8								TD = 8'
9								* LEL TO 1% DURING DRILLING
10								FLUID LEVEL AFTER DRIL ~ 1.0' B.S.

## LITHOLOGIC LOG (CORE)

Page 1 of 1

LOCATION MAP: SEE MAP

SITE ID: REXENE LOCATION ID: B-7  
 SITE COORDINATES (ft.):  
 N \_\_\_\_\_ E \_\_\_\_\_  
 GROUND ELEVATION (ft. MSL): \_\_\_\_\_  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM AUGER  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/18/94 DATE COMPLETED: 6/18/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: \_\_\_\_\_

\_\_\_\_ 1/4 \_\_\_\_ 1/4 \_\_\_\_ 1/4 \_\_\_\_ 1/4 S \_\_\_\_ T \_\_\_\_ R \_\_\_\_

LOCATION DESCRIPTION: SAGE BRUSH AND DEBRIS. APPARENT SALT AT SURF.

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1			PUSH WITH AUGER	6"	2'	15		GRAVEL, FILL MATERIAL
2			PUSH WITH AUGER					SANDY SILT, FN GRAIN, 20% SAND, DRY, YELLOWISH BRN (10YR 5/4), ANGULAR, MED SORT (M/S), MOD. CONSOLID. SAND INC W/DEPTH. HC STAIN AT BASE OF UNIT.
3			PUSH WITH AUGER	2'	4'	70		SILTY CLAY, V FN GRN, <10% SILT, DRY, GRAYISH BRN (5YR 3/2), RND, W/S, MOD. CONSOLID. MOTTLED HC STAINING
4			PUSH WITH AUGER					SILTY SAND, FN GRN, 10% SILT, WET, YELLOWISH BRN (10YR 4/2), RND-TO WELL ROUNDN, W/S, UNCONSOLID., THIN ZONE, WATER SAND.
5			PUSH WITH AUGER	4'	6'	90		SILTY CLAY, V. FN. GRN, <10% SILT, WET, GRAYISH BRN (5YR 3/2), RND-SUB RND, W/S, SLIGHT HC ODOR, NO SIGNIF STAIN.
6			PUSH WITH AUGER					COULD NOT CATCH WET SAMPLE. APPEARED SANDIER THAN ABOVE UNIT, (CUTTINGS) WET.
7			PUSH WITH AUGER	6'	8'	10		
8								FL ≈ 1.0 FT B.S. TD = 8'
9								
10								

# LITHOLOGIC LOG (CORE)

Page 1 of 1

LOCATION MAP: SEE MAP

SITE ID: REXENE LOCATION ID: B-8  
 SITE COORDINATES (ft.):  
 N \_\_\_\_\_ E \_\_\_\_\_  
 GROUND ELEVATION (ft. MSL): \_\_\_\_\_  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM AUGER  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/18/94 DATE COMPLETED: 6/18/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: NEAR DUMPSITE

1/4 1/4 1/4 1/4 S T R

LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1				6"	2'	50		GRAVEL, DEBRIS, SANDY FILL, BROWN, NO STAIN OR ODOR.
2								SANDY SILT, FINE GRAIN SD, ~ 10% SAND, DRY, YELLOW BRN, (10YR 5/4) ANGULAR, M/S, CONSOLID. W/ ANGULAR, PEBBLE GRAVEL
3				2'	4'	25		SILTY CLAY, V FN GRAIN, 20-30% SILT, MINOR SAND, DRY, DUSKY YELLOWISH BRN (10YR 2/2) (HC STAINED), ANGULAR GRNS, W/S, CONSOLID, STRON HC ODOR AND STAIN.
4								SILT, V FN GRAN, (W/ INTERBEDD- 6" SILTY CLAY BEDS) WET, BLACK (HC STAIN) ANG-SUB RND, W/S, GRAINS, MOD. CONSOLID, STRONG HC ODOR AND STAIN.
5				4'	6'	80		SILTY SAND, V FN GR, 10-20% SILT. MINOR CLAY, WET, GRAYISH BRN, (5YR 3/2) RND-SUB RND, W/S, GRN, UNCONSOLID. HC STAIN AND ODOR IN UPPER UNIT, NO STAIN IN LOWER FOOT.
6								TD = 8'
7				6'	8'	90		
8								
9								
10								

# LITHOLOGIC LOG (CORE)

Page 1 of 2

LOCATION MAP: SEE MAP

SITE ID: REXENE LOCATION ID: B-9  
 SITE COORDINATES (ft.):  
 N \_\_\_\_\_ E \_\_\_\_\_  
 GROUND ELEVATION (ft. MSL): \_\_\_\_\_  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM AUGER  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/18/94 DATE COMPLETED: 6/18/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: HEAVY BRUSH, NO GRAVEL, LESS DEBRIS

\_\_\_ 1/4 \_\_\_ 1/4 \_\_\_ 1/4 \_\_\_ 1/4 S \_\_\_ T \_\_\_ R \_\_\_


LOCATION DESCRIPTION: \_\_\_\_\_

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1				6"	2'	30		SILTY FILL, ORGANIC MATERIAL AND DEBRIS  SANDY SILT, V. FN GR, 20% SAND, CLAY DK YELLOWISH BRN (10YR 5/4) ANGULAR, MED/SORT, CONSOLID.. NO STAIN, OR ODOR.
2								
3				2'	4'	30		SILTY SAND, FN GRAIN, 30% SILT, DRY, GRAYISH BRN (5YR 5/2), RND-SUB RND, W/S, MOD. CONSOLID, NO ODOR OR STAIN. WET AT BTM. OF UNIT.
4								
5				4'	6'	100		SILTY CLAY, V,V, FN GR, 30-40% SILT, WET, GRAY (N4)(HC STAIN), WELL SORT, MOD. CONSOLID., LENSES OF LIGHT GRAY CLAY.
6								
7				6'	8'	90		SILTY SAND, V. FN GR, 20% SILT, WET GRAYISH BRN (5YR 5/2) RND-SUB RND, W/S, MOD CONSOLID, NOT STAIN OR ODOR.  SILTY CLAY, V FN GR, 10% SILT WET, GRAYISH BRN (5YR 5/2), W/S. NO STAIN OR ODOR. SILTY INCREASE SLIGHTY W/ DEPTH. TO TD OF 12'.
8								
9				8'	10'	90		
10								

(Continued)

Page 2 of 2

LOCATION ID: B-9

DEPTH	WELL CONST.	LITH.	SAMPLE				LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)	
			USCS	FROM	TO	% REC		NUMBER OR PID READING
11				10	12	90		TD = 12' (SAME LITH)
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

## LITHOLOGIC LOG (CORE)

Page 1 of 2

LOCATION MAP:

SITE ID: REXENE LOCATION ID: B-10

SITE COORDINATES (ft.):

N 288429.59539 E 1552201.23136GROUND ELEVATION (ft. MSL): 3733.52STATE: NEW MEXICO COUNTY: DONA ANADRILLING METHOD: HOLLOW STEM AUGERDRILLING CONTR.: GEO PROJECTSDATE STARTED: 6/20/94 DATE COMPLETED: 6/20/94FIELD REP.: DALE LITTLEJOHNCOMMENTS: BORING IN SAND AREA, USED TRACK HOE TO  
MOBILIZE RIG (NEAR WP 30)1/4 1/4 1/4 1/4 S    T    R   LOCATION DESCRIPTION: SAND DUNED W/ SOME SPARSE VEG.

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
1			AUGER PUSH	0	2	40		SAND, MED GR., <10% CLAY, DRY, PALE YELLOWISH BRN. (10YR 6/2), ANGULAR-SUB ANG, MED SORT, UNCONSOLID. (DUNES)
2								
3				2	4	40		SAND, MD-FN GRN, ~ 20% SILT, DRY, MOD. YELLOWISH BRN (10YR 5/4), SUB ANG-SUB RND, MOD. SORTED, UNCONSOLID.
4								
5				4	6	30		SILTY CLAY, V FN GRN. 40% SILT, MOIST, PALE YELLOWISH BR. (10YR 6/2), CONSOLID. NO HC STAIN OR ODOR.
6								
7				6	8	30		SILTY CLAY, V. FN GR, <10%, SILT, DRY, GRAYISH BRN (5YR 7/2), CONSOLID. NO HC ODOR, STAIN AT BASE.
8								
9				8	10	70		SILTY SAND, V. FN GR, ~ 20% WILT, WET, BROWNISH GRAY (5YR 4/1), ANG-SUB ANG, W/S, MOD CONSOLID, STRONG HC ODOR, POSS. HC STAIN.
10								
								SANDY SILT, V FN GR, <10% SAD, WET PROD PRESENT CONSOLIDATED (5YR 3/2)

**LITHOLOGIC LOG (CORE)**  
(Continued)

Page 2 of 2  
LOCATION ID: B-10

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	NUMBER OR PID READING	
11				10	12	60		
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

## LITHOLOGIC LOG (CORE)

Page 1 of 1

LOCATION MAP: SEE MAP

SITE ID: REXENE LOCATION ID: B-11

SITE COORDINATES (ft.):

N                      E                     GROUND ELEVATION (ft. MSL):                     STATE: NEW MEXICO COUNTY: DONA ANADRILLING METHOD: HOLLOW STEM AUGERDRILLING CONTR.: GEO PROJECTSDATE STARTED: 6/20/94 DATE COMPLETED: 6/20/94FIELD REP.: DALE LITTLEJOHNCOMMENTS:                                     1/4 1/4 1/4 1/4 S      T      R     LOCATION DESCRIPTION: SAND DUNES

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC		
				0	2	30		NO SAMPLE, SPUD IN SAND (AS BELOW)
2				2	4	80		SAND, MED GRAIN, <5% SILT, DRY, PALE BROWN (5YR 5/2) RNDG - SUB RND, WELL SORTED, UNCONSOLIDATED, NO ODOR OR STAIN.
4				4	6	40		SILT. V. FN GRN, <10% CLAY, MOIST, BLACK, HC STAINED, W/S, MOD. CONSOLIDATION, STR HC ODOR.
6				6	8	30		
8				8	10	90		SILTY SAND, F FN GRN, 30% SILT, MINOR CLAY, WET, HEAVY HC STAIN AND ODOR (BLACK), SUB RND, W/S, MOD CONSOLIDATION.
10				10	12	100		SAND, VN GR, <10% SILT, WET, PROD. SATURATED, DK GRAY - BLK (HC STAIN) RND - SUB RND, W/S, MOD. CONSOLID TO UNCONSOLID. (STRONG HC ODOR/FREE PRODUCT.
12								SILTY CLAY, 10% SILT, DK BRN, MOTTLED WITH HC STAINING (BLK). MOD CONSOLID. STRONG HC ODOR.
14								TD = 12'
16								
18								
20								



## LITHOLOGIC LOG

Page 1 of 2

LOCATION MAP:

SITE ID: REXENE LOCATION ID: B-12(MW-16)

SITE COORDINATES (ft.):

N 288172.59247 E 1552284.09469

GROUND ELEVATION (ft. MSL): 3737.07

STATE: NEW MEXICO COUNTY: DONA ANA

DRILLING METHOD: HOLLOW STEM AUGER

DRILLING CONTR.: GEO PROJECTS

DATE STARTED: 6/21/94 DATE COMPLETED: 6/21/94

FIELD REP.: DALE LITTLEJOHN

COMMENTS: CONNECTED TO MONITOR WELL #16

LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE					NUMBER OR PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW-COUNT		
2									SAND, MED GR., DRY, PALE YELLOWISH BRN (10YR 6/2), SUB ANGULAR, MOD. SORTED, UNCONSOLID., NO STAINING OR ODOR.
4									
6									SAND, FN GR, MOD. YELLOW BRN, (10YR 6/2), ANGULAR, WELL SORTED, UNCONSOLID. NO ODOR /OR STAIN.
8									CLAY, (V. FN SR. SILT) <10% SILT, DK. YELLOW BRN (10YR 4/2) CONSOLID. HC STAIN AT BASE OF UNIT ONLY. HC ODOR AT BASE OF UNIT.
10									
12									NOTE: 8' TO 16' LOGGED FROM HOLE, OTHER SAMP. DESC DETERM. FROM MON. WELL SILT, V FN GR, 30% CLAY, MOIST, GRAY, HC STAIN AND ODOR, W/S CONSOLID.OD. SORTED.
14									SILTY SAND, FN GR, 50% SILT, WET, GRAY, HC STAIN AND ODOR, MOD. CONSOLID, SUB RND, MED SORT.
16									THIS INTERVAL WAS NOT STAINED BUT * SATURATED WITH PROD. SOME INTERVAL IN MON. WELL (10's) DID NOT!
18									SILTY SAND, V FN GR., WET, 30% SILT, PALE BRN, (5YR 5/2), ANG-SUB ANG, WELL SORTED, CONSOLID. NO HC STAIN OR ODOR.
20									SAND FN GRAIN, <55 SILT, WET, GRAYISH BROWN (5YR 3/2), SUB RND, W/S MOD. CONSOLID NO STAIN OR HC ODOR.

(Continued)

Page 2 of 2

LOCATION ID: B-12

[illegible]

# LITHOLOGIC LOG

Page 1 of 2

LOCATION MAP:

SITE ID: REXENE LOCATION ID: B-13A(MW15)  
 SITE COORDINATES (ft.):  
 N 288099.5991 E 1552403.44909  
 GROUND ELEVATION (ft. MSL): 3738.62  
 STATE: NEW MEXICO COUNTY: DONA ANA  
 DRILLING METHOD: HOLLOW STEM AUGER  
 DRILLING CONTR.: GEO PROJECTS  
 DATE STARTED: 6/21/94 DATE COMPLETED: 6/21/94  
 FIELD REP.: DALE LITTLEJOHN  
 COMMENTS: INSTALLED ON HIGH SANDY AREA AT  
SOUTH END OF PROPERTY, B-13 (ORIGINAL LOCATION)  
 IMPACTED AT BEDROCK AT = 10'

LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE						LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW-COUNT	NUMBER OR PID READING	
2									SAND, FN GRN, <10% SILT, DRY, PALE YELLOWISH BRN (10YR 6/2), SUB ANGULAR, W/S, UNCOLID., NO STAINING OR ODOR.
4									SAND FROM RIVER DREDGING, FORMED DUNES.
6									
8									
10									SILT V. FN GRAIN, ≈ 20-30% CLAY, WET, BLACK (HC STAIN).W/S, MOD. CONSOLID. V. STRONG HC ODOR.
12									SAND FN GRAIN, ≈ 10% SILT, WET, DK GRAY BLACK (HC STAIN).ANGULAR, MOD. SORTED, MOD. CONSOLID. V. STRONG HC ODOR. (FROM PROD)
14									
16									
18									SAND FN GRAIN, ≈ 10% SILT, WET, GRAYISH BRN (5YR 3/2), ANGULAR, MED SORTED, UNCONSOLIDATED STRONG HC ODOR, (SATURATED W/ PRODUCT AND WTR)
20									* NO SPOON SAMPLES BELOW 20' (FLOWING SAND)



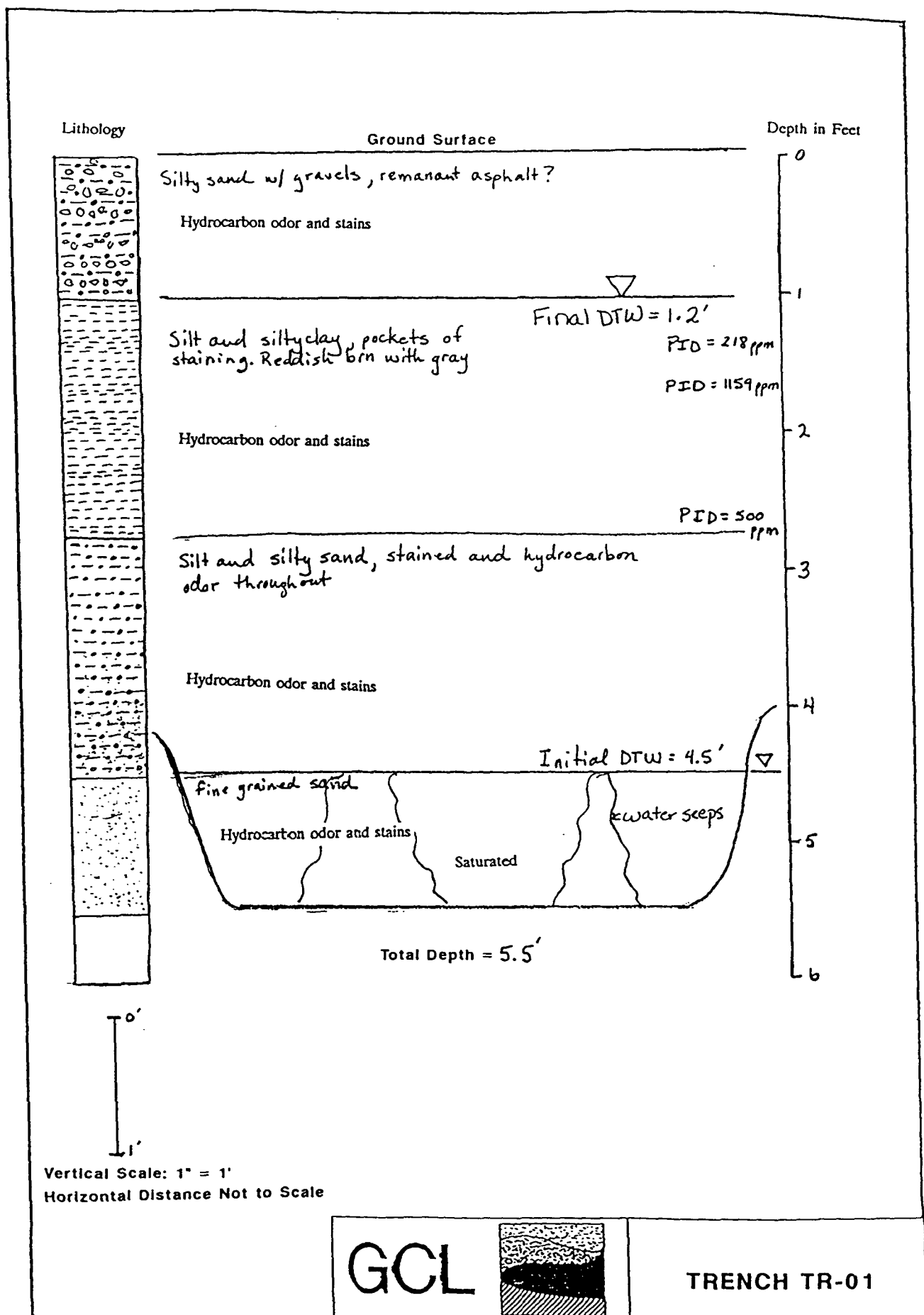
## Page 1 of 2

SITE ID: REXENE LOCATION ID: B-14(MW-17)  
SITE COORDINATES (ft.):  
N 288730.82473 E 1552304.16481  
GROUND ELEVATION (ft. MSL): 3732.04  
STATE: NEW MEXICO COUNTY: DONA ANA  
DRILLING METHOD: HOLLOW STEM AUGER  
DRILLING CONTR.: GEO PROJECTS  
DATE STARTED: 6/20/94 DATE COMPLETED: \_\_\_\_\_  
FIELD REP.: DALE LITTLEJOHN  
COMMENTS: \_\_\_\_\_

LOCATION DESCRIPTION: SITE LOCATED ON SAND AND GRAVEL HILL  $\approx$  1FT. ABOVE SURROUNDING AREA

[illegible]

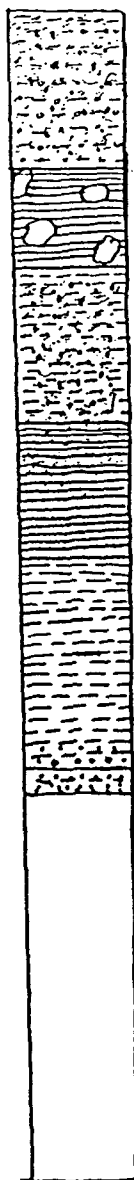




Lithology

Ground Surface

Depth in Feet



Silty sand with pea gravel, light brown

Gravel, cobbles with black clay-like substance. Remanent asphalt?

PID=971ppm

Fine grained sand with silt and minor clay. Brownish gray, visible mica

PID=459ppm

Clay with minor sand. Dry, low plasticity. Reddish brown towards bottom

Final DTW = 2.3'  $\nabla$

Silty clay. Black-gray-brown, staining Moderate to high plasticity

PID=719ppm

Initial DTW = 3.9'  $\nabla$

Silty sand w/ clay Saturated, Hydrocarbon odor

Total Depth = 4.0'



Vertical Scale: 1" = 1'

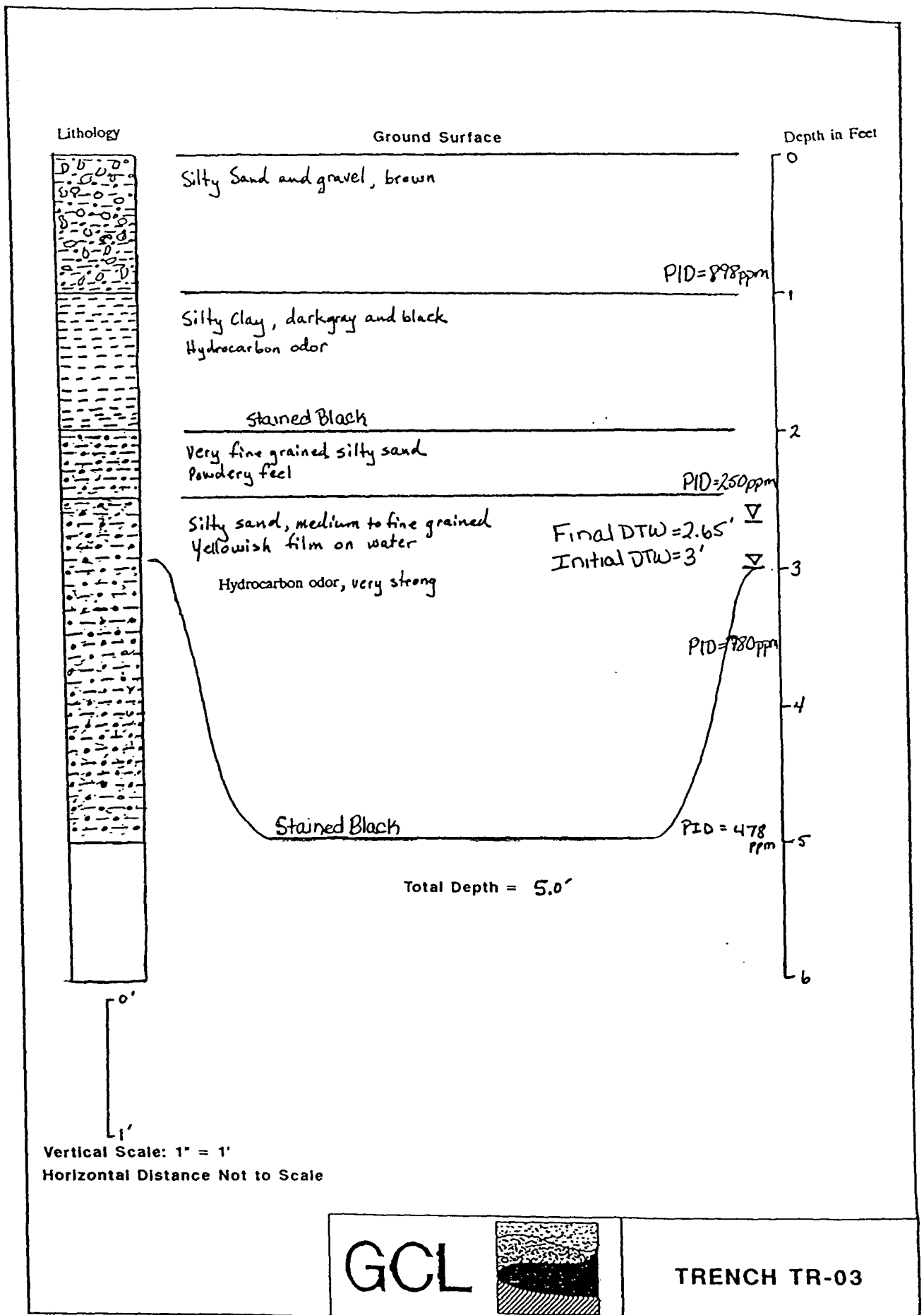
Horizontal Distance Not to Scale

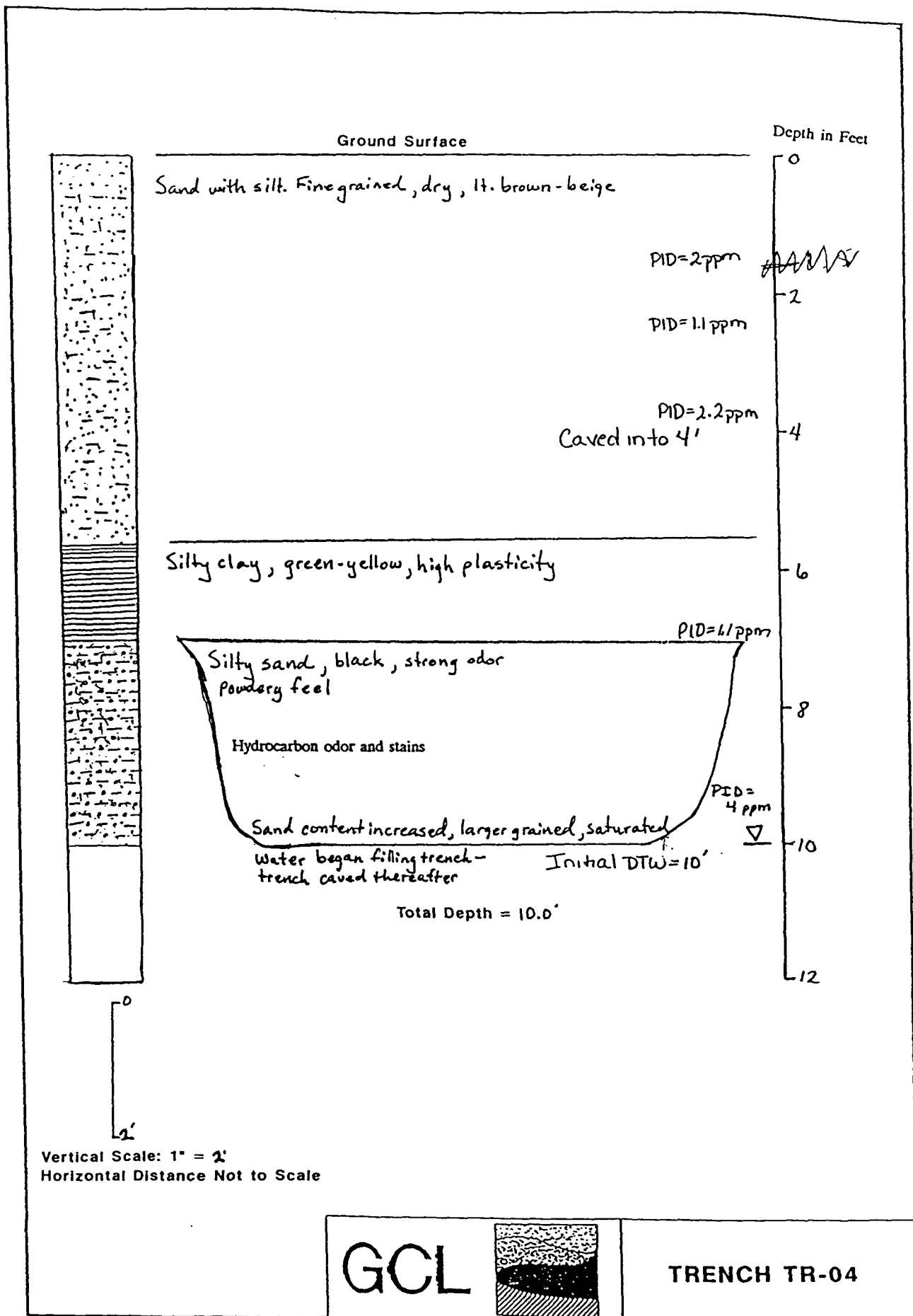
GCL

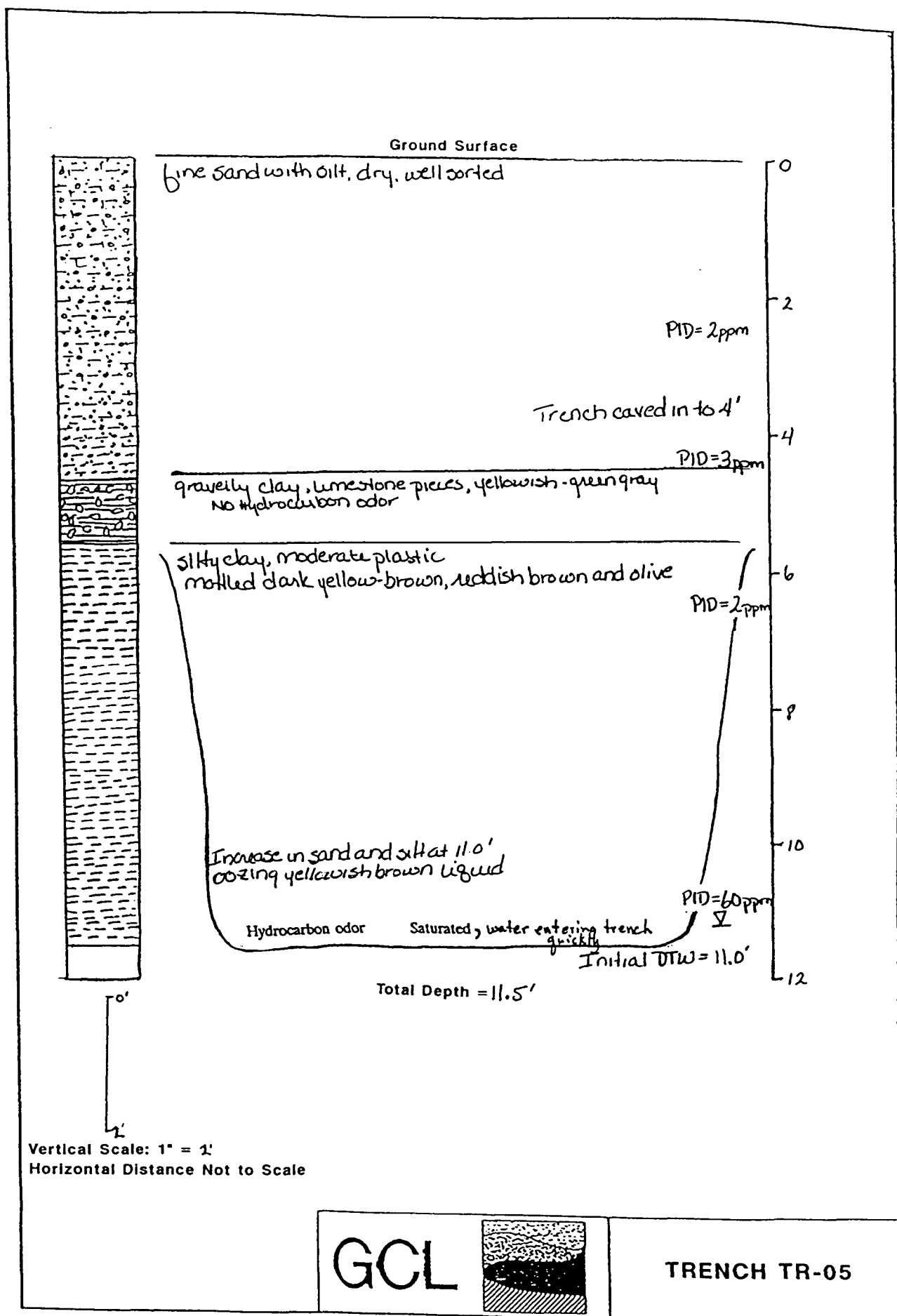


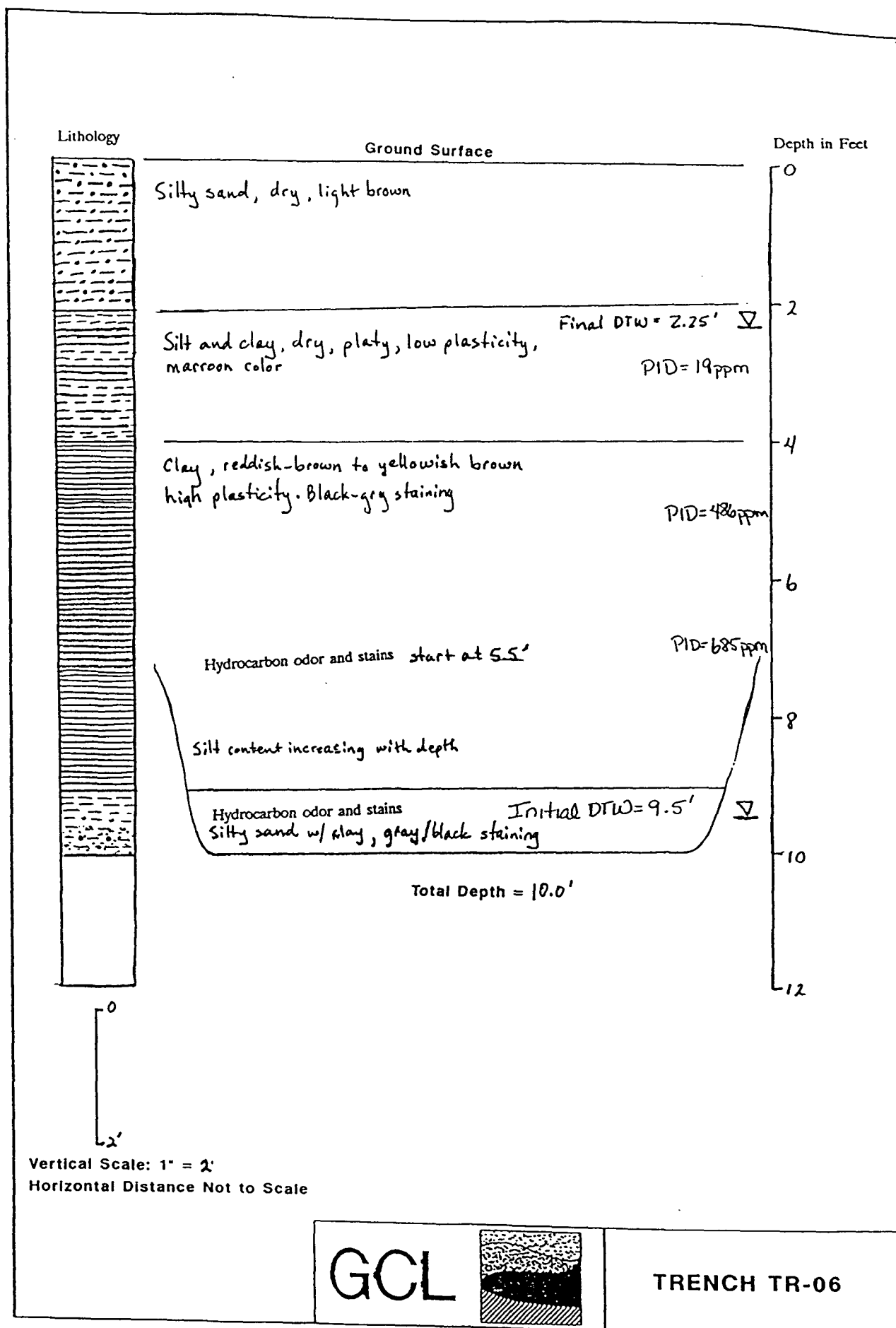
TRENCH TR-02







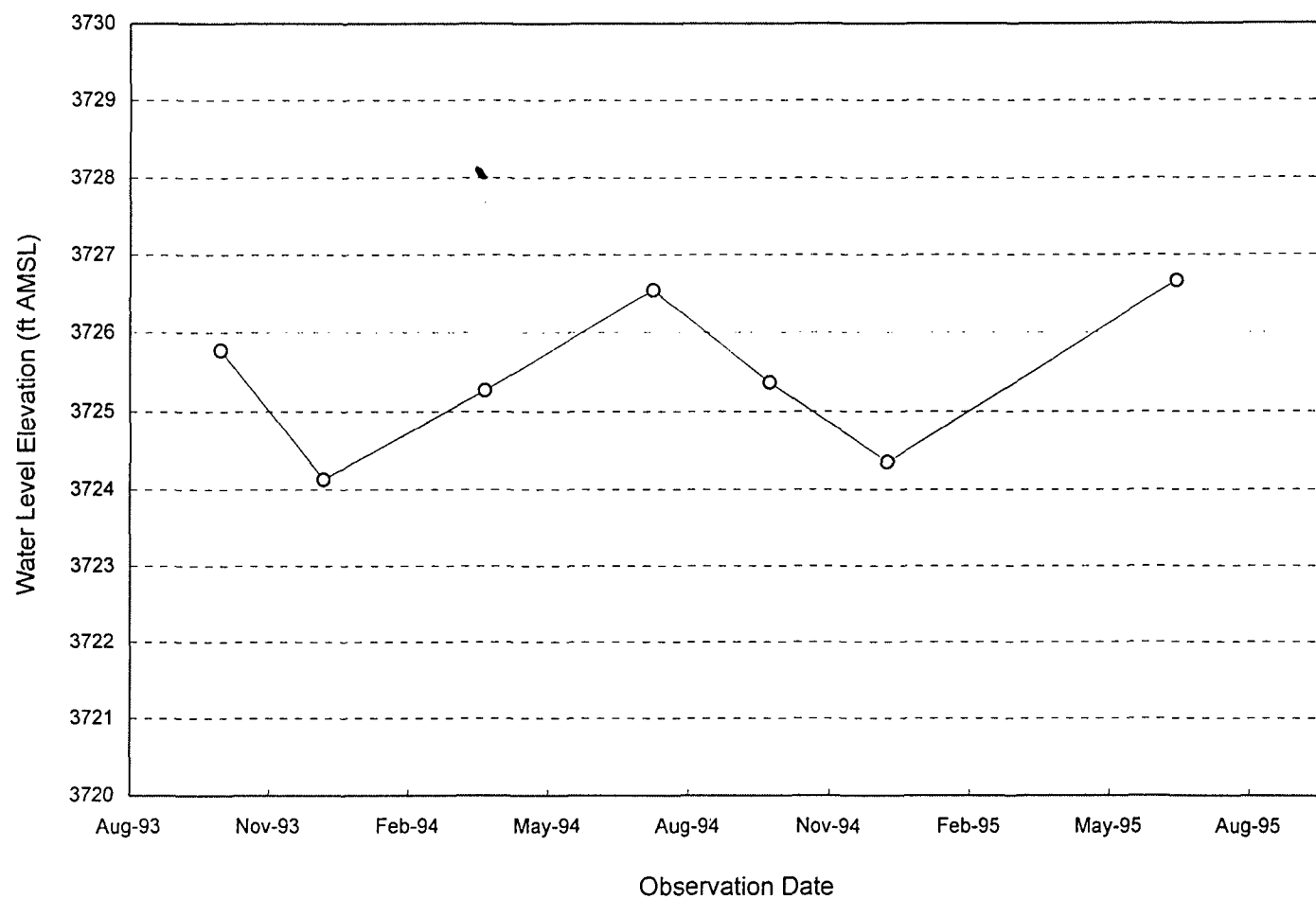


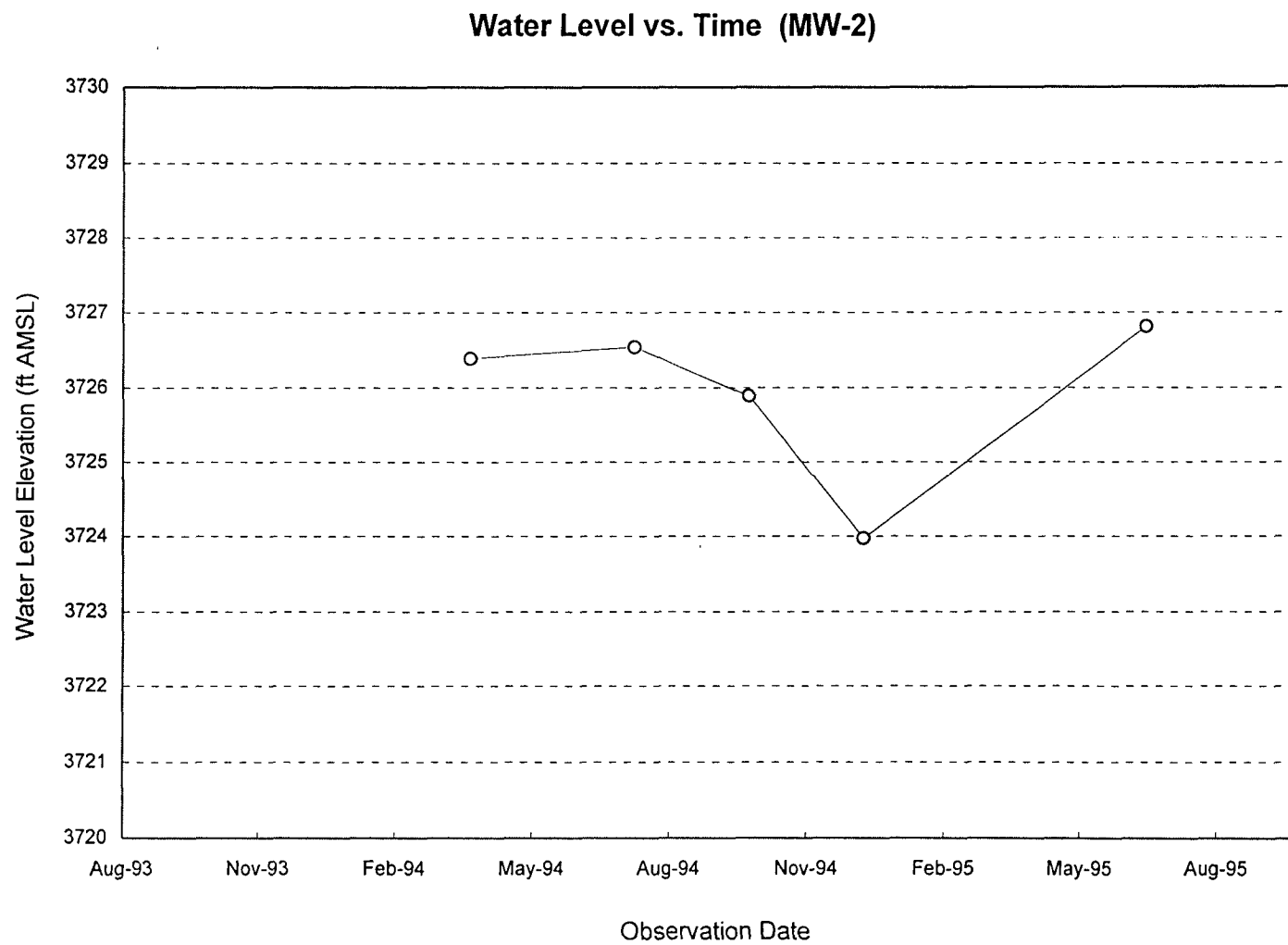


**Appendix D**

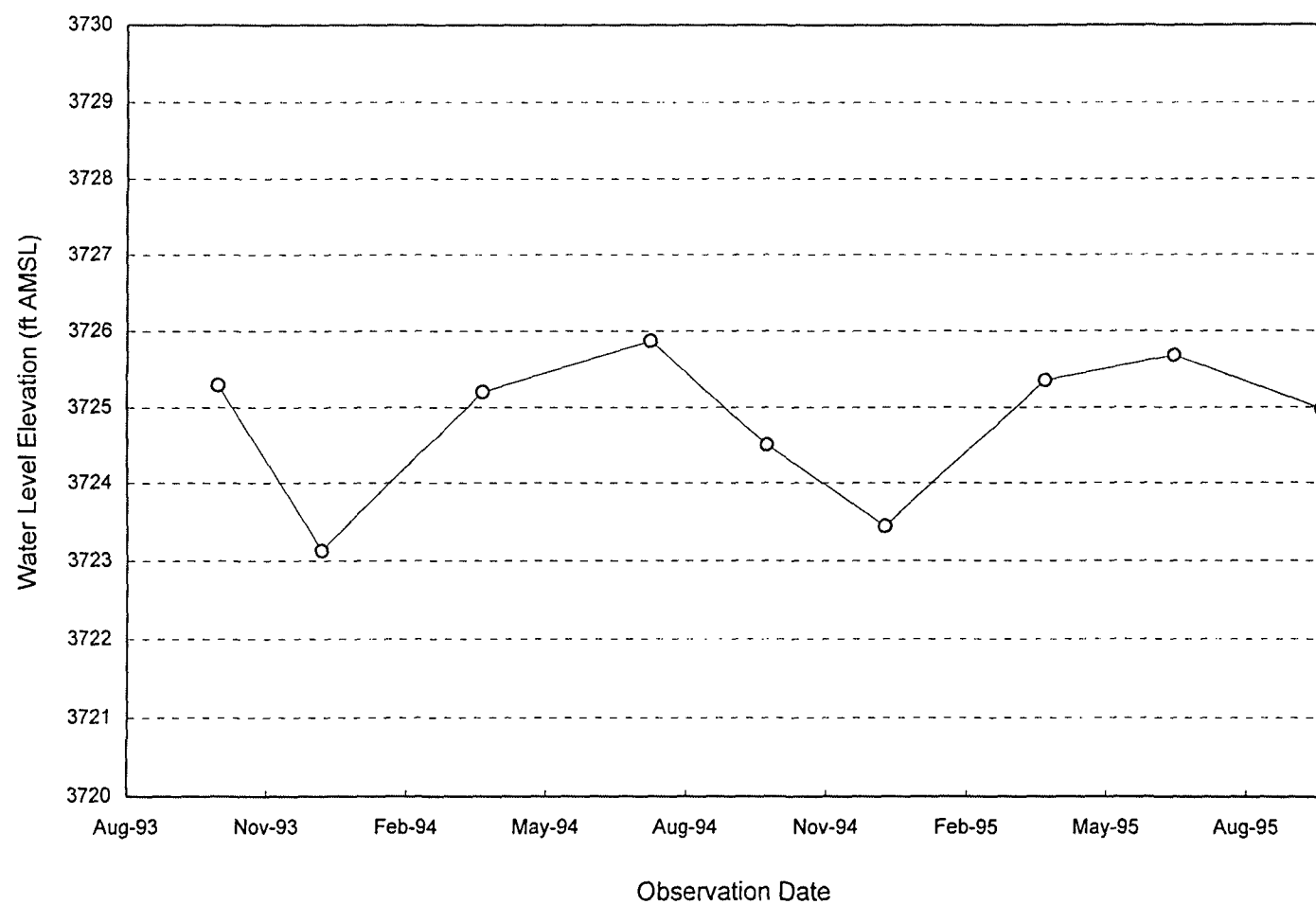
Water Levels vs. Time for Monitoring Wells MW-1 through MW-17

Water Level vs. Time (MW-1)



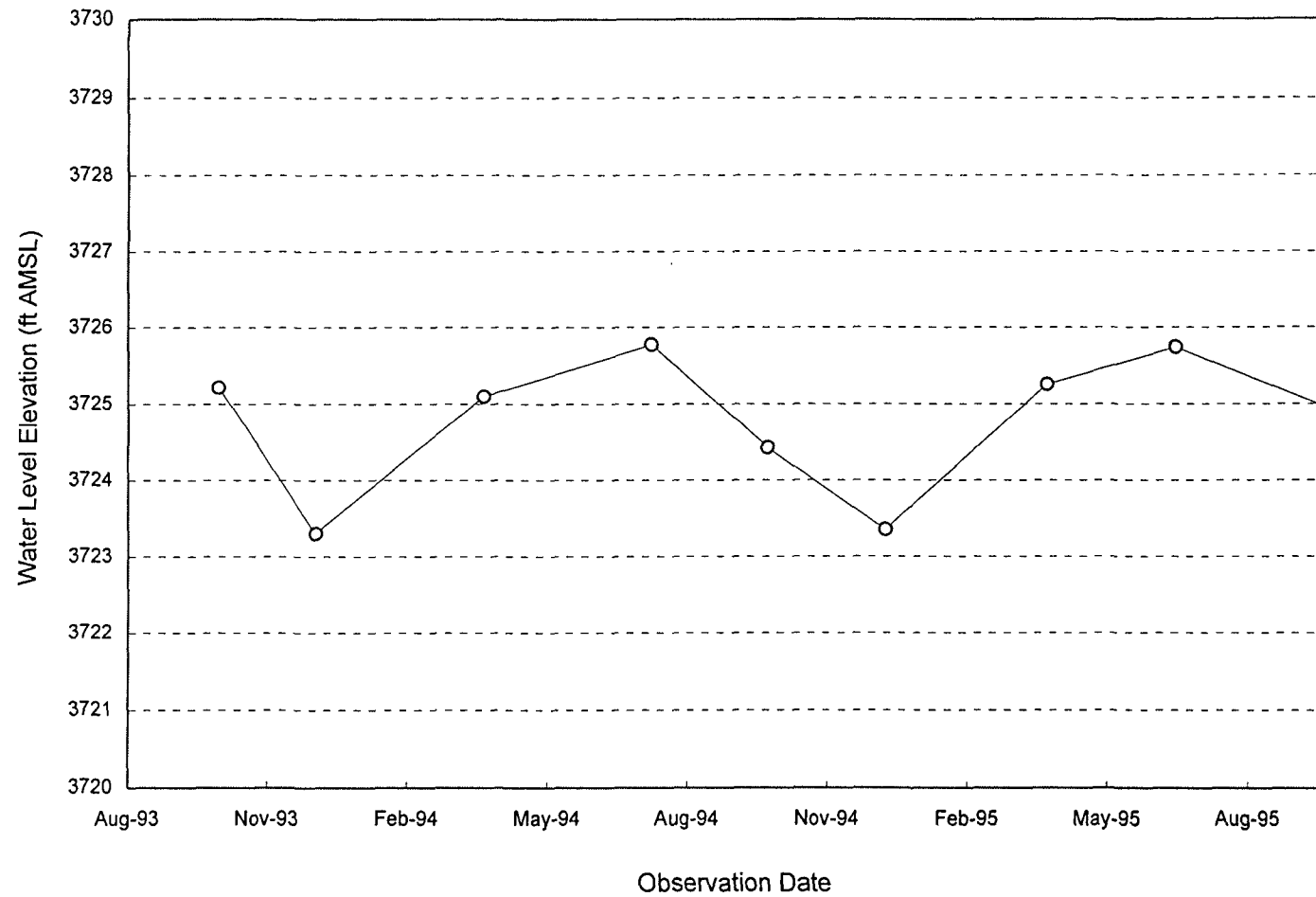


Water Level vs. Time (MW-3S)

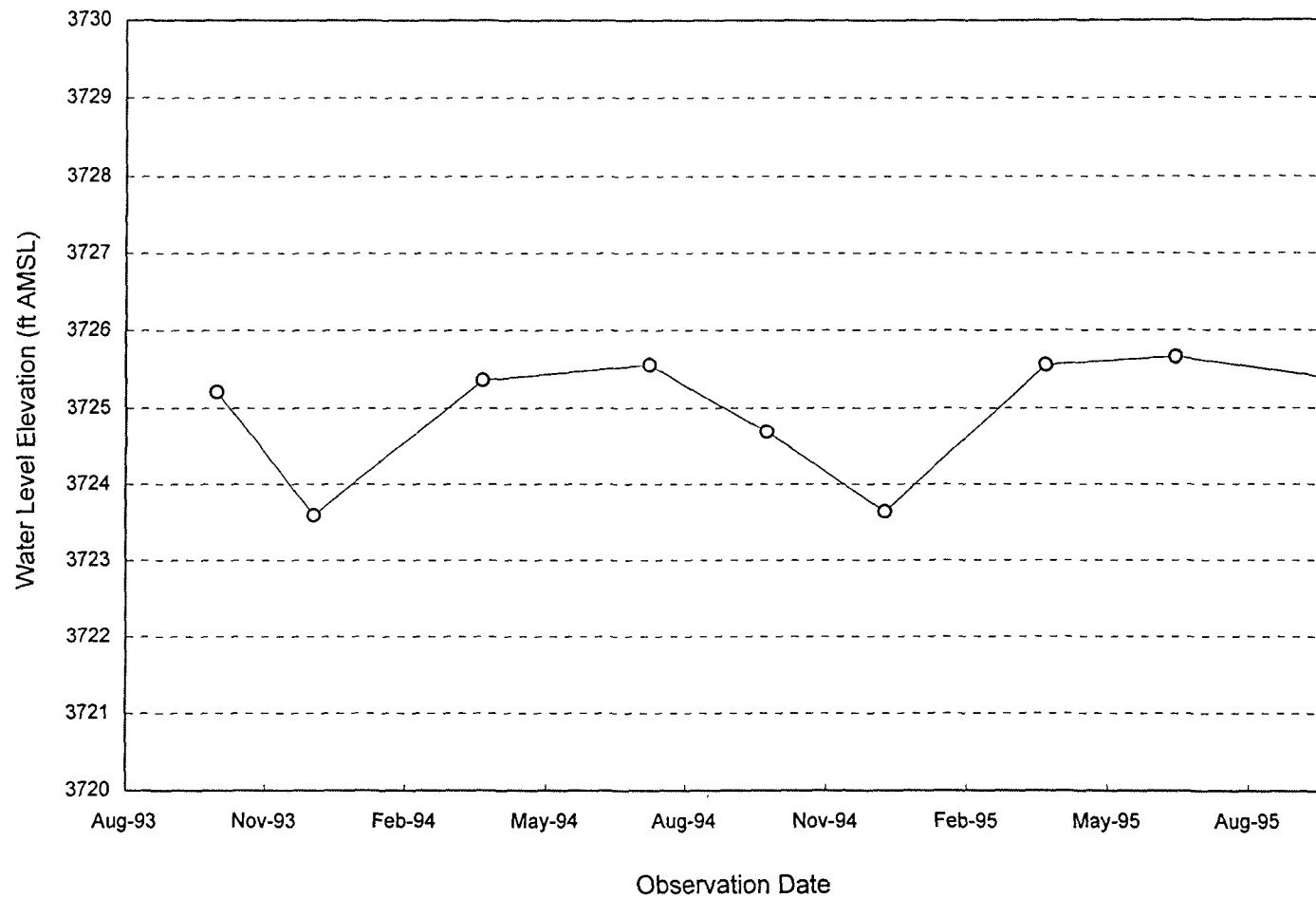




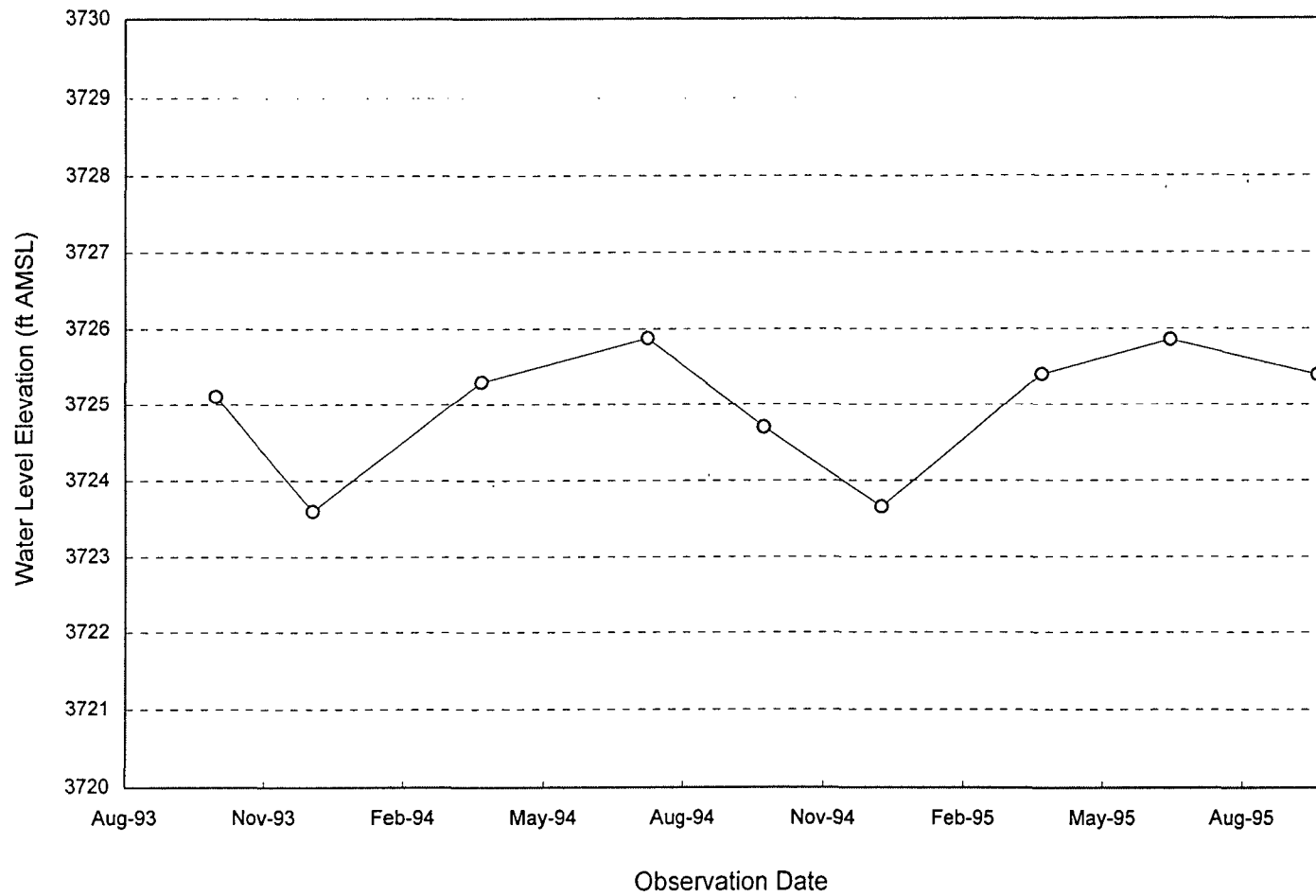
Water Level vs. Time (MW-3D)



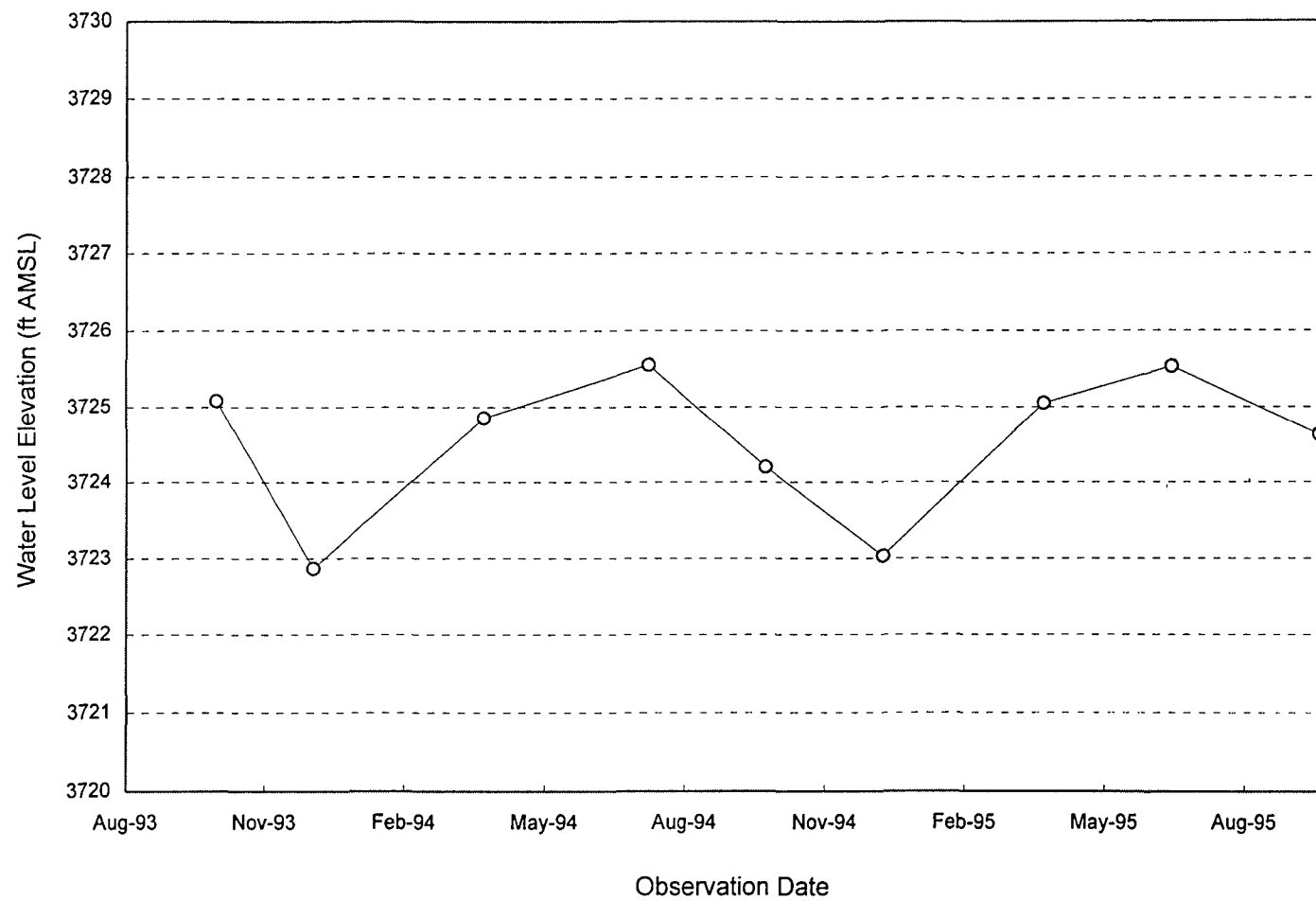
Water Level vs. Time (MW-4)



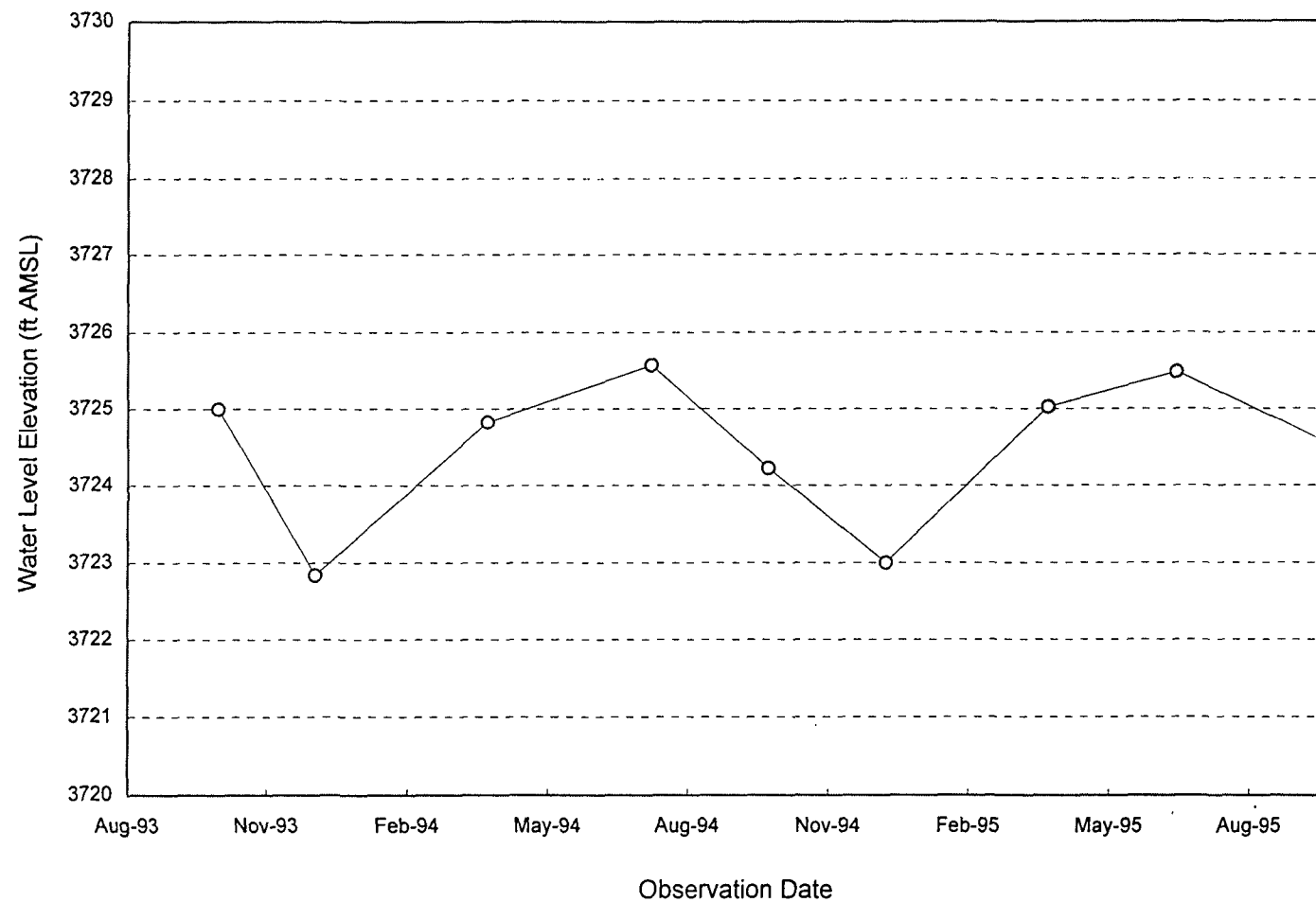
Water Level vs. Time (MW-5)



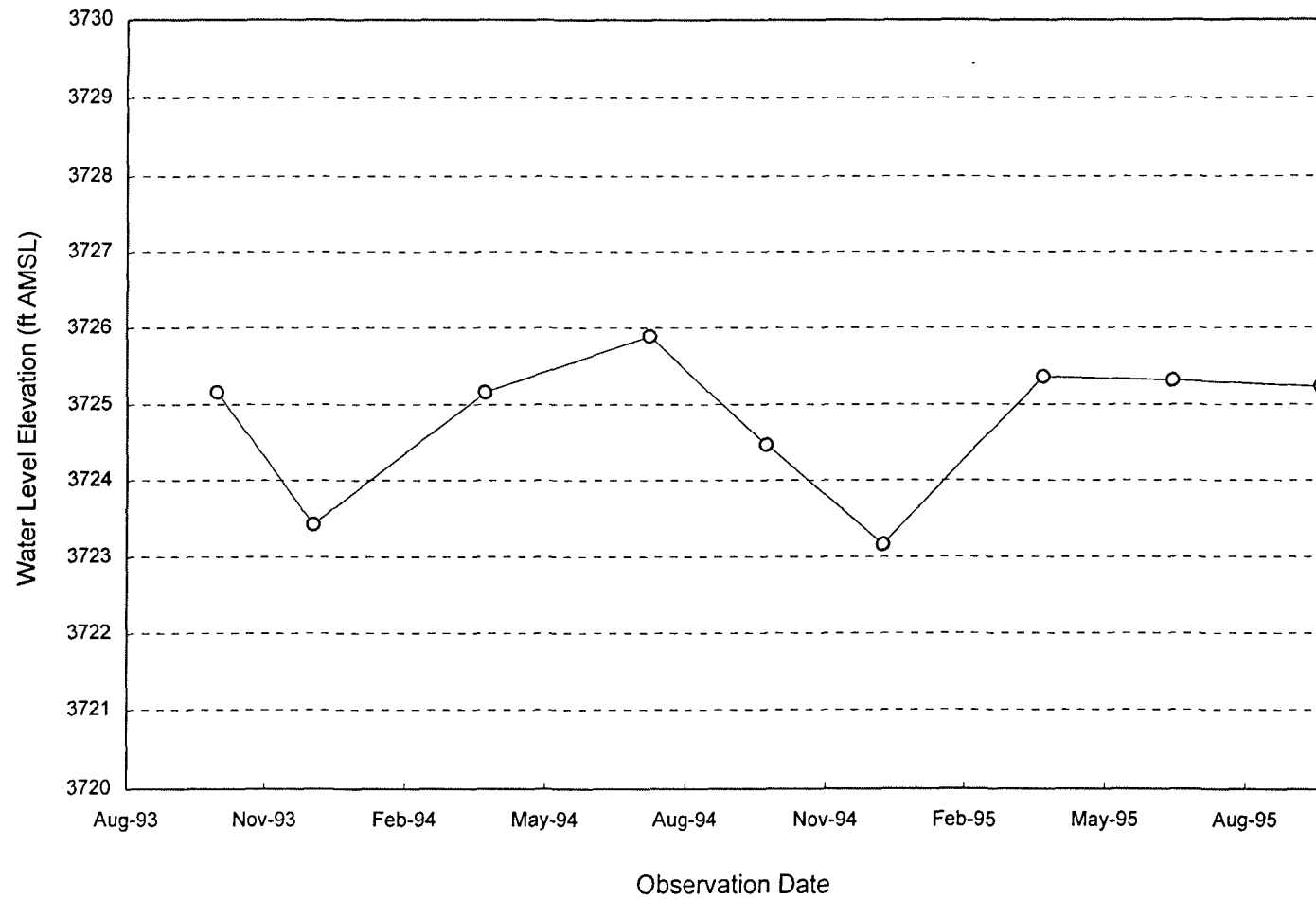
Water Level vs. Time (MW-6S)



Water Level vs. Time (MW-6D)



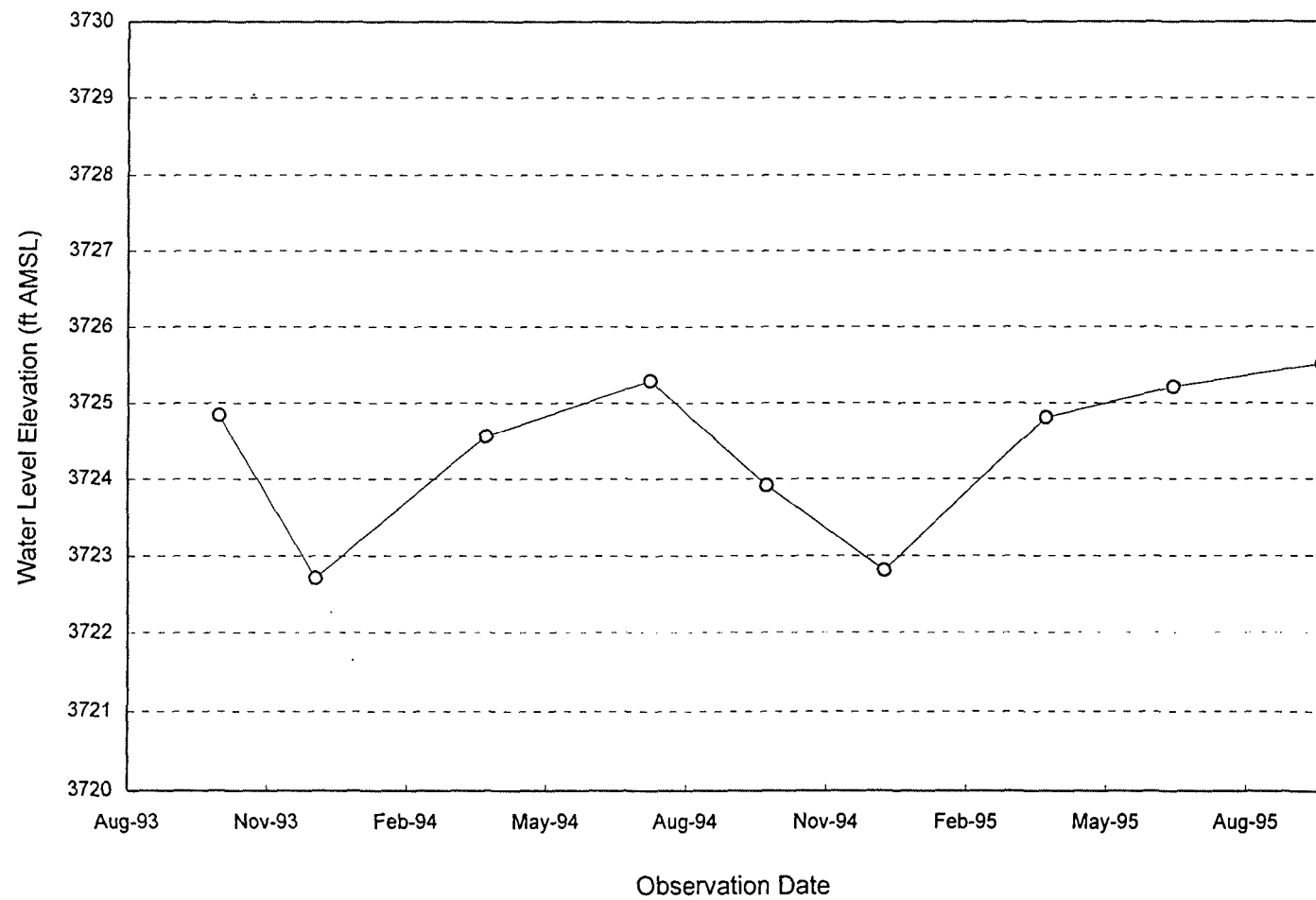
Water Level vs. Time (MW-7)



Water Level vs. Time (MW-8)

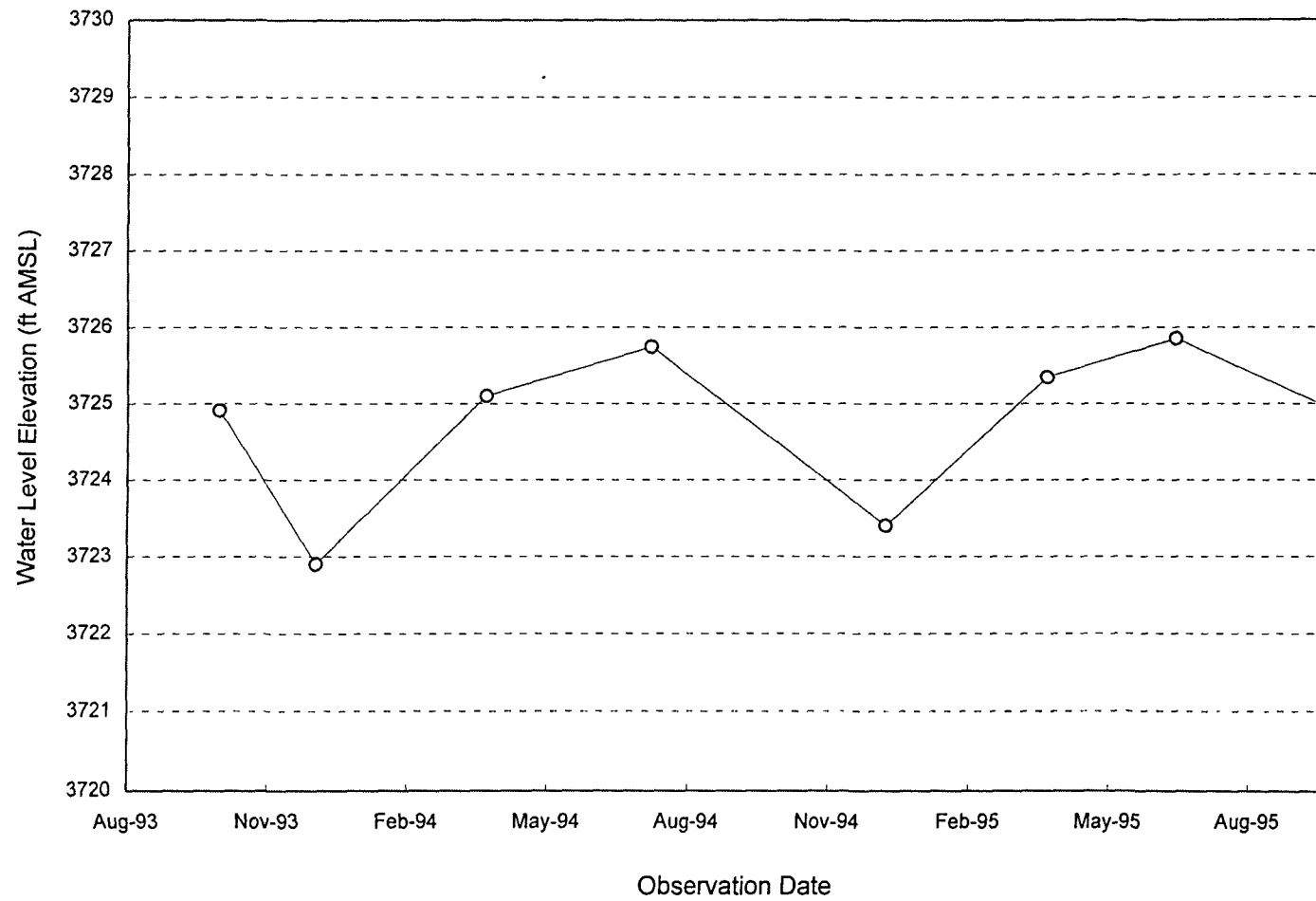


Water Level vs. Time (MW-9S)

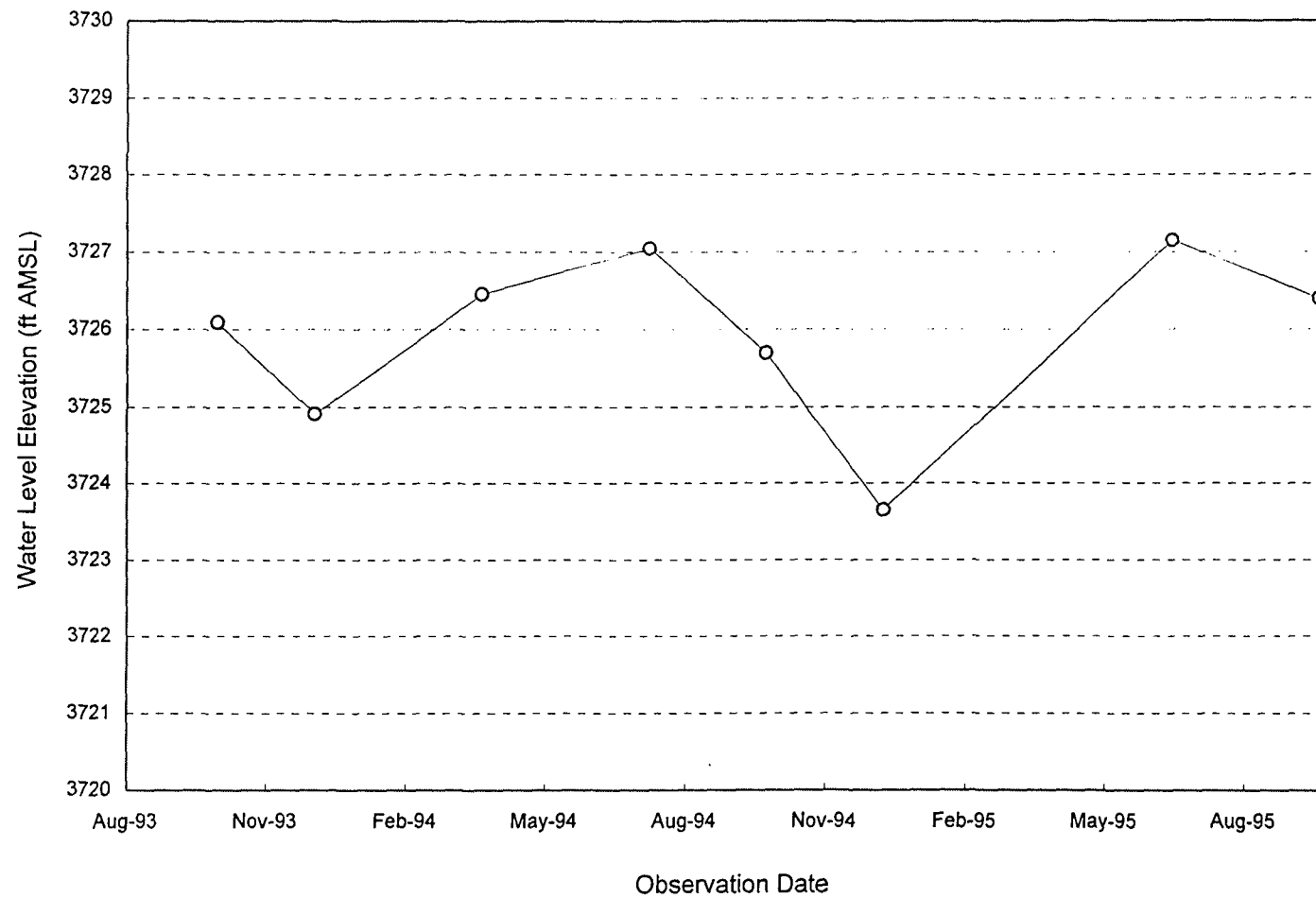




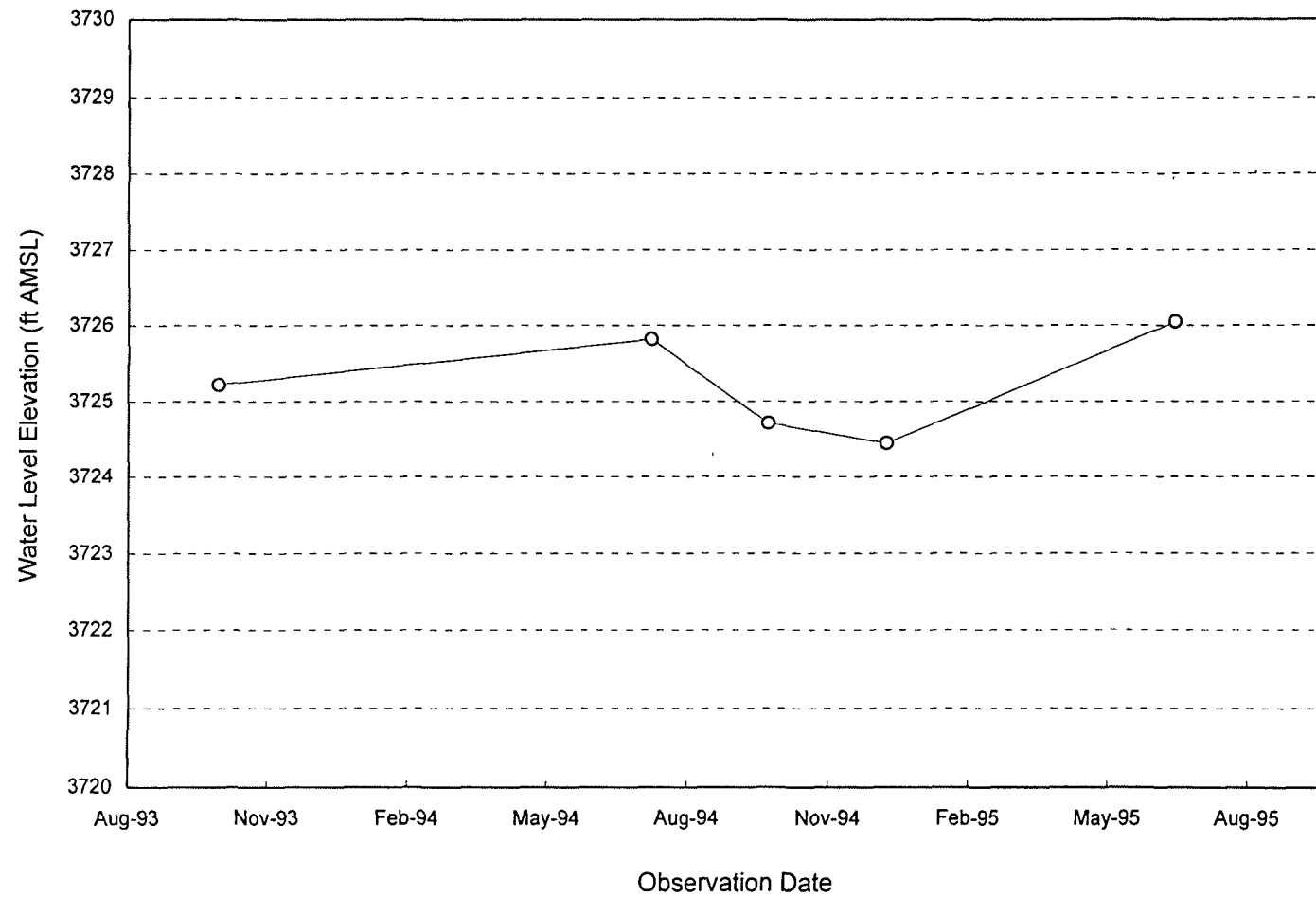
Water Level vs. Time (MW-11)



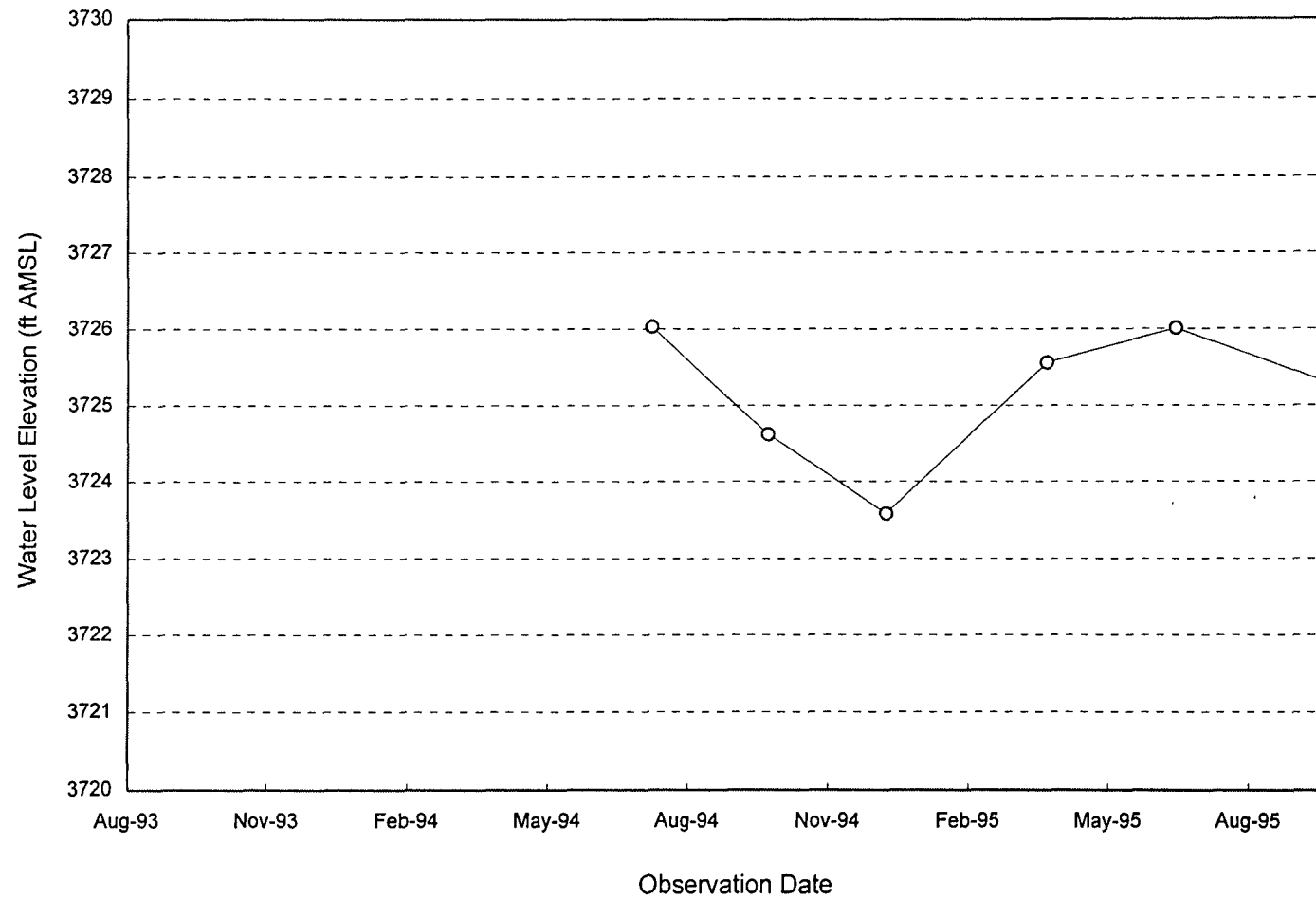
Water Level vs. Time (MW-12)



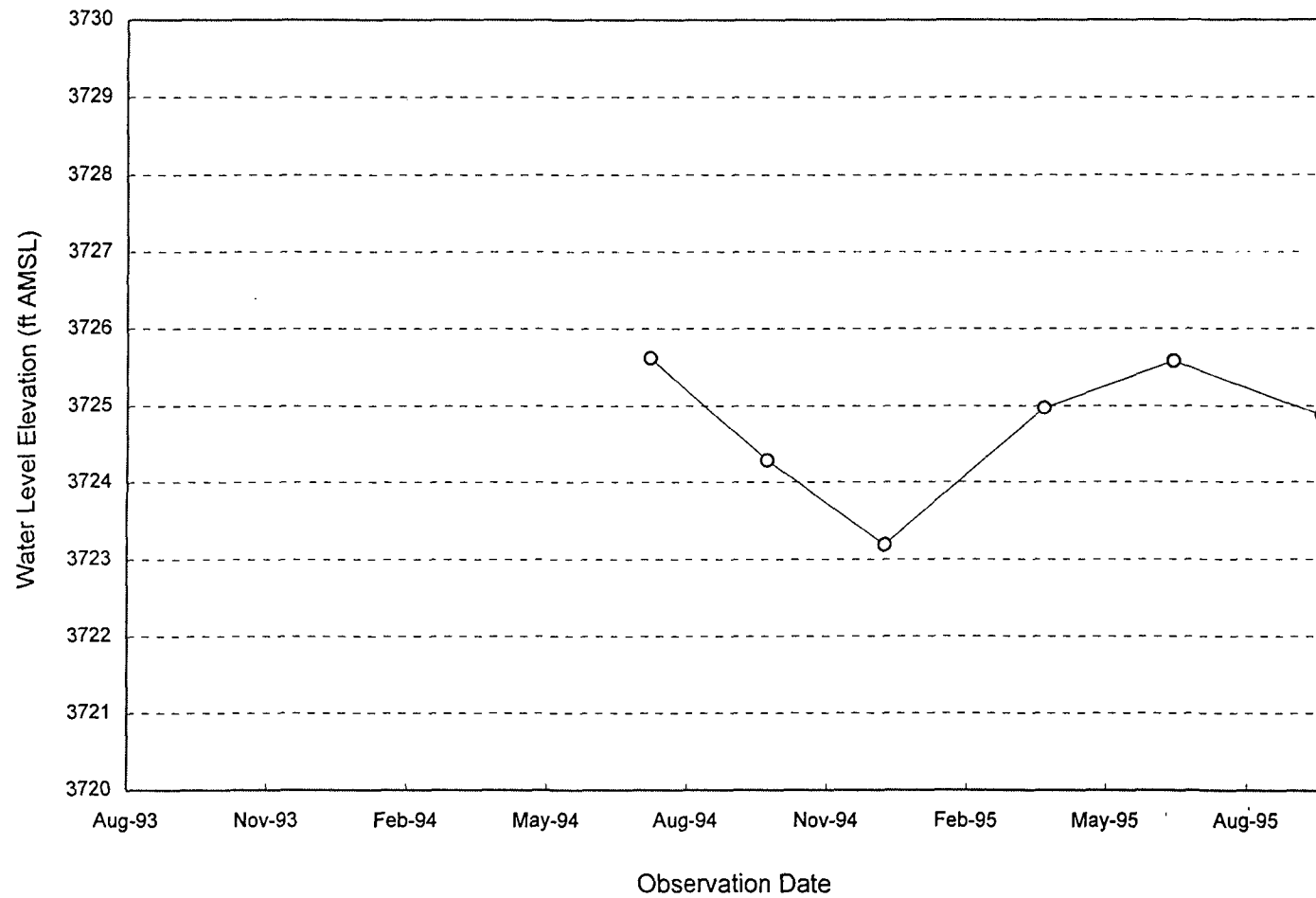
Water Level vs. Time (MW-13)



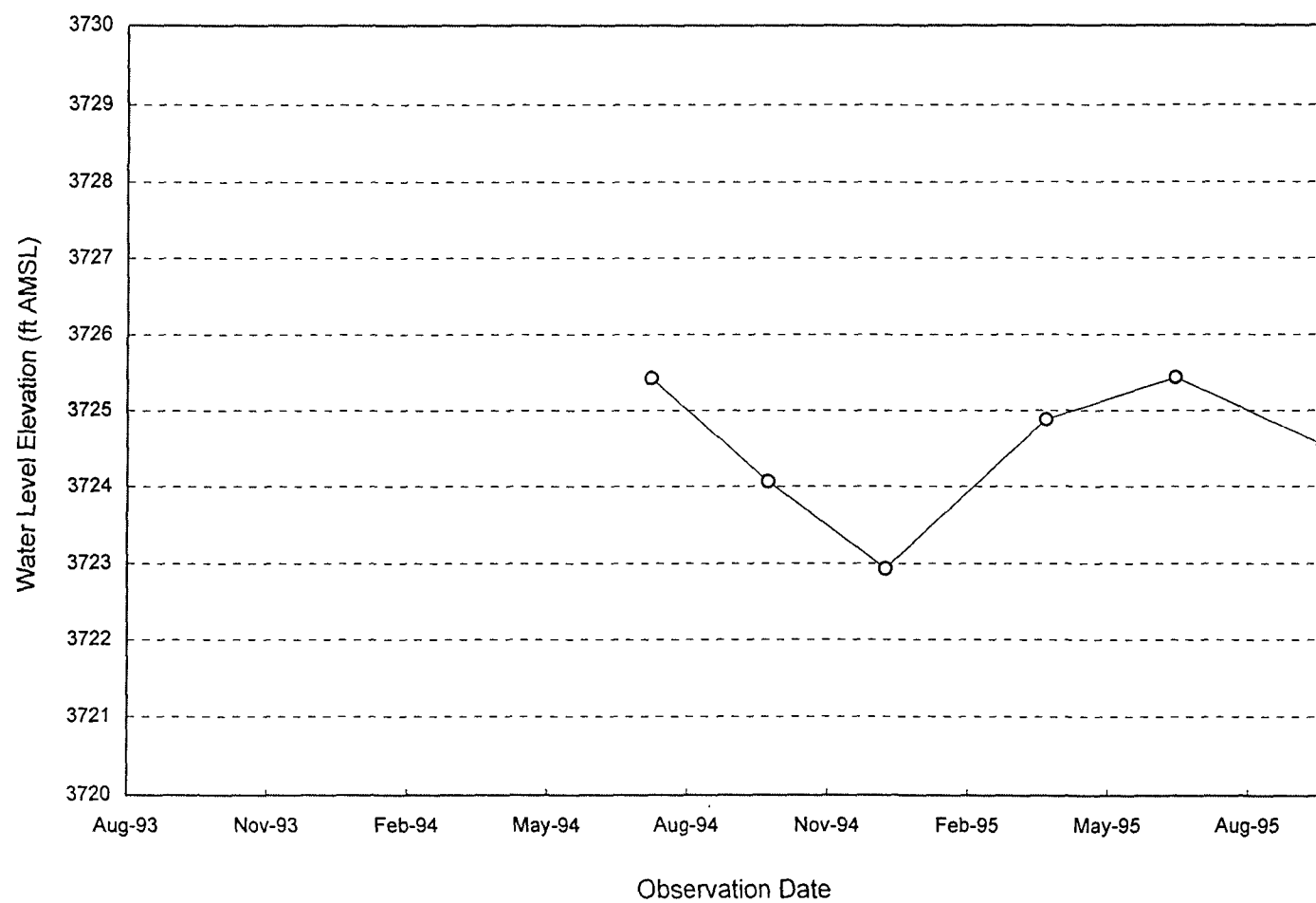
Water Level vs. Time (MW-14)



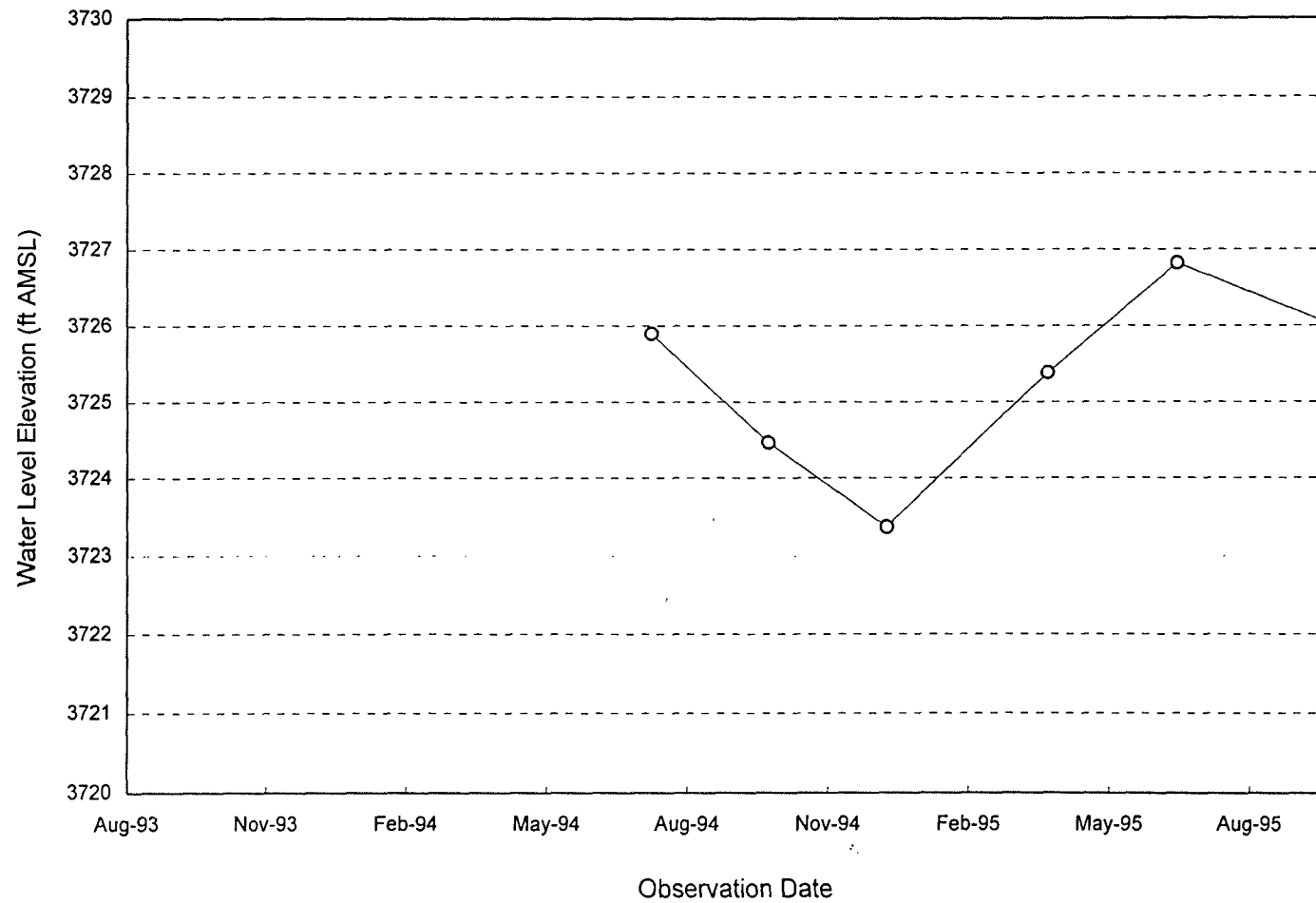
Water Level vs. Time (MW-15)



Water Level vs. Time (MW-16)



Water Level vs. Time (MW-17)





Environmental Science  
and Engineering  
A BDM International Company

☒ Albuquerque  
505 Marquette NW, Ste. 1100  
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Las Cruces, NM 88004  
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No 9437

Environmental Bureau  
Oil Conservation Division

## Chain of Custody

Date 4/29/96 Page 1 Of 1

Lab Name <u>CORE LABORATORIES</u> Address <u>10703 East Bethany Drive</u> <u>Aurora, CO 80014-2696</u> Telephone <u>303/751-1780</u>			Analysis Request																							
Sample Number	Matrix	Location	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX	Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals (8)	Priority Pollutant Metals (13)	CAM Metals (18) TTLCS/SLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	Number of Containers
9604291430	Soil	GSS-8															X									1
9604291500	Soil	GTP-70															X									1
9604291530	Soil	F-TP-34															X									1
9604291545	Soil	F-SS-6															X									1
9604291600	Soil	E-TP-26															X									1
9604291610	Soil	E-SS-4															X									1
9604291640	Soil	B-1															X									1
9604291715	Soil	B-HA-4															X									1
9604291745	Soil	BG-1															X									1
9604291755	Soil	BG-2															X									1

Project Information		Sample Receipt		Relinquished By		1. Relinquished By		2. Relinquished By		3. Relinquished By	
Project <u>Rexene</u>	Total No. of Containers <u>10</u>	Signature <u>[Signature]</u>	Time <u>1400</u>	Signature <u>[Signature]</u>	Time <u>1400</u>	Signature <u>[Signature]</u>	Time <u>1400</u>	Signature <u>[Signature]</u>	Time <u>1400</u>	Signature <u>[Signature]</u>	Time <u>1400</u>
Project Director <u>M. Selke</u>	Chain of Custody Seals <u>1</u>	(Printed Name) <u>Ron Huguen</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>
Charge Code No. <u>3031-</u>	Rec'd Good Condition/Cold <u>Yes</u>	Company <u>GCL</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>	
Shipping ID. No. <u>3238365631</u>	Conforms to Record <u>Yes</u>	Received By <u>[Signature]</u>	Time <u>1400</u>	Received By <u>[Signature]</u>	Time <u>1400</u>	Received By <u>[Signature]</u>	Time <u>1400</u>	Received By <u>[Signature]</u>	Time <u>1400</u>	Received By <u>[Signature]</u>	Time <u>1400</u>
Via: <u>Fed-X #1</u>	Lab No. <u>961168</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>	(Printed Name) <u>[Signature]</u>	(Date) <u>5/1/96</u>
Special Instructions/Comments: <u>RUSH TAT- 48 hrs if possible</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>		Company <u>[Signature]</u>	





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CORE LABORATORIES

## ANALYTICAL REPORT

JOB NUMBER: 961168

Prepared For:

Geoscience Consultants, Ltd.

505 Marquette NW

Suite 1100

Albuquerque, NM 87102


Attention: Dwayne Salisbury

Date: 05/06/96

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Oil Conservation Division

  
Signature

Name: Linda L. Benkers

Title: QA/QC Coordinator

5-6-96  
Date

CORE LABORATORIES, INC.  
10703 East Bethany Drive  
Aurora, CO 80014

PHONE: (303) 751-1780  
FAX: (303) 751-1784



## CORE LABORATORIES

### SAMPLE INFORMATION

Date: 05/06/96

Job Number.: 961168  
Customer ...: Geoscience Consultants, Ltd.  
Attn.....: Dwayne Salisbury

Project Number.....: 95000229  
Customer Project ID.....: REXENE  
Project Description.....: Unnamed GCL

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
961168-1	9604291430/G-SS-8	Soil	04/29/96	14:30	05/02/96	09:10
961168-2	9604291500/GTP-70	Soil	04/29/96	15:00	05/02/96	09:10
961168-3	9604291530/F-TP-34	Soil	04/29/96	15:30	05/02/96	09:10
961168-4	9604291545/F-SS-6	Soil	04/29/96	15:45	05/02/96	09:10
961168-5	9604291600/E-TP-26	Soil	04/29/96	16:00	05/02/96	09:10
961168-6	9604291610/E-SS-4	Soil	04/29/96	16:10	05/02/96	09:10
961168-7	9604291640/B-1	Soil	04/29/96	16:40	05/02/96	09:10
961168-8	9604291715/B-HA-4	Soil	04/29/96	17:15	05/02/96	09:10
961168-9	9604291745/BG-1	Soil	04/29/96	17:45	05/02/96	09:10
961168-10	9604291755/BG-2	Soil	04/29/96	17:55	05/02/96	09:10

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## CORE LABORATORIES

### LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291430/G-SS-8  
Date Sampled.....: 04/29/96  
Time Sampled.....: 14:30  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-1  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	13	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	119	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	0.8	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	9	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	36	5	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	<0.10	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	3	1	mg/Kg	05/02/96	gef

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# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291500/GTP-70  
Date Sampled.....: 04/29/96  
Time Sampled.....: 15:00  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-2  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	65	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	533	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	8.6	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	104	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	7200	100	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	2.23	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	20	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291530/F-TP-34  
Date Sampled.....: 04/29/96  
Time Sampled.....: 15:30  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-3  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	15	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	165	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	1.0	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	13	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	83	5	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	0.11	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291545/F-SS-6  
Date Sampled.....: 04/29/96  
Time Sampled.....: 15:45  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-4  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	58	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	101	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	11.9	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	13	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	1500	20	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	0.31	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291600/E-TP-26  
Date Sampled.....: 04/29/96  
Time Sampled.....: 16:00  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-5  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	31	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	167	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	2.5	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	12	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	18300	200	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	4.48	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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## CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291610/E-SS-4

Date Sampled.....: 04/29/96

Time Sampled.....: 16:10

Sample Matrix.....: Soil

Laboratory Sample ID: 961168-6

Date Received.....: 05/02/96

Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	30	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	95	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	4.8	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	14	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	1170	20	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	1.66	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291640/B-1  
Date Sampled.....: 04/29/96  
Time Sampled.....: 16:40  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-7  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	11	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	146	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	<0.5	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	13	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	154	5	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	<0.10	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291715/B-HA-4  
Date Sampled.....: 04/29/96  
Time Sampled.....: 17:15  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-8  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	10	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	142	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	0.9	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	9	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	75	5	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	<0.10	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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## CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291745/BG-1

Date Sampled.....: 04/29/96

Time Sampled.....: 17:45

Sample Matrix.....: Soil

Laboratory Sample ID: 961168-9

Date Received.....: 05/02/96

Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	42	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	102	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	9.2	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	11	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	292	5	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	0.12	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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## CORE LABORATORIES

### LABORATORY TEST RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd..

PROJECT: REXENE

ATTN: Dwayne Salisbury

Customer Sample ID: 9604291755/BG-2  
Date Sampled.....: 04/29/96  
Time Sampled.....: 17:55  
Sample Matrix.....: Soil

Laboratory Sample ID: 961168-10  
Date Received.....: 05/02/96  
Time Received.....: 09:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3050	Acid Digestion: Solids	Complete			05/02/96	lmt
SW-846 6010A	Arsenic (As), Solid	14	5	mg/Kg	05/02/96	gef
SW-846 6010A	Barium (Ba), Solid	102	1	mg/Kg	05/02/96	gef
SW-846 6010A	Cadmium (Cd), Solid	1.8	0.5	mg/Kg	05/02/96	gef
SW-846 6010A	Chromium (Cr), Solid	8	1	mg/Kg	05/02/96	gef
SW-846 6010A	Lead (Pb), Solid	103	5	mg/Kg	05/02/96	gef
SW-846 7471	Mercury (Hg), Solid	<0.10	0.10	mg/Kg	05/03/96	lmt
SW-846 6010A	Selenium (Se), Solid	<10	10	mg/Kg	05/02/96	gef
SW-846 6010A	Silver (Ag), Solid	<1	1	mg/Kg	05/02/96	gef

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Oil Conservation Division

## CORE LABORATORIES

### QUALITY CONTROL RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Test Method.....: SW-846 6010A  
Method Description.: Metals Analysis (ICAP)  
Parameter.....: Arsenic (As)

Batch.....: 8668  
Reporting Limit....: 0.05  
Units.....: mg/L

Analyst....: gef

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960429Z	1.97918		2.00		99.0	% REC	05/02/96 1837
ICB		960328Z	-0.00930						05/02/96 1900
ISB		960330A	0.88511		1.00		88.5	% REC	05/02/96 1920
MB		0502	-0.02467						05/02/96 1925
LCS		960097	0.72162		0.754		95.7	% REC	05/02/96 1930
MD	961168-1		0.10309			0.12378	0.02069	ABS Diff.	05/02/96 1942
MS	961168-2	960330B	1.69088		1.000	0.63213	105.9	% REC	05/02/96 1951
PDS	961168-2	960330B	1.53698		1.000	0.63213	90.5	% REC	05/02/96 1958
CCV		960502K	2.33158		2.5		93.3	% REC	05/02/96 2020
CCB		960328Z	-0.01714						05/02/96 2030
CCV		960502K	2.26917		2.5		90.8	% REC	05/02/96 2116
CCB		960328Z	0.00297						05/02/96 2146
SD	961168-10		0.04103			0.14276		% Diff.	05/02/96 2200
ISB		960330A	0.91362		1.00		91.4	% REC	05/02/96 2212
CCV		960502K	2.33774		2.5		93.5	% REC	05/02/96 2216
CCB		960328Z	-0.00505						05/02/96 2233

Test Method.....: SW-846 6010A  
Method Description.: Metals Analysis (ICAP)  
Parameter.....: Barium (Ba)

Batch.....: 8668  
Reporting Limit....: 0.01  
Units.....: mg/L

Analyst....: gef

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		951024R	1.96828		2.00		98.4	% REC	05/02/96 1839
ICB		960328Z	0.00037						05/02/96 1900
ISB		960330A	0.46127		0.500		92.3	% REC	05/02/96 1920
MB		0502	0.00037						05/02/96 1925
LCS		960097	1.02209		1.06		96.4	% REC	05/02/96 1930
MD	961168-1		1.18096			1.16623	1.3	RPD	05/02/96 1942
MS	961168-2	960330B	5.16677		1.000	5.17160	-0.5	% REC	05/02/96 1951
PDS	961168-2	960330B	6.00750		1.000	5.17160	83.6	% REC	05/02/96 1958
CCV		960502K	4.74672		5.0		94.9	% REC	05/02/96 2020
CCB		960328Z	-0.00018						05/02/96 2030
CCV		960502K	4.68936		5.0		93.8	% REC	05/02/96 2116
CCB		960328Z	-0.00028						05/02/96 2146
SD	961168-10		0.22335			1.05770	-5.6	% Diff.	05/02/96 2200
ISB		960330A	0.45406		0.500		90.8	% REC	05/02/96 2212
CCV		960502K	4.65650		5.0		93.1	% REC	05/02/96 2216
CCB		960328Z	-0.00009						05/02/96 2233

Test Method.....: SW-846 6010A  
Method Description.: Metals Analysis (ICAP)  
Parameter.....: Cadmium (Cd)

Batch.....: 8668  
Reporting Limit....: 0.005  
Units.....: mg/L

Analyst....: gef

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960429Z	1.96263		2.00		98.1	% REC	05/02/96 1837
ICB		960328Z	-0.00216						05/02/96 1900
ISB		960330A	0.96877		1.00		96.9	% REC	05/02/96 1920
MB		0502	-0.00122						05/02/96 1925
LCS		960097	0.43031		0.454		94.8	% REC	05/02/96 1930

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## QUALITY CONTROL RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Test Method.....: SW-846 6010A	Batch.....: 8668	Analyst....: gef
Method Description.: Metals Analysis (ICAP)	Reporting Limit....: 0.005	
Parameter.....: Cadmium (Cd)	Units.....: mg/L	

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
MD	961168-1		0.01147			0.00817	0.00330	ABS Diff.	05/02/96 1942
MS	961168-2	960330B	1.02178		1.000	0.08392	93.8	% REC	05/02/96 1951
PDS	961168-2	960330B	1.01476		1.000	0.08392	93.1	% REC	05/02/96 1958
CCV		960502K	2.41586		2.5		96.6	% REC	05/02/96 2020
CCB		960328Z	0.00094						05/02/96 2030
CCV		960502K	2.45292		2.5		98.1	% REC	05/02/96 2116
CCB		960328Z	0.00151						05/02/96 2146
SD	961168-10		0.00207			0.01869		% Diff.	05/02/96 2200
ISB		960330A	0.96959		1.00		97.0	% REC	05/02/96 2212
CCV		960502K	2.43581		2.5		97.4	% REC	05/02/96 2216
CCB		960328Z	-0.00215						05/02/96 2233

Test Method.....: SW-846 6010A	Batch.....: 8668	Analyst....: gef
Method Description.: Metals Analysis (ICAP)	Reporting Limit....: 0.01	
Parameter.....: Chromium (Cr)	Units.....: mg/L	

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960429Z	1.91348		2.00		95.7	% REC	05/02/96 1837
ICB		960328Z	-0.00102						05/02/96 1900
ISB		960330A	0.41774		0.5000		83.5	% REC	05/02/96 1920
MB		0502	0.00359						05/02/96 1925
LCS		960097	0.64913		0.71		91.4	% REC	05/02/96 1930
MD	961168-1		0.08217			0.08563	4.1	RPD	05/02/96 1942
MS	961168-2	960330B	1.98442		1.000	1.01268	97.2	% REC	05/02/96 1951
PDS	961168-2	960330B	1.87755		1.000	1.01268	86.5	% REC	05/02/96 1958
CCV		960502K	2.28486		2.5		91.4	% REC	05/02/96 2020
CCB		960328Z	0.00102						05/02/96 2030
CCV		960502K	2.25824		2.5		90.3	% REC	05/02/96 2116
CCB		960328Z	0.00154						05/02/96 2146
SD	961168-10		0.01980			0.08408		% Diff.	05/02/96 2200
ISB		960330A	0.41017		0.5000		82.0	% REC	05/02/96 2212
CCV		960502K	2.42704		2.5		97.1	% REC	05/02/96 2216
CCB		960328Z	0.00166						05/02/96 2233

Test Method.....: SW-846 6010A	Batch.....: 8668	Analyst....: gef
Method Description.: Metals Analysis (ICAP)	Reporting Limit....: 0.05	
Parameter.....: Lead (Pb)	Units.....: mg/L	

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960429Z	2.05439		2.00		102.7	% REC	05/02/96 1837
ICB		960328Z	-0.01649						05/02/96 1900
ISB		960330A	1.02374		1.00		102.4	% REC	05/02/96 1920
MB		0502	0.00145						05/02/96 1925
LCS		960097	0.58979		0.535		110.2	% REC	05/02/96 1930
MD	961168-1		0.35393			0.34830	1.6	RPD	05/02/96 1942
CCV		960502K	2.44460		2.5		97.8	% REC	05/02/96 2020
CCB		960328Z	0.01644						05/02/96 2030
PDS	961168-2	960330B	4.44872		1.000	3.47690	97.2	% REC	05/02/96 2047
CCV		960502K	2.49112		2.5		99.6	% REC	05/02/96 2116

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Environmental Bureau  
Oil Conservation Division

## CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Test Method.....: SW-846 6010A  
Method Description.: Metals Analysis (ICAP)  
Parameter.....: Lead (Pb)

Batch.....: 8668  
Reporting Limit...: 0.05  
Units.....: mg/L

Analyst...: gef

[illegible]

Test Method.....: SW-846 6010A  
Method Description.: Metals Analysis (ICAP)  
Parameter.....: Selenium (Se)

Batch.....: 8668  
Reporting Limit...: 0.1  
Units.....: mg/L

Analyst...: gef

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960429Z	1.99259		2.00		99.6	% REC	05/02/96 1837
ICB		960328Z	0.04356						05/02/96 1900
ISB		960330A	0.97070		1.00		97.1	% REC	05/02/96 1920
MB		0502	-0.07257						05/02/96 1925
LCS		960097	0.84304		0.723		116.6	% REC	05/02/96 1930
MD	961168-1		0.03038			0.12145	0.09107	ABS Diff.	05/02/96 1942
MS	961168-2	960330B	1.06928		1.000	0.22335	84.6	% REC	05/02/96 1951
PDS	961168-2	960330B	1.23758		1.000	0.22335	101.4	% REC	05/02/96 1958
CCV		960502K	2.38788		2.5		95.5	% REC	05/02/96 2020
CCB		960328Z	-0.01089						05/02/96 2030
CCV		960502K	2.30774		2.5		92.3	% REC	05/02/96 2116
CCB		960328Z	-0.05782						05/02/96 2146
SD	961168-10		-0.03318			0.03345		% Diff.	05/02/96 2200
ISB		960330A	0.98619		1.00		98.6	% REC	05/02/96 2212
CCV		960502K	2.49531		2.5		99.8	% REC	05/02/96 2216
CCB		960328Z	0.02562						05/02/96 2233

Test Method.....: SW-846 6010A  
Method Description.: Metals Analysis (ICAP)  
Parameter.....: Silver (Ag)

Batch.....: 8668  
Reporting Limit...: 0.01  
Units.....: mg/L

Analyst...: gef

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		951024R	1.82948		2.00		91.5	% REC	05/02/96 1839
ICB		960328Z	0.00519						05/02/96 1900
ISB		960330A	0.80227		1.000		80.2	% REC	05/02/96 1920
MB		0502	0.00460						05/02/96 1925
LCS		960097	1.07883		1.16		93.0	% REC	05/02/96 1930
MD	961168-1		0.03074			0.03033	0.00041	ABS Diff.	05/02/96 1942
MS	961168-2	960330B	0.46191		1.000	0.00432	45.8	% REC	05/02/96 1951
PDS	961168-2	960330B	0.85640		1.000	0.00432	85.2	% REC	05/02/96 1958
CCV		960501U	2.47644		2.500		99.1	% REC	05/02/96 2023
CCB		960328Z	0.00191						05/02/96 2030
CCV		960501U	2.42569		2.500		97.0	% REC	05/02/96 2143
CCB		960328Z	0.00076						05/02/96 2146
SD	961168-10		-0.00019			0.00242		% Diff.	05/02/96 2200
ISB		960330A	0.85430		1.000		85.4	% REC	05/02/96 2212
CCV		960501U	2.74537		2.500		109.8	% REC	05/02/96 2222
CCB		960328Z	0.00470						05/02/96 2233



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961168

Date: 05/06/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE

ATTN: Dwayne Salisbury

Test Method.....: SW-846 7471  
Method Description.: Mercury (CVAA)  
Parameter.....: Mercury (Hg)

Batch.....: 8687  
Reporting Limit...: 0.0002  
Units.....: mg/L

Analyst....: lmt

QC	Lab ID	Reagent	QC Result	QC Result	Dil. Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960227G	0.00395		0.004000		98.8	% REC	05/03/96 1230
ICB		05026	0.00005						05/03/96 1231
MB		05026	0.00008						05/03/96 1233
EB		1311	0.00008						05/03/96 1234
SB		960502H	0.00448		0.005000	0.00008	89.6	% REC	05/03/96 1235
ED	961131-2		0.00001			0.00008	0.00007	ABS Diff.	05/03/96 1238
CCV		960227G	0.00375		0.004000		93.8	% REC	05/03/96 1243
CCB		05026	0.00005						05/03/96 1244
MS	961112-3	960502H	0.00632		0.005000	0.00225	81.4	% REC	05/03/96 1246
MB		0502T	0.00001						05/03/96 1248
MB		0502D	0.00001						05/03/96 1250
CCV		960227G	0.00435		0.004000		108.8	% REC	05/03/96 1258
CCB		05026	-0.00002						05/03/96 1259
MD	961130-1		0.00001			0.00001	0.00000	ABS Diff.	05/03/96 1304
MS	961130-2	960502H	0.00396		0.005000	0.00001	79.0	% REC	05/03/96 1307
MD	961130-1		0.00001			0.00008	0.00007	ABS Diff.	05/03/96 1309
MS	961130-2	960502H	0.00505		0.005000	0.00001	100.8	% REC	05/03/96 1312
CCV		960227G	0.00366		0.004000		91.5	% REC	05/03/96 1313
CCB		05026	0.00005						05/03/96 1315
MB		0502S	0.00005						05/03/96 1317
LCS		960097	0.00166		0.00150		110.7	% REC	05/03/96 1319
MD	961168-2		0.00512			0.00468	9.0	RPD	05/03/96 1321
MS	961168-3	960502H	0.00485		0.005000	0.00025	92.0	% REC	05/03/96 1324
CCV		960227G	0.00398		0.004000		99.5	% REC	05/03/96 1329
CCB		05026	0.00008						05/03/96 1331
CCV		960227G	0.00375		0.004000		93.8	% REC	05/03/96 1344
CCB		05026	0.00001						05/03/96 1345

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## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 05/06/96

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989
- (3) Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988
- (8) U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)
- (10) Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rocks; Building Stones, 1981

Comments: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated.

NC = Not Calculable Due to Value(s) lower than the Detection Limit.

BLANK QC SAMPLE IDENTIFICATION

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## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 05/06/96

MB Method Blank  
ICB Initial Calibration Blank  
CCB Continuing Calibration Blank

#### SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike  
MSD Method (Matrix) Spike Duplicate  
PDS Post Digestion Spike  
SB Spiked Blank  
SBD Spike Blank Duplicate

#### REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard  
RS Reference Standard  
ICV Initial Calibration Verification Standard  
CCV Continuing Calibration Verification Standard  
ISA/ISB ICP Interface Check Sample  
ICL Initial Calibration/Laboratory Control Sample  
DSC Distilled Standard Check

#### DUPLICATE QC SAMPLE IDENTIFICATION

MD Method (Matrix) Duplicate  
ED Extraction Duplicate  
DD Digestion Duplicate

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Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

#### SUBCONTRACT LABORATORY

#### CODE

Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP
Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

#### EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method.



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 05/06/96

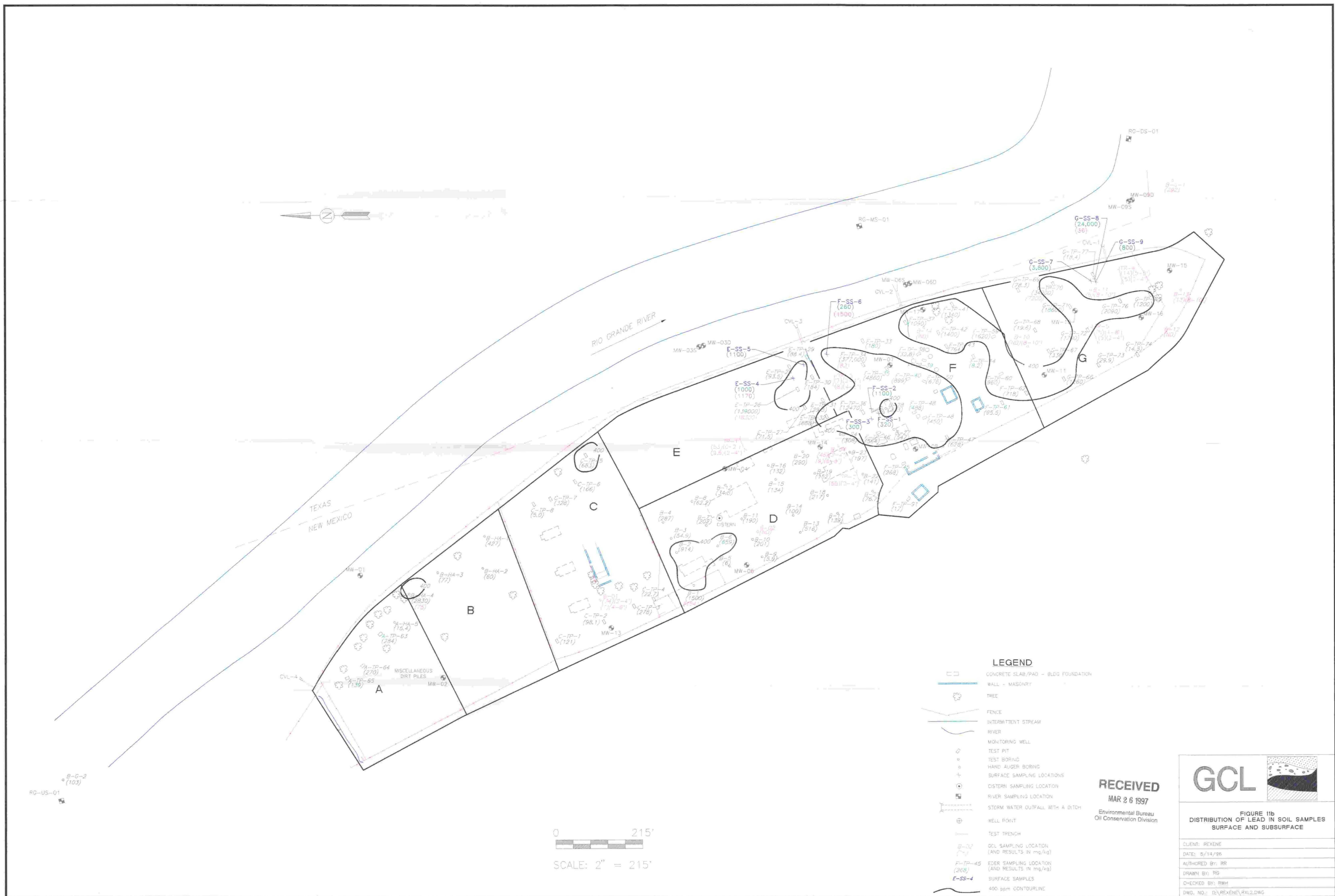
- This flag is also used when estimating the concentration of a tentatively identified compound.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
  - Y - Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits.
  - Z - Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
  - \* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
  - - Used to indicate that a standard is outside specified quality control limits.

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# LEGEND

SAMPLE LOCATION  
CONCENTRATION OF SEMI-VOLATILE (mg/kg) IN SOIL SAMPLE.

x G-TP-70  
(1200)

3700

CONCRETE SLAB/PAD - BLDG FOUNDATION

ROAD GRADED AND DRAINED

ACTIVE RAILROADS

WALL - MASONRY

SIGN

POST

FENCE - CHAINLINK

INTERMITTENT STREAM

POLE

MONITORING WELL

MONITORING WELL w/CONCENTRATION OF SEMI-VOLATILE  
COMPOUNDS (mg/kg) IN SOIL SAMPLE

RIVER SAMPLING LOCATION

STORM WATER OUTFALL WITH A DITCH

MW-5  
(1200)

3700

SCALE 1"= 100'  
CONTOUR INTERVAL : 5'

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GCL

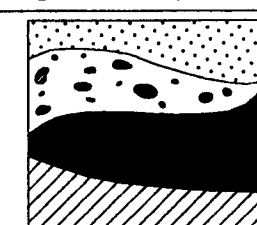


FIGURE-12b  
CONCENTRATIONS OF SEMI-VOLATILE ORGANIC  
COMPOUNDS IN SELECT SOIL SAMPLES  
(FROM EDER, 1990)

CLIENT: REXENE  
DATE:  
DRAWN BY:  
CHECKED BY:  
DWG. NO.:

# ATTACHMENT OF

## FINAL SITE INVESTIGATION REPORT FOR THE FORMER BRICKLAND REFINERY STAGE I ABATEMENT PLAN

PREPARED FOR:

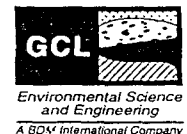
REXENE CORPORATION  
OFFICE OF ENVIRONMENTAL AFFAIRS  
5005 LBJ FREEWAY  
OCCIDENTAL TOWER, 5TH FLOOR  
DALLAS, TEXAS 75244

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(505) 842-0001





Environmental Science  
and Engineering  
A BDM International Company

☒ Albuquerque  
505 Marquette NW, Ste. 1100  
Albuquerque, NM 87102  
(505) 842-0001  
FAX: (505) 842-0595

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4221 Forbes Blvd., Ste. 240  
Lanham, MD 20706-4325  
(301) 459-9677  
FAX: (301) 459-3064

☐ NASA-WSTF  
PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

No 9054

# Chain of Custody

Date 6/22/95 Page 1 Of 1

Lab Name <u>CORE LABORATORIES</u> Address <u>10703 East Bethany Drive</u> <u>Aurora, CO 80014-2696</u> Telephone <u>303/751-1780</u>			Analysis Request																											
Samplers (SIGNATURES) <u>D. NEE</u>			Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 <i>STEX ONLY</i>	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 824/8240	Base/Neu/Acid Compounds GC/MS 825/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/STX Modified 8015	TCLP - Vol, Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals (8)	Priority Pollutant Metals (13)	CAM Metals (18) TLC/STC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)						Number of Containers
Sample Number	Matrix	Location																												
9506221230	Soil	SS-1		1																									1	
9506221235	Soil	SS-2		1	7 day TAT																							1		
9506221240	Soil	SS-3		1																									1	
9506221245	Soil	SS-4		1	7 day TAT																							1		
9506221250	Soil	SS-5		1																									1	
9506221300	Soil	SS-6		1	7 day TAT																							1		
9506221305	Soil	SS-7		1																									1	
9506221310	Soil	SS-8		1																									1	
9506221315	Soil	SS-9		1																									1	
9506221320	Soil	SS-10		1																									1	

Project Information		Sample Receipt		Relinquished By 1.		Relinquished By 2.		Relinquished By 3.	
Project <u>PEXENE</u>	Total No. of Containers <u>10</u>	<u>D. NEE</u> <u>1530</u>		<u>D. NEE</u> <u>1530</u>					
Project Director <u>JOHN T.</u>	Chain of Custody Seals <u>OK</u>	<u>DAVID NEE</u> <u>6/22/95</u>		<u>DAVID NEE</u> <u>6/22/95</u>					
Charge Code No. <u>3031-006</u>	Rec'd Good Condition/Cold <u>OK</u>	<u>GCL</u>		<u>GCL</u>					
Shipping ID. No. <u>3238365712</u>	Conforms to Record <u>OK</u>								
Via: <u>Fed X</u>	Lab No. <u>951438</u>	Received By 1.		Received By 2.		Received By (Laboratory) 3.			
Special Instructions/Comments:		(Signature)		(Signature)		(Signature)			
		(Time)		(Time)		(Time)			
		(Date)		(Date)		(Date)			
		(Company)		(Company)		(Company)			



RECEIVED JUL 11 1995

CORE LABORATORIES

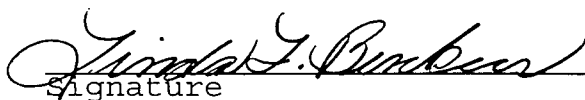
CORE LABORATORIES  
ANALYTICAL REPORT

Job Number: 951438  
Prepared For:

GEOSCIENCE CONSULTANTS, LTD.

505 MARQUETTE NW, SUITE 1100  
ALBUQUERQUE, NM 87102

Date: 07/09/95

  
Signature

7-9-95  
Date:

Name: Linda L. Benkers

Core Laboratories  
10703 East Bethany Drive  
Aurora, CO 80014

Title: QA/QC Coordinator





# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 12:30

WORK DESCRIPTION: 9506221230

LABORATORY I.D.: 951438-0001

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-1

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	94	0	% Recovery	78-123% Limit		
Time Analyzed	1910	0				

10703 East Bethany Drive  
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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 95143B

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 12:35

WORK DESCRIPTION: 9506221235

LABORATORY I.D.: 951438-0002

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-2

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	100	0	% Recovery	78-123% Limit		
Time Analyzed	1946	0				

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(303) 751-1780



# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 12:40

WORK DESCRIPTION: 9506221240

LABORATORY I.D.: 951438-0003

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-3

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	85	0	% Recovery	78-123% Limit		
Time Analyzed	2022	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 12:45

WORK DESCRIPTION: 9506221245

LABORATORY I.D.: 951438-0004

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-4

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	1	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	79	0	% Recovery	78-123% Limit		
Time Analyzed	2058	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054  
DATE SAMPLED: 06/22/95  
TIME SAMPLED: 12:50  
WORK DESCRIPTION: 9506221250

LABORATORY I.D.: 951438-0005  
DATE RECEIVED: 06/23/95  
TIME RECEIVED: 11:00  
REMARKS: SS-5

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	95	0	% Recovery	78-123% Limit		
Time Analyzed	2134	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:00

WORK DESCRIPTION: 9506221300

LABORATORY I.D.: 951438-0006

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-6

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	90	0	% Recovery	78-123% Limit		
Time Analyzed	2210	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:05

WORK DESCRIPTION: 9506221305

LABORATORY I.D.: 951438-0007

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-7

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	87	0	% Recovery	78-123% Limit		
Time Analyzed	2246	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

OB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ENT I.D.: REXENE COC #9054

ATE SAMPLED: 06/22/95

IME SAMPLED: 13:10

CK DESCRIPTION: 9506221310

LABORATORY I.D.: 951438-0008

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-8

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	78-123% Limit		
Time Analyzed	2323	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:15

WORK DESCRIPTION: 9506221315

LABORATORY I.D.: 951438-0009

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-9

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
820 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	96	0	% Recovery	78-123% Limit		
Time Analyzed	2359	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9054  
DATE SAMPLED: 06/22/95  
TIME SAMPLED: 13:20  
SAMPLE DESCRIPTION: 9506221320

LABORATORY I.D.: 951438-0010  
DATE RECEIVED: 06/23/95  
TIME RECEIVED: 11:00  
REMARKS: SS-10

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
10 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	94	0	% Recovery	78-123% Limit		
Time Analyzed	0222	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951438

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.:  
DATE SAMPLED: / /  
TIME SAMPLED: :  
WORK DESCRIPTION: METHOD BLANK

LABORATORY I.D.: 951438-0011  
DATE RECEIVED: / /  
TIME RECEIVED: :  
REMARKS:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	100	0	% Recovery	78-123% Limit		
Time Analyzed	1758	0				

10703 East Bethany Drive  
Aurora, CO 80014  
(303) 751-1780



## CORE LABORATORIES

### QUALITY CONTROL FOOTER

#### METHOD REFERENCES

- (1) EPA 600/4-79-020, Methods For Chemical Analysis Of Water And Wastes, March 1983
- (2) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, November 1986
- (3) Standard Methods For The Examination Of Water And Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-039, Methods For The Determination Of Organics Compounds In Drinking Water, December 1988
- (8) U.S.G.S. Methods For The Determination Of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991, (40 CFR Parts 141 and 142)
- (10) Standard Methods For The Examination Of Water And Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water And Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods Of Soil Analysis, American Society Of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rock; Building Stones, 1981

Comments: Data in QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated. NC = Not Calculable Due To Value(s) Lower Than The Detection Limit.

#### Blank QC Sample Identification

MB Method Blank  
ICB Initial Calibration Blank  
CCB Continuing Calibration Blank

#### Reference Standard QC Sample Identification

LCS Laboratory Control Standard  
RS Reference Standard  
ICV Initial Calibration Verification Standard  
CCV Continuing Calibration Verification Standard  
ISA/ISB ICP Interference Check Samples

#### Spike QC Sample Identification

MS Method (Matrix) Spike  
MSD Method (Matrix) Spike Duplicate  
PDS Post Digestion Spike  
SB Spiked Blank  
SBD Spiked Blank Duplicate

#### Duplicate QC Sample Identification

MD Method (Matrix) Duplicate  
ED Extraction Duplicate  
DD Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "Technician" using the following codes:

#### Subcontract Laboratory

Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP

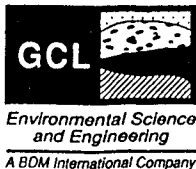
#### Code

#### Subcontract Laboratory

Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

#### Code

10703 East Bethany Drive  
Aurora, CO 80014  
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☐ NASA-WSTF  
PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

No 9055

# Chain of Custody

Date JUNE 22 1995 Page 1 of 1

Lab Name <u>CORE LABORATORIES</u> Address <u>10703 East Bethany Drive</u> <u>Aurora, CO 80014-2696</u> Telephone <u>303/751-1780</u>			Analysis Request																												
Samplers (SIGNATURES) <u>D. NEE</u>			Halo- genated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 606/8060	Polynuclear Aromatic Hydrocarbons 610/8310	Volatiles Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals (8)	Priority Pollutant Metals (13)	CAM Metals (16) TLC/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)						Number of Containers	
Sample Number	Matrix	Location																													
9506221325	Soil	SS-11		1																											1
9506221330	Soil	SS-12		1																											1
9506221335	Soil	SS-13		1																											1
9506221340	Soil	SS-14		1																											1
9506221345	Soil	SS-15 <sup>ON</sup>		1																											1
9506221350	Soil	SS-16		1																											1
9506221355	Soil	SS-17		1																											1
9506221400	Soil	SS-18		1																											1
9506221405	Soil	SS-19		1																											1
9506221410	Soil	SS-20		1																											1

Project Information		Sample Receipt		Relinquished By		1. Relinquished By		2. Relinquished By		3. Relinquished By					
Project <u>DEXENE</u>	Total No. of Containers <u>10</u>	Project Director <u>TRENT</u>	Chain of Custody Seals <u>OK</u>	Charge Code No. <u>3031-006</u>	Rec'd Good Condition/Cold <u>OK</u>	Shipping ID. No. <u>3238365712</u>	Lab No. <u>951437</u>	Relinquished By <u>D. NEE</u> 1533	Signature <u>DAVID NEE</u> 6/22/95	Signature	(Time)	Signature	(Time)	Signature	(Time)
Via: <u>ELC X</u>		Special Instructions/Comments:		(Printed Name) <u>GILL</u>		(Date)		(Printed Name)		(Date)		(Printed Name)		(Date)	
				Company				Received By		1. Received By		2. Received By (Laboratory)		3. Received By (Laboratory)	
				(Signature)		(Time)		(Signature)		(Time)		(Signature) <u>Amey</u> 1100		(Time)	
				(Printed Name)		(Date)		(Printed Name)		(Date)		(Signature) <u>FRARY</u> 6/23/95		(Time)	
				(Company)				(Company)				(Signature) <u>CORE</u>		(Time)	



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## CORE LABORATORIES


### CORE LABORATORIES ANALYTICAL REPORT

Job Number: 951437  
Prepared For:

GEOSCIENCE CONSULTANTS, LTD.

505 MARQUETTE NW, SUITE 1100  
ALBUQUERQUE, NM 87102

Date: 07/09/95

  
Signature

7-9-95  
Date:

Name: Linda L. Benkers

Core Laboratories  
10703 East Bethany Drive  
Aurora, CO 80014

Title: QA/QC COORDINATOR



# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:25

SAMPLE DESCRIPTION: 9506221325

LABORATORY I.D.: 951437-0001

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-11

DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
0 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	85	0	% Recovery	78-123% Limit		
Time Analyzed	0258	0				

10703 East Bethany Drive  
Aurora, CO 80014  
(303) 751-1780



# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:30

WORK DESCRIPTION: 9506221330

LABORATORY I.D.: 951437-0002

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-12

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	94	0	% Recovery	78-123% Limit		
Time Analyzed	0334	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:35

WORK DESCRIPTION: 9506221335

LABORATORY I.D.: 951437-0003

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-13

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	95	0	% Recovery	78-123% Limit		
Time Analyzed	0410	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:40

WORK DESCRIPTION: 9506221340

LABORATORY I.D.: 951437-0004

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-14

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	78-123% Limit		
Time Analyzed	0446	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:45

WORK DESCRIPTION: 9506221345

LABORATORY I.D.: 951437-0005

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-15

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	78-123% Limit		
Time Analyzed	0522	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:50

WORK DESCRIPTION: 9506221350

LABORATORY I.D.: 951437-0006

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-16

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	97	0	% Recovery	78-123% Limit		
Time Analyzed	0557	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 13:55

WELL DESCRIPTION: 9506221355

LABORATORY I.D.: 951437-0007

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-17

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
0 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	101	0	% Recovery	78-123% Limit		
Time Analyzed	0934	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 14:00

WORK DESCRIPTION: 9506221400

LABORATORY I.D.: 951437-0008

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-18

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	102	0	% Recovery	78-123% Limit		
Time Analyzed	1010	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 14:05

WELL DESCRIPTION: 9506221405

LABORATORY I.D.: 951437-0009

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-19

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
0 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DHJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	91	0	% Recovery	78-123% Limit		
Time Analyzed	1046	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9055

DATE SAMPLED: 06/22/95

TIME SAMPLED: 14:10

WORK DESCRIPTION: 9506221410

LABORATORY I.D.: 951437-0010

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: SS-20

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
8020 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/29/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	93	0	% Recovery	78-123% Limit		
Time Analyzed	1122	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.....:

DATE SAMPLED.....: / /

TIME SAMPLED.....:

WORK DESCRIPTION...: METHOD BLANK

LABORATORY I.D....: 951437-0011

DATE RECEIVED.....: / /

TIME RECEIVED.....:

REMARKS.....:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
20 - VOLATILE AROMATIC ORGANICS		*1		8020 (2)	06/28/95	DMJ
Benzene	ND	1	ug/Kg			
Toluene	ND	1	ug/Kg			
Ethyl benzene	ND	1	ug/Kg			
Xylenes	ND	1	ug/Kg			
4-Bromofluorobenzene (Surrogate)	100	0	% Recovery	78-123% Limit		
Time Analyzed	1758	0				

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## CORE LABORATORIES

QUALITY CONTROL REPORT  
07/09/95

DB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

**ATTN:**

X SPIKED ANALYSIS-SOIL

DATE ANALYZED: 06/29/95 TIME ANALYZED: 00:00 METHOD: 8020 (2)

QC NUMBER:332388

B L A N K S

[illegible]

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/09/95

JOB NUMBER: 951437

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

X SPIKED ANALYSIS-SOIL

DATE ANALYZED: 06/29/95 TIME ANALYZED: 00:00 METHOD: 8020 (2)

QC NUMBER: 332388

### MATRIX SPIKES

DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
zene	MS	951437-6	1	20	0	20	100	1	ug/Kg
	MSD	950437-6	1	17	0	20	85	1	ug/Kg
uene	MS	951437-6	1	19	0	20	95	1	ug/Kg
	MSD	951437-6	1	15	0	20	75	1	ug/Kg
hylbenzene	MS	951437-6	1	22	0	20	110	1	ug/Kg
	MSD	951437-6	1	21	0	20	105	1	ug/Kg
enes	MS	951437-6	1	68	0	60	113	1	ug/Kg
	MSD	951437-6	1	65	0	60	108	1	ug/Kg
Bromofluorobenzene (Surrogat	MS	951437-6	1	93	0	100	93	0	Limit 78-123%
	MSD	951437-6	1	92	0	100	92	0	Limit 78-123%

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## CORE LABORATORIES

### QUALITY CONTROL FOOTER

#### METHOD REFERENCES

- (1) EPA 600/4-79-020, Methods For Chemical Analysis Of Water And Wastes, March 1983
- (2) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, November 1986
- (3) Standard Methods For The Examination Of Water And Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-039, Methods For The Determination Of Organics Compounds In Drinking Water, December 1988
- (8) U.S.G.S. Methods For The Determination Of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991, (40 CFR Parts 141 and 142)
- (10) Standard Methods For The Examination Of Water And Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water And Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods Of Soil Analysis, American Society Of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rock; Building Stones, 1981

Comments: Data in QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated.

NC = Not Calculable Due To Value(s) Lower Than The Detection Limit.

#### Blank QC Sample Identification

MB Method Blank  
ICB Initial Calibration Blank  
CCB Continuing Calibration Blank

#### Reference Standard QC Sample Identification

LCS Laboratory Control Standard  
RS Reference Standard  
ICV Initial Calibration Verification Standard  
CCV Continuing Calibration Verification Standard  
ISA/ISB ICP Interference Check Samples

#### Spike QC Sample Identification

MS Method (Matrix) Spike  
MSD Method (Matrix) Spike Duplicate  
PDS Post Digestion Spike  
SB Spiked Blank  
SBD Spiked Blank Duplicate

#### Duplicate QC Sample Identification

MD Method (Matrix) Duplicate  
ED Extraction Duplicate  
DD Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "Technician" using the following codes:

#### Subcontract Laboratory

	<u>Code</u>
Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP

#### Subcontract Laboratory

	<u>Code</u>
Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

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☒ Albuquerque  
505 Marquette NW, Ste. 1100  
Albuquerque, NM 87102  
(505) 842-0001  
FAX: (505) 842-0595

☐ Mid Atlantic Region  
4221 Forbes Blvd., Ste. 240  
Lanham, MD 20706-4325  
(301) 459-9677  
FAX: (301) 459-3064

☐ NASA-WSTF  
PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

**Nº 9053**

# Chain of Custody

Date 6/22/95 Page 1 Of 1

Lab Name <u>CORE LABORATORIES</u> Address <u>10703 East Bethany Drive</u> <u>Aurora, CO 80014-2696</u> Telephone <u>303/751-1780</u>			Analysis Request																						
Samplers (SIGNATURES) <u>D. NEE</u>			Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Poly/nuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals(8)	Priority Pollutant Metals (13)	CAM Metals (18) ITLC/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	Number of Containers
Sample Number	Matrix	Location																							
9506221050	H <sub>2</sub> O	USMW-12		3			1																		4
9506221100	H <sub>2</sub> O	DSMW-350		3			1																		4
9506221110	H <sub>2</sub> O	DSMW-650		3			1																		4
9506221120	H <sub>2</sub> O	DSMW-95		3			1																		4
9506221145	H <sub>2</sub> O	MC																							
9506221155	H <sub>2</sub> O	CPC																							1
9506221205	H <sub>2</sub> O	MW-10																							1

Project Information		Sample Receipt		Relinquished By 1.		Relinquished By 2.		Relinquished By 3.	
Project <u>REXENIE</u>	Total No. of Containers			<u>D. NEE</u> 1536					
Project Director <u>TRENT T.</u>	Chain of Custody Seals			(Signature) <u>DAVID NEE</u> 6/22/95	(Time)	(Signature)	(Time)	(Signature)	(Time)
Charge Code No. <u>3031.006</u>	Rec'd Good Condition/Cold			(Printed Name) <u>GCL</u>	(Date)	(Printed Name)	(Date)	(Printed Name)	(Date)
Shipping ID, No. <u>3238365712</u>	Conforms to Record			(Company)		(Company)		(Company)	
Via: <u>Fed X</u>	Lab No.			Received By 1.		Received By 2.		Received By (Laboratory) 3.	
Special Instructions/Comments:				(Signature)	(Time)	(Signature)	(Time)	(Signature)	(Time)
				(Printed Name)	(Date)	(Printed Name)	(Date)	(Printed Name)	(Date)
				(Company)		(Company)		(Laboratory)	



## CORE LABORATORIES

CORE LABORATORIES  
ANALYTICAL REPORT

Job Number: 951427

Prepared For:

GEOSCIENCE CONSULTANTS, LTD.

505 MARQUETTE NW, SUITE 1100  
ALBUQUERQUE, NM 87102

Date: 07/19/95

  
Signature

7-19-95  
Date:

Name: Linda L. Benkers

Core Laboratories  
10703 East Bethany Drive  
Aurora, CO 80014

Title: QA/QC Coordinator



## CORE LABORATORIES

### SAMPLE DELIVERY GROUP NARRATIVE

July 19, 1995

Customer: Geoscience Consultants, Ltd.  
Project: Rexene COC 9053  
Core Laboratories Project Number: 951427

---


#### Method 8270 GC/MS Organics

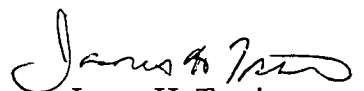
The matrix spike on sample 951427-7 (9506221205) non aqueous had recovery of hexachlorobutadiene at 104% and m&p cresol recovery at 190% with acceptance criteria set at 23-86% and 29-129% respectively.

The matrix spike on sample 951427-5 (9506221145) non aqueous had recovery of hexachlorobutadiene at 109% and m&p cresol recovery at 181% with acceptance criteria set at 23-86% and 29-129% respectively.

#### Method 8080 TCLP Pesticides

The matrix spike on sample 951427-5 (9506221145) non aqueous did not show any recovery for endrin or methoxychlor.

  
Linda L. Benkers  
QA/QC Coordinator

  
James H. Travis  
Laboratory Supervisor



# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 10:50

WORK DESCRIPTION: 9506221050

LABORATORY I.D.: 951427-0001

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: USMW-12

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
2 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene	ND	0.5	ug/L			
Toluene	ND	0.5	ug/L			
Ethyl benzene	ND	0.5	ug/L			
Xylenes	ND	0.5	ug/L			
4-Bromofluorobenzene (Surrogate)	99	0	% Recovery	89-110% Limit		
Time Analyzed	1830	0				
0 - PAH'S BY 8270		*1		8270 (2)	06/28/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L			
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	62	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	60	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	74	0	% Recovery	33-141% Limit		
Time Analyzed	1745	0				
Date Extracted	6/27/95	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:00

WORK DESCRIPTION: 9506221100

LABORATORY I.D.: 951427-0002

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: DSMW-3SD

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
6 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene	ND	0.5	ug/L			
Toluene	ND	0.5	ug/L			
Ethyl benzene	ND	0.5	ug/L			
Xylenes	ND	0.5	ug/L			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	89-110% Limit		
Time Analyzed	1911	0				
6 - PAH'S BY 8270		*1		8270 (2)	06/28/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L			
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	76	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	69	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	81	0	% Recovery	33-141% Limit		
Time Analyzed	1846	0				
Date Extracted	6/27/95	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:10

WORK DESCRIPTION: 9506221110

LABORATORY I.D.: 951427-0003

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: DSMW-6SD

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene	ND	0.5	ug/L			
Toluene	ND	0.5	ug/L			
Ethyl benzene	ND	0.5	ug/L			
Xylenes	ND	0.5	ug/L			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	89-110% Limit		
Time Analyzed	1953	0				
8270 - PAH'S BY 8270		*1		8270 (2)	06/28/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L			
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	62	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	57	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	79	0	% Recovery	33-141% Limit		
Time Analyzed	1947	0				
Date Extracted	6/27/95	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:20

WORK DESCRIPTION: 9506221120

LABORATORY I.D.: 951427-0004

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: DSMW-9S

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
6 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene	ND	0.5	ug/L			
Toluene	ND	0.5	ug/L			
Ethyl benzene	ND	0.5	ug/L			
Xylenes	ND	0.5	ug/L			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	89-110% Limit		
Time Analyzed	2034	0				
6 - PAH'S BY 8270		*1		8270 (2)	06/28/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L			
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	64	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	64	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	80	0	% Recovery	33-141% Limit		
Time Analyzed	2049	0				
Date Extracted	6/27/95	0				

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:45

WORK DESCRIPTION: 9506221145

LABORATORY I.D.: 951427-0005

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: MC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Arsenic, non-aqueous TCLP (As)	<2	2	mg/L	TCLP 6010 (2)	07/06/95	GAG
Arsenic, TCLP (As)	<0.5	0.5	mg/L	TCLP 6010 (2)	07/05/95	GAG
Barium, non-aqueous TCLP (Ba)	<20	20	mg/L	TCLP 6010 (2)	07/06/95	GAG
Barium, TCLP (Ba)	<5	5	mg/L	TCLP 6010 (2)	07/05/95	GAG
Cadmium, non-aqueous TCLP (Cd)	1.2	0.4	mg/L	TCLP 6010 (2)	07/06/95	GAG
Cadmium, TCLP (Cd)	<0.1	0.1	mg/L	TCLP 6010 (2)	07/05/95	GAG
Chromium, non-aqueous TCLP (Cr)	2.4	0.4	mg/L	TCLP 6010 (2)	07/06/95	GAG
Chromium, TCLP (Cr)	<0.1	0.1	mg/L	TCLP 6010 (2)	07/05/95	GAG
Lead, non-aqueous TCLP (Pb)	64	2	mg/L	TCLP 6010 (2)	07/06/95	GAG
Lead, TCLP (Pb)	<0.5	0.5	mg/L	TCLP 6010 (2)	07/05/95	GAG
Mercury, non-aqueous TCLP (Hg)	0.18	0.08	mg/L	TCLP 7471 (2)	07/11/95	LMT
Mercury, TCLP (Hg)	<0.003	0.003	mg/L	TCLP 7470 (2)	07/05/95	GEF
Selenium, non-aqueous TCLP (Se)	<4	4	mg/L	TCLP 6010 (2)	07/06/95	GAG
Selenium, TCLP (Se)	<1	1	mg/L	TCLP 6010 (2)	07/05/95	GAG
Silver, non-aqueous TCLP (Ag)	<0.4	0.4	mg/L	TCLP 6010 (2)	07/06/95	GAG
Silver, TCLP (Ag)	<0.1	0.1	mg/L	TCLP 6010 (2)	07/05/95	GAG
TCLP Metals - Weighted Average		*1		Calculated	07/19/95	KCW
Arsenic, TCLP (As)	<0.8	0.8	mg/L			
Barium, TCLP (Ba)	<8	8	mg/L			
Cadmium, TCLP (Cd)	0.2	0.2	mg/L			
Chromium, TCLP (Cr)	0.5	0.2	mg/L			
Lead, TCLP (Pb)	13.0	0.8	mg/L			
Mercury, TCLP (Hg)	0.04	0.02	mg/L			
Selenium, TCLP (Se)	<2	2	mg/L			
Silver, TCLP (Ag)	<0.2	0.2	mg/L			
TCLP - Volatile Organics		*10		8240 (2)	07/05/95	BFR

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# CORE LABORATORIES

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JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:45

WORK DESCRIPTION: 9506221145

LABORATORY I.D.: 951427-0005

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: MC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Benzene	ND	10	ug/L			
Carbon Tetrachloride	ND	50	ug/L			
Chlorobenzene	ND	50	ug/L			
Chloroform	ND	50	ug/L			
1,2-Dichloroethane	ND	50	ug/L			
1,1-Dichloroethene	ND	50	ug/L			
2-Butanone	ND	1000	ug/L			
Tetrachloroethene	ND	50	ug/L			
Trichloroethene	ND	50	ug/L			
Vinyl chloride	ND	100	ug/L			
TCLP Volatile Organics-Nonaqueous		*100		8240 (2)	07/11/95	BFR
Benzene	190	100	ug/L			
Carbon Tetrachloride	ND	500	ug/L			
Chlorobenzene	ND	500	ug/L			
Chloroform	ND	500	ug/L			
1,2-Dichloroethane	ND	500	ug/L			
1,1-Dichloroethene	ND	500	ug/L			
2-Butanone	ND	10000	ug/L			
Tetrachloroethene	ND	500	ug/L			
Trichloroethene	ND	500	ug/L			
Vinyl chloride	ND	1000	ug/L			
TCLP VOLATILE - Weighted Average		*1		Calculated	07/19/95	KCW
Benzene	65	41	ug/L			
Carbon Tetrachloride	<204	204	ug/L			
Chlorobenzene	<204	204	ug/L			
Chloroform	<204	204	ug/L			
1,2-Dichloroethane	<204	204	ug/L			
1,1-Dichloroethene	<204	204	ug/L			
2-Butanone	<4080	4080	ug/L			
Tetrachloroethene	<204	204	ug/L			
Trichloroethene	<204	204	ug/L			
Vinyl chloride	<408	408	ug/L			
TCLP - Base/Neutral/Acid Organics		*10		8270 (2)	07/05/95	MLA
1,4-Dichlorobenzene	ND	100	ug/L			
2,4-Dinitrotoluene	ND	100	ug/L			
Hexachlorobenzene	ND	100	ug/L			
Hexachlorobutadiene	ND	100	ug/L			
Hexachloroethane	ND	100	ug/L			
Nitrobenzene	ND	100	ug/L			

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS

07/19/95

LAB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:45

WORK DESCRIPTION: 9506221145

LABORATORY I.D.: 951427-0005

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: MC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Pyridine	ND	100	ug/L			
o-Cresol (2-Methylphenol)	ND	100	ug/L			
m & p-Cresol (3 & 4-Methylphenol)	ND	100	ug/L			
Pentachlorophenol	ND	500	ug/L			
2,4,5-Trichlorophenol	ND	100	ug/L			
2,4,6-Trichlorophenol	ND	100	ug/L			
TCLP Base/Neutral/Acid-Nonaqueous		*40000		8270 (2)	07/10/95	MLA
1,4-Dichlorobenzene	ND	400000	ug/L			
2,4-Dinitrotoluene	ND	400000	ug/L			
Hexachlorobenzene	ND	400000	ug/L			
Hexachlorobutadiene	ND	400000	ug/L			
Hexachloroethane	ND	400000	ug/L			
Nitrobenzene	ND	400000	ug/L			
Pyridine	ND	400000	ug/L			
o-Cresol (2-Methylphenol)	ND	400000	ug/L			
m & p-Cresol (3 & 4-Methylphenol)	ND	400000	ug/L			
Pentachlorophenol	ND	2000000	ug/L			
2,4,5-Trichlorophenol	ND	400000	ug/L			
2,4,6-Trichlorophenol	ND	400000	ug/L			
TCLP BNA - Weighted Average		*1		Calculated	07/19/95	KCW
1,4-Dichlorobenzene	<81300	81300	ug/L			
2,4-Dinitrotoluene	<81300	81300	ug/L			
Hexachlorobenzene	<81300	81300	ug/L			
Hexachlorobutadiene	<81300	81300	ug/L			
Hexachloroethane	<81300	81300	ug/L			
Nitrobenzene	<81300	81300	ug/L			
Pyridine	<81300	81300	ug/L			
o-Cresol (2-Methylphenol)	<81300	81300	ug/L			
m & p-Cresol (3 & 4-Methylphenol)	<81300	81300	ug/L			
Pentachlorophenol	<406000	406000	ug/L			
2,4,5-Trichlorophenol	<81300	81300	ug/L			
2,4,6-Trichlorophenol	<81300	81300	ug/L			
LP Pesticides		*100		8080 (2)	07/10/95	LB
Chlordane	ND	1.40	ug/L			
Endrin	ND	0.600	ug/L			
Heptachlor	ND	0.300	ug/L			
Heptachlor epoxide	ND	8.30	ug/L			
gamma-BHC	ND	0.400	ug/L			
Methoxychlor	ND	18	ug/L			

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:45

WORK DESCRIPTION: 9506221145

LABORATORY I.D.: 951427-0005

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: MC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Toxaphene	ND	24	ug/L			
TCLP Pesticides - Nonaqueous		*16000		8080 (2)	07/11/95	LB
Chlordane	ND	2240	ug/L			
1,2-Dichloroethane	ND	960	ug/L			
Heptachlor	ND	480	ug/L			
Heptachlor epoxide	ND	13280	ug/L			
gamma-BHC	ND	640	ug/L			
Methoxychlor	ND	28800	ug/L			
Toxaphene	ND	38400	ug/L			
TCLP Pesticides-Weighted Average		*1		Calculated	07/19/95	KCW
Chlordane	<456	456	ug/L			
Endrin	<195	195	ug/L			
Heptachlor	<98	98	ug/L			
Heptachlor epoxide	<2700	2700	ug/L			
gamma-BHC	<130	130	ug/L			
Methoxychlor	<5860	5860	ug/L			
Toxaphene	<7810	7810	ug/L			
P Herbicides		*100		8150 (2)	07/10/95	LB
2,4-D	ND	12	ug/L			
2,4,5-TP (Silvex)	ND	1.70	ug/L			
P Herbicides-Nonaqueous		*8000		8150 (2)	07/10/95	LB
2,4-D	ND	32000	ug/L			
2,4,5-TP (Silvex)	ND	4480	ug/L			
P Herbicides-Weighted Average		*1		Calculated	07/19/95	KCW
2,4-D	<6510	6510	ug/L			
2,4,5-TP (Silvex)	<910	910	ug/L			
P ZHE Physical Characterization		*1		1311 (2)	06/30/95	BPB
% Solids	<0.5	0.5	%			
% Liquid	100	0.5	%			
% Aqueous-Extract	65.8	0.5	%			
% Non-aqueous-Extract	34.2	0.5	%			
TCLP Extraction Date	06/30/95	0				
Density of TCLP Extract	0.8/1.0	0.1	Kg/L	NON-AQ./AQ		

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053  
DATE SAMPLED: 06/22/95  
TIME SAMPLED: 11:45  
WORK DESCRIPTION: 9506221145

LABORATORY I.D.: 951427-0005  
DATE RECEIVED: 06/23/95  
TIME RECEIVED: 11:00  
REMARKS: MC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
TCLP Physical Characterization		*1		1311 (2)	06/29/95	BPB
% Solids	<0.5	0.5	%			
% Liquid	100	0.5	%			
% Aqueous-Extract	79.7	0.5	%			
% Non-aqueous-Extract	20.3	0.5	%			
TCLP Extraction Date	06/29/95	0				
Density of TCLP Extract	0.8/1.0	0.1	Kg/L	NON-AQ./AQ.		

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:55

WORK DESCRIPTION: 9506221155

LABORATORY I.D.: 951427-0006

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: CPC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Arsenic, TCLP (As)	0.5	0.5	mg/L	TCLP 6010 (2)	07/05/95	GAG
Barium, TCLP (Ba)	<5	5	mg/L	TCLP 6010 (2)	07/05/95	GAG
Cadmium, TCLP (Cd)	<0.1	0.1	mg/L	TCLP 6010 (2)	07/05/95	GAG
Chromium, TCLP (Cr)	<0.1	0.1	mg/L	TCLP 6010 (2)	07/05/95	GAG
Lead, TCLP (Pb)	<0.5	0.5	mg/L	TCLP 6010 (2)	07/05/95	GAG
Mercury, TCLP (Hg)	<0.003	0.003	mg/L	TCLP 7470 (2)	07/05/95	GEF
Selenium, TCLP (Se)	<1	1	mg/L	TCLP 6010 (2)	07/05/95	GAG
Silver, TCLP (Ag)	<0.1	0.1	mg/L	TCLP 6010 (2)	07/05/95	GAG
TCLP - Volatile Organics		*10		8240 (2)	07/05/95	BFR
Benzene	ND	10	ug/L			
Carbon Tetrachloride	ND	50	ug/L			
Chlorobenzene	ND	50	ug/L			
Chloroform	ND	50	ug/L			
1,2-Dichloroethane	ND	50	ug/L			
1,1-Dichloroethene	ND	50	ug/L			
2-Butanone	ND	1000	ug/L			
Tetrachloroethene	ND	50	ug/L			
Trichloroethene	ND	50	ug/L			
Vinyl chloride	ND	100	ug/L			
TCLP - Base/Neutral/Acid Organics		*10		8270 (2)	07/05/95	MLA
1,4-Dichlorobenzene	ND	100	ug/L			
2,4-Dinitrotoluene	ND	100	ug/L			
Hexachlorobenzene	ND	100	ug/L			
Hexachlorobutadiene	ND	100	ug/L			
Hexachloroethane	ND	100	ug/L			
Nitrobenzene	ND	100	ug/L			
Pyridine	ND	100	ug/L			
o-Cresol (2-Methylphenol)	ND	100	ug/L			
m & p-Cresol (3 & 4-Methylphenol)	ND	100	ug/L			
Pentachlorophenol	ND	500	ug/L			
2,4,5-Trichlorophenol	ND	100	ug/L			
2,4,6-Trichlorophenol	ND	100	ug/L			
TCLP Pesticides		*100		8080 (2)	07/10/95	LB

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 11:55

WORK DESCRIPTION: 9506221155

LABORATORY I.D.: 951427-0006

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: CPC

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Chlordane	ND	1.40	ug/L			
Endrin	ND	0.600	ug/L			
Heptachlor	ND	0.300	ug/L			
Heptachlor epoxide	ND	8.30	ug/L			
gamma-BHC	ND	0.400	ug/L			
Methoxychlor	ND	18	ug/L			
Toxaphene	ND	24	ug/L			
TCLP Herbicides		*100		8150 (2)	07/10/95	LB
2,4-D	ND	12	ug/L			
2,4,5-TP (Silvex)	ND	1.70	ug/L			
TCLP ZHE Physical Characterization		*1		1311 (2)	06/30/95	BPB
% Solids	<0.5	0.5	%			
% Liquid	100	0.5	%			
% Aqueous-Extract	100	0.5	%			
% Non-aqueous-Extract	<0.5	0.5	%			
TCLP Extraction Date	06/30/95	0				
Density of TCLP Extract	1.0	0.1	Kg/L			
TCLP Physical Characterization		*1		1311 (2)	06/29/95	BPB
% Solids	<0.5	0.5	%			
% Liquid	100	0.5	%			
% Aqueous-Extract	100	0.5	%			
% Non-aqueous-Extract	<0.5	0.5	%			
TCLP Extraction Date	06/29/95	0				
Density of TCLP Extract	1.0	0.1	Kg/L			

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 12:05

WORK DESCRIPTION: 9506221205

LABORATORY I.D.: 951427-0007

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: MW-10

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Arsenic, non-aqueous TCLP (As)	40	2	mg/L	TCLP 6010 (2)	06/28/95	GAG
Barium, non-aqueous TCLP (Ba)	<20	20	mg/L	TCLP 6010 (2)	06/28/95	GAG
Cadmium, non-aqueous TCLP (Cd)	<0.4	0.4	mg/L	TCLP 6010 (2)	06/28/95	GAG
Chromium, non-aqueous TCLP (Cr)	0.4	0.4	mg/L	TCLP 6010 (2)	06/28/95	GAG
Lead, non-aqueous TCLP (Pb)	14	2	mg/L	TCLP 6010 (2)	06/28/95	GAG
Mercury, non-aqueous TCLP (Hg)	0.24	0.08	mg/L	TCLP 7471 (2)	06/28/95	LMT
Selenium, non-aqueous TCLP (Se)	0.4	0.4	mg/L	TCLP 6010 (2)	06/30/95	GAG
Silver, non-aqueous TCLP (Ag)	<0.4	0.4	mg/L	TCLP 6010 (2)	06/30/95	GAG
TCLP Volatile Organics-Nonaqueous		*10000		8240 (2)	06/29/95	BFR
Benzene	14000	10000	ug/L			
Carbon Tetrachloride	ND	50000	ug/L			
Chlorobenzene	ND	50000	ug/L			
Chloroform	ND	50000	ug/L			
1,2-Dichloroethane	ND	50000	ug/L			
1,1-Dichloroethene	ND	50000	ug/L			
2-Butanone	ND	1000000	ug/L			
Tetrachloroethene	ND	50000	ug/L			
Trichloroethene	ND	50000	ug/L			
Vinyl chloride	ND	100000	ug/L			
TCLP Base/Neutral/Acid-Nonaqueous		*40000		8270 (2)	06/28/95	MLA
1,4-Dichlorobenzene	ND	400000	ug/L			
2,4-Dinitrotoluene	ND	400000	ug/L			
Hexachlorobenzene	ND	400000	ug/L			
Hexachlorobutadiene	ND	400000	ug/L			
Hexachloroethane	ND	400000	ug/L			
Nitrobenzene	ND	400000	ug/L			
Pyridine	ND	400000	ug/L			
o-Cresol (2-Methylphenol)	ND	400000	ug/L			
m & p-Cresol (3 & 4-Methylphenol)	ND	400000	ug/L			
Pentachlorophenol	ND	2000000	ug/L			
2,4,5-Trichlorophenol	ND	400000	ug/L			
2,4,6-Trichlorophenol	ND	400000	ug/L			
TCLP Pesticides - Nonaqueous		*8000		8080 (2)	07/04/95	LB

10703 East Bethany Drive  
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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.: REXENE COC #9053

DATE SAMPLED: 06/22/95

TIME SAMPLED: 12:05

WORK DESCRIPTION: 9506221205

LABORATORY I.D.: 951427-0007

DATE RECEIVED: 06/23/95

TIME RECEIVED: 11:00

REMARKS: MW-10

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Chlordane	ND	1120	ug/L			
1,2-Dichloroethane	ND	480	ug/L			
Heptachlor	ND	240	ug/L			
Heptachlor epoxide	ND	6640	ug/L			
gamma-BHC	ND	320	ug/L			
Methoxychlor	ND	14400	ug/L			
Toxaphene	ND	19200	ug/L			
TCLP Herbicides-Nonaqueous		*16000		8150 (2)	07/04/95	LB
2,4-D	ND	64000	ug/L			
2,4,5-TP (Silvex)	ND	8960	ug/L			
TCLP ZHE Physical Characterization		*1		1311 (2)	06/27/95	GEF
% Solids	<0.5	0.5	%			
% Liquid	100	0.5	%			
% Aqueous-Extract	<0.5	0.5	%			
% Non-aqueous-Extract	100	0.5	%			
TCLP Extraction Date	06/27/95	0				
Density of TCLP Extract	0.8	0.1	Kg/L			
TCLP Physical Characterization		*1		1311 (2)	06/23/95	BPB
% Solids	<0.5	0.5	%			
% Liquid	100	0.5	%			
% Aqueous-Extract	<0.5	0.5	%			
% Non-aqueous-Extract	100	0.5	%			
TCLP Extraction Date	06/23/95	0				
Density of TCLP Extract	0.8	0.1	Kg/L			

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# CORE LABORATORIES

## LABORATORY TESTS RESULTS 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.:  
DATE SAMPLED: / /  
TIME SAMPLED: :  
WORK DESCRIPTION: METHOD BLANKLABORATORY I.D.: 951427-0008  
DATE RECEIVED: / /  
TIME RECEIVED: :  
REMARKS:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
2 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene	ND	0.5	ug/L			
Toluene	ND	0.5	ug/L			
Ethyl benzene	ND	0.5	ug/L			
Xylenes	ND	0.5	ug/L			
4-Bromofluorobenzene (Surrogate)	99	0	% Recovery	89-110% Limit		
Time Analyzed	0932	0				
PAH'S BY 8270		*1		8270 (2)	06/28/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L			
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	63	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	55	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	82	0	% Recovery	33-141% Limit		
Time Analyzed	1644	0				
Date Extracted	6/27/95	0				

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY

PARAMETER: Mercury, non-aqueous TCLP (Hg) DATE/TIME ANALYZED: 06/28/95 11:15 QC BATCH NUMBER: 332105  
REPORTING LIMIT/DF: 0.0002 UNITS: mg/L METHOD REFERENCE: TCLP 7471 (2) TECHNICIAN: LMT

BLANK	ICB	06285	<0.0002							
BLANK	CCB	06285	<0.0002							
BLANK	CCB	06285	<0.0002							
BLANK	CCB	06285	<0.0002							
STANDARD	ICV	1121H	0.0039			0.0040	98			
STANDARD	CCV	1013P	0.0026			0.0025	104			
STANDARD	CCV	1013P	0.0024			0.0025	96			
STANDARD	CCV	1013P	0.0025			0.0025	100			
SPIKE	MS	951427-007	0.0044					0.0006	0.0050	76
DUPLICATE	MD	951427-007	0.0006	0.0004	0.0002					

PARAMETER: Arsenic, non-aqueous TCLP (As) DATE/TIME ANALYZED: 06/28/95 14:19 QC BATCH NUMBER: 332382  
REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE: TCLP 6010 (2) TECHNICIAN: GAG

BLANK	ICB	0502B	<0.05							
BLANK	MB	0627	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
STANDARD	CCV	0505D	2.35			2.50	94			
STANDARD	ISB	0616C	0.95			1.00	95			
STANDARD	CCV	0505D	2.34			2.50	94			
STANDARD	ICV	0531B	1.95			2.00	98			
STANDARD	CCV	0505D	2.35			2.50	94			
STANDARD	ISB	0616C	0.96			1.00	96			
STANDARD	CCV	0505D	2.34			2.50	94			
SPIKE	MS	951361-001	0.90					<0.05	1.00	90
DUPLICATE	MD	951427-007	0.94	1.03	9					

PARAMETER: Barium, non-aqueous TCLP (Ba) DATE/TIME ANALYZED: 06/28/95 14:19 QC BATCH NUMBER: 332383  
REPORTING LIMIT/DF: 0.5 UNITS: mg/L METHOD REFERENCE: TCLP 6010 (2) TECHNICIAN: GAG

BLANK	ICB	0502B	<0.5							
BLANK	MB	0627	<0.5							
BLANK	CCB	0502B	<0.5							
BLANK	CCB	0502B	<0.5							
BLANK	CCB	0502B	<0.5							
BLANK	CCB	0502B	<0.5							
STANDARD	CCV	0505D	4.8			5.0	96			
STANDARD	ISB	0616C	0.5			0.5	100			
STANDARD	CCV	0505D	4.7			5.0	94			
STANDARD	ICV	1206H	2.1			2.0	105			
STANDARD	CCV	0505D	4.8			5.0	96			
STANDARD	ISB	0616C	0.5			0.5	100			

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Barium, non-aqueous TCLP (Ba)				DATE/TIME ANALYZED: 06/28/95 14:19				QC BATCH NUMBER: 332383		
REPORTING LIMIT/DF: 0.5 UNITS: mg/L				METHOD REFERENCE : TCLP 6010 (2)				TECHNICIAN: GAG		
STANDARD	CCV	0505D	4.8			5.0	96			
SPIKE	MS	951361-001	0.9							
DUPLICATE	MD	951427-007	<0.5	<0.5	NC			<0.5	1.0	90
PARAMETER: Cadmium, non-aqueous TCLP (Cd)				DATE/TIME ANALYZED: 06/28/95 14:19				QC BATCH NUMBER: 332384		
REPORTING LIMIT/DF: 0.01 UNITS: mg/L				METHOD REFERENCE : TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	ICB	0502B	<0.01							
BLANK	MB	0627	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
STANDARD	CCV	0505D	2.43			2.50	97			
STANDARD	ISB	0616C	1.09			1.00	109			
STANDARD	CCV	0505D	2.37			2.50	95			
STANDARD	ICV	0531B	2.00			2.00	100			
STANDARD	CCV	0505D	2.39			2.50	96			
STANDARD	ISB	0616C	1.11			1.00	111			
STANDARD	CCV	0505D	2.38			2.50	95			
SPIKE	MS	951361-001	0.92							
DUPLICATE	MD	951427-007	<0.01	<0.01	NC			<0.01	1.00	92
PARAMETER: Chromium, non-aqueous TCLP (Cr)				DATE/TIME ANALYZED: 06/28/95 14:19				QC BATCH NUMBER: 332385		
REPORTING LIMIT/DF: 0.01 UNITS: mg/L				METHOD REFERENCE : TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	ICB	0502B	<0.01							
BLANK	MB	0627	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
STANDARD	CCV	0505D	2.29			2.50	92			
STANDARD	ISB	0616C	0.48			0.50	96			
STANDARD	CCV	0505D	2.26			2.50	90			
STANDARD	ICV	0531B	1.92			2.00	96			
STANDARD	CCV	0505D	2.28			2.50	91			
STANDARD	ISB	0616C	0.48			0.50	96			
STANDARD	CCV	0505D	2.30			2.50	92			
SPIKE	MS	951361-001	0.87							
DUPLICATE	MD	951427-007	0.01	0.02	0.01			0.02	1.00	85
PARAMETER: Lead, non-aqueous TCLP (Pb)				DATE/TIME ANALYZED: 06/28/95 14:19				QC BATCH NUMBER: 332386		
REPORTING LIMIT/DF: 0.05 UNITS: mg/L				METHOD REFERENCE : TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	ICB	0502B	<0.05							

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Lead, non-aqueous TCLP (Pb)				DATE/TIME ANALYZED: 06/28/95 14:19				QC BATCH NUMBER: 332386		
REPORTING LIMIT/DF: 0.05 UNITS: mg/L				METHOD REFERENCE: TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	MB	0627	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
STANDARD	CCV	0505D	2.37			2.50	95			
STANDARD	ISB	0616C	1.03			1.00	103			
STANDARD	CCV	0505D	2.35			2.50	94			
STANDARD	ICV	0531B	1.97			2.00	98			
STANDARD	CCV	0505D	2.36			2.50	94			
STANDARD	ISB	0616C	1.08			1.00	108			
STANDARD	CCV	0505D	2.33			2.50	93			
SPIKE	MS	951361-001	1.31					0.50	1.00	81
DUPLICATE	MD	951427-007	0.34	0.34	0					

PARAMETER: Silver, non-aqueous TCLP (Ag)				DATE/TIME ANALYZED: 06/30/95 16:11				QC BATCH NUMBER: 332446		
REPORTING LIMIT/DF: 0.01 UNITS: mg/L				METHOD REFERENCE: TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	ICB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	MB	0627	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
STANDARD	CCV	0605D	2.44			2.50	98			
STANDARD	CCV	0605D	2.53			2.50	101			
STANDARD	CCV	0605D	2.41			2.50	96			
STANDARD	ICV	03020	1.04			1.00	104			
STANDARD	ISB	0616C	1.03			1.00	103			
STANDARD	CCV	0605D	2.45			2.50	98			
STANDARD	ISB	0616C	1.11			1.00	111			
SPIKE	MS	951427-007	0.97					<0.01	1.00	97
DUPLICATE	MD	951427-007	<0.01	<0.01	NC					

PARAMETER: Selenium, non-aqueous TCLP (Se)				DATE/TIME ANALYZED: 06/30/95 16:11				QC BATCH NUMBER: 332447		
REPORTING LIMIT/DF: 0.01 UNITS: mg/L				METHOD REFERENCE: TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	ICB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	MB	0627	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
STANDARD	CCV	0426U	2.55			2.50	102			
STANDARD	CCV	0426U	2.59			2.50	104			
STANDARD	CCV	0426U	2.50			2.50	100			

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER:Selenium, non-aqueous TCLP (Se)				DATE/TIME ANALYZED:06/30/95 16:11				QC BATCH NUMBER:332447		
REPORTING LIMIT/DF: 0.01 UNITS:mg/L				METHOD REFERENCE :TCLP 6010 (2)				TECHNICIAN:GAG		
STANDARD	ICV	0607B	2.01			2.00	100			
STANDARD	ISB	0616C	0.96			1.00	96			
STANDARD	CCV	0426U	2.55			2.50	102			
STANDARD	ISB	0616C	1.05			1.00	105			
SPIKE	MS	951427-007	0.99					0.01	1.00	98
DUPLICATE	MD	951427-007	0.01	<0.01	0.01					

PARAMETER:Silver, TCLP (Ag)				DATE/TIME ANALYZED:07/05/95 20:48				QC BATCH NUMBER:332549		
REPORTING LIMIT/DF: 0.01 UNITS:mg/L				METHOD REFERENCE :TCLP 6010 (2)				TECHNICIAN:GAG		
BLANK	ICB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	MB	0630	<0.01							
BLANK	MB	1311	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
STANDARD	CCV	0605C	2.50			2.50	100			
STANDARD	ICV	03020	1.03			1.00	103			
STANDARD	CCV	0605C	2.56			2.50	102			
STANDARD	CCV	0605C	2.50			2.50	100			
STANDARD	ISB	0616C	0.86			1.00	86			
STANDARD	ISB	0616C	0.86			1.00	86			
STANDARD	CCV	0605C	2.47			2.50	99			
STANDARD	CCV	0605C	2.56			2.50	102			
SPIKE	MS	951416-003	0.83					<0.01	1.00	83
SPIKE	MS	951385-009	1.02					<0.01	1.00	102
SPIKE	PDS	951416-003	0.77					<0.01	1.00	77
DUPLICATE	ED	951385-009	<0.01	<0.01	NC					
DUPLICATE	MD	951385-009	<0.01	<0.01	NC					

PARAMETER:Arsenic, TCLP (As)				DATE/TIME ANALYZED:07/05/95 20:48				QC BATCH NUMBER:332550		
REPORTING LIMIT/DF: 0.05 UNITS:mg/L				METHOD REFERENCE :TCLP 6010 (2)				TECHNICIAN:GAG		
BLANK	ICB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							
BLANK	MB	0630	<0.05							
BLANK	MB	1311	<0.05							
BLANK	CCB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							
STANDARD	CCV	0329K	2.55			2.50	102			
STANDARD	ICV	0607B	2.00			2.00	100			
STANDARD	CCV	0329K	2.61			2.50	104			

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

## ANALYSIS

## DUPLICATES

## REFERENCE STANDARDS

## MATRIX SPIKES

ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or (A-B)	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Arsenic, TCLP (As)			DATE/TIME ANALYZED: 07/05/95 20:48				QC BATCH NUMBER: 332550			
REPORTING LIMIT/DF: 0.05 UNITS: mg/L			METHOD REFERENCE : TCLP 6010 (2)				TECHNICIAN: GAG			
STANDARD	CCV	0329K	2.45			2.50	98			
STANDARD	ISB	0616C	1.12			1.00	112			
STANDARD	ISB	0616C	0.97			1.00	97			
STANDARD	CCV	0329K	2.32			2.50	93			
STANDARD	CCV	0329K	2.41			2.50	96			
SPIKE	MS	951416-003	0.86					<0.05	1.00	86
SPIKE	MS	951385-009	0.90					<0.05	1.00	90
SPIKE	PDS	951416-003	1.11					<0.05	1.00	111
DUPLICATE	ED	951385-009	<0.05	<0.05	NC					
DUPLICATE	MD	951385-009	<0.05	<0.05	NC					

PARAMETER: Barium, TCLP (Ba)

DATE/TIME ANALYZED: 07/05/95 20:48

QC BATCH NUMBER: 332551

REPORTING LIMIT/DF: 0.5 UNITS: mg/L

METHOD REFERENCE : TCLP 6010 (2)

TECHNICIAN: GAG

BLANK	ICB	0628A	<0.5							
BLANK	CCB	0628A	<0.5							
BLANK	CCB	0628A	<0.5							
BLANK	CCB	0628A	<0.5							
BLANK	MB	0630	<0.5							
BLANK	MB	1311	<0.5							
BLANK	CCB	0628A	<0.5							
BLANK	CCB	0628A	<0.5							
STANDARD	CCV	0329K	4.8			5.0	96			
STANDARD	ICV	03020	1.0			1.0	100			
STANDARD	CCV	0329K	4.9			5.0	98			
STANDARD	CCV	0329K	4.8			5.0	96			
STANDARD	ISB	0616C	0.5			0.5	100			
STANDARD	ISB	0616C	0.5			0.5	100			
STANDARD	CCV	0329K	4.7			5.0	94			
STANDARD	CCV	0329K	4.9			5.0	98			
SPIKE	MS	951416-003	1.0					<0.5	5.0	20
SPIKE	MS	951385-009	5.3					0.5	5.0	96
SPIKE	PDS	951416-003	0.8					<0.5	1.0	80
DUPLICATE	ED	951385-009	0.5	0.5	0.0					
DUPLICATE	MD	951385-009	0.5	0.5	0.0					

PARAMETER: Cadmium, TCLP (Cd)

DATE/TIME ANALYZED: 07/05/95 20:48

QC BATCH NUMBER: 332552

REPORTING LIMIT/DF: 0.01 UNITS: mg/L

METHOD REFERENCE : TCLP 6010 (2)

TECHNICIAN: GAG

BLANK	ICB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	MB	0630	<0.01							
BLANK	MB	1311	<0.01							
BLANK	CCB	0628A	<0.01							

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Cadmium, TCLP (Cd)      DATE/TIME ANALYZED: 07/05/95 20:48      QC BATCH NUMBER: 332552										
REPORTING LIMIT/DF: 0.01 UNITS: mg/L      METHOD REFERENCE: TCLP 6010 (2)      TECHNICIAN: GAG										
BLANK	CCB	0628A	<0.01							
STANDARD	CCV	0329K	2.43			2.50	97			
STANDARD	ICV	0607B	1.93			2.00	96			
STANDARD	CCV	0329K	2.46			2.50	98			
STANDARD	CCV	0329K	2.47			2.50	99			
STANDARD	ISB	0616C	0.92			1.00	92			
STANDARD	ISB	0616C	0.94			1.00	94			
STANDARD	CCV	0329K	2.36			2.50	94			
STANDARD	CCV	0329K	2.49			2.50	100			
SPIKE	MS	951416-003	0.80					<0.01	1.00	80
SPIKE	MS	951385-009	0.91					<0.01	1.00	91
SPIKE	PDS	951416-003	0.75					<0.01	1.00	75
DUPLICATE	ED	951385-009	<0.01	<0.01	NC					
DUPLICATE	MD	951385-009	<0.01	<0.01	NC					

PARAMETER: Chromium, TCLP (Cr)      DATE/TIME ANALYZED: 07/05/95 20:48      QC BATCH NUMBER: 332553										
REPORTING LIMIT/DF: 0.01 UNITS: mg/L      METHOD REFERENCE: TCLP 6010 (2)      TECHNICIAN: GAG										
BLANK	ICB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	MB	0630	<0.01							
BLANK	MB	1311	<0.01							
BLANK	CCB	0628A	<0.01							
BLANK	CCB	0628A	<0.01							
STANDARD	CCV	0329K	2.48			2.50	99			
STANDARD	ICV	0607B	1.99			2.00	100			
STANDARD	CCV	0329K	2.54			2.50	102			
STANDARD	CCV	0329K	2.44			2.50	98			
STANDARD	ISB	0616C	0.45			0.50	90			
STANDARD	ISB	0616C	0.45			0.50	90			
STANDARD	CCV	0329K	2.39			2.50	96			
STANDARD	CCV	0329K	2.59			2.50	104			
SPIKE	MS	951416-003	0.73					0.01	1.00	72
SPIKE	MS	951385-009	0.95					<0.01	1.00	95
SPIKE	PDS	951416-003	0.82					0.01	1.00	81
DUPLICATE	ED	951385-009	<0.01	<0.01	NC					
DUPLICATE	MD	951385-009	<0.01	<0.01	NC					

PARAMETER: Lead, TCLP (Pb)      DATE/TIME ANALYZED: 07/05/95 20:48      QC BATCH NUMBER: 332554										
REPORTING LIMIT/DF: 0.05 UNITS: mg/L      METHOD REFERENCE: TCLP 6010 (2)      TECHNICIAN: GAG										
BLANK	ICB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Lead, TCLP (Pb) DATE/TIME ANALYZED: 07/05/95 20:48 QC BATCH NUMBER: 332554										
REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE: TCLP 6010 (2) TECHNICIAN: GAG										
BLANK	CCB	0628A	<0.05							
BLANK	MB	0630	<0.05							
BLANK	MB	1311	<0.05							
BLANK	CCB	0628A	<0.05							
BLANK	CCB	0628A	<0.05							
STANDARD	CCV	0329K	2.44			2.50	98			
STANDARD	ICV	0607B	1.92			2.00	96			
STANDARD	CCV	0329K	2.48			2.50	99			
STANDARD	CCV	0329K	2.41			2.50	96			
STANDARD	ISB	0616C	0.85			1.00	85			
STANDARD	ISB	0616C	0.89			1.00	89			
STANDARD	CCV	0329K	2.32			2.50	93			
STANDARD	CCV	0329K	2.52			2.50	101			
SPIKE	MS	951416-003	0.45					<0.05	1.00	45
SPIKE	MS	951385-009	0.96					<0.05	1.00	96
SPIKE	PDS	951416-003	1.06					<0.05	1.00	106
DUPLICATE	ED	951385-009	<0.05	<0.05	NC					
DUPLICATE	MD	951385-009	<0.05	<0.05	NC					

PARAMETER: Selenium, TCLP (Se) DATE/TIME ANALYZED: 07/05/95 20:48 QC BATCH NUMBER: 332555										
REPORTING LIMIT/DF: 0.1 UNITS: mg/L METHOD REFERENCE: TCLP 6010 (2) TECHNICIAN: GAG										
BLANK	ICB	0628A	<0.1							
BLANK	CCB	0628A	<0.1							
BLANK	CCB	0628A	<0.1							
BLANK	CCB	0628A	<0.1							
BLANK	MB	0630	<0.1							
BLANK	MB	1311	<0.1							
BLANK	CCB	0628A	<0.1							
BLANK	CCB	0628A	<0.1							
STANDARD	CCV	0329K	2.4			2.5	96			
STANDARD	ICV	0607B	1.9			2.0	95			
STANDARD	CCV	0329K	2.5			2.5	100			
STANDARD	CCV	0329K	2.3			2.5	92			
STANDARD	ISB	0616C	1.2			1.0	120			
STANDARD	ISB	0616C	1.1			1.0	110			
STANDARD	CCV	0329K	2.3			2.5	92			
STANDARD	CCV	0329K	2.3			2.5	92			
SPIKE	MS	951416-003	1.3					<0.1	1.0	130
SPIKE	MS	951385-009	1.0					<0.1	1.0	100
SPIKE	PDS	951416-003	1.2					<0.1	1.0	120
DUPLICATE	ED	951385-009	<0.1	<0.1	NC					
DUPLICATE	MD	951385-009	<0.1	<0.1	NC					

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

LAB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

## ANALYSIS

## DUPLICATES

## REFERENCE STANDARDS

## MATRIX SPIKES

ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Mercury, TCLP (Hg)			DATE/TIME ANALYZED: 07/05/95 22:15				QC BATCH NUMBER: 332557			
REPORTING LIMIT/DF: 0.0003 UNITS: mg/L			METHOD REFERENCE: TCLP 7470 (2)				TECHNICIAN: GEF			
BLANK	ICB	07055	<0.0003							
BLANK	CCB	07055	<0.0003							
BLANK	CCB	07055	<0.0003							
BLANK	MB	0705	<0.0003							
BLANK	MB	1311	<0.0003							
STANDARD	ICV	1121H	0.0037			0.0040	92			
STANDARD	CCV	1013P	0.0027			0.0025	108			
STANDARD	CCV	1013P	0.0027			0.0025	108			
SPIKE	MS	951416-003	0.0053					<0.0003	0.0050	106
DUPLICATE	MD	951385-009	<0.0003	<0.0003	NC					
DUPLICATE	ED	951385-009	<0.0003	<0.0003	NC					

PARAMETER: Silver, non-aqueous TCLP (Ag)

DATE/TIME ANALYZED: 07/06/95 20:56

QC BATCH NUMBER: 332633

REPORTING LIMIT/DF: 0.01 UNITS: mg/L

METHOD REFERENCE: TCLP 6010 (2)

TECHNICIAN: GAG

BLANK	ICB	0502B	<0.01							
BLANK	MB	0706	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
STANDARD	CCV	0607J	2.26			2.50	90			
STANDARD	ISB	0616C	0.92			1.00	92			
STANDARD	ISB	0616C	0.83			1.00	83			
STANDARD	CCV	0607J	2.29			2.50	92			
STANDARD	ICV	1206H	2.02			2.00	101			
SPIKE	MS	951543-001	0.89					<0.01	1.00	89
SPIKE	MS	951427-005	1.07					<0.01	1.00	107
SPIKE	PDS	951427-005	0.95					<0.01	1.00	95
DUPLICATE	MD	951427-005	<0.01	<0.01	NC					

PARAMETER: Arsenic, non-aqueous TCLP (As)

DATE/TIME ANALYZED: 07/06/95 20:56

QC BATCH NUMBER: 332634

REPORTING LIMIT/DF: 0.05 UNITS: mg/L

METHOD REFERENCE: TCLP 6010 (2)

TECHNICIAN: GAG

BLANK	ICB	0502B	<0.05							
BLANK	MB	0706	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
STANDARD	CCV	0505D	2.27			2.50	91			
STANDARD	ISB	0616C	0.91			1.00	91			
STANDARD	ISB	0616C	0.90			1.00	90			
STANDARD	CCV	0505D	2.31			2.50	92			
STANDARD	ICV	0531B	1.96			2.00	98			
SPIKE	MS	951543-001	0.93					<0.05	1.00	93
SPIKE	MS	951427-005	1.07					<0.05	1.00	107
SPIKE	PDS	951427-005	1.02					<0.05	1.00	102
DUPLICATE	MD	951427-005	<0.05	<0.05	NC					

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Barium, non-aqueous TCLP (Ba)				DATE/TIME ANALYZED: 07/06/95 20:56				QC BATCH NUMBER: 332635		
REPORTING LIMIT/DF: 0.5 UNITS: mg/L				METHOD REFERENCE : TCLP 6010 (2)				TECHNICIAN: GAG		
BLANK	ICB	0502B	<0.5							
BLANK	MB	0706	<0.5							
BLANK	CCB	0502B	<0.5							
BLANK	CCB	0502B	<0.5							
STANDARD	CCV	0505D	4.8			5.0	96			
STANDARD	ISB	0616C	0.5			0.5	100			
STANDARD	ISB	0616C	0.5			0.5	100			
STANDARD	CCV	0505D	4.8			5.0	96			
STANDARD	ICV	1206H	2.0			2.0	100			
SPIKE	MS	951543-001	1.0					<0.5	1.0	100
SPIKE	MS	951427-005	5.8					<0.5	5.0	116
DUPLICATE	MD	951427-005	<0.5	<0.5	NC					

PARAMETER: Cadmium, non-aqueous TCLP (Cd)  
REPORTING LIMIT/DF: 0.01 UNITS: mg/LDATE/TIME ANALYZED: 07/06/95 20:56  
METHOD REFERENCE : TCLP 6010 (2)QC BATCH NUMBER: 332636  
TECHNICIAN: GAG

BLANK	ICB	0502B	<0.01							
BLANK	MB	0706	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
STANDARD	CCV	0505D	2.31			2.50	92			
STANDARD	ISB	0616C	1.04			1.00	104			
STANDARD	ISB	0616C	1.09			1.00	109			
STANDARD	CCV	0505D	2.36			2.50	94			
STANDARD	ICV	0531B	1.99			2.00	100			
SPIKE	MS	951543-001	0.93					<0.01	1.00	93
SPIKE	MS	951427-005	1.11					0.03	1.00	108
SPIKE	PDS	951427-005	1.00					0.03	1.00	97
DUPLICATE	MD	951427-005	0.03	0.02	0.01					

PARAMETER: Chromium, non-aqueous TCLP (Cr)  
REPORTING LIMIT/DF: 0.01 UNITS: mg/LDATE/TIME ANALYZED: 07/06/95 20:56  
METHOD REFERENCE : TCLP 6010 (2)QC BATCH NUMBER: 332637  
TECHNICIAN: GAG

BLANK	ICB	0502B	<0.01							
BLANK	MB	0706	<0.01							
BLANK	CCB	0502B	<0.01							
BLANK	CCB	0502B	<0.01							
STANDARD	CCV	0505D	2.25			2.50	90			
STANDARD	ISB	0616C	0.46			0.50	92			
STANDARD	ISB	0616C	0.45			0.50	90			
STANDARD	CCV	0505D	2.27			2.50	91			
STANDARD	ICV	0531B	1.92			2.00	96			
SPIKE	MS	951543-001	0.96					0.06	1.00	90
SPIKE	MS	951427-005	1.08					0.06	1.00	102
SPIKE	PDS	951427-005	1.00					0.06	1.00	94
DUPLICATE	MD	951427-005	0.06	0.06	0					

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER:Chromium, non-aqueous TCLP (Cr)				DATE/TIME ANALYZED:07/06/95 20:56				QC BATCH NUMBER:332637		
REPORTING LIMIT/DF: 0.01 UNITS:mg/L				METHOD REFERENCE :TCLP 6010 (2)				TECHNICIAN:GAC		
PARAMETER:Lead, non-aqueous TCLP (Pb)				DATE/TIME ANALYZED:07/06/95 20:56				QC BATCH NUMBER:332638		
REPORTING LIMIT/DF: 0.05 UNITS:mg/L				METHOD REFERENCE :TCLP 6010 (2)				TECHNICIAN:GAC		
BLANK	ICB	0502B	<0.05							
BLANK	MB	0706	<0.05							
BLANK	CCB	0502B	<0.05							
BLANK	CCB	0502B	<0.05							
STANDARD	CCV	0505D	2.30			2.50	92			
STANDARD	ISB	0616C	1.13			1.00	113			
STANDARD	ISB	0616C	1.19			1.00	119			
STANDARD	CCV	0505D	2.31			2.50	92			
STANDARD	ICV	0531B	2.00			2.00	100			
SPIKE	MS	951543-001	1.43					0.49	1.00	94
SPIKE	MS	951427-005	2.71					1.59	1.00	112
SPIKE	PDS	951427-005	2.56					1.59	1.00	97
DUPLICATE	MD	951427-005	1.59	1.53	4					
PARAMETER:Selenium, non-aqueous TCLP (Se)				DATE/TIME ANALYZED:07/06/95 20:56				QC BATCH NUMBER:332639		
REPORTING LIMIT/DF: 0.1 UNITS:mg/L				METHOD REFERENCE :TCLP 6010 (2)				TECHNICIAN:GAC		
BLANK	ICB	0502B	<0.1							
BLANK	MB	0706	<0.1							
BLANK	CCB	0502B	<0.1							
BLANK	CCB	0502B	<0.1							
STANDARD	CCV	0505D	2.3			2.5	92			
STANDARD	ISB	0616C	1.2			1.0	120			
STANDARD	ISB	0616C	1.2			1.0	120			
STANDARD	CCV	0505D	2.3			2.5	92			
STANDARD	ICV	0531B	2.0			2.0	100			
SPIKE	MS	951543-001	0.9					<0.1	1.0	90
SPIKE	MS	951427-005	1.4					<0.1	1.0	140
SPIKE	PDS	951427-005	1.2					<0.1	1.0	120
DUPLICATE	MD	951427-005	<0.1	<0.1	NC					
PARAMETER:Mercury, non-aqueous TCLP (Hg)				DATE/TIME ANALYZED:07/11/95 12:30				QC BATCH NUMBER:332906		
REPORTING LIMIT/DF: 0.0003UNITS:mg/L				METHOD REFERENCE :TCLP 7471 (2)				TECHNICIAN:LM		
BLANK	ICB	07115	<0.0003							
BLANK	CCB	07115	<0.0003							
BLANK	CCB	07115	<0.0003							
BLANK	CCB	07115	<0.0003							
STANDARD	ICV	1121H	0.0037			0.0040	92			
STANDARD	CCV	1013P	0.0025			0.0025	100			
STANDARD	CCV	1013P	0.0023			0.0025	92			
STANDARD	CCV	1013P	0.0024			0.0025	96			

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## CORE LABORATORIES

QUALITY CONTROL REPORT  
07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or ( A-B )	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER:Mercury, non-aqueous TCLP (Hg)				DATE/TIME ANALYZED:07/11/95 12:30				QC BATCH NUMBER:332906		
REPORTING LIMIT/DF: 0.0003UNITS:mg/L				METHOD REFERENCE :TCLP 7471 (2)				TECHNICIAN:LMT		
SPIKE DUPLICATE	MS MD	951427-005 951427-005	0.0043 0.0004	0.0004	0.0000			0.0004	0.0050	78

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

TYPE: BNA ORGANICS - NONAQUEOUS

DATE ANALYZED: 06/28/95 TIME ANALYZED: 14:32 METHOD: 8270 (2)

QC NUMBER: 332333

### MATRIX SPIKES

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
1,4-Dichlorobenzene	MS	951427-7	40000	388000	0	400000	97	400000	ug/L
2,4-Dinitrotoluene	MS	951427-7	40000	440000	0	400000	110	400000	ug/L
Hexachlorobenzene	MS	951427-7	40000	448000	0	400000	112	400000	ug/L
Hexachlorobutadiene	MS	951427-7	40000	416000	0	400000	104	400000	ug/L
Hexachloroethane	MS	951427-7	40000	348000	0	400000	87	400000	ug/L
Nitrobenzene	MS	951427-7	40000	390000	0	400000	98	400000	ug/L
Pyridine	MS	951427-7	40000	320000	0	400000	80	400000	ug/L
o-Cresol (2-Methylphenol)	MS	951427-7	40000	1090000	0	1000000	109	400000	ug/L
m & p-Cresol (3 & 4-Methylphenol)	MS	951427-7	40000	3790000	0	2000000	190	400000	ug/L
Pentachlorophenol	MS	951427-7	40000	1020000	0	1000000	102	2000000	ug/L
2,4,5-Trichlorophenol	MS	951427-7	40000	984000	0	1000000	98	400000	ug/L
2,4,6-Trichlorophenol	MS	951427-7	40000	1040000	0	1000000	104	400000	ug/L

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## CORE LABORATORIES

QUALITY CONTROL REPORT  
07/19/95

003 NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

812 - VOLATILE AROMATIC ORGANICS

DATE ANALYZED: 06/26/95 TIME ANALYZED: 07:29 METHOD: 602 (6)

QC NUMBER:332497

B L A N K S

[illegible]

10703 East Bethany Drive  
Aurora, CO 80014  
(303) 751-1780

PAGE:3

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

02 - VOLATILE AROMATIC ORGANICS

DATE ANALYZED: 06/26/95 TIME ANALYZED: 07:29 METHOD: 602 (6)

QC NUMBER: 332497

### REFERENCE STANDARDS

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Benzene	SB	T062695B	1	20.8	20.0	104	0.5	ug/L
	SBD	T062695B	1	21.5	20.0	108	0.5	ug/L
Toluene	SB	T062695B	1	20.2	20.0	101	0.5	ug/L
	SBD	T062695B	1	20.8	20.0	104	0.5	ug/L
Ethyl benzene	SB	T062695B	1	20.6	20.0	103	0.5	ug/L
	SBD	T062695B	1	21.2	20.0	106	0.5	ug/L
Xylenes	SB	T062695B	1	60.7	60.0	101	0.5	ug/L
	SBD	T062695B	1	62.7	60.0	105	0.5	ug/L
4-Bromofluorobenzene (Surrogate)	SB	T062695B	1	96	100	96	0	89-110% Limit
	SBD	T062695B	1	97	100	97	0	89-110% Limit

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PAGE:4

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

SAMPLE: BNA ORGANICS - NONAQUEOUS

DATE ANALYZED: 07/10/95 TIME ANALYZED: 16:58 METHOD: 8270 (2)

QC NUMBER: 332887

### MATRIX SPIKES

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
1,4-Dichlorobenzene	MS	951427-5	40000	420000	0	400000	105	400000	ug/L
2,4-Dinitrotoluene	MS	951427-5	40000	304000	0	400000	76	400000	ug/L
1,2,4-Trichlorobenzene	MS	951427-5	40000	444000	0	400000	111	400000	ug/L
Hexachlorobutadiene	MS	951427-5	40000	436000	0	400000	109	400000	ug/L
Hexachloroethane	MS	951427-5	40000	364000	0	400000	91	400000	ug/L
1,2-Dichlorobenzene	MS	951427-5	40000	412000	0	400000	103	400000	ug/L
Pyridine	MS	951427-5	40000	392000	0	400000	98	400000	ug/L
o-Cresol (2-Methylphenol)	MS	951427-5	40000	1170000	0	1000000	117	400000	ug/L
m & p-Cresol (3 & 4-Methylphenol)	MS	951427-5	40000	3620000	0	2000000	181	400000	ug/L
Pentachlorophenol	MS	951427-5	40000	1000000	0	1000000	100	2000000	ug/L
2,3,5-Trichlorophenol	MS	951427-5	40000	1030000	0	1000000	103	400000	ug/L
2,3,6-Trichlorophenol	MS	951427-5	40000	1050000	0	1000000	105	400000	ug/L

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## CORE LABORATORIES

QUALITY CONTROL REPORT  
07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

PLP - HERBICIDES - AQUEOUS

DATE ANALYZED: 07/10/95 TIME ANALYZED: 15:34 METHOD: 8150 (2)

QC NUMBER:333037

M A T R I X     S P I K E S

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
2,4-D	MS	951427-6	100	85	0	100	85	12	ug/L
2,4,5-TP (Silvex)	MS	951427-6	100	89	0	100	89	1.70	ug/L

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PAGE:14

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# CORE LABORATORIES

## QUALITY CONTROL REPORT 07/19/95

JOB NUMBER: 951427

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

SAMPLE - PESTICIDES - NONAQUEOUS

DATE ANALYZED: 07/11/95 TIME ANALYZED: 13:01 METHOD: 8080 (2)

QC NUMBER: 333496

### MATRIX SPIKES

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Endrin	MS	951427-5	16000	0	0	800000	0	960	ug/L
Heptachlor	MS	951427-5	16000	391000	0	800000	49	480	ug/L
Heptachlor epoxide	MS	951427-5	16000	346000	0	800000	43	13280	ug/L
gamma-BHC	MS	951427-5	16000	356000	0	800000	44	640	ug/L
Methoxychlor	MS	951427-5	16000	0	0	8000000	0	28800	ug/L

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## CORE LABORATORIES

### RCRA MAXIMUM CONTAMINANT LEVELS

#### TOXICITY CHARACTERISTIC LEACHING PROCEDURE - METALS

Parameter	RCRA Regulatory Level (mg/L)
Arsenic (As)	5.0
Barium (Ba)	100.0
Cadmium (Cd)	1.0
Chromium (Cr)	5.0
Lead (Pb)	5.0
Mercury (Hg)	0.2
Selenium (Se)	1.0
Silver (Ag)	5.0



## CORE LABORATORIES

### RCRA MAXIMUM CONTAMINANT LEVELS

#### TOXICITY CHARACTERISTIC LEACHING PROCEDURE - ORGANICS

RCRA Regulatory Level (ug/L)

##### VOLATILE ORGANIC COMPOUNDS

Benzene	500
Carbon Tetrachloride	500
Chlorobenzene	100000
Chloroform	6000
1,2-Dichloroethane	500
1,1-Dichloroethylene	700
Methyl ethyl ketone	200000
Tetrachloroethylene	700
Trichloroethylene	500
Vinyl chloride	200

##### SEMI-VOLATILE COMPOUNDS

o-Cresol (2-Methylphenol)	200000 **
m & p-Cresol (3 & 4-Methylphenol)	200000 **
1,4-Dichlorobenzene	7500
2,4-Dinitrotoluene	130 *
Hexachlorobenzene	130 *
Hexachlorobutadiene	500
Hexachloroethane	3000
Nitrobenzene	2000
Pentachlorophenol	100000
Pyridine	5000 *
2,4,5-Trichlorophenol	400000
2,4,6-Trichlorophenol	2000

##### PESTICIDE COMPOUNDS

Chlordane	30
Endrin	20
Heptachlor	8
Heptachlor epoxide	8
gamma-BHC (Lindane)	400
Methoxychlor	10000
Toxaphene	500

##### HERBICIDE COMPOUNDS

2,4-D	10000
2,4,5-TP (Silvex)	1000

\*\* Total Cresol (2-, 3-, & 4-Cresol) RCRA regulatory level is 200000 ug/L.

\* Method quantitation limit becomes the RCRA regulatory level.





## CORE LABORATORIES

### QUALITY CONTROL FOOTER

#### METHOD REFERENCES

- (1) EPA 600/4-79-020, Methods For Chemical Analysis Of Water And Wastes, March 1983
- (2) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, November 1986
- (3) Standard Methods For The Examination Of Water And Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-039, Methods For The Determination Of Organics Compounds In Drinking Water, December 1988
- (8) U.S.G.S. Methods For The Determination Of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991, (40 CFR Parts 141 and 142)
- (10) Standard Methods For The Examination Of Water And Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water And Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods Of Soil Analysis, American Society Of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rock; Building Stones, 1981

Comments: Data in QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated. NC = Not Calculable Due To Value(s) Lower Than The Detection Limit.

#### Blank QC Sample Identification

MB Method Blank  
ICB Initial Calibration Blank  
CCB Continuing Calibration Blank

#### Reference Standard QC Sample Identification

LCS Laboratory Control Standard  
RS Reference Standard  
ICV Initial Calibration Verification Standard  
CCV Continuing Calibration Verification Standard  
ISA/ISB ICP Interference Check Samples

#### Spike QC Sample Identification

MS Method (Matrix) Spike  
MSD Method (Matrix) Spike Duplicate  
PDS Post Digestion Spike  
SB Spiked Blank  
SBD Spiked Blank Duplicate

#### Duplicate QC Sample Identification

MD Method (Matrix) Duplicate  
ED Extraction Duplicate  
DD Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "Technician" using the following codes:

#### Subcontract Laboratory

Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP

#### Subcontract Laboratory

Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

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Environmental Science  
and Engineering  
A BDM International Company

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FAX: (301) 459-3064

NASA-WSTF  
PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

No 9424

# Chain of Custody

Date 9/26/95 Page 1 Of 1

Lab Name <b>CORE LABORATORIES</b>			Analysis Request																										
Address <b>10703 East Bethany Drive</b>			Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/GTEX Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals(6)	Priority Pollutant Metals (13)	CAM Metals (18)	TTL/CSTLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	pH/Temp/1	Hg	Number of Containers	
Telephone <b>303/751-1780</b>																													
Samplers (SIGNATURES) <i>Billy Gallegos</i>			Sample Number	Matrix	Location																								
9509260810	H2O	MW-7	X																										3
9509260830	H2O	MW-7	X																										3
9509260905	H2O	MW-4	X																										3
9509260840	H2O	MW-4	X																										3
9509261010	H2O	MW-15	X																								X		4
9509261110	H2O	MW-17	X																								X		4
9509261155	H2O	MW-14	X																							X	X		5
9509261235	H2O	MW-95	X																							X			4
9509261245	H2O	MW-95	X																										3
9509261340	H2O	MW-30	X																							X			4

Project Information		Sample Receipt		Relinquished By		1. Relinquished By		2. Relinquished By		3. Relinquished By		
Project <b>Rexine</b>	Total No. of Containers	Chain of Custody Seals	Rec'd Good Condition/Cold	Conforms to Record	Lab No.	Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)	1. Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)	2. Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)	3. Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)	1. Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)	2. Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)	3. Relinquished By <i>Billy Gallegos</i> (Signature) <i>Billy Gallegos</i> (Printed Name) <b>GCL</b> (Company)

Shipping ID. No.		Via:		Special Instructions/Comments:	
3238365561		FED EX		Normal TAT	



CORE LABORATORIES

CORE LABORATORIES  
ANALYTICAL REPORT

JOB NUMBER: 954368

Prepared For:  
Geoscience Consultants, Ltd.  
Annette Montoya  
505 Marquette NW  
Suite 1100

Albuquerque, NM 87102

Date: 10/30/95

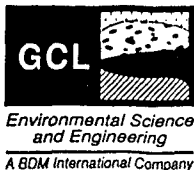
Linda L. Benkers  
Signature

Name: Linda L. Benkers

Title: QA/QC Coordinator

10-30-95  
Date

CORE LABORATORIES, INC.  
Analytical Chemistry Division  
10703 East Bethany Drive  
Aurora, CO 80014



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PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

No 9424

# Chain of Custody

Date 9/26/95 Page 1 of 1

Lab Name CORE LABORATORIES			Analysis Request																							
Address 10703 East Bethany Drive																										
Telephone 303/751-1780																										
Samplers (SIGNATURES)																										
Sample Number	Matrix	Location	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1 TPH/BTEX Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals(8)	Priority Pollutant Metals (13)	CAM Metals (18) TTLC/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	04H/Phenols	Hg	Number of Containers
9509260810	H2O	MW-7	X																							3
9509260830	H2O	MW-7	X																							3
9509260905	H2O	MW-4	X																							3
9509260840	H2O	MW-4	X																							3
9509261010	H2O	MW-15	X																					X		4
9509261110	H2O	MW-17	X																					X		4
9509261155	H2O	MW-14	X																					X	X	5
9509261235	H2O	MW-95	X																					X		4
9509261245	H2O	MW-95	X																							3
9509261340	H2O	MW-30	X																					X		4

Project Information		Sample Receipt		Relinquished By		1. Relinquished By		2. Relinquished By		3. Relinquished By	
Project REXNE	Total No. of Containers 36	Signature Billy Gallegos	Time 1630	Signature	Time	Signature	Time	Signature	Time	Signature	Time
Project Director Trent T	Chain of Custody Seals OK	Printed Name Billy Gallegos	Date 9/26/95	Signature	Time	Signature	Time	Signature	Time	Signature	Time
Charge Code No. 3031-006	Rec'd Good Condition/Cold OK	Printed Name GCL	Date	Signature	Time	Signature	Time	Signature	Time	Signature	Time
Shipping ID. No. 3238.365561	Conforms to Record OK	Company		Signature	Time	Signature	Time	Signature	Time	Signature	Time
Via: FedEx	Lab No. 954368	Received By	1. Received By	Received By	2. Received By	Received By	3. Received By	Received By	4. Received By	Received By	5. Received By
Special Instructions/Comments: Normal TAT		Signature	Time	Signature	Time	Signature	Time	Signature	Time	Signature	Time
		Printed Name	Date	Printed Name	Date	Printed Name	Date	Printed Name	Date	Printed Name	Date
		Company		Company		Company		Company		Company	



## ENVIRONMENTAL TESTING SERVICES

---

### SAMPLE DELIVERY GROUP NARRATIVE

October 30, 1995

Customer: Geoscience Consultants, Ltd.  
Project: Rexene Quarterly Waters COC # 9424  
Core Laboratories Project Number: 954368

---

#### Method 8270 GC/MS Semi-volatiles Analysis:

Sample 954368-5 (9509261010) had low internal standards chrysene-d12 and perylene-d12 when compared to the daily continuing calibration verification standard. This sample also had the surrogate, terphenyl-d14, above method acceptance criteria.

Sample 954368-6 (9509261110) had a low internal standard, perylene-d12, when compared to the daily continuing calibration verification standard.

Both of the above samples were reanalyzed to confirm the internal standards and surrogates.

A handwritten signature in cursive script, reading "Linda L. Benkers".

Linda L. Benkers  
QA/QC Coordinator

A handwritten signature in cursive script, reading "James H. Travis".

James H. Travis  
Laboratory Manager



## CORE LABORATORIES

### J O B   S A M P L E   I N F O R M A T I O N

Report Date: 10/30/95

Job Number.....: 954368  
Customer .....: Geoscience Consultants, Ltd.  
Job Received Date...: 09/27/95

Project Number.....: 95000161  
Customer Project ID....: REXENE COC #9424  
Project Description....: GCL Rexene Quarterly Waters

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
954368-1	9509260810	Water	09/26/95	08:10	09/27/95	10:15
954368-2	9509260830	Water	09/26/95	08:30	09/27/95	10:15
954368-3	9509260905	Water	09/26/95	09:05	09/27/95	10:15
954368-4	9509260840	Water	09/26/95	08:40	09/27/95	10:15
954368-5	9509261010	Water	09/26/95	10:10	09/27/95	10:15
954368-6	9509261110	Water	09/26/95	11:10	09/27/95	10:15
954368-7	9509261155	Water	09/26/95	11:55	09/27/95	10:15
954368-8	9509261235	Water	09/26/95	12:35	09/27/95	10:15
954368-9	9509261245	Water	09/26/95	12:45	09/27/95	10:15
954368-10	9509261340	Water	09/26/95	13:40	09/27/95	10:15



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509260810

Sample Date.....: 09/26/95

Sample Time.....: 08:10

Sample Matrix.....: Water

Laboratory Sample ID: 954368-1

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		4.9	0.5	ug/L		10/05/95
Ethylbenzene		ND	0.5	ug/L		10/05/95
Toluene		ND	0.5	ug/L		10/05/95
Xylenes (total)		ND	0.5	ug/L		10/05/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509260830

Sample Date.....: 09/26/95

Sample Time.....: 08:30

Sample Matrix.....: Water

Laboratory Sample ID: 954368-2

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/05/95
Ethylbenzene		ND	0.5	ug/L		10/05/95
Toluene		ND	0.5	ug/L		10/05/95
Xylenes (total)		ND	0.5	ug/L		10/05/95





# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509260905

Sample Date.....: 09/26/95

Sample Time.....: 09:05

Sample Matrix.....: Water

Laboratory Sample ID: 954368-3

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		2200	50	ug/L		10/09/95
Ethylbenzene		ND	50	ug/L		10/09/95
Toluene		ND	50	ug/L		10/09/95
Xylenes (total)		ND	50	ug/L		10/09/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509260840

Sample Date.....: 09/26/95

Sample Time.....: 08:40

Sample Matrix.....: Water

Laboratory Sample ID: 954368-4

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/05/95
Ethylbenzene		ND	0.5	ug/L		10/05/95
Toluene		ND	0.5	ug/L		10/05/95
Xylenes (total)		ND	0.5	ug/L		10/05/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261010

Sample Date.....: 09/26/95

Sample Time.....: 10:10

Sample Matrix.....: Water

Laboratory Sample ID: 954368-5

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction		Complete		mL	SW-846 3510	10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/06/95
Acenaphthylene		ND	10	ug/L		10/06/95
Anthracene		ND	10	ug/L		10/06/95
Benzo(a)anthracene		ND	10	ug/L		10/06/95
Benzo(b)fluoranthene		ND	10	ug/L		10/06/95
Benzo(k)fluoranthene		ND	10	ug/L		10/06/95
Benzo(ghi)perylene		ND	10	ug/L		10/06/95
Benzo(a)pyrene		ND	10	ug/L		10/06/95
Chrysene		ND	10	ug/L		10/06/95
Dibenzo(a,h)anthracene		ND	10	ug/L		10/06/95
Fluoranthene		ND	10	ug/L		10/06/95
Fluorene		ND	10	ug/L		10/06/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/06/95
1-Methylnaphthalene		ND	10	ug/L		10/06/95
2-Methylnaphthalene		ND	10	ug/L		10/06/95
Naphthalene		ND	10	ug/L		10/06/95
Phenanthrene		ND	10	ug/L		10/06/95
Pyrene		ND	10	ug/L		10/06/95
4-Chloro-3-methylphenol		ND	10	ug/L		10/06/95
2-Chlorophenol		ND	10	ug/L		10/06/95
2,4-Dichlorophenol		ND	10	ug/L		10/06/95
2,4-Dimethylphenol		ND	10	ug/L		10/06/95
2,4-Dinitrophenol		ND	50	ug/L		10/06/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/06/95
2-Nitrophenol		ND	10	ug/L		10/06/95
4-Nitrophenol		ND	50	ug/L		10/06/95
Pentachlorophenol		ND	50	ug/L		10/06/95
Phenol		ND	10	ug/L		10/06/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/06/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		90	50	ug/L		10/07/95
Ethylbenzene		ND	50	ug/L		10/07/95
Toluene		ND	50	ug/L		10/07/95
Xylenes (total)		ND	50	ug/L		10/07/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261110

Sample Date: 09/26/95

Sample Time: 11:10

Sample Matrix: Water

Laboratory Sample ID: 954368-6

Date Received: 09/27/95

Time Received: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Extraction Funnel Liq/Liq Extraction		Complete		mL	SW-846 3510	10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Benaphthene		ND	10	ug/L		10/06/95
Benaphthylene		ND	10	ug/L		10/06/95
Anthracene		ND	10	ug/L		10/06/95
Benzo(a)anthracene		ND	10	ug/L		10/06/95
Benzo(b)fluoranthene		ND	10	ug/L		10/06/95
Benzo(k)fluoranthene		ND	10	ug/L		10/06/95
Benzo(ghi)perylene		ND	10	ug/L		10/06/95
Benzo(a)pyrene		ND	10	ug/L		10/06/95
Chrysene		ND	10	ug/L		10/06/95
Benzo(a,h)anthracene		ND	10	ug/L		10/06/95
Fluoranthene		ND	10	ug/L		10/06/95
Fluorene		ND	10	ug/L		10/06/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/06/95
1-Methylnaphthalene		ND	10	ug/L		10/06/95
2-Methylnaphthalene		ND	10	ug/L		10/06/95
Naphthalene		ND	10	ug/L		10/06/95
Phenanthrene		ND	10	ug/L		10/06/95
Pyrene		ND	10	ug/L		10/06/95
2-Chloro-3-methylphenol		ND	10	ug/L		10/06/95
2-Chlorophenol		ND	10	ug/L		10/06/95
2,4-Dichlorophenol		ND	10	ug/L		10/06/95
2,4-Dimethylphenol		ND	10	ug/L		10/06/95
2,4-Dinitrophenol		ND	50	ug/L		10/06/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/06/95
2-Nitrophenol		ND	10	ug/L		10/06/95
4-Nitrophenol		ND	50	ug/L		10/06/95
Pentachlorophenol		ND	50	ug/L		10/06/95
Phenol		ND	10	ug/L		10/06/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/06/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		390	50	ug/L		10/07/95
Ethylbenzene		ND	50	ug/L		10/07/95
Toluene		ND	50	ug/L		10/07/95
Xylenes (total)		ND	50	ug/L		10/07/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261155

Sample Date: 09/26/95

Sample Time: 11:55

Sample Matrix: Water

Laboratory Sample ID: 954368-7

Date Received: 09/27/95

Time Received: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Mercury (Hg)	Total	<0.0002	0.0002	mg/L	SW-846 7470	09/30/95
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			mL	SW-846 3510	10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene	ND	10	ug/L	10/04/95		
Acenaphthylene	ND	10	ug/L	10/04/95		
Anthracene	ND	10	ug/L	10/04/95		
Benzo(a)anthracene	ND	10	ug/L	10/04/95		
Benzo(b)fluoranthene	ND	10	ug/L	10/04/95		
Benzo(k)fluoranthene	ND	10	ug/L	10/04/95		
Benzo(ghi)perylene	ND	10	ug/L	10/04/95		
Benzo(a)pyrene	ND	10	ug/L	10/04/95		
Benzofluoranthene	ND	10	ug/L	10/04/95		
Benzo(a,h)anthracene	ND	10	ug/L	10/04/95		
Fluoranthene	ND	10	ug/L	10/04/95		
Fluorene	ND	10	ug/L	10/04/95		
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	10/04/95		
1-Methylnaphthalene	ND	10	ug/L	10/04/95		
2-Methylnaphthalene	ND	10	ug/L	10/04/95		
Naphthalene	ND	10	ug/L	10/04/95		
Phenanthrene	ND	10	ug/L	10/04/95		
Pyrene	ND	10	ug/L	10/04/95		
2-Chloro-3-methylphenol	ND	10	ug/L	10/04/95		
2-Chlorophenol	ND	10	ug/L	10/04/95		
2,4-Dichlorophenol	ND	10	ug/L	10/04/95		
2,4-Dimethylphenol	ND	10	ug/L	10/04/95		
2,4-Dinitrophenol	ND	50	ug/L	10/04/95		
2-Methyl-4,6-dinitrophenol	ND	50	ug/L	10/04/95		
2-Nitrophenol	ND	10	ug/L	10/04/95		
4-Nitrophenol	ND	50	ug/L	10/04/95		
2,4,6-Trichlorophenol	ND	50	ug/L	10/04/95		
2,4,6-Trichlorophenol	ND	10	ug/L	10/04/95		
Volatile Organics -Aromatics					SW-846 8020	
Benzene	5.7	0.5	ug/L	10/07/95		
Ethylbenzene	ND	0.5	ug/L	10/07/95		
Toluene	ND	0.5	ug/L	10/07/95		
Xylenes (total)	ND	0.5	ug/L	10/07/95		



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261235

Sample Date.....: 09/26/95

Sample Time.....: 12:35

Sample Matrix.....: Water

Laboratory Sample ID: 954368-8

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction		Complete		mL	SW-846 3510	10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Benaphthene		ND	10	ug/L		10/04/95
Benaphthylene		ND	10	ug/L		10/04/95
Anthracene		ND	10	ug/L		10/04/95
Benzo(a)anthracene		ND	10	ug/L		10/04/95
Benzo(b)fluoranthene		ND	10	ug/L		10/04/95
Benzo(k)fluoranthene		ND	10	ug/L		10/04/95
Benzo(ghi)perylene		ND	10	ug/L		10/04/95
Benzo(a)pyrene		ND	10	ug/L		10/04/95
Chrysene		ND	10	ug/L		10/04/95
Benzo(a,h)anthracene		ND	10	ug/L		10/04/95
Fluoranthene		ND	10	ug/L		10/04/95
Fluorene		ND	10	ug/L		10/04/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/04/95
1-Methylnaphthalene		ND	10	ug/L		10/04/95
2-Methylnaphthalene		ND	10	ug/L		10/04/95
Naphthalene		ND	10	ug/L		10/04/95
Phenanthrene		ND	10	ug/L		10/04/95
Pyrene		ND	10	ug/L		10/04/95
2-Chloro-3-methylphenol		ND	10	ug/L		10/04/95
2-Chlorophenol		ND	10	ug/L		10/04/95
4-Dichlorophenol		ND	10	ug/L		10/04/95
2,4-Dimethylphenol		ND	10	ug/L		10/04/95
2,4-Dinitrophenol		ND	50	ug/L		10/04/95
Methyl-4,6-dinitrophenol		ND	50	ug/L		10/04/95
4-Nitrophenol		ND	10	ug/L		10/04/95
2-Nitrophenol		ND	50	ug/L		10/04/95
Pentachlorophenol		ND	50	ug/L		10/04/95
Phenol		ND	10	ug/L		10/04/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/04/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/10/95
Ethylbenzene		ND	0.5	ug/L		10/10/95
Toluene		ND	0.5	ug/L		10/10/95
Xylenes (total)		ND	0.5	ug/L		10/10/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261245

Sample Date.....: 09/26/95

Sample Time.....: 12:45

Sample Matrix.....: Water

Laboratory Sample ID: 954368-9

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/05/95
Ethylbenzene		ND	0.5	ug/L		10/05/95
Toluene		ND	0.5	ug/L		10/05/95
Xylenes (total)		ND	0.5	ug/L		10/05/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261340

Sample Date.....: 09/26/95

Sample Time.....: 13:40

Sample Matrix.....: Water

Laboratory Sample ID: 954368-10

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Extraction Funnel Liq/Liq Extraction		Complete		mL	SW-846 3510	10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/04/95
Acenaphthylene		ND	10	ug/L		10/04/95
Anthracene		ND	10	ug/L		10/04/95
Benzo(a)anthracene		ND	10	ug/L		10/04/95
Benzo(b)fluoranthene		ND	10	ug/L		10/04/95
Benzo(k)fluoranthene		ND	10	ug/L		10/04/95
Benzo(ghi)perylene		ND	10	ug/L		10/04/95
Benzo(a)pyrene		ND	10	ug/L		10/04/95
Chrysene		ND	10	ug/L		10/04/95
Dibenzo(a,h)anthracene		ND	10	ug/L		10/04/95
Fluoranthene		ND	10	ug/L		10/04/95
Fluorene		ND	10	ug/L		10/04/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/04/95
1-Methylnaphthalene		ND	10	ug/L		10/04/95
2-Methylnaphthalene		ND	10	ug/L		10/04/95
Naphthalene		ND	10	ug/L		10/04/95
Phenanthrene		ND	10	ug/L		10/04/95
Pyrene		ND	10	ug/L		10/04/95
2-Chloro-3-methylphenol		ND	10	ug/L		10/04/95
Chlorophenol		ND	10	ug/L		10/04/95
4-Dichlorophenol		ND	10	ug/L		10/04/95
2,4-Dimethylphenol		ND	10	ug/L		10/04/95
2,4-Dinitrophenol		ND	50	ug/L		10/04/95
Methyl-4,6-dinitrophenol		ND	50	ug/L		10/04/95
Nitrophenol		ND	10	ug/L		10/04/95
Nitrophenol		ND	50	ug/L		10/04/95
Pentachlorophenol		ND	50	ug/L		10/04/95
Phenol		ND	10	ug/L		10/04/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/04/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/05/95
Ethylbenzene		ND	0.5	ug/L		10/05/95
Toluene		ND	0.5	ug/L		10/05/95
Aromatics (total)		ND	0.5	ug/L		10/05/95





# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Method.....: SW-846 7470  
Description.: Mercury (CVAA)  
Parameter...: Mercury (Hg)

Batch.....: 2335  
Detection Limit....: 0.0002  
Units.....: mg/L

Analyst....: lmt

QC	Lab ID	M	Reagent	QC Result	Dil. Value	Orig. Value	Alt. Value	Calculation	Result	Analyzed
CV			950911B	0.00407	0.004000			% REC	101.8	09/30/95 1115
ICB				0.00006						09/30/95 1117
MD	954371-1	T		0.00013		0.00013		ABS Diff.	0.00000	09/30/95 1120
MS	957371-7	T	950929C	0.00506	0.005000	0.00006		% REC	100.0	09/30/95 1123
MB				0.00019						09/30/95 1132
SB			950929C	0.00536	0.005000	0.00019		% REC	107.2	09/30/95 1133
CCV			1013P	0.00264	0.002500			% REC	105.6	09/30/95 1135
CCB				-0.00001						09/30/95 1137
SBD			950929C	0.00496	0.005000	0.00019	0.00536	% REC	99.2	09/30/95 1138
								RPD	7.8	
CCV			1013P	0.00241	0.002500			% REC	96.4	09/30/95 1155
CCB				-0.00004						09/30/95 1157
MD	954367-1	D		0.00006		0.00009		ABS Diff.	0.00003	09/30/95 1202
MS	954367-2	D	950929C	0.00506	0.005000	-0.00005		% REC	102.2	09/30/95 1205
CCV			1013P	0.00237	0.002500			% REC	94.8	09/30/95 1215
CCB				0.00002						09/30/95 1217
MB				0.00002						09/30/95 1220
EB				-0.00001						09/30/95 1222
DD	954329-1			0.00053		0.00030		ABS Diff.	0.00023	09/30/95 1225
ED	954329-1			0.00033		0.00030		ABS Diff.	0.00003	09/30/95 1227
SB			950929C	0.00509	0.005000			% REC	101.8	09/30/95 1228
MS	954329-1		950929C	0.00502	0.005000	0.00030		% REC	94.4	09/30/95 1232
CCV			1013P	0.00264	0.002500			% REC	105.6	09/30/95 1233
CCB				0.00006						09/30/95 1235



# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Method .....: SW-846 8020

Batch.....: 2704

Analyst ....: dmj

Method Description.: Volatile Organics -Aromatics

Units.....: ug/L

MB	Method Blank				10/05/95	1325
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5					
Ethylbenzene	ND	0.5					
Toluene	ND	0.5					
Xylenes (total)	ND	0.5					

SB	Spiked Blank		T100595B			10/05/95	1129
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	21.4	0.5	20.0			% REC	107.0
Ethylbenzene	21.0	0.5	20.0			% REC	105.0
Toluene	21.1	0.5	20.0			% REC	105.5
Xylenes (total)	62.0	0.5	60.0			% REC	103.3

SBD	Spiked Blank Duplicate		T100595B			10/05/95	1207
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	20.6	0.5	20.0		21.4	% REC	103.0
Ethylbenzene	20.1	0.5	20.0		21.0	RPD	3.8
Toluene	20.3	0.5	20.0		21.1	% REC	100.5
Xylenes (total)	60.0	0.5	60.0		62.0	RPD	4.4
						% REC	101.5
						RPD	3.9
						% REC	100.0
						RPD	3.3

Method .....: SW-846 8020

Batch.....: 2705

Analyst ....: dmj

Method Description.: Volatile Organics -Aromatics

Units.....: ug/L

MB	Method Blank					10/06/95	1024
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5					
Ethylbenzene	ND	0.5					
Toluene	ND	0.5					
Xylenes (total)	ND	0.5					



# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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SB	Spiked Blank	T100695B			10/06/95	1643
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	21.7	0.5	20.0			% REC	108.5
Ethylbenzene	21.1	0.5	20.0			% REC	105.5
Toluene	21.5	0.5	20.0			% REC	107.5
Xylenes (total)	63.1	0.5	60.0			% REC	105.2

SBD	Spiked Blank Duplicate	T100695B			10/06/95	1720
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	21.7	0.5	20.0		21.7	% REC RPD	108.5 0.0
Ethylbenzene	21.1	0.5	20.0		21.1	% REC RPD	105.5 0.0
Toluene	21.4	0.5	20.0		21.5	% REC RPD	107.0 0.5
Xylenes (total)	62.9	0.5	60.0		63.1	% REC RPD	104.8 0.3

Method .....: SW-846 8020  
Method Description.: Volatile Organics -Aromatics

Batch.....: 2707  
Units.....: ug/L

Analyst ....: dmj

MB	Method Blank				10/09/95	1151
----	--------------	--	--	--	----------	------

Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5					
Ethylbenzene	ND	0.5					
Toluene	ND	0.5					
Xylenes (total)	ND	0.5					

Method .....: SW-846 8020  
Method Description.: Volatile Organics -Aromatics

Batch.....: 2708  
Units.....: ug/L

Analyst ....: dmj

MB	Method Blank				10/10/95	1325
----	--------------	--	--	--	----------	------

Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5					
Ethylbenzene	ND	0.5					
Toluene	ND	0.5					
Xylenes (total)	ND	0.5					



# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Method .....: SW-846 8270

Batch.....: 2797

Analyst ....: mla

Method Description.: Semivolatile Organics (Client List)

Units.....: ug/L

MB	Method Blank	MB0744			10/04/95	1923
----	--------------	--------	--	--	----------	------

Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
benzophenone	ND	10					
benzophenylene	ND	10					
anthracene	ND	10					
benzo(a)anthracene	ND	10					
benzo(b)fluoranthene	ND	10					
benzo(k)fluoranthene	ND	10					
benzo(ghi)perylene	ND	10					
benzo(a)pyrene	ND	10					
pyrene	ND	10					
benzo(a,h)anthracene	ND	10					
fluoranthene	ND	10					
fluorene	ND	10					
beno(1,2,3-cd)pyrene	ND	10					
1-methylnaphthalene	ND	10					
2-methylnaphthalene	ND	10					
1-naphthalene	ND	10					
2-naphthalene	ND	10					
1-chloro-3-methylphenol	ND	10					
2-chlorophenol	ND	10					
1,2-dichlorophenol	ND	10					
1,4-dimethylphenol	ND	10					
1,3-dinitrophenol	ND	50					
1-methyl-4,6-dinitrophenol	ND	50					
1-nitrophenol	ND	10					
2-nitrophenol	ND	50					
1,2,4-trichlorophenol	ND	50					
phenol	ND	10					
1,4,6-Trichlorophenol	ND	10					

Method .....: SW-846 8270

Batch.....: 2798

Analyst ....: mla

Method Description.: Semivolatile Organics (Client List)

Units.....: ug/L

MB	Method Blank	MB0745			10/06/95	1659
----	--------------	--------	--	--	----------	------

Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
benzophenone	ND	10					
benzophenylene	ND	10					
anthracene	ND	10					
benzo(a)anthracene	ND	10					
benzo(b)fluoranthene	ND	10					
benzo(k)fluoranthene	ND	10					
benzo(ghi)perylene	ND	10					
benzo(a)pyrene	ND	10					



# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank		MB0745		10/06/95	1659

Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
rysene	ND	10					
Dibenzo(a,h)anthracene	ND	10					
Fluoranthene	ND	10					
luorene	ND	10					
beno(1,2,3-cd)pyrene	ND	10					
1-Methylnaphthalene	ND	10					
2-Methylnaphthalene	ND	10					
phthalene	ND	10					
enanthrene	ND	10					
rene	ND	10					
4-Chloro-3-methylphenol	ND	10					
2-Chlorophenol	ND	10					
4-Dichlorophenol	ND	10					
4-Dimethylphenol	ND	10					
2,4-Dinitrophenol	ND	50					
2-Methyl-4,6-dinitrophenol	ND	50					
Nitrophenol	ND	10					
Nitrophenol	ND	50					
ntachlorophenol	ND	50					
Phenol	ND	10					
2,4,6-Trichlorophenol	ND	10					



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Method.....: SW-846  
Method Code.....: 8020

Batch.....: 2704  
Analyst.....: dmj

Surrogate	Dilution Factor	Units
FB (Surrogate)	3.5	ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	19.8	20.0800	98.6		10/05/95	1325
		SB	19.0	20.0800	94.6		10/05/95	1129
		SBD	19.1	20.0800	95.1		10/05/95	1207
954368-2			19.7	20.0800	98.1		10/05/95	1402
954368-4			19.7	20.0800	98.1		10/05/95	1440
954368-9			19.7	20.0800	98.1		10/05/95	1517
954368-10			19.8	20.0800	98.6		10/05/95	1555
954368-1			17.8	20.0800	88.6		10/05/95	1636

Method.....: SW-846  
Method Code.....: 8020

Batch.....: 2705  
Analyst.....: dmj

Surrogate	Dilution Factor	Units
FB (Surrogate)	3.5	ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	19.5	20.0800	97.1		10/06/95	1024
		SB	19.2	20.0800	95.6		10/06/95	1643
		SBD	19.0	20.0800	94.6		10/06/95	1720
954368-7			19.4	20.0800	96.6		10/07/95	0240
954368-5			20.0	20.0800	99.6		10/07/95	0432
954368-6			18.4	20.0800	91.6		10/07/95	0509

Method.....: SW-846  
Method Code.....: 8020

Batch.....: 2707  
Analyst.....: dmj

Surrogate	Dilution Factor	Units
FB (Surrogate)	3.5	ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	19.8	20.0800	98.6		10/09/95	1151
954368-3			18.9	20.0800	94.1		10/09/95	1420



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Method.....: SW-846  
Method Code.....: 8020

Batch.....: 2708  
Analyst.....: dmj

Surrogate	Dilution Factor	Units
BFB (Surrogate)	3.5	ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-8		MB	19.7	20.0800	98.1		10/10/95	1325
			19.4	20.0800	96.6		10/10/95	1547

Method.....: SW-846  
Method Code.....: 8270C

Batch.....: 2797  
Analyst.....: mla

Surrogate	Dilution Factor	Units
2,4,6-Tribromophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		MB	78.35	100.0100	78		10/04/95	1923
			86.26	100.0100	86		10/04/95	2025
			95.03	100.0100	95		10/04/95	2127
			82.07	100.0100	82		10/04/95	2228

Surrogate	Dilution Factor	Units
2-Fluorobiphenyl		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		MB	34.22	50.0100	68		10/04/95	1923
			36.49	50.0100	73		10/04/95	2025
			40.46	50.0100	81		10/04/95	2127
			38.03	50.0100	76		10/04/95	2228

Surrogate	Dilution Factor	Units
2-Fluorophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		MB	47.91	100.0000	48		10/04/95	1923
			50.40	100.0000	50		10/04/95	2025
			51.84	100.0000	52		10/04/95	2127
			50.90	100.0000	51		10/04/95	2228



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Surrogate	Dilution Factor	Units
Nitrobenzene-d5		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	34.88	50.0500	70		10/04/95	1923
954368-7			36.94	50.0500	74		10/04/95	2025
954368-8			39.58	50.0500	79		10/04/95	2127
954368-10			36.51	50.0500	73		10/04/95	2228

Surrogate	Dilution Factor	Units
Phenol-d6		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	25.70	100.0200	26		10/04/95	1923
954368-7			31.45	100.0200	31		10/04/95	2025
954368-8			30.20	100.0200	30		10/04/95	2127
954368-10			29.60	100.0200	30		10/04/95	2228

Surrogate	Dilution Factor	Units
Terphenyl-d14		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	44.58	50.0000	89		10/04/95	1923
954368-7			39.97	50.0000	80		10/04/95	2025
954368-8			50.88	50.0000	102		10/04/95	2127
954368-10			42.32	50.0000	85		10/04/95	2228

Method.....: SW-846  
Method Code.....: 8270CBatch.....: 2798  
Analyst.....: mla

Surrogate	Dilution Factor	Units
2,4,6-Tribromophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	81.64	100.0100	82		10/06/95	1659
954369-1			101.32	100.0100	101		10/06/95	1800
954368-6			101.13	100.0100	101		10/06/95	1902
954368-5			102.17	100.0100	102		10/06/95	2004
954368-5			97.96	100.0100	98		10/09/95	0014





# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Surrogate	Dilution Factor	Units
2-Fluorobiphenyl		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	29.81	50.0100	60		10/06/95	1659
954369-1			41.36	50.0100	83		10/06/95	1800
954368-6			35.99	50.0100	72		10/06/95	1902
954368-5			39.95	50.0100	80		10/06/95	2004
954368-5			39.35	50.0100	79		10/09/95	0014

Surrogate	Dilution Factor	Units
2-Fluorophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	48.22	100.0000	48		10/06/95	1659
954369-1			47.16	100.0000	47		10/06/95	1800
954368-6			61.68	100.0000	62		10/06/95	1902
954368-5			73.95	100.0000	74		10/06/95	2004
954368-5			69.92	100.0000	70		10/09/95	0014

Surrogate	Dilution Factor	Units
Nitrobenzene-d5		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	29.32	50.0500	59		10/06/95	1659
954369-1			40.51	50.0500	81		10/06/95	1800
954368-6			34.42	50.0500	69		10/06/95	1902
954368-5			41.99	50.0500	84		10/06/95	2004
954368-5			41.83	50.0500	84		10/09/95	0014

Surrogate	Dilution Factor	Units
Phenol-d6		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	49.78	100.0200	50		10/06/95	1659
954369-1			60.24	100.0200	60		10/06/95	1800
954368-6			76.31	100.0200	76		10/06/95	1902
954368-5			85.84	100.0200	86		10/06/95	2004
954368-5			78.55	100.0200	79		10/09/95	0014



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Surrogate	Dilution Factor	Units
Terphenyl-d14		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	44.72	50.0000	89		10/06/95	1659
954369-1			39.94	50.0000	80		10/06/95	1800
954368-6			50.43	50.0000	101		10/06/95	1902
954368-5			119.26	50.0000	239	X	10/06/95	2004
954368-5			133.66	50.0000	267	X	10/09/95	0014



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

#### REFERENCES AND NOTES

Report Date: 10/30/95

#### Volatile Organics

Method 602/8020

##### Surrogate Recovery Limits

	Water	Soil
Bromofluorobenzene	89-110%	78-123%
Spike/Spike Duplicate Recovery Limits		
	Water	Soil
Benzene	75-125%	75-125%
Ethylbenzene	75-125%	75-125%
Toluene	75-125%	75-125%
Xylenes	75-125%	75-125%

Method 8015 Modified

##### Spike/Spike Duplicate Recovery Limits

	Water	Soil
TVPH	81-124%	81-124%
TEPH	54-135%	54-135%

Method 624/8240/8260

##### Surrogate Recovery Limits

	Water	Soil
Dibromofluoromethane	86-118%	80-120%
Toluene-(d8)	88-110%	81-117%
4-Bromofluorobenzene	86-115%	74-121%

##### Spike/Spike Duplicate Recovery & RPD Limits

	Water Recovery	RPD	Soil Recovery	RPD
1,1-Dichloroethene	61-145%	14	59-172%	22
Trichloroethene	71-120%	14	62-137%	24
Benzene	76-127%	11	66-142%	21
Toluene	76-125%	13	59-139%	21
Chlorobenzene	75-130%	13	60-133%	21

#### Pesticides/PCB Organics

Method 608/8080

##### Surrogate Recovery Limits

	Water	Soil
Tetrachloro-m-xylene	60-150%	60-150%
4,4'-Dichlorobiphenyl	60-150%	60-150%

Method 8140

##### Surrogate Recovery Limits

	Water	Soil
Tributylphosphate	36-152%	36-152%
Triphenylphosphate	40-152%	40-152%

#### Base/Neutral/Acid Organics

Method 625/8270

##### Surrogate Recovery Limits

	Water	Soil
Nitrobenzene-d5	35-114%	23-120%
2-Fluorobiphenyl	43-116%	30-115%
4-Terphenyl-d14	33-141%	18-137%
Phenol-d6	10-94%	24-113%
2-Fluorophenol	21-100%	25-121%
2,4,6-Tribromophenol	10-123%	19-122%



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

#### Matrix Spike/Matrix Spike Duplicate Recovery & RPD Limits

	Water		Soil	
	Recovery	RPD	Recovery	RPD
Phenol	12-110%	42	26-90%	35
2-Chlorophenol	27-123%	40	25-102%	50
1,4-Dichlorobenzene	36-97%	28	28-104%	27
N-Nitroso-di-n-propylamine	41-116%	38	41-126%	38
1,2,4-Trichlorobenzene	39-98%	28	38-107%	23
4-Chloro-3-methylphenol	23-97%	42	26-103%	33
Acenaphthene	46-118%	31	31-137%	19
4-Nitrophenol	10-80%	50	11-114%	50
2,4-Dinitrotoluene	24-96%	38	28-89%	47
Pentachlorophenol	9-103%	50	17-109%	47
Pyrene	26-127%	31	35-142%	36



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989
- (3) Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988
- (8) U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)
- (10) Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rocks; Building Stones, 1981

Comments: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated.

NC = Not Calculable Due to Value(s) lower than the Detection Limit.

BLANK QC SAMPLE IDENTIFICATION



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

MB	Method Blank
ICB	Initial Calibration Blank
CCB	Continuing Calibration Blank

#### SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion Spike
SB	Spiked Blank
SBD	Spike Blank Duplicate

#### REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS	Laboratory Control Standard
RS	Reference Standard
ICV	Initial Calibration Verification Standard
CCV	Continuing Calibration Verification Standard
ISA/ISB	ICP Interface Check Sample
ICL	Initial Calibration/Laboratory Control Sample
DSC	Distilled Standard Check

#### DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

#### SUBCONTRACT LABORATORY

#### CODE

Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP
Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

#### EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method.

QUALITY ASSURANCE METHODS  
REFERENCES AND NOTES

Report Date: 10/30/95

- This flag is also used when estimating the concentration of a tentatively identified compound.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
  - Y - Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits.
  - Z - Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
  - \* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
  - ^ - Used to indicate that a standard is outside specified quality control limits.



☐ NASA-WSTF  
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Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

## Chain of Custody

**Distribution:** White, Canary-Laboratory • Pink, GCL





CORE LABORATORIES

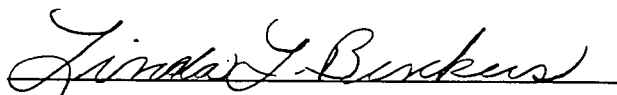
CORE LABORATORIES  
ANALYTICAL REPORT

JOB NUMBER: 954369

Prepared For:  
Geoscience Consultants, Ltd.  
Annette Montoya  
505 Marquette NW  
Suite 1100

Albuquerque, NM 87102

Date: 10/30/95

  
Signature

Name: Linda L. Benkers

Title: QA/QC Coordinator

10-30-95  
Date

CORE LABORATORIES, INC.  
Analytical Chemistry Division  
10703 East Bethany Drive  
Aurora, CO 80014



Environmental Science  
and Engineering  
A BDM International Company

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No 9425

# Chain of Custody

Date 9/26/95 Page 1 of 1

Lab Name <u>CORE LABORATORIES</u> Address <u>10703 East Bethany Drive</u> <u>Aurora, CO 80014-2696</u> Telephone <u>303/751-1780</u>			Analysis Request																							
Sample Number	Matrix	Location	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	PCRA Metals(8)	Priority Pollutant Metals (13)	CAM Metals (18) TTL/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	SPEND/HAZ	Number of Containers
4509261415	H2O	mw-35	X																						X	4
4509261430	H2O	mw-3	X																							3
4509261440	Air	mw-6	X																							3
4509261450	H2O	mw-6	X																							3
4509261500	H2O	TRIP Blank	X																							1

Project Information		Sample Receipt		Relinquished By 1.		Relinquished By 2.		Relinquished By 3.	
Project <u>REXENE</u>	Total No. of Containers <u>14</u>	<u>Billy Bullegos</u> 10/30		<u>Billy Bullegos</u> 9/26/95					
Project Director <u>Trent T</u>	Chain of Custody Seals <u>OK</u>	<u>Billy Bullegos</u>		<u>Billy Bullegos</u>					
Charge Code No. <u>3031.006</u>	Rec'd Good Condition/Cold <u>OK</u>	<u>OK</u>		<u>OK</u>					
Shipping ID. No. <u>3238365561</u>	Conforms to Record <u>OK</u>	<u>OK</u>		<u>OK</u>					
Via: <u>Fed Ex</u>	Lab No. <u>954369</u>	Received By 1.		Received By 2.		Received By 3.			
Special Instructions/Comments: <u>Abnormal TAT</u>		(Signature)		(Signature)		(Signature)			
		(Time)		(Time)		(Time)			
		(Printed Name)		(Printed Name)		(Printed Name)			
		(Company)		(Company)		(Company)			



## CORE LABORATORIES

### J O B S A M P L E I N F O R M A T I O N

Report Date: 10/30/95

Job Number.....: 954369

Customer .....: Geoscience Consultants, Ltd.

Job Received Date....: 09/27/95

Project Number.....: 95000161

Customer Project ID....: REXENE COC #9425

Project Description....: GCL Rexene Quarterly Waters

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
954369-1	9509261415	Water	09/26/95	14:15	09/27/95	10:15
954369-2	9509261430	Water	09/26/95	14:30	09/27/95	10:15
954369-3	9509261440	Water	09/26/95	14:40	09/27/95	10:15
954369-4	9509261450	Water	09/26/95	14:50	09/27/95	10:15
954369-5	9509261500	Water	09/26/95	15:00	09/27/95	10:15



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Customer Sample ID: 9509261415  
Sample Date.....: 09/26/95  
Sample Time.....: 14:15  
Sample Matrix.....: Water

Laboratory Sample ID: 954369-1  
Date Received.....: 09/27/95  
Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction		Complete		mL	SW-846 3510	10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/06/95
Acenaphthylene		ND	10	ug/L		10/06/95
Anthracene		ND	10	ug/L		10/06/95
Benzo(a)anthracene		ND	10	ug/L		10/06/95
Benzo(b)fluoranthene		ND	10	ug/L		10/06/95
Benzo(k)fluoranthene		ND	10	ug/L		10/06/95
Benzo(ghi)perylene		ND	10	ug/L		10/06/95
Benzo(a)pyrene		ND	10	ug/L		10/06/95
Chrysene		ND	10	ug/L		10/06/95
Dibenzo(a,h)anthracene		ND	10	ug/L		10/06/95
Fluoranthene		ND	10	ug/L		10/06/95
Fluorene		ND	10	ug/L		10/06/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/06/95
1-Methylnaphthalene		ND	10	ug/L		10/06/95
2-Methylnaphthalene		ND	10	ug/L		10/06/95
Naphthalene		ND	10	ug/L		10/06/95
Phenanthrene		ND	10	ug/L		10/06/95
Pyrene		ND	10	ug/L		10/06/95
4-Chloro-3-methylphenol		ND	10	ug/L		10/06/95
2-Chlorophenol		ND	10	ug/L		10/06/95
2,4-Dichlorophenol		ND	10	ug/L		10/06/95
2,4-Dimethylphenol		ND	10	ug/L		10/06/95
2,4-Dinitrophenol		ND	50	ug/L		10/06/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/06/95
2-Nitrophenol		ND	10	ug/L		10/06/95
4-Nitrophenol		ND	50	ug/L		10/06/95
Pentachlorophenol		ND	50	ug/L		10/06/95
Phenol		ND	10	ug/L		10/06/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/06/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/06/95
Ethylbenzene		ND	0.5	ug/L		10/06/95
Toluene		ND	0.5	ug/L		10/06/95
Xylenes (total)		ND	0.5	ug/L		10/06/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Customer Sample ID: 9509261430  
Sample Date.....: 09/26/95  
Sample Time.....: 14:30  
Sample Matrix.....: Water

Laboratory Sample ID: 954369-2  
Date Received.....: 09/27/95  
Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/06/95
Ethylbenzene		ND	0.5	ug/L		10/06/95
Toluene		ND	0.5	ug/L		10/06/95
Xylenes (total)		ND	0.5	ug/L		10/06/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Customer Sample ID: 9509261440  
Sample Date.....: 09/26/95  
Sample Time.....: 14:40  
Sample Matrix.....: Water

Laboratory Sample ID: 954369-3  
Date Received.....: 09/27/95  
Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/06/95
Ethylbenzene		ND	0.5	ug/L		10/06/95
Toluene		ND	0.5	ug/L		10/06/95
Xylenes (total)		ND	0.5	ug/L		10/06/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Customer Sample ID: 9509261450  
Sample Date.....: 09/26/95  
Sample Time.....: 14:50  
Sample Matrix.....: Water

Laboratory Sample ID: 954369-4  
Date Received.....: 09/27/95  
Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/07/95
Ethylbenzene		ND	0.5	ug/L		10/07/95
Toluene		ND	0.5	ug/L		10/07/95
Xylenes (total)		ND	0.5	ug/L		10/07/95



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Customer Sample ID: 9509261500

Sample Date.....: 09/26/95

Sample Time.....: 15:00

Sample Matrix.....: Water

Laboratory Sample ID: 954369-5

Date Received.....: 09/27/95

Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics						
Benzene		ND	0.5	ug/L	SW-846 8020	10/06/95
Ethylbenzene		ND	0.5	ug/L		10/06/95
Toluene		ND	0.5	ug/L		10/06/95
Xylenes (total)		ND	0.5	ug/L		10/06/95





# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Method ..... SW-846 8020

Batch..... 2591

Analyst .... dmj

Method Description.: Volatile Organics -Aromatics

Units..... ug/L

MB	Method Blank				10/06/95	1024
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5					
Ethylbenzene	ND	0.5					
Toluene	ND	0.5					
lenes (total)	ND	0.5					

SB	Spiked Blank	T100695B			10/06/95	1643
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	21.7	0.5	20.0			% REC	108.5
Ethylbenzene	21.1	0.5	20.0			% REC	105.5
Toluene	21.5	0.5	20.0			% REC	107.5
lenes (total)	63.1	0.5	60.0			% REC	105.2

SBD	Spiked Blank Duplicate	T100695B			10/06/95	1720
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benzene	21.7	0.5	20.0		21.7	% REC RPD	108.5 0.0
Ethylbenzene	21.1	0.5	20.0		21.1	% REC RPD	105.5 0.0
Toluene	21.4	0.5	20.0		21.5	% REC RPD	107.0 0.5
lenes (total)	62.9	0.5	60.0		63.1	% REC RPD	104.8 0.3

Method ..... SW-846 8270

Batch..... 2798

Analyst .... mla

Method Description.: Semivolatile Organics (Client List)

Units..... ug/L

MB	Method Blank	MB0745			10/06/95	1659
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Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Benaphthene	ND	10					
Benaphthylene	ND	10					
Anthracene	ND	10					
Benzo(a)anthracene	ND	10					
Benzo(b)fluoranthene	ND	10					
Benzo(k)fluoranthene	ND	10					
Benzo(ghi)perylene	ND	10					
Benzo(a)pyrene	ND	10					
Chrysene	ND	10					



# CORE LABORATORIES

## QUALITY CONTROL REPORT

Job Number: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	MB0745			10/06/95	1659

Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
benzo(a,h)anthracene	ND	10					
Fluoranthene	ND	10					
Fluorene	ND	10					
Indeno(1,2,3-cd)pyrene	ND	10					
1-Methylnaphthalene	ND	10					
2-Methylnaphthalene	ND	10					
Naphthalene	ND	10					
Phenanthrene	ND	10					
Pyrene	ND	10					
1-Chloro-3-methylphenol	ND	10					
2-Chlorophenol	ND	10					
2,4-Dichlorophenol	ND	10					
2,4-Dimethylphenol	ND	10					
2,4-Dinitrophenol	ND	50					
2-Methyl-4,6-dinitrophenol	ND	50					
2-Nitrophenol	ND	10					
4-Nitrophenol	ND	50					
Pentachlorophenol	ND	50					
Phenol	ND	10					
2,4,6-Trichlorophenol	ND	10					



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Method.....: SW-846  
Method Code.....: 8020

Batch.....: 2591  
Analyst.....: dmj

Surrogate	Dilution Factor	Units
BFB (Surrogate)	3.5	ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	19.5	20.0800	97.1		10/06/95	1024
		SB	19.2	20.0800	95.6		10/06/95	1643
		SBD	19.0	20.0800	94.6		10/06/95	1720
954369-5			19.4	20.0800	96.6		10/06/95	1101
954369-1			19.8	20.0800	98.6		10/06/95	2229
954369-2			19.4	20.0800	96.6		10/06/95	2259
954369-3			19.5	20.0800	97.1		10/06/95	2335
954369-4			19.5	20.0800	97.1		10/07/95	0012

Method.....: SW-846  
Method Code.....: 8270C

Batch.....: 2798  
Analyst.....: mla

Surrogate	Dilution Factor	Units
2,4,6-Tribromophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	81.64	100.0100	82		10/06/95	1659
954369-1			101.32	100.0100	101		10/06/95	1800
954368-6			101.13	100.0100	101		10/06/95	1902
954368-5			102.17	100.0100	102		10/06/95	2004
954368-5			97.96	100.0100	98		10/09/95	0014

Surrogate	Dilution Factor	Units
2-Fluorobiphenyl		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	29.81	50.0100	60		10/06/95	1659
954369-1			41.36	50.0100	83		10/06/95	1800
954368-6			35.99	50.0100	72		10/06/95	1902
954368-5			39.95	50.0100	80		10/06/95	2004
954368-5			39.35	50.0100	79		10/09/95	0014



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Surrogate	Dilution Factor	Units
2-Fluorophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	48.22	100.0000	48		10/06/95	1659
954369-1			47.16	100.0000	47		10/06/95	1800
954368-6			61.68	100.0000	62		10/06/95	1902
954368-5			73.95	100.0000	74		10/06/95	2004
954368-5			69.92	100.0000	70		10/09/95	0014

Surrogate	Dilution Factor	Units
Nitrobenzene-d5		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	29.32	50.0500	59		10/06/95	1659
954369-1			40.51	50.0500	81		10/06/95	1800
954368-6			34.42	50.0500	69		10/06/95	1902
954368-5			41.99	50.0500	84		10/06/95	2004
954368-5			41.83	50.0500	84		10/09/95	0014

Surrogate	Dilution Factor	Units
Phenol-d6		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	49.78	100.0200	50		10/06/95	1659
954369-1			60.24	100.0200	60		10/06/95	1800
954368-6			76.31	100.0200	76		10/06/95	1902
954368-5			85.84	100.0200	86		10/06/95	2004
954368-5			78.55	100.0200	79		10/09/95	0014

Surrogate	Dilution Factor	Units
Terphenyl-d14		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	44.72	50.0000	89		10/06/95	1659
954369-1			39.94	50.0000	80		10/06/95	1800
954368-6			50.43	50.0000	101		10/06/95	1902
954368-5			119.26	50.0000	239	X	10/06/95	2004
954368-5			133.66	50.0000	267	X	10/09/95	0014



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

#### Volatile Organics

Method 602/8020

##### Surrogate Recovery Limits

	Water	Soil
Bromofluorobenzene	89-110%	78-123%

##### Spike/Spike Duplicate Recovery Limits

	Water	Soil
Benzene	75-125%	75-125%
Ethylbenzene	75-125%	75-125%
Toluene	75-125%	75-125%
Xylenes	75-125%	75-125%

Method 8015 Modified

##### Spike/Spike Duplicate Recovery Limits

	Water	Soil
TVPH	81-124%	81-124%
TEPH	54-135%	54-135%

Method 624/8240/8260

##### Surrogate Recovery Limits

	Water	Soil
Dibromofluoromethane	86-118%	80-120%
Toluene- (d8)	88-110%	81-117%
4-Bromofluorobenzene	86-115%	74-121%

##### Spike/Spike Duplicate Recovery & RPD Limits

	Water		Soil	
	Recovery	RPD	Recovery	RPD
1,1-Dichloroethene	61-145%	14	59-172%	22
Trichloroethene	71-120%	14	62-137%	24
Benzene	76-127%	11	66-142%	21
Toluene	76-125%	13	59-139%	21
Chlorobenzene	75-130%	13	60-133%	21

#### Pesticides/PCB Organics

Method 608/8080

##### Surrogate Recovery Limits

	Water	Soil
Tetrachloro-m-xylene	60-150%	60-150%
4,4'-Dichlorobiphenyl	60-150%	60-150%

Method 8140

##### Surrogate Recovery Limits

	Water	Soil
Tributylphosphate	36-152%	36-152%
Triphenylphosphate	40-152%	40-152%

#### Base/Neutral/Acid Organics

Method 625/8270

##### Surrogate Recovery Limits

	Water	Soil
Nitrobenzene-d5	35-114%	23-120%
2-Fluorobiphenyl	43-116%	30-115%
4-Terphenyl-d14	33-141%	18-137%
Phenol-d6	10-94%	24-113%
2-Fluorophenol	21-100%	25-121%
2,4,6-Tribromophenol	10-123%	19-122%



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

#### Matrix Spike/Matrix Spike Duplicate Recovery & RPD Limits

	Water		Soil	
	Recovery	RPD	Recovery	RPD
Phenol	12-110%	42	26-90%	35
2-Chlorophenol	27-123%	40	25-102%	50
1,4-Dichlorobenzene	36-97%	28	28-104%	27
N-Nitroso-di-n-propylamine	41-116%	38	41-126%	38
1,2,4-Trichlorobenzene	39-98%	28	38-107%	23
4-Chloro-3-methylphenol	23-97%	42	26-103%	33
Acenaphthene	46-118%	31	31-137%	19
4-Nitrophenol	10-80%	50	11-114%	50
2,4-Dinitrotoluene	24-96%	38	28-89%	47
Pentachlorophenol	9-103%	50	17-109%	47
Pyrene	26-127%	31	35-142%	36



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989
- (3) Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988
- (8) U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)
- (10) Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rocks; Building Stones, 1981

Comments: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated.

NC = Not Calculable Due to Value(s) lower than the Detection Limit.

BLANK QC SAMPLE IDENTIFICATION



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

MB	Method Blank
ICB	Initial Calibration Blank
CCB	Continuing Calibration Blank

#### SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion Spike
SB	Spiked Blank
SBD	Spike Blank Duplicate

#### REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS	Laboratory Control Standard
RS	Reference Standard
ICV	Initial Calibration Verification Standard
CCV	Continuing Calibration Verification Standard
ISA/ISB	ICP Interface Check Sample
ICL	Initial Calibration/Laboratory Control Sample
DSC	Distilled Standard Check

#### DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

#### SUBCONTRACT LABORATORY

#### CODE

Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP
Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

#### EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method.





## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 10/30/95

- This flag is also used when estimating the concentration of a tentatively identified compound.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
  - Y - Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits.
  - Z - Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
  - \* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
  - ^ - Used to indicate that a standard is outside specified quality control limits.



☐ NASA-WSTF  
PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

## Chain of Custody

Date 6/24/96 Page 1 Of 1

Distribution: White, Canary-Laboratory • Pink, GCL



CORE LABORATORIES

## ANALYTICAL REPORT

JOB NUMBER: 961676

Prepared For:

Geoscience Consultants, Ltd.  
505 Marquette NW  
Suite 1100  
Albuquerque, NM 87102

Attention: Annette Montoya

Date: 07/18/96

  
Signature

Name: Linda L. Benkers

Title: QA/QC Coordinator

7-18-96  
Date

CORE LABORATORIES, INC.  
10703 East Bethany Drive  
Aurora, CO 80014

PHONE: (303) 751-1780  
FAX: (303) 751-1784



Date: 07/18/96

Project Number.....: 95000161  
Customer Project ID....: REXENE COC #9338  
Project Description....: GCL Rexene Quarterly Waters

Page 1



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606210945

Date Sampled.....: 06/21/96

Time Sampled.....: 09:45

Sample Matrix.....: Water

Laboratory Sample ID: 961676-1

Date Received.....: 06/25/96

Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA-600-83	Acid Digestion, Total Metals	Complete			07/01/96	lmt
EPA 200.7	Antimony (Sb), Total	<0.01	0.01	mg/L	07/09/96	smh
EPA 200.7	Arsenic (As), Total	<0.01	0.01	mg/L	07/01/96	smh
EPA 200.7	Beryllium (Be), Total	<0.001	0.001	mg/L	07/01/96	smh
EPA 200.7	Cadmium (Cd), Total	<0.0005	0.0005	mg/L	07/01/96	smh
EPA 200.7	Chromium (Cr), Total	0.008	0.005	mg/L	07/01/96	smh
EPA 200.7	Copper (Cu), Total	<0.005	0.005	mg/L	07/01/96	smh
EPA 200.7	Lead (Pb), Total	0.005	0.003	mg/L	07/01/96	smh
EPA 245.1	Mercury (Hg), Total	<0.0002	0.0002	mg/L	07/10/96	lmt
EPA 200.7	Nickel (Ni), Total	<0.005	0.005	mg/L	07/01/96	smh
EPA 200.7	Selenium (Se), Total	<0.01	0.01	mg/L	07/01/96	smh
EPA 200.7	Silver (Ag), Total	<0.005	0.005	mg/L	07/09/96	smh
EPA 200.7	Thallium (Tl), Total	<0.01	0.01	mg/L	07/01/96	smh
EPA 200.7	Zinc (Zn), Total	0.006	0.005	mg/L	07/01/96	smh
SW-846 3510B	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			06/28/96	jbd
SW-846 8270	Semivolatile Organics (Client List)					
	Acenaphthene	ND	10	ug/L	07/10/96	dmj
	Acenaphthylene	ND	10	ug/L	07/10/96	dmj
	Anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(b)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(k)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(ghi)perylene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)pyrene	ND	10	ug/L	07/10/96	dmj
	Chrysene	ND	10	ug/L	07/10/96	dmj
	Dibenzo(a,h)anthracene	ND	10	ug/L	07/10/96	dmj
	Fluoranthene	ND	10	ug/L	07/10/96	dmj
	Fluorene	ND	10	ug/L	07/10/96	dmj
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L	07/10/96	dmj
	1-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	2-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	Naphthalene	ND	10	ug/L	07/10/96	dmj



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606210945

Date Sampled.....: 06/21/96

Time Sampled.....: 09:45

Sample Matrix.....: Water

Laboratory Sample ID: 961676-1

Date Received.....: 06/25/96

Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8020	Phenanthrene	ND	10	ug/L	07/10/96	dmj
	Pyrene	ND	10	ug/L	07/10/96	dmj
	Volatile Organics -Aromatics					
	Benzene	ND	0.5	ug/L	06/26/96	tdw
	Ethylbenzene	ND	0.5	ug/L	06/26/96	tdw
	Toluene	ND	0.5	ug/L	06/26/96	tdw
	Xylenes (total)	ND	0.5	ug/L	06/26/96	tdw



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211130  
Date Sampled.....: 06/21/96  
Time Sampled.....: 11:30  
Sample Matrix.....: Water

Laboratory Sample ID: 961676-2  
Date Received.....: 06/25/96  
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA-600-83	Acid Digestion, Total Metals	Complete			07/01/96	lmt
EPA 200.7	Antimony (Sb), Total	<0.01	0.01	mg/L	07/09/96	smh
EPA 200.7	Arsenic (As), Total	<0.01	0.01	mg/L	07/01/96	smh
EPA 200.7	Beryllium (Be), Total	<0.001	0.001	mg/L	07/01/96	smh
EPA 200.7	Cadmium (Cd), Total	<0.0005	0.0005	mg/L	07/01/96	smh
EPA 200.7	Chromium (Cr), Total	<0.005	0.005	mg/L	07/01/96	smh
EPA 200.7	Copper (Cu), Total	<0.005	0.005	mg/L	07/01/96	smh
EPA 200.7	Lead (Pb), Total	0.007	0.003	mg/L	07/01/96	smh
EPA 245.1	Mercury (Hg), Total	<0.0002	0.0002	mg/L	07/10/96	lmt
EPA 200.7	Nickel (Ni), Total	<0.005	0.005	mg/L	07/01/96	smh
EPA 200.7	Selenium (Se), Total	<0.01	0.01	mg/L	07/01/96	smh
EPA 200.7	Silver (Ag), Total	<0.005	0.005	mg/L	07/09/96	smh
EPA 200.7	Thallium (Tl), Total	<0.01	0.01	mg/L	07/01/96	smh
EPA 200.7	Zinc (Zn), Total	0.013	0.005	mg/L	07/01/96	smh
SW-846 3510B	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			06/28/96	jbd
SW-846 8270	Semivolatile Organics (Client List)					
	Acenaphthene	ND	10	ug/L	07/10/96	dmj
	Acenaphthylene	ND	10	ug/L	07/10/96	dmj
	Anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(b)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(k)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(ghi)perylene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)pyrene	ND	10	ug/L	07/10/96	dmj
	Chrysene	ND	10	ug/L	07/10/96	dmj
	Dibenzo(a,h)anthracene	ND	10	ug/L	07/10/96	dmj
	Fluoranthene	ND	10	ug/L	07/10/96	dmj
	Fluorene	ND	10	ug/L	07/10/96	dmj
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L	07/10/96	dmj
	1-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	2-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	Naphthalene	ND	10	ug/L	07/10/96	dmj



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211130  
Date Sampled.....: 06/21/96  
Time Sampled.....: 11:30  
Sample Matrix.....: Water

Laboratory Sample ID: 961676-2  
Date Received.....: 06/25/96  
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8020	Phenanthrene	ND	10	ug/L	07/10/96	dmj
	Pyrene	ND	10	ug/L	07/10/96	dmj
	Volatile Organics -Aromatics					
	Benzene	ND	0.5	ug/L	06/26/96	tdw
	Ethylbenzene	ND	0.5	ug/L	06/26/96	tdw
	Toluene	ND	0.5	ug/L	06/26/96	tdw
	Xylenes (total)	ND	0.5	ug/L	06/26/96	tdw





# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211345

Date Sampled.....: 06/21/96

Time Sampled.....: 13:45

Sample Matrix.....: Water

Laboratory Sample ID: 961676-3

Date Received.....: 06/25/96

Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 200.7	Antimony (Sb), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Arsenic (As), Diss.	0.02	0.01	mg/L	07/15/96	smh
EPA 200.7	Beryllium (Be), Diss.	<0.001	0.001	mg/L	07/15/96	smh
EPA 200.7	Cadmium (Cd), Diss.	0.0021	0.0005	mg/L	07/15/96	smh
EPA 200.7	Chromium (Cr), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Copper (Cu), Diss.	0.023	0.005	mg/L	07/15/96	smh
EPA 200.7	Lead (Pb), Diss.	<0.003	0.003	mg/L	07/15/96	smh
EPA 245.1	Mercury (Hg), Total	<0.0002	0.0002	mg/L	07/10/96	lmt
EPA 200.7	Nickel (Ni), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Selenium (Se), Diss.	0.05	0.01	mg/L	07/15/96	smh
EPA 200.7	Silver (Ag), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Thallium (Tl), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Zinc (Zn), Diss.	<0.005	0.005	mg/L	07/15/96	smh
SW-846 3510B	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			06/28/96	jbd
SW-846 8270	Semivolatile Organics (Client List)					
	Acenaphthene	ND	10	ug/L	07/10/96	dmj
	Acenaphthylene	ND	10	ug/L	07/10/96	dmj
	Anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(b)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(k)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(ghi)perylene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)pyrene	ND	10	ug/L	07/10/96	dmj
	Chrysene	ND	10	ug/L	07/10/96	dmj
	Dibenzo(a,h)anthracene	ND	10	ug/L	07/10/96	dmj
	Fluoranthene	ND	10	ug/L	07/10/96	dmj
	Fluorene	ND	10	ug/L	07/10/96	dmj
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L	07/10/96	dmj
	1-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	2-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	Naphthalene	ND	10	ug/L	07/10/96	dmj
	Phenanthrene	ND	10	ug/L	07/10/96	dmj
	Pyrene	ND	10	ug/L	07/10/96	dmj



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211345

Date Sampled.....: 06/21/96

Time Sampled.....: 13:45

Sample Matrix.....: Water

Laboratory Sample ID: 961676-3

Date Received.....: 06/25/96

Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8020	Volatile Organics -Aromatics					
	Benzene	ND	0.5	ug/L	06/26/96	tdw
	Ethylbenzene	ND	0.5	ug/L	06/26/96	tdw
	Toluene	ND	0.5	ug/L	06/26/96	tdw
	Xylenes (total)	ND	0.5	ug/L	06/26/96	tdw



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211400  
Date Sampled.....: 06/21/96  
Time Sampled.....: 14:00  
Sample Matrix.....: Water

Laboratory Sample ID: 961676-4  
Date Received.....: 06/25/96  
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 200.7	Antimony (Sb), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Arsenic (As), Diss.	0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Beryllium (Be), Diss.	<0.001	0.001	mg/L	07/15/96	smh
EPA 200.7	Cadmium (Cd), Diss.	<0.0005	0.0005	mg/L	07/15/96	smh
EPA 200.7	Chromium (Cr), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Copper (Cu), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Lead (Pb), Diss.	<0.003	0.003	mg/L	07/15/96	smh
EPA 245.1	Mercury (Hg), Total	<0.0002	0.0002	mg/L	07/10/96	lmt
EPA 200.7	Nickel (Ni), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Selenium (Se), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Silver (Ag), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Thallium (Tl), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Zinc (Zn), Diss.	<0.005	0.005	mg/L	07/15/96	smh
SW-846 3510B	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			06/28/96	jbd
SW-846 8270	Semivolatile Organics (Client List)					
	Acenaphthene	ND	10	ug/L	07/10/96	dmj
	Acenaphthylene	ND	10	ug/L	07/10/96	dmj
	Anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)anthracene	ND	10	ug/L	07/10/96	dmj
	Benzo(b)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(k)fluoranthene	ND	10	ug/L	07/10/96	dmj
	Benzo(ghi)perylene	ND	10	ug/L	07/10/96	dmj
	Benzo(a)pyrene	ND	10	ug/L	07/10/96	dmj
	Chrysene	ND	10	ug/L	07/10/96	dmj
	Dibenzo(a,h)anthracene	ND	10	ug/L	07/10/96	dmj
	Fluoranthene	ND	10	ug/L	07/10/96	dmj
	Fluorene	ND	10	ug/L	07/10/96	dmj
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L	07/10/96	dmj
	1-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	2-Methylnaphthalene	ND	10	ug/L	07/10/96	dmj
	Naphthalene	ND	10	ug/L	07/10/96	dmj
	Phenanthrene	ND	10	ug/L	07/10/96	dmj
	Pyrene	ND	10	ug/L	07/10/96	dmj



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COG #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211400

Date Sampled.....: 06/21/96

Time Sampled.....: 14:00

Sample Matrix.....: Water

Laboratory Sample ID: 961676-4

Date Received.....: 06/25/96

Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8020	Volatile Organics -Aromatics					
	Benzene	ND	0.5	ug/L	06/26/96	tdw
	Ethylbenzene	ND	0.5	ug/L	06/26/96	tdw
	Toluene	ND	0.5	ug/L	06/26/96	tdw
	Xylenes (total)	ND	0.5	ug/L	06/26/96	tdw



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211500  
Date Sampled.....: 06/21/96  
Time Sampled.....: 15:00  
Sample Matrix.....: Water

Laboratory Sample ID: 961676-5  
Date Received.....: 06/25/96  
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 200.7	Antimony (Sb), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Arsenic (As), Diss.	0.02	0.01	mg/L	07/15/96	smh
EPA 200.7	Beryllium (Be), Diss.	<0.001	0.001	mg/L	07/15/96	smh
EPA 200.7	Cadmium (Cd), Diss.	<0.0005	0.0005	mg/L	07/15/96	smh
EPA 200.7	Chromium (Cr), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Copper (Cu), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Lead (Pb), Diss.	0.003	0.003	mg/L	07/15/96	smh
EPA 245.1	Mercury (Hg), Total	<0.0002	0.0002	mg/L	07/10/96	lmt
EPA 200.7	Nickel (Ni), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Selenium (Se), Diss.	0.02	0.01	mg/L	07/15/96	smh
EPA 200.7	Silver (Ag), Diss.	<0.005	0.005	mg/L	07/15/96	smh
EPA 200.7	Thallium (Tl), Diss.	<0.01	0.01	mg/L	07/15/96	smh
EPA 200.7	Zinc (Zn), Diss.	<0.005	0.005	mg/L	07/15/96	smh
SW-846 3510B	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			06/28/96	jbd
SW-846 8270	Semivolatile Organics (Client List)					
	Acenaphthene	ND	100	ug/L	07/10/96	dmj
	Acenaphthylene	ND	100	ug/L	07/10/96	dmj
	Anthracene	ND	100	ug/L	07/10/96	dmj
	Benzo(a)anthracene	ND	100	ug/L	07/10/96	dmj
	Benzo(b)fluoranthene	ND	100	ug/L	07/10/96	dmj
	Benzo(k)fluoranthene	ND	100	ug/L	07/10/96	dmj
	Benzo(ghi)perylene	ND	100	ug/L	07/10/96	dmj
	Benzo(a)pyrene	ND	100	ug/L	07/10/96	dmj
	Chrysene	ND	100	ug/L	07/10/96	dmj
	Dibenzo(a,h)anthracene	ND	100	ug/L	07/10/96	dmj
	Fluoranthene	ND	100	ug/L	07/10/96	dmj
	Fluorene	ND	100	ug/L	07/10/96	dmj
	Indeno(1,2,3-cd)pyrene	ND	100	ug/L	07/10/96	dmj
	1-Methylnaphthalene	ND	100	ug/L	07/10/96	dmj
	2-Methylnaphthalene	ND	100	ug/L	07/10/96	dmj
	Naphthalene	ND	100	ug/L	07/10/96	dmj
	Phenanthrene	ND	100	ug/L	07/10/96	dmj
	Pyrene	ND	100	ug/L	07/10/96	dmj



# CORE LABORATORIES

## LABORATORY TEST RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Customer Sample ID: 9606211500

Date Sampled.....: 06/21/96

Time Sampled.....: 15:00

Sample Matrix.....: Water

Laboratory Sample ID: 961676-5

Date Received.....: 06/25/96

Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8020	Volatile Organics -Aromatics					
	Benzene	330	50	ug/L	06/27/96	tdw
	Ethylbenzene	160	50	ug/L	06/27/96	tdw
	Toluene	ND	50	ug/L	06/27/96	tdw
	Xylenes (total)	90	50	ug/L	06/27/96	tdw



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Batch.....: 10605

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.05

Parameter.....: Arsenic (As)

Units.....: mg/L

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.01627		2.00		100.8	% REC	07/01/96 1001
ICB		960611Z	0.00190						07/01/96 1054
ISB		960630H	0.97787		1.000		97.8	% REC	07/01/96 1108
ICV		960604Y	2.46160		2.5		98.5	% REC	07/01/96 1356
ICB		960611Z	0.00059						07/01/96 1402
CCV		960604Y	2.46159		2.5		98.5	% REC	07/01/96 1505
CCB		960611Z	-0.00216						07/01/96 1514
ICV		960604Y	2.48429		2.5		99.4	% REC	07/01/96 1603
ICB		960611Z	-0.00328						07/01/96 1616
ISB		960630H	0.96177		1.000		96.2	% REC	07/01/96 1634
CCV		960604Y	2.44526		2.5		97.8	% REC	07/01/96 1644
CCB		960611Z	-0.00018						07/01/96 1649
IB		0701	0.00192						07/01/96 1847
ICS		960606H	0.97105		1.00		97.1	% REC	07/01/96 1852
MD	961682-1		-0.00036			-0.00014	0.00022	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	0.91563		1.000	0.00202	91.4	% REC	07/01/96 1919
ICV		960604Y	2.46693		2.5		98.7	% REC	07/01/96 1931
ICB		960611Z	-0.00054						07/01/96 1940
ISB		960524T	1.01603		1.00		101.6	% REC	07/01/96 2054
CCV		960604Y	2.55736		2.5		102.3	% REC	07/01/96 2107
CCB		960611Z	-0.00113						07/01/96 2134

Test Method.....: EPA 200.7

Batch.....: 10605

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.002

Parameter.....: Beryllium (Be)

Units.....: mg/L

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.09721		2.00		104.9	% REC	07/01/96 1001
ICB		960611Z	0.00042						07/01/96 1054
ISB		960630H	0.49082		0.5000		98.2	% REC	07/01/96 1108
CCV		960604Y	2.56302		2.5		102.5	% REC	07/01/96 1356
CCB		960611Z	0.00048						07/01/96 1402
ICV		960604Y	2.52295		2.5		100.9	% REC	07/01/96 1505
ICB		960611Z	0.00030						07/01/96 1514
ICV		960604Y	2.56360		2.5		102.5	% REC	07/01/96 1603
CCB		960611Z	-0.00006						07/01/96 1616
ISB		960630H	0.48468		0.5000		96.9	% REC	07/01/96 1634
ICV		960604Y	2.52236		2.5		100.9	% REC	07/01/96 1644
ICB		960611Z	0.00012						07/01/96 1649
IB		0701	-0.00005						07/01/96 1847
LCS		960606H	1.04010		1.00		104.0	% REC	07/01/96 1852
MD	961682-1		-0.00042			-0.00054	0.00012	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	1.00484		1.000	-0.00035	100.5	% REC	07/01/96 1919
ICV		960604Y	2.54812		2.5		101.9	% REC	07/01/96 1931
CCB		960611Z	-0.00024						07/01/96 1940
ISB		960524T	0.52284		0.5000		104.6	% REC	07/01/96 2054
CCV		960604Y	2.45288		2.5		98.1	% REC	07/01/96 2107
CCB		960611Z	-0.00016						07/01/96 2134



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Cadmium (Cd)

Batch.....: 10605

Reporting Limit...: 0.005

Units.....: mg/L

Analyst...: smh

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.00525		2.00		100.3	% REC	07/01/96 1001
ICB		960611Z	0.00020						07/01/96 1054
ISB		960630H	1.01920		1.000		101.9	% REC	07/01/96 1108
ICV		960604Y	0.98088		1.0		98.1	% REC	07/01/96 1356
ICB		960611Z	0.00039						07/01/96 1402
CCV		960604Y	0.97098		1.0		97.1	% REC	07/01/96 1505
CCB		960611Z	-0.00001						07/01/96 1514
ICV		960604Y	0.99000		1.0		99.0	% REC	07/01/96 1603
ICB		960611Z	0.00031						07/01/96 1616
ISB		960630H	0.99543		1.000		99.5	% REC	07/01/96 1634
CCV		960604Y	0.96892		1.0		96.9	% REC	07/01/96 1644
CCB		960611Z	-0.00012						07/01/96 1649
B		0701	0.00120						07/01/96 1847
CS		960606H	1.01280		1.00		101.3	% REC	07/01/96 1852
MD	961682-1		0.00119			0.00075	0.00044	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	0.97829		1.000	0.00009	97.8	% REC	07/01/96 1919
ICV		960604Y	0.97950		1.0		98.0	% REC	07/01/96 1931
ICB		960611Z	-0.00020						07/01/96 1940
ISB		960524T	1.08007		1.00		108.0	% REC	07/01/96 2054
CCV		960604Y	1.03965		1.0		104.0	% REC	07/01/96 2107
CCB		960611Z	-0.00027						07/01/96 2134

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Chromium (Cr)

Batch.....: 10605

Reporting Limit...: 0.01

Units.....: mg/L

Analyst...: smh

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.04917		2.00		102.5	% REC	07/01/96 1001
ICB		960611Z	-0.00127						07/01/96 1054
ISB		960630H	0.55443		0.5000		110.9	% REC	07/01/96 1108
CCV		960604Y	2.54534		2.5		101.8	% REC	07/01/96 1356
CCB		960611Z	0.00077						07/01/96 1402
ICV		960604Y	2.53278		2.5		101.3	% REC	07/01/96 1505
ICB		960611Z	0.00051						07/01/96 1514
ICV		960604Y	2.57046		2.5		102.8	% REC	07/01/96 1603
CCB		960611Z	-0.00153						07/01/96 1616
ISB		960630H	0.54890		0.5000		109.8	% REC	07/01/96 1634
ICV		960604Y	2.53124		2.5		101.2	% REC	07/01/96 1644
ICB		960611Z	-0.00076						07/01/96 1649
B		0701	0.00153						07/01/96 1847
LCS		960606H	1.04922		1.00		104.9	% REC	07/01/96 1852
MD	961682-1		0.00309			0.00436	0.00127	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	1.06382		1.000	0.02899	103.5	% REC	07/01/96 1919
ICV		960604Y	2.56534		2.5		102.6	% REC	07/01/96 1931
CCB		960611Z	0.00051						07/01/96 1940
ISB		960524T	0.59503		0.5000		119.0	% REC	07/01/96 2054
CCV		960604Y	2.55921		2.5		102.4	% REC	07/01/96 2107
CCB		960611Z	0.00024						07/01/96 2134





# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Batch.....: 10605

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.01

Parameter.....: Copper (Cu)

Units.....: mg/L

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960512H	1.90797		2.00		95.4	% REC	07/01/96 1001
ICB		960611Z	-0.00062						07/01/96 1054
ISB		960630H	0.53707		0.5000		107.4	% REC	07/01/96 1108
CV		960604Y	2.41422		2.5		96.6	% REC	07/01/96 1356
CB		960611Z	0.00048						07/01/96 1402
CCV		960604Y	2.39731		2.5		95.9	% REC	07/01/96 1505
CCB		960611Z	-0.00095						07/01/96 1514
CCV		960604Y	2.38934		2.5		95.6	% REC	07/01/96 1603
CB		960611Z	-0.00134						07/01/96 1616
SB		960630H	0.51640		0.5000		103.3	% REC	07/01/96 1634
CCV		960604Y	2.38800		2.5		95.5	% REC	07/01/96 1644
CCB		960611Z	-0.00043						07/01/96 1649
B		0701	-0.00061						07/01/96 1847
CS		960606H	1.02046		1.00		102.0	% REC	07/01/96 1852
MD	961682-1		0.01376			0.01233	0.00143	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	1.15786		1.000	0.06451	109.3	% REC	07/01/96 1919
CCV		960604Y	2.39720		2.5		95.9	% REC	07/01/96 1931
CB		960611Z	0.00018						07/01/96 1940
SB		960524T	0.51747		0.5000		103.5	% REC	07/01/96 2054
CCV		960604Y	2.38656		2.5		95.5	% REC	07/01/96 2107
CCB		960611Z	-0.00004						07/01/96 2134

Test Method.....: EPA 200.7

Batch.....: 10605

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.05

Parameter.....: Lead (Pb)

Units.....: mg/L

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.01034		2.00		100.5	% REC	07/01/96 1001
CB		960611Z	-0.00102						07/01/96 1054
SB		960630H	1.08786		1.000		108.8	% REC	07/01/96 1108
CV		960604Y	0.98565		1.0		98.6	% REC	07/01/96 1356
CCB		960611Z	0.00076						07/01/96 1402
CCV		960604Y	0.98018		1.0		98.0	% REC	07/01/96 1505
CB		960611Z	-0.00203						07/01/96 1514
CV		960604Y	1.00366		1.0		100.4	% REC	07/01/96 1603
CCB		960611Z	-0.00274						07/01/96 1616
ISB		960630H	1.05077		1.000		105.1	% REC	07/01/96 1634
CCV		960604Y	0.97799		1.0		97.8	% REC	07/01/96 1644
CB		960611Z	0.00217						07/01/96 1649
B		0701	0.00031						07/01/96 1847
LCS		960606H	1.00850		1.00		100.8	% REC	07/01/96 1852
MD	961682-1		0.00883			0.00708	0.00175	ABS Diff.	07/01/96 1912
S	961682-2	960630G	1.02947		1.000	0.01272	101.7	% REC	07/01/96 1919
CV		960604Y	0.98508		1.0		98.5	% REC	07/01/96 1931
CCB		960611Z	0.00239						07/01/96 1940
ISB		960524T	1.12696		1.00		112.7	% REC	07/01/96 2054
CCV		960604Y	1.04047		1.0		104.0	% REC	07/01/96 2107
CB		960611Z	-0.00039						07/01/96 2134



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Nickel (Ni)

Batch.....: 10605

Reporting Limit...: 0.04

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.03958		2.00		102.0	% REC	07/01/96 1001
ICB		960611Z	-0.00020						07/01/96 1054
ISB		960630H	1.09483		1.000		109.5	% REC	07/01/96 1108
CCV		960604Y	2.47499		2.5		99.0	% REC	07/01/96 1356
CCB		960611Z	0.00065						07/01/96 1402
CCV		960604Y	2.45798		2.5		98.3	% REC	07/01/96 1505
CCB		960611Z	-0.00047						07/01/96 1514
CCV		960604Y	2.49507		2.5		99.8	% REC	07/01/96 1603
CCB		960611Z	-0.00154						07/01/96 1616
ISB		960630H	1.06937		1.000		106.9	% REC	07/01/96 1634
CCV		960604Y	2.44912		2.5		98.0	% REC	07/01/96 1644
CCB		960611Z	-0.00029						07/01/96 1649
MB		0701	-0.00077						07/01/96 1847
LCS		960606H	1.01404		1.00		101.4	% REC	07/01/96 1852
MD	961682-1		-0.00062			-0.00046	0.00016	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	1.01069		1.000	0.01255	99.8	% REC	07/01/96 1919
CCV		960604Y	2.47403		2.5		99.0	% REC	07/01/96 1931
CCB		960611Z	0.00175						07/01/96 1940
ISB		960524T	1.14034		1.00		114.0	% REC	07/01/96 2054
CCV		960604Y	2.61504		2.5		104.6	% REC	07/01/96 2107
CCB		960611Z	0.00041						07/01/96 2134

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Selenium (Se)

Batch.....: 10605

Reporting Limit...: 0.1

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.01402		2.00		100.7	% REC	07/01/96 1001
ICB		960611Z	-0.00464						07/01/96 1054
ISB		960630H	0.98175		1.000		98.2	% REC	07/01/96 1108
CCV		960604Y	2.41579		2.5		96.6	% REC	07/01/96 1356
CCB		960611Z	-0.00085						07/01/96 1402
CCV		960604Y	2.42187		2.5		96.9	% REC	07/01/96 1505
CCB		960611Z	-0.00177						07/01/96 1514
CCV		960604Y	2.42650		2.5		97.1	% REC	07/01/96 1603
CCB		960611Z	0.00453						07/01/96 1616
ISB		960630H	0.93771		1.000		93.8	% REC	07/01/96 1634
CCV		960604Y	2.39004		2.5		95.6	% REC	07/01/96 1644
CCB		960611Z	-0.00197						07/01/96 1649
MB		0701	0.00032						07/01/96 1847
LCS		960606H	0.89634		1.00		89.6	% REC	07/01/96 1852
MD	961682-1		0.00372			-0.00097	0.00469	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	0.86783		1.000	-0.00012	86.8	% REC	07/01/96 1919
CCV		960604Y	2.38446		2.5		95.4	% REC	07/01/96 1931
CCB		960611Z	0.00111						07/01/96 1940
ISB		960524T	0.98173		1.00		98.2	% REC	07/01/96 2054
CCV		960604Y	2.46536		2.5		98.6	% REC	07/01/96 2107
CCB		960611Z	-0.00354						07/01/96 2134



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Thallium (Tl)

Batch.....: 10605

Reporting Limit....: 0.1

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960512H	1.99112		2.00		99.6	% REC	07/01/96 1001
ICB		960611Z	-0.00151						07/01/96 1054
ISB		960630H	1.14767		1.000		114.8	% REC	07/01/96 1108
CCV		960604Y	0.99805		1.0		99.8	% REC	07/01/96 1356
CCB		960611Z	-0.00646						07/01/96 1402
CCV		960604Y	0.98969		1.0		99.0	% REC	07/01/96 1505
CCB		960611Z	-0.00302						07/01/96 1514
CCV		960604Y	0.99372		1.0		99.4	% REC	07/01/96 1603
CCB		960611Z	0.00905						07/01/96 1616
ISB		960630H	1.13147		1.000		113.1	% REC	07/01/96 1634
CCV		960604Y	0.97007		1.0		97.0	% REC	07/01/96 1644
CCB		960611Z	-0.00086						07/01/96 1649
IB		0701	-0.00408						07/01/96 1847
LCS		960606H	0.99010		1.00		99.0	% REC	07/01/96 1852
MD	961682-1		-0.00501			-0.00954	0.00453	ABS Diff.	07/01/96 1912
MS	961682-2	960630G	1.05964		1.000	0.00123	105.8	% REC	07/01/96 1919
CCV		960604Y	0.98659		1.0		98.7	% REC	07/01/96 1931
CCB		960611Z	-0.00366						07/01/96 1940
ISB		960524T	1.19960		1.00		120.0	% REC	07/01/96 2054
CCV		960604Y	1.03062		1.0		103.1	% REC	07/01/96 2107
CCB		960611Z	0.00597						07/01/96 2134

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Zinc (Zn)

Batch.....: 10605

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960512H	2.09663		2.00		104.8	% REC	07/01/96 1001
CB		960611Z	-0.00020						07/01/96 1054
SB		960630H	1.07307		1.000		107.3	% REC	07/01/96 1108
CCV		960604Y	2.53342		2.5		101.3	% REC	07/01/96 1356
CCB		960611Z	0.00040						07/01/96 1402
CCV		960604Y	2.52391		2.5		101.0	% REC	07/01/96 1505
CCB		960611Z	0.00061						07/01/96 1514
CCV		960604Y	2.53655		2.5		101.5	% REC	07/01/96 1603
CCB		960611Z	0.00041						07/01/96 1616
ISB		960630H	1.03745		1.000		103.7	% REC	07/01/96 1634
CCV		960604Y	2.49650		2.5		99.9	% REC	07/01/96 1644
CCB		960611Z	0.00123						07/01/96 1649
IB		0701	0.00348						07/01/96 1847
LCS		960606H	1.05211		1.00		105.2	% REC	07/01/96 1852
MD	961682-1		0.12783			0.11331	12.0	RPD	07/01/96 1912
MS	961682-2	960630G	3.04133		1.000	2.09161	95.0	% REC	07/01/96 1919
CCV		960604Y	2.49820		2.5		99.9	% REC	07/01/96 1931
CCB		960611Z	-0.00186						07/01/96 1940
ISB		960524T	1.08474		1.00		108.5	% REC	07/01/96 2054
CCV		960604Y	2.58575		2.5		103.4	% REC	07/01/96 2107
CCB		960611Z	-0.00185						07/01/96 2134



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Batch.....: 10837

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.1

Parameter.....: Antimony (Sb)

Units.....: mg/L

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960512H	2.05900		2.00		103.0	% REC	07/09/96 1104
ICB		960702Y	-0.00079						07/09/96 1257
SB		960630H	1.06580		1.000		106.6	% REC	07/09/96 1310
CV		960708T	2.50042		2.5		100.0	% REC	07/09/96 1405
CB		960702Y	0.00497						07/09/96 1410
CCV		960708T	2.50779		2.5		100.3	% REC	07/09/96 1453
CCB		960702Y	0.00324						07/09/96 1456
CV		960708T	2.46927		2.5		98.8	% REC	07/09/96 1602
CB		960702Y	0.00057						07/09/96 1612
CV		960708T	2.44878		2.5		98.0	% REC	07/09/96 1649
CCB		960702Y	0.00228						07/09/96 1656
SB		960630H	1.01562		1.000		101.6	% REC	07/09/96 1714
CV		960708T	2.47430		2.5		99.0	% REC	07/09/96 1719
CB		960702Y	0.00142						07/09/96 1722
MB		0701	-0.00103						07/09/96 1737
LCS		960606H	0.99386		1.00		99.4	% REC	07/09/96 1741
D	961682-1		0.00170			0.00040	0.00130	ABS Diff.	07/09/96 1755
S	961682-2	960630G	0.96207		1.000	0.00293	95.9	% REC	07/09/96 1821
CV		960708T	2.41956		2.5		96.8	% REC	07/09/96 1830
CCB		960702Y	0.00151						07/09/96 1834
CCV		960708T	2.53394		2.5		101.4	% REC	07/09/96 1924
CB		960702Y	-0.00220						07/09/96 1939
CV		960708T	2.57180		2.5		102.9	% REC	07/09/96 2135
CCB		960702Y	0.00201						07/09/96 2153
CCV		960708T	2.48054		2.5		99.2	% REC	07/09/96 2318
CB		960702Y	-0.00191						07/09/96 2329
SB		960630H	1.01353		1.000		101.4	% REC	07/10/96 0013
CV		960708T	2.56291		2.5		102.5	% REC	07/10/96 0023
CCB		960702Y	-0.00074						07/10/96 0027

Test Method.....: EPA 200.7

Batch.....: 10837

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.01

Parameter.....: Silver (Ag)

Units.....: mg/L

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960501Q	1.01604		1.00		101.6	% REC	07/09/96 1111
ICB		960702Y	0.00113						07/09/96 1257
SB		960630H	1.13639		1.000		113.6	% REC	07/09/96 1310
CV		960604Z	2.62247		2.500		104.9	% REC	07/09/96 1359
CB		960702Y	-0.00323						07/09/96 1410
CCV		960604Z	2.38702		2.500		95.5	% REC	07/09/96 1448
CCB		960702Y	-0.00218						07/09/96 1456
CV		960604Z	2.37551		2.500		95.0	% REC	07/09/96 1557
CB		960702Y	-0.00443						07/09/96 1612
CCV		960604Z	2.41169		2.500		96.5	% REC	07/09/96 1646
CCB		960702Y	-0.00378						07/09/96 1656
SB		960630H	1.02185		1.000		102.2	% REC	07/09/96 1714
CV		960604Z	2.40001		2.500		96.0	% REC	07/09/96 1717
CB		960702Y	-0.00464						07/09/96 1722
MB		0701	0.00071						07/09/96 1737
LCS		960606H	0.96868		1.00		96.9	% REC	07/09/96 1741



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Silver (Ag)

Batch.....: 10837

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
MD	961682-1		0.00394			0.00249	0.00145	ABS Diff.	07/09/96 1755
MS	961682-2	960630G	0.99223		1.000	0.00268	99.0	% REC	07/09/96 1821
CCV		960604Z	2.37575		2.500		95.0	% REC	07/09/96 1827
CCB		960702Y	0.00055						07/09/96 1834
CCV		960604Z	2.43988		2.500		97.6	% REC	07/09/96 1916
CCB		960702Y	-0.00213						07/09/96 1939
CCV		960604Z	2.54163		2.500		101.7	% REC	07/09/96 2130
CCB		960702Y	-0.00090						07/09/96 2153
CCV		960604Z	2.50897		2.500		100.4	% REC	07/09/96 2312
CCB		960702Y	-0.00025						07/09/96 2329
ISB		960630H	1.06637		1.000		106.6	% REC	07/10/96 0013
CCV		960604Z	2.57469		2.500		103.0	% REC	07/10/96 0021
CCB		960702Y	-0.00008						07/10/96 0027

Test Method.....: EPA 245.1

Method Description.: Mercury (CVAA)

Parameter.....: Mercury (Hg)

Batch.....: 10873

Reporting Limit....: 0.0002

Units.....: mg/L

Analyst....: lmt

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960624G	0.004085		0.004000		102.1	% REC	07/10/96 1300
CB		07106	-0.000170						07/10/96 1302
MB		0709	-0.000170						07/10/96 1304
MD	961676-1		-0.000133			-0.000095	0.00003	ABS Diff.	07/10/96 1308
MS	961676-2	950929N	0.004988		0.005000	-0.000170	103.2	% REC	07/10/96 1312
CCV		950929N	0.005177		0.005000		103.5	% REC	07/10/96 1325
CCB		07106	-0.000095						07/10/96 1327
CCV		950929N	0.004800		0.005000		96.0	% REC	07/10/96 1350
CCB		07106	-0.000095						07/10/96 1352
EB		1311	-0.000095						07/10/96 1356
SB		950929N	0.005026		0.005000		100.5	% REC	07/10/96 1358
ED	961708-1		-0.000095			-0.000170	0.00007	ABS Diff.	07/10/96 1410
MD	961708-1		-0.000095			-0.000170	0.00007	ABS Diff.	07/10/96 1412
CCV		950929N	0.005139		0.005000		102.8	% REC	07/10/96 1414
CCB		07106	-0.000095						07/10/96 1417
IS	961708-1	950929N	0.005139		0.005000	-0.000170	106.2	% REC	07/10/96 1419
MB		0709	-0.000095						07/10/96 1427
MB		0709	-0.000095						07/10/96 1429
ACS		950824B	0.001976		0.002000		98.8	% REC	07/10/96 1431
CD		950824B	0.001901	0.00197	0.002000		95.0	% REC	07/10/96 1433
							3.9	RPD	
MD	961737-2		-0.000170			-0.000170	0.00000	ABS Diff.	07/10/96 1437
CCV		950929N	0.005177		0.005000		103.5	% REC	07/10/96 1439
CCB		09106	-0.000095						07/10/96 1441
IS	961737-2	950929N	0.005064		0.005000	-0.000170	104.7	% REC	07/10/96 1443
MD	961746-2		-0.000133			-0.000170	0.00003	ABS Diff.	07/10/96 1452
MS	961746-3	950929N	0.004951		0.005000	-0.000170	102.4	% REC	07/10/96 1456
CCV		950929N	0.004838		0.005000		96.8	% REC	07/10/96 1458
CCB		07106	-0.000133						07/10/96 1500



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Antimony (Sb)

Batch.....: 11046

Reporting Limit...: 0.1

Units.....: mg/L

Analyst.... smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960618Z	2.08388		2.00		104.2	% REC	07/15/96 0822
ICB		960603S	0.00290						07/15/96 0935
ISB		960630H	1.04256		1.000		104.3	% REC	07/15/96 0943
ID	961603-3		0.00601			0.00737	0.00136	ABS Diff.	07/15/96 0958
DS	961603-3	960630G	0.96647		1.000	0.00737	95.9	% REC	07/15/96 1005
CCV		960610T	2.53520		2.5		101.4	% REC	07/15/96 1111
CCB		960603S	-0.00494						07/15/96 1132
CCV		960610T	2.41066		2.5		96.4	% REC	07/15/96 1513
CCB		960603S	-0.00157						07/15/96 1532
CCV		960610T	2.57160		2.5		102.9	% REC	07/15/96 1739
CCB		960603S	-0.00246						07/15/96 1751
CCV		960610T	2.39790		2.5		95.9	% REC	07/15/96 2011
CCB		960603S	0.00369						07/15/96 2019
ID	961754-3		0.00217			-0.00214	0.00431	ABS Diff.	07/15/96 2052
DS	961754-4	960630G	1.01572		1.000	0.00227	101.3	% REC	07/15/96 2058
CCV		960610T	2.40844		2.5		96.3	% REC	07/15/96 2108
CCB		960603S	-0.00285						07/15/96 2122
CCV		960610T	2.42387		2.5		97.0	% REC	07/15/96 2207
CCB		960603S	-0.00120						07/15/96 2218
CCV		960610T	2.44411		2.5		97.8	% REC	07/15/96 2311
CCB		960603S	-0.00370						07/15/96 2337
ID	961818-3		-0.00133			0.00041	0.00174	ABS Diff.	07/16/96 0005
DS	961818-3	960630G	0.90828		1.000	0.00041	90.8	% REC	07/16/96 0008
CCV		960610T	2.56784		2.5		102.7	% REC	07/16/96 0037
CCB		960603S	0.00404						07/16/96 0103
ISB		960630H	0.99730		1.000		99.7	% REC	07/16/96 0116
CCV		960610T	2.59228		2.5		103.7	% REC	07/16/96 0139
CCB		960603S	-0.00235						07/16/96 0208

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Arsenic (As)

Batch.....: 11046

Reporting Limit...: 0.05

Units.....: mg/L

Analyst.... smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960618Z	2.09734		2.00		104.9	% REC	07/15/96 0822
ICB		960603S	-0.00157						07/15/96 0935
ISB		960630H	1.03364		1.000		103.4	% REC	07/15/96 0943
ID	961603-3		-0.00182			0.00031	0.00213	ABS Diff.	07/15/96 0958
DS	961603-3	960630G	0.98349		1.000	0.00031	98.3	% REC	07/15/96 1005
CCV		960610T	2.61069		2.5		104.4	% REC	07/15/96 1111
CCB		960603S	0.00026						07/15/96 1132
CCV		960610T	2.53985		2.5		101.6	% REC	07/15/96 1513
CCB		960603S	0.00370						07/15/96 1532
CCV		960610T	2.62043		2.5		104.8	% REC	07/15/96 1739
CCB		960603S	0.00270						07/15/96 1751
CCV		960610T	2.50640		2.5		100.3	% REC	07/15/96 2011
CCB		960603S	-0.00087						07/15/96 2019
ID	961754-3		0.00058			0.00035	0.00023	ABS Diff.	07/15/96 2052
DS	961754-4	960630G	1.03391		1.000	-0.00413	103.8	% REC	07/15/96 2058
CCV		960610T	2.53312		2.5		101.3	% REC	07/15/96 2108
CCB		960603S	-0.00468						07/15/96 2122



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Batch.....: 11046

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.05

Parameter.....: Arsenic (As)

Units.....: mg/L

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960610T	2.54403		2.5		101.8	% REC	07/15/96 2207
CCB		960603S	0.00162						07/15/96 2218
CCV		960610T	2.58654		2.5		103.5	% REC	07/15/96 2311
CB		960603S	0.00109						07/15/96 2337
D	961818-3		0.00221			-0.00394	0.00615	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.92979		1.000	-0.00394	93.4	% REC	07/16/96 0008
CCV		960610T	2.60387		2.5		104.2	% REC	07/16/96 0037
CCB		960603S	0.00307						07/16/96 0103
SB		960630H	0.97758		1.000		97.8	% REC	07/16/96 0116
CV		960610T	2.62200		2.5		104.9	% REC	07/16/96 0139
CCB		960603S	-0.00402						07/16/96 0208

Test Method.....: EPA 200.7

Batch.....: 11046

Analyst....: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit....: 0.002

Parameter.....: Beryllium (Be)

Units.....: mg/L

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.06246		2.00		103.1	% REC	07/15/96 0822
ICB		960603S	0.00030						07/15/96 0935
SB		960630H	0.51085		0.5000		102.2	% REC	07/15/96 0943
D	961603-3		-0.00036			-0.00036	0.00000	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	0.97554		1.000	-0.00036	97.6	% REC	07/15/96 1005
CCV		960610T	2.51741		2.5		100.7	% REC	07/15/96 1111
CCB		960603S	-0.00004						07/15/96 1132
CV		960610T	2.50447		2.5		100.2	% REC	07/15/96 1513
CB		960603S	0.00013						07/15/96 1532
CCV		960610T	2.56168		2.5		102.5	% REC	07/15/96 1739
CCB		960603S	0.00025						07/15/96 1751
CV		960610T	2.44925		2.5		98.0	% REC	07/15/96 2011
CB		960603S	0.00022						07/15/96 2019
D	961754-3		-0.00008			-0.00009	0.00001	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.05698		1.000	-0.00009	105.7	% REC	07/15/96 2058
CCV		960610T	2.49586		2.5		99.8	% REC	07/15/96 2108
CB		960603S	-0.00021						07/15/96 2122
CV		960610T	2.50544		2.5		100.2	% REC	07/15/96 2207
CCB		960603S	0.00012						07/15/96 2218
CCV		960610T	2.53975		2.5		101.6	% REC	07/15/96 2311
CB		960603S	-0.00012						07/15/96 2337
D	961818-3		0.00016			0.00025	0.00009	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.93491		1.000	0.00025	93.5	% REC	07/16/96 0008
CCV		960610T	2.57217		2.5		102.9	% REC	07/16/96 0037
CCB		960603S	-0.00007						07/16/96 0103
SB		960630H	0.50337		0.5000		100.7	% REC	07/16/96 0116
CV		960610T	2.56360		2.5		102.5	% REC	07/16/96 0139
CCB		960603S	-0.00010						07/16/96 0208



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method..... EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter..... Cadmium (Cd)

Batch..... 11046

Reporting Limit.... 0.005

Units..... mg/L

Analyst.... smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.04797		2.00		102.4	% REC	07/15/96 0822
ICB		960603S	-0.00027						07/15/96 0935
ISB		960630H	0.99259		1.000		99.3	% REC	07/15/96 0943
MD	961603-3		-0.00018			-0.00028	0.00010	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	1.00847		1.000	-0.00028	100.9	% REC	07/15/96 1005
CCV		960610T	1.00320		1.0		100.3	% REC	07/15/96 1111
CCB		960603S	0.00026						07/15/96 1132
CCV		960610T	0.98232		1.0		98.2	% REC	07/15/96 1513
CCB		960603S	0.00015						07/15/96 1532
CCV		960610T	1.01990		1.0		102.0	% REC	07/15/96 1739
CCB		960603S	0.00045						07/15/96 1751
CCV		960610T	1.00082		1.0		100.1	% REC	07/15/96 2011
CCB		960603S	-0.00021						07/15/96 2019
MD	961754-3		-0.00030			-0.00017	0.00013	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.03107		1.000	-0.00005	103.1	% REC	07/15/96 2058
CCV		960610T	1.00444		1.0		100.4	% REC	07/15/96 2108
CCB		960603S	0.00019						07/15/96 2122
CCV		960610T	1.01076		1.0		101.1	% REC	07/15/96 2207
CCB		960603S	0.00030						07/15/96 2218
CCV		960610T	1.02681		1.0		102.7	% REC	07/15/96 2311
CCB		960603S	-0.00012						07/15/96 2337
MD	961818-3		1.60708			1.57346	2.1	RPD	07/16/96 0005
PDS	961818-3	960630G	2.34361		1.000	1.57346	77.0	% REC	07/16/96 0008
CCV		960610T	1.02559		1.0		102.6	% REC	07/16/96 0037
CCB		960603S	-0.00046						07/16/96 0103
ISB		960630H	0.93075		1.000		93.1	% REC	07/16/96 0116
CCV		960610T	1.03981		1.0		104.0	% REC	07/16/96 0139
CCB		960603S	0.00021						07/16/96 0208

Test Method..... EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter..... Chromium (Cr)

Batch..... 11046

Reporting Limit.... 0.01

Units..... mg/L

Analyst.... smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.04626		2.00		102.3	% REC	07/15/96 0822
ICB		960603S	-0.00106						07/15/96 0935
ISB		960630H	0.53700		0.5000		107.4	% REC	07/15/96 0943
MD	961603-3		-0.00071			0.00076	0.00147	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	0.99989		1.000	0.00076	99.9	% REC	07/15/96 1005
CCV		960610T	2.47130		2.5		98.9	% REC	07/15/96 1111
CCB		960603S	-0.00085						07/15/96 1132
CCV		960610T	2.41104		2.5		96.4	% REC	07/15/96 1513
CCB		960603S	-0.00039						07/15/96 1532
CCV		960610T	2.51790		2.5		100.7	% REC	07/15/96 1739
CCB		960603S	-0.00127						07/15/96 1751
CCV		960610T	2.59991		2.5		104.0	% REC	07/15/96 2011
CCB		960603S	0.00046						07/15/96 2019
MD	961754-3		0.00323			0.00023	0.00300	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.10673		1.000	0.00011	110.7	% REC	07/15/96 2058
CCV		960610T	2.61743		2.5		104.7	% REC	07/15/96 2108
CCB		960603S	0.00057						07/15/96 2122





# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Chromium (Cr)

Batch.....: 11046

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CCV		960610T	2.48234		2.5		99.3	% REC	07/15/96 2207
CCB		960603S	0.00119						07/15/96 2218
CCV		960610T	2.51485		2.5		100.6	% REC	07/15/96 2311
CCB		960603S	0.00152						07/15/96 2337
MD	961818-3		0.00507			0.00594	0.00087	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.97086		1.000	0.00594	96.5	% REC	07/16/96 0008
CCV		960610T	2.52274		2.5		100.9	% REC	07/16/96 0037
CCB		960603S	-0.00136						07/16/96 0103
ISB		960630H	0.49242		0.5000		98.5	% REC	07/16/96 0116
CCV		960610T	2.53339		2.5		101.3	% REC	07/16/96 0139
CCB		960603S	-0.00045						07/16/96 0208

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Copper (Cu)

Batch.....: 11046

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.09205		2.00		104.6	% REC	07/15/96 0822
ICB		960603S	-0.00061						07/15/96 0935
ISB		960630H	0.53945		0.5000		107.9	% REC	07/15/96 0943
MD	961603-3		-0.00035			0.00110	0.00145	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	0.96939		1.000	0.00110	96.8	% REC	07/15/96 1005
CCV		960610T	2.59499		2.5		103.8	% REC	07/15/96 1111
CCB		960603S	0.00112						07/15/96 1132
CCV		960610T	2.47499		2.5		99.0	% REC	07/15/96 1513
CCB		960603S	-0.00067						07/15/96 1532
CCV		960610T	2.49262		2.5		99.7	% REC	07/15/96 1739
CCB		960603S	0.00120						07/15/96 1751
CCV		960610T	2.47028		2.5		98.8	% REC	07/15/96 2011
CCB		960603S	-0.00151						07/15/96 2019
MD	961754-3		0.00094			-0.00076	0.00170	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.00627		1.000	0.00065	100.6	% REC	07/15/96 2058
CCV		960610T	2.51400		2.5		100.6	% REC	07/15/96 2108
CCB		960603S	-0.00045						07/15/96 2122
CCV		960610T	2.51901		2.5		100.8	% REC	07/15/96 2207
CCB		960603S	-0.00050						07/15/96 2218
CCV		960610T	2.55022		2.5		102.0	% REC	07/15/96 2311
CCB		960603S	-0.00035						07/15/96 2337
MD	961818-3		-0.00090			-0.00247	0.00157	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.92624		1.000	-0.00247	92.9	% REC	07/16/96 0008
CCV		960610T	2.55338		2.5		102.1	% REC	07/16/96 0037
CCB		960603S	-0.00111						07/16/96 0103
ISB		960630H	0.42662		0.5000		85.3	% REC	07/16/96 0116
CCV		960610T	2.55707		2.5		102.3	% REC	07/16/96 0139
CCB		960603S	0.00167						07/16/96 0208



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Lead (Pb)

Batch.....: 11046

Reporting Limit....: 0.05

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.04012		2.00		102.0	% REC	07/15/96 0822
ICB		960603S	-0.00013						07/15/96 0935
ISB		960630H	0.99497		1.000		99.5	% REC	07/15/96 0943
MD	961603-3		-0.00032			0.00101	0.00133	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	1.02485		1.000	0.00101	102.4	% REC	07/15/96 1005
CCV		960610T	0.99122		1.0		99.1	% REC	07/15/96 1111
CCB		960603S	0.00134						07/15/96 1132
CCV		960610T	0.97926		1.0		97.9	% REC	07/15/96 1513
CCB		960603S	-0.00252						07/15/96 1532
CCV		960610T	1.03341		1.0		103.3	% REC	07/15/96 1739
CCB		960603S	-0.00133						07/15/96 1751
CCV		960610T	1.01033		1.0		101.0	% REC	07/15/96 2011
CCB		960603S	-0.00154						07/15/96 2019
MD	961754-3		-0.00058			-0.00156	0.00098	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.03461		1.000	0.00178	103.3	% REC	07/15/96 2058
CCV		960610T	1.00447		1.0		100.4	% REC	07/15/96 2108
CCB		960603S	-0.00025						07/15/96 2122
CCV		960610T	1.01419		1.0		101.4	% REC	07/15/96 2207
CCB		960603S	0.00073						07/15/96 2218
CCV		960610T	1.01851		1.0		101.9	% REC	07/15/96 2311
CCB		960603S	0.00029						07/15/96 2337
MD	961818-3		0.00215			0.00429	0.00214	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.95857		1.000	0.00429	95.4	% REC	07/16/96 0008
CCV		960610T	0.99709		1.0		99.7	% REC	07/16/96 0037
CCB		960603S	-0.00294						07/16/96 0103
ISB		960630H	0.86364		1.000		86.4	% REC	07/16/96 0116
CCV		960610T	0.99477		1.0		99.5	% REC	07/16/96 0139
CCB		960603S	-0.00149						07/16/96 0208

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Nickel (Ni)

Batch.....: 11046

Reporting Limit....: 0.04

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.09424		2.00		104.7	% REC	07/15/96 0822
ICB		960603S	-0.00074						07/15/96 0935
ISB		960630H	1.04130		1.000		104.1	% REC	07/15/96 0943
MD	961603-3		0.00329			0.00374	0.00045	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	0.99988		1.000	0.00374	99.6	% REC	07/15/96 1005
CCV		960610T	2.44841		2.5		97.9	% REC	07/15/96 1111
CCB		960603S	-0.00124						07/15/96 1132
CCV		960610T	2.45002		2.5		98.0	% REC	07/15/96 1513
CCB		960603S	-0.00072						07/15/96 1532
CCV		960610T	2.52023		2.5		100.8	% REC	07/15/96 1739
CCB		960603S	0.00062						07/15/96 1751
CCV		960610T	2.50642		2.5		100.3	% REC	07/15/96 2011
CCB		960603S	0.00025						07/15/96 2019
MD	961754-3		-0.00030			-0.00131	0.00101	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	0.99783		1.000	-0.00094	99.9	% REC	07/15/96 2058
CCV		960610T	2.52191		2.5		100.9	% REC	07/15/96 2108
CCB		960603S	-0.00090						07/15/96 2122



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Batch.....: 11046

Analyst...: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit...: 0.04

Parameter.....: Nickel (Ni)

Units.....: mg/L

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CCV		960610T	2.52814		2.5		101.1	% REC	07/15/96 2207
CCB		960603S	-0.00116						07/15/96 2218
CCV		960610T	2.56940		2.5		102.8	% REC	07/15/96 2311
CCB		960603S	-0.00113						07/15/96 2337
MD	961818-3		0.00869			0.00787	0.00082	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.89702		1.000	0.00787	88.9	% REC	07/16/96 0008
CCV		960610T	2.56441		2.5		102.6	% REC	07/16/96 0037
CCB		960603S	-0.00035						07/16/96 0103
ISB		960630H	0.86723		1.000		86.7	% REC	07/16/96 0116
CCV		960610T	2.57692		2.5		103.1	% REC	07/16/96 0139
CCB		960603S	0.00172						07/16/96 0208

Test Method.....: EPA 200.7

Batch.....: 11046

Analyst...: smh

Method Description.: Metals Analysis(ICAP), Trace

Reporting Limit...: 0.1

Parameter.....: Selenium (Se)

Units.....: mg/L

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
ICV		960618Z	2.03095		2.00		101.5	% REC	07/15/96 0822
ICB		960603S	0.00094						07/15/96 0935
ISB		960630H	1.00305		1.000		100.3	% REC	07/15/96 0943
MD	961603-3		0.00921			0.00748	0.00173	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	0.99587		1.000	0.00748	98.8	% REC	07/15/96 1005
CCV		960610T	2.55458		2.5		102.2	% REC	07/15/96 1111
CCB		960603S	-0.00263						07/15/96 1132
CCV		960610T	2.44138		2.5		97.7	% REC	07/15/96 1513
CCB		960603S	-0.00127						07/15/96 1532
CCV		960610T	2.62493		2.5		105.0	% REC	07/15/96 1739
CCB		960603S	0.00258						07/15/96 1751
CCV		960610T	2.51783		2.5		100.7	% REC	07/15/96 2011
CCB		960603S	0.00118						07/15/96 2019
MD	961754-3		0.00673			-0.00489	0.01162	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.08407		1.000	-0.00160	108.6	% REC	07/15/96 2058
CCV		960610T	2.53174		2.5		101.3	% REC	07/15/96 2108
CCB		960603S	-0.00372						07/15/96 2122
CCV		960610T	2.52323		2.5		100.9	% REC	07/15/96 2207
CCB		960603S	-0.00277						07/15/96 2218
CCV		960610T	2.56986		2.5		102.8	% REC	07/15/96 2311
CCB		960603S	-0.00423						07/15/96 2337
MD	961818-3		0.01989			0.02961	0.00972	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.96609		1.000	0.02961	93.6	% REC	07/16/96 0008
CCV		960610T	2.60487		2.5		104.2	% REC	07/16/96 0037
CCB		960603S	-0.00159						07/16/96 0103
ISB		960630H	1.00343		1.000		100.3	% REC	07/16/96 0116
CCV		960610T	2.60449		2.5		104.2	% REC	07/16/96 0139
CCB		960603S	0.00368						07/16/96 0208



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Silver (Ag)

Batch.....: 11046

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960618Y	1.99221		2.00		99.6	% REC	07/15/96 0919
ICB		960603S	-0.00082						07/15/96 0935
ISB		960630H	1.04581		1.000		104.6	% REC	07/15/96 0943
D	961603-3		-0.00011			0.00302	0.00313	ABS Diff.	07/15/96 0958
DS	961603-3	960630G	0.90077		1.000	0.00302	89.8	% REC	07/15/96 1005
CCV		960627Z	2.56122		2.5		102.4	% REC	07/15/96 1101
CCB		960603S	-0.00132						07/15/96 1132
CV		960627Z	2.60426		2.5		104.2	% REC	07/15/96 1459
CB		960603S	-0.00096						07/15/96 1532
CV		960627Z	2.62399		2.5		105.0	% REC	07/15/96 1715
CCB		960603S	-0.00083						07/15/96 1751
CCV		960627Z	2.61263		2.5		104.5	% REC	07/15/96 1956
CB		960603S	0.00101						07/15/96 2019
D	961754-3		0.00198			-0.00109	0.00307	ABS Diff.	07/15/96 2052
DS	961754-4	960630G	1.03065		1.000	0.00005	103.1	% REC	07/15/96 2058
CCV		960627Z	2.61538		2.5		104.6	% REC	07/15/96 2100
CCB		960603S	-0.00074						07/15/96 2122
CV		960627Z	2.58087		2.5		103.2	% REC	07/15/96 2205
CB		960603S	-0.00012						07/15/96 2218
CCV		960627Z	2.59317		2.5		103.7	% REC	07/15/96 2307
CCB		960603S	-0.00007						07/15/96 2337
D	961818-3		0.00545			0.00714	0.00169	ABS Diff.	07/16/96 0005
DS	961818-3	960630G	0.93591		1.000	0.00714	92.9	% REC	07/16/96 0008
CCV		960627Z	2.46686		2.5		98.7	% REC	07/16/96 0017
CCB		960603S	0.00067						07/16/96 0103
ISB		960630H	0.91574		1.000		91.6	% REC	07/16/96 0116
CV		960627Z	2.50119		2.5		100.0	% REC	07/16/96 0131
CB		960603S	-0.00070						07/16/96 0208

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Zinc (Zn)

Batch.....: 11046

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CV		960618Z	2.06478		2.00		103.2	% REC	07/15/96 0822
ICB		960603S	-0.00006						07/15/96 0935
ISB		960630H	1.02005		1.000		102.0	% REC	07/15/96 0943
D	961603-3		0.00550			0.00552	0.00002	ABS Diff.	07/15/96 0958
DS	961603-3	960630G	0.97007		1.000	0.00552	96.5	% REC	07/15/96 1005
CCV		960610T	2.52494		2.5		101.0	% REC	07/15/96 1111
CCB		960603S	0.00000						07/15/96 1132
CV		960610T	2.50064		2.5		100.0	% REC	07/15/96 1513
CB		960603S	0.00069						07/15/96 1532
CV		960610T	2.53788		2.5		101.5	% REC	07/15/96 1739
CCB		960603S	0.00023						07/15/96 1751
CCV		960610T	2.41600		2.5		96.6	% REC	07/15/96 2011
CB		960603S	-0.00023						07/15/96 2019
D	961754-3		0.00058			0.00070	0.00012	ABS Diff.	07/15/96 2052
DS	961754-4	960630G	1.00820		1.000	0.00082	100.7	% REC	07/15/96 2058
CCV		960610T	2.44017		2.5		97.6	% REC	07/15/96 2108
CCB		960603S	-0.00105						07/15/96 2122



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Zinc (Zn)

Batch.....: 11046

Reporting Limit....: 0.01

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CCV		960610T	2.44355		2.5		97.7	% REC	07/15/96 2207
CCB		960603S	-0.00011						07/15/96 2218
CCV		960610T	2.48513		2.5		99.4	% REC	07/15/96 2311
CCB		960603S	-0.00023						07/15/96 2337
ID	961818-3		2.02963			1.97022	3.0	RPD	07/16/96 0005
CCV		960610T	2.53053		2.5		101.2	% REC	07/16/96 0037
CCB		960603S	-0.00110						07/16/96 0103
ISB		960630H	0.90231		1.000		90.2	% REC	07/16/96 0116
CCV		960610T	2.58638		2.5		103.5	% REC	07/16/96 0139
CCB		960603S	-0.00001						07/16/96 0208

Test Method.....: EPA 200.7

Method Description.: Metals Analysis(ICAP), Trace

Parameter.....: Thallium (Tl)

Batch.....: 11048

Reporting Limit....: 0.1

Units.....: mg/L

Analyst....: smh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Units	Date/Time
CCV		960618Z	2.07545		2.00		103.8	% REC	07/15/96 0822
ICB		960603S	-0.00636						07/15/96 0935
ISB		960630H	1.00747		1.000		100.7	% REC	07/15/96 0943
ID	961603-3		-0.01231			-0.00534	0.00697	ABS Diff.	07/15/96 0958
PDS	961603-3	960630G	1.03252		1.000	-0.00534	103.8	% REC	07/15/96 1005
CCV		960610T	0.98956		1.0		99.0	% REC	07/15/96 1111
CCB		960603S	0.00747						07/15/96 1132
CCV		960610T	0.97252		1.0		97.3	% REC	07/15/96 1513
CCB		960603S	-0.00111						07/15/96 1532
CCV		960610T	1.03816		1.0		103.8	% REC	07/15/96 1739
CCB		960603S	-0.00855						07/15/96 1751
CCV		960610T	1.01577		1.0		101.6	% REC	07/15/96 2011
CCB		960603S	0.00936						07/15/96 2019
ID	961754-3		-0.00131			0.00692	0.00823	ABS Diff.	07/15/96 2052
PDS	961754-4	960630G	1.09694		1.000	0.00887	108.8	% REC	07/15/96 2058
CCV		960610T	1.03234		1.0		103.2	% REC	07/15/96 2108
CCB		960603S	0.00508						07/15/96 2122
CCV		960610T	1.04018		1.0		104.0	% REC	07/15/96 2207
CCB		960603S	0.00753						07/15/96 2218
CCV		960610T	1.04398		1.0		104.4	% REC	07/15/96 2311
CCB		960603S	0.00081						07/15/96 2337
ID	961818-3		-0.02077			-0.05396	0.03319	ABS Diff.	07/16/96 0005
PDS	961818-3	960630G	0.96149		1.000	-0.05396	101.5	% REC	07/16/96 0008
CCV		960610T	1.01137		1.0		101.1	% REC	07/16/96 0037
CCB		960603S	-0.00683						07/16/96 0103
ISB		960630H	0.87882		1.000		87.9	% REC	07/16/96 0116
CCV		960610T	0.98395		1.0		98.4	% REC	07/16/96 0139
CCB		960603S	0.00090						07/16/96 0208



# CORE LABORATORIES

## QUALITY CONTROL RESULTS

Job Number: 961676

Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8020

Batch.....: 10479

Analyst ....: tdw

Method Description.: Volatile Organics -Aromatics

Units.....: ug/L

MB	Method Blank					06/26/96 1401
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Parameter/Test Description	QC Result	QC Result	Rep. Limit	True Value	Orig. Value	Calc. Result	Units
Benzene	ND		0.5				
Ethylbenzene	ND		0.5				
Toluene	ND		0.5				
Aromatics (total)	ND		0.5				

Test Method.....: SW-846 8270

Batch.....: 10917

Analyst ....: dmj

Method Description.: Semivolatile Organics (Client List)

Units.....: ug/L

MB	Method Blank	MB1528				07/10/96 0231
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Parameter/Test Description	QC Result	QC Result	Rep. Limit	True Value	Orig. Value	Calc. Result	Units
Acenaphthene	ND		10				
Acenaphthylene	ND		10				
Anthracene	ND		10				
Benzo(a)anthracene	ND		10				
Benzo(b)fluoranthene	ND		10				
Benzo(k)fluoranthene	ND		10				
Benzo(ghi)perylene	ND		10				
Benzo(a)pyrene	ND		10				
Chrysene	ND		10				
Dibenzo(a,h)anthracene	ND		10				
Fluoranthene	ND		10				
Fluorene	ND		10				
Indeno(1,2,3-cd)pyrene	ND		10				
1-Methylnaphthalene	ND		10				
2-Methylnaphthalene	ND		10				
Naphthalene	ND		10				
Phenanthrene	ND		10				
Pyrene	ND		10				



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 961676

Report Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Method.....: SW-846 8020  
Method Code.....: 8020

Batch.....: 10479  
Analyst.....: tdw

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
961676-1		MB		19.156	20.08	95.4		06/26/96	1401
961676-2				18.090	20.08	90.1		06/26/96	1707
961676-3				18.651	20.08	92.9		06/26/96	1746
961676-4				18.698	20.08	93.1		06/26/96	1833
961676-5			100	19.059	20.08	94.9		06/26/96	1912
				18.247	20.08	90.9		06/27/96	0006

Method.....: SW-846 8270  
Method Code.....: 8270C

Batch.....: 10917  
Analyst.....: dmj

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
961676-2			1.00	84.28	100.01	84		07/10/96	1253
961705-4			1.00	90.40	100.01	90		07/10/96	1449
961676-3			1.00	85.40	100.01	85		07/10/96	1547
961676-4			1.00	88.89	100.01	89		07/10/96	1646
961705-1			1.00	84.82	100.01	85		07/10/96	1744
961705-2			1.00	88.57	100.01	89		07/10/96	1843
961705-3			1.00	83.28	100.01	83		07/10/96	1941
961676-1			1.00	77.93	100.01	78		07/10/96	2038
961676-5			10.00	7.06	100.01	71		07/10/96	2136
		MB	1.00	70.66	100.01	71		07/10/96	0231

Surrogate	Units
2-Fluorobiphenyl	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
961676-2			1.00	25.59	50.01	51		07/10/96	1253
961705-4			1.00	32.68	50.01	65		07/10/96	1449
961676-3			1.00	25.75	50.01	51		07/10/96	1547
961676-4			1.00	26.35	50.01	53		07/10/96	1646
961705-1			1.00	25.12	50.01	50		07/10/96	1744
961705-2			1.00	25.59	50.01	51		07/10/96	1843
961705-3			1.00	27.82	50.01	56		07/10/96	1941
961676-1			1.00	26.27	50.01	53		07/10/96	2038
961676-5			10.00	2.83	50.01	57		07/10/96	2136
		MB	1.00	25.12	50.01	50		07/10/96	0231



# CORE LABORATORIES

## SURROGATE RECOVERIES REPORT

Job Number.: 961676

Report Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
761676-2			1.00	31.39	100.00	31		07/10/96	1253
761705-4			1.00	40.62	100.00	41		07/10/96	1449
761676-3			1.00	32.82	100.00	33		07/10/96	1547
761676-4			1.00	35.56	100.00	36		07/10/96	1646
761705-1			1.00	35.31	100.00	35		07/10/96	1744
761705-2			1.00	26.27	100.00	26		07/10/96	1843
761705-3			1.00	31.55	100.00	32		07/10/96	1941
761676-1			1.00	32.85	100.00	33		07/10/96	2038
761676-5			10.00	3.39	100.00	34		07/10/96	2136
		MB	1.00	33.85	100.00	34		07/10/96	0231

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
761676-2			1.00	24.63	50.05	49		07/10/96	1253
761705-4			1.00	29.65	50.05	59		07/10/96	1449
761676-3			1.00	24.04	50.05	48		07/10/96	1547
761676-4			1.00	25.41	50.05	51		07/10/96	1646
761705-1			1.00	24.55	50.05	49		07/10/96	1744
761705-2			1.00	25.08	50.05	50		07/10/96	1843
761705-3			1.00	27.17	50.05	54		07/10/96	1941
761676-1			1.00	25.92	50.05	52		07/10/96	2038
761676-5			10.00	5.39	50.05	108		07/10/96	2136
		MB	1.00	25.96	50.05	52		07/10/96	0231

Surrogate	Units
Phenol-d6	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
761676-2			1.00	21.31	100.02	21		07/10/96	1253
761705-4			1.00	29.63	100.02	30		07/10/96	1449
761676-3			1.00	23.40	100.02	23		07/10/96	1547
761676-4			1.00	25.65	100.02	26		07/10/96	1646
761705-1			1.00	24.66	100.02	25		07/10/96	1744
761705-2			1.00	24.17	100.02	24		07/10/96	1843
761705-3			1.00	24.56	100.02	25		07/10/96	1941
761676-1			1.00	21.57	100.02	22		07/10/96	2038
761676-5			10.00	2.90	100.02	29		07/10/96	2136
		MB	1.00	22.92	100.02	23		07/10/96	0231





## CORE LABORATORIES

### SURROGATE RECOVERIES REPORT

Job Number.: 961676

Report Date: 07/18/96

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9338

ATTN: Annette Montoya

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Flag	Date	Time
961676-2			1.00	41.68	50.00	83		07/10/96	1253
961705-4			1.00	26.10	50.00	52		07/10/96	1449
961676-3			1.00	42.33	50.00	85		07/10/96	1547
961676-4			1.00	40.86	50.00	82		07/10/96	1646
961705-1			1.00	42.04	50.00	84		07/10/96	1744
961705-2			1.00	42.65	50.00	85		07/10/96	1843
961705-3			1.00	39.74	50.00	79		07/10/96	1941
961676-1			1.00	39.10	50.00	78		07/10/96	2038
961676-5			10.00	3.09	50.00	62		07/10/96	2136
		MB	1.00	42.48	50.00	85		07/10/96	0231



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 07/18/96

#### Volatile Organics

##### Method 602/8020

##### Surrogate Recovery Limits

	Water	Soil
Bromofluorobenzene	89-110%	78-123%
Spike/Spike Duplicate Recovery Limits		
	Water	Soil
Benzene	39-150%	75-125%
Ethylbenzene	32-160%	60-140%
Toluene	46-148%	70-130%
Xylenes	75-125%	61-139%

##### Method 8015 Modified

##### Spike/Spike Duplicate Recovery Limits

	Water	Soil
TVPH	81-124%	48-152%
TEPH	54-135%	54-135%

##### Method 624/8240/8260

##### Surrogate Recovery Limits

	Water	Soil
Dibromofluoromethane	86-118%	80-120%
Toluene-(d8)	88-110%	81-117%
4-Bromofluorobenzene	86-115%	74-121%

##### Spike/Spike Duplicate Recovery & RPD Limits

	Water		Soil	
	Recovery	RPD	Recovery	RPD
1,1-Dichloroethene	61-145%	14	59-172%	22
Trichloroethene	71-120%	14	62-137%	24
Benzene	76-127%	11	66-142%	21
Toluene	76-125%	13	59-139%	21
Chlorobenzene	75-130%	13	60-133%	21

#### Pesticides/PCB Organics

##### Method 608/8080

##### Surrogate Recovery Limits

	Water	Soil
Tetrachloro-m-xylene	60-150%	60-150%
4,4'-Dichlorobiphenyl	60-150%	60-150%

##### Method 8140

##### Surrogate Recovery Limits

	Water	Soil
Tributylphosphate	36-152%	36-152%
Triphenylphosphate	40-152%	40-152%

#### Base/Neutral/Acid Organics

##### Method 625/8270

##### Surrogate Recovery Limits

	Water	Soil
Nitrobenzene-d5	35-114%	23-120%
2-Fluorobiphenyl	43-116%	30-115%
4-Terphenyl-d14	33-141%	18-137%
Phenol-d6	10-94%	24-113%
2-Fluorophenol	21-100%	25-121%
2,4,6-Tribromophenol	10-123%	19-122%



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 07/18/96

#### Matrix Spike/Matrix Spike Duplicate Recovery & RPD Limits

	Water		Soil	
	Recovery	RPD	Recovery	RPD
Phenol	12-110%	42	26-90%	35
2-Chlorophenol	27-123%	40	25-102%	50
1,4-Dichlorobenzene	36-97%	28	28-104%	27
N-Nitroso-di-n-propylamine	41-116%	38	41-126%	38
1,2,4-Trichlorobenzene	39-98%	28	38-107%	23
4-Chloro-3-methylphenol	23-97%	42	26-103%	33
Acenaphthene	46-118%	31	31-137%	19
4-Nitrophenol	10-80%	50	11-114%	50
2,4-Dinitrotoluene	24-96%	38	28-89%	47
Pentachlorophenol	9-103%	50	17-109%	47
Pyrene	26-127%	31	35-142%	36



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 07/18/96

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989
- (3) Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989
- (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
- (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
- (6) Federal Register, July 1, 1990 (40 CFR Part 136)
- (7) EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988
- (8) U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
- (9) Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)
- (10) Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985
- (11) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (12) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
- (14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke
- (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
- (16) ASTM, Part 19, Soils and Rocks; Building Stones, 1981

Comments: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated.

NC = Not Calculable Due to Value(s) lower than the Detection Limit.

BLANK QC SAMPLE IDENTIFICATION



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 07/18/96

MB Method Blank  
ICB Initial Calibration Blank  
CCB Continuing Calibration Blank

#### SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike  
MSD Method (Matrix) Spike Duplicate  
PDS Post Digestion Spike  
SB Spiked Blank  
SBD Spike Blank Duplicate

#### REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard  
RS Reference Standard  
ICV Initial Calibration Verification Standard  
CCV Continuing Calibration Verification Standard  
ISA/ISB ICP Interface Check Sample  
ICL Initial Calibration/Laboratory Control Sample  
DSC Distilled Standard Check

#### DUPLICATE QC SAMPLE IDENTIFICATION

MD Method (Matrix) Duplicate  
ED Extraction Duplicate  
DD Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORY	CODE
Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP
Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

#### EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method.



## CORE LABORATORIES

### QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 07/18/96

- This flag is also used when estimating the concentration of a tentatively identified compound.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
  - Y - Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits.
  - Z - Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
  - \* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
  - - Used to indicate that a standard is outside specified quality control limits.

