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ENVIRONMENTAL SITE INVESTIGATION
EUNICE SOUTH GAS PLANT

LEA COUNTY, NEW MEXICO

January 1996

Prepared for

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Prepared by

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EXECUTIVE SUMMARY

Geraghty & Miller, Inc. was contacted by Texaco Exploration and Production Inc. to conduct an environmental investigation at the Eunice South Gas Plant, located in southeastern New Mexico. The purpose of this investigation is to evaluate the occurrence of phase-separated hydrocarbons, dissolved hydrocarbon and high chloride and total dissolved solids in the groundwater at the Northern Natural Gas Company Eunice Compressor Station which adjoins the north boundary of the Texaco Exploration and Production Inc. Eunice South Gas Plant in Lea County, New Mexico. A preliminary study of the Northern Natural Gas Company property, conducted by D. B. Stephens & Associates, Inc., identified phase-separated hydrocarbons in MW-3 located on the western edge of the Northern Natural Gas Company Compressor Station. There is also an indication of dissolved hydrocarbons in the groundwater under the southern portion of the Northern Natural Gas Company property. According to the D. B. Stephens & Associates, Inc. report, chlorides and total dissolved solids also increase in a generally southerly direction across Northern Natural Gas Company property. In addition, soils containing hydrocarbon constituents were identified above the water table in locations determined to be downgradient from MW-3.

The scope of work for the Geraghty & Miller, Inc. study included a background data review, the proposed installation of six monitor wells, soil and groundwater sampling and a water well inventory of wells between a one-half and one mile radius of the gas plant for background water sampling. Since Texaco Exploration and Production Inc. and Geraghty & Miller, Inc. were unable to secure access to the Northern Natural Gas Company property for the installation of proposed well TMW-4, only five monitor wells were actually drilled and installed during this investigation. Access was also unavailable for the proposed resampling of the groundwater in the existing Northern Natural Gas Company monitor wells.

During Geraghty & Miller, Inc. drilling activities, soil samples were analyzed for volatile organic compounds using field and laboratory methods. Soils were also analyzed for total petroleum hydrocarbons. Based on these findings, the soil at the water table interface in the location of monitor wells TMW-2, 3, 5 and 6 has been impacted by hydrocarbons. These wells are located immediately southeast, south and southwest of the Northern Natural Gas Company property. Similarly, the soil at the water table interface has been impacted at BH-14, SB-1 and obviously because of phase-separated hydrocarbons, at MW-3 on the west and southwest part of the Northern Natural Gas Company property.

Groundwater was encountered at a depth of approximately 52 feet below ground level in each monitor well location. Water levels were gauged, surface well elevations determined and a water table gradient map constructed. Groundwater generally flows toward the south from the Northern Natural Gas Company property toward the Texaco Exploration and Production Inc. property. Groundwater samples from newly installed monitor wells were collected and analyzed for volatile organic compounds, total petroleum hydrocarbons, polynuclear aromatic hydrocarbons, major minerals and metals. Benzene concentrations exceeded New Mexico Water Quality Control Commission standards in TMW-2, 3, 5 and 6. Concentrations of total dissolved solids and chloride exceeded New Mexico Quality Control Commission standards in groundwater samples collected from each new monitor well. Concentrations for aluminum, barium, boron, iron and manganese were also above New Mexico Quality Control Commission standards in several wells. The cadmium concentration in one well was at the New Mexico Quality Control Commission standard. Previous data, collected by D. B. Stephens & Associates, Inc. (10/94) identifies concentrations of benzene, toluene, ethylbenzene and total xylenes in excess of New Mexico Quality Control Commission standards in MW-2 and MW-3. Concentrations of barium, iron and manganese were detected above New Mexico Quality Control Commission standards in several wells.

Groundwater levels were gauged in the seven monitor wells on Northern Natural Gas Company property on December 17, 1995. An apparent water table mound exists under the

Northern Natural Gas Company property. Phase-separated hydrocarbons were identified in MW-3. The oil/water interface probe recorded 0.92 feet of product. A clear, disposable polyethylene bailer was lowered into the well and slowly removed. About 8 inches of product were visible over the groundwater. An Enron employee collected samples of the product at that time. No phase-separated hydrocarbons were encountered in other Northern Natural Gas Company wells or in the newly installed Texaco Exploration and Production Inc. monitor wells. Highest concentrations of hydrocarbon compounds and chloride and total dissolved solids concentrations are found in the groundwater beneath the Northern Natural Gas Company property. No source areas for contamination were identified on Texaco Exploration and Production Inc. property from soil or groundwater sampling conducted during this investigation.

INTRODUCTION

Texaco Exploration and Production Inc. (TEPI) retained Geraghty & Miller, Inc. (G&M) to conduct an environmental investigation of soils and groundwater underlying the TEPI Eunice South Gas Plant located south of Eunice, Lea County, New Mexico. The Eunice South Gas Plant is adjacent to the Northern Natural Gas Company (NNG) Compressor Station investigated by Daniel B. Stephens & Associates, Inc. (Stephens) in 1994.

The TEPI gas plant has been operating to extract primary distillates from raw natural gas since the 1940s. The NNG compressor station was constructed in 1962 to aid in the transport of dry natural gas originating at the adjoining gas plant. The purpose of this investigation is to evaluate the extent of subsurface hydrocarbon impacts identified in the Stephens report and to assess the location of possible sources.

G&M field investigation activities were conducted from November 27, 1995 to December 11, 1995. Activities included:

- The installation of five monitor wells;
- Soil sampling and analysis;
- Development and sampling of the newly installed monitor wells;
- Water level gauging in newly installed wells and existing monitor wells on NNG property;
- Water sampling from background water wells located upgradient and downgradient of the gas plant; and
- Surveying of newly installed monitor wells.

This report presents the methods and results of this investigation. Groundwater analytical tables include the results of sample analyses from this investigation and the preceding Stephens investigation on NNG property. Maps have been produced from this data and are included. Soil boring logs and laboratory analytical reports are included within the attached appendices.

SITE BACKGROUND

The subject area is located within Township 22S, Range 37E, Section 27 of Lea County, New Mexico. The TEPI gas plant was constructed in the 1940s to extract primary distillates (natural gas, butane and propane) from the raw natural gas obtained from local gas production wells. The NNG compressor station was built in 1962 to accommodate the transport of dry natural gas from the TEPI gas plant adjoining the NNG property on the south.

During the investigation conducted by Stephens, historical aerial photographs were reviewed to determine the number and location of former and present impoundments. The identified pits and impoundments are noted in Figure 1. Upon our review of the aerial photos, modification to the location of the pits southwest of the brine ponds was made.

PHYSICAL SETTING

The TEPI Eunice South Gas Plant is located in the southern half of Lea County where the sandy plains dip gradually to the south and southeast. Natural surface drainage is also to the south and southeast (SCS, 1971). The near surface material in the study area is composed of approximately one to two feet of Quaternary sands identified as belonging to the Simona series. These soils typically exhibit moderately rapid permeability and slow to medium run-off. Underlying Simona soils is hard, indurated caliche which varies in thickness from 10 to 20 feet. The land surface adjoining the plant area is sparsely vegetative with long-stem grasses and mesquite.

The climate in the Eunice area is semi-arid, characterized by hot, dry summers and cool, dry winters. Mean annual precipitation is approximately 13 inches (Nicholson and Clebsch, 1961). Most precipitation is associated with summer thunderstorms (Soil Conservation Service [SCS], 1974).

REGIONAL GEOLOGY

Potable groundwater in southern Lea County is supplied by three major aquifers. From oldest to youngest these include the Triassic Dockum group, comprised of the Santa Rosa sandstone and Chinle formation, the Pliocene-aged Ogallala formation and Quaternary alluvium. Most water wells are completed in the younger formations because the younger aquifers typically exhibit greater permeability and water yields. In addition, water derived from shallow, younger zones is generally of better chemical quality than water from the Triassic (Nicholson, Jr. And Oebsch, Jr., 1960).

The Triassic Dockum group consists of the Santa Rosa sandstone and the Chinle Formation. However, lithologic similarities may obscure distinction between the two formations. The Santa Rosa sandstone is the older member of the Dockum group. It is a fine to coarse grained sandstone, usually red, though containing white, gray and greenish-gray sands. It also contains minor shale units. In general, the sandstone ranges in thickness from 140 feet to over 300 feet. The Santa Rosa outcrops in the extreme western part of southern Lea County, but occurs at depth in the eastern part.

The Chinle Formation is the uppermost member of the Dockum group. It consists of red and green claystone, but also contains fine-grained sandstone and siltstone units. The Chinle is present in the eastern part of the area but thins to the west, where it is absent in the western portion of southern Lea County.

The Ogallala Formation is present under most of southern Lea County. The formation consists of a heterogeneous mixture of terrestrial sediments that were deposited upon an irregular erosional surface of Triassic rocks. Though dominantly composed of calcareous sand, the Ogallala Formation also contains clay, silts and gravel. Thin beds of well-cemented, conglomeratic sandstone have also been identified within this formation. In southern Lea County, the formation ranges in thickness from a few inches to about 300 feet.

Most of the near surface material in southern Lea County is composed of alluvium and sand dunes ranging in age from Pleistocene to recent. The alluvium was deposited in topographically low areas. It consists of alternating beds of calcareous silt, fine sand and clay. In some places, the alluvium ranges in thickness from a few inches to over 400 feet, though it is typically less than 100 feet thick.

Sand dunes mantle the Quaternary alluvium and, where alluvium is absent, the Ogallala Formation. The dunes are made up of unconsolidated fine to medium grained sand which becomes semi-consolidated with increased depth. Average dune sediments form a veneer of five to ten feet thick, though thicknesses from a few inches to about 30 feet have been identified.

REGIONAL HYDROGEOLOGY

The principal aquifer in southern Lea County is the Ogallala Formation. In the western portion of southern Lea County, the Santa Rosa sandstone is the primary aquifer, but it is not an important fresh water aquifer in the eastern part of southern Lea County where it is located much deeper in the subsurface. The Triassic Chinle Formation does not produce a significant amount of water in the study area and is not considered an important aquifer. Quaternary alluvium and sand dune deposits which overlie the Ogallala Formation throughout southern Lea County are also not considered a significant aquifer in the study area. They are usually not saturated.

Groundwater in the Ogallala aquifer occurs under water table conditions. In southern Lea County, the aquifer is considered partially saturated. Recharge to the Ogallala aquifer is provided by precipitation on outcrop areas and overlying permeable alluvium or sand dune deposits.

Regionally, groundwater movement in the Ogallala aquifer is southerly or southeasterly, although local drainage features may influence the direction of groundwater flow. In the study area, groundwater was encountered within the sands of the Ogallala formation at a depth of approximately 52 feet bgs. Figure 2 is a water table map of the investigation area.

PREVIOUS HYDROGEOLOGIC INVESTIGATIONS

Three previous hydrogeologic investigations have been conducted to evaluate impacted soil and groundwater underlying the NNG Eunice Compressor Station.

In 1991, the Metric Corporation performed the first investigation which consisted of installing two monitor wells (MW-1 and MW-2) and drilling 21 soil borings on NNG property. The 21 borings included 12 shallow borings (4 feet or less in depth) and 9 borings advanced to the water table (approximately 52 feet bgl). Two of the deep borings used to evaluate contamination throughout the vertical extent of the vadose zone were completed as monitor wells.

Soil samples were collected and analyzed for total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1 and for the volatile organic compounds (VOCs) of benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8020. Shallow soil samples contained levels of petroleum hydrocarbons in excess of regulatory guidelines set by the New Mexico Oil Conservation Division (NMOCD). In the deep borings constructed during the Metric study, hydrocarbon levels were exceeded in only one boring which was located near the former aboveground storage tank (AST) at the southwest corner of the NNG property. Soil samples were also analyzed for organics and metals using the toxic characteristic leaching procedure (TCLP). Concentrations were below regulatory standards.

Groundwater samples collected by Metric were analyzed for purgeable halocarbons and metals. Groundwater samples contained concentrations of barium, iron, lead and manganese in excess of New Mexico Water Quality Control Commission Standards. The 1991 Metric report details this investigation.

Brown and Root Environmental conducted an investigation in 1993 which included the installation of a third monitor well (MW-3). In addition, the three monitor wells were sampled for VOCs and semi-volatile organic compounds (SVOCs) using EPA Methods 8240 and 8270,

respectively. Samples were also collected for total dissolved solids (TDS) and metals analyses. TDS and barium concentrations exceeded NMWQCC standards in MW-1. Benzene, ethylbenzene, TDS and barium concentrations in MW-2 also exceeded NMWQCC standards. MW-3 had concentrations of benzene, toluene, naphthalene, TDS and barium in excess of NMWQCC standards. A 1993 report completed by Brown & Root Environmental outlines the details of this investigation.

In 1994, Stephens conducted further investigations to characterize the distribution of organic and inorganic constituents in the soil and groundwater underlying the NNG property. In addition, they attempted to identify potential on and off-site sources for the subsurface contamination previously identified. Activities included the installation of four more monitor wells and one soil boring. Soil and groundwater samples were collected, and in-situ tests of aquifer hydraulic properties were conducted.

During this investigation, it was determined that soil contamination (remaining after surficial soil removal) was greatest in the southwestern corner of the site, in soils directly above the water table.

Groundwater contamination was identified along the southern fence line adjoining the NNG and TEPI properties. Groundwater concentrations of benzene, toluene, ethylbenzene, xylene, naphthalene, TDS, chloride, barium, iron and manganese exceeded the NMWQCC standards. Phase-separated hydrocarbons were identified in MW-3, located in the southwestern portion of the NNG property.

GERAGHTY & MILLER, INC. INVESTIGATION

This investigation began on November 27, 1995. All field activities, including groundwater sampling, were completed by December 11, 1995

WATER WELL INVENTORY

Records of water wells associated with the Eunice South Gas Plant were reviewed to determine accessible wells for gauging and sampling. Field reconnaissance and interviews with Rodney Bailey (TEPI) and Robert Browning (TEPI) revealed that nearly all of these wells had been abandoned and were now inaccessible. One water well, located about one-half mile south of the plant was accessible. The pump was shut down for about 10 minutes, then the water level was taken using an oil/water interface probe. After gauging, the pump was turned back on, and the spigot opened. Water was pumped for 15 minutes prior to sampling. Groundwater collected for analyses of volatile organic compounds was collected first, followed by samples to be analyzed for polynuclear aromatic hydrocarbons, major ions, TDS and metals. Another water well (the Abell well) located northwest of the gas plant supplies potable water to the plant. Though a water level could not be obtained on the Abell well, samples were collected using the same procedure described above.

During field reconnaissance, a few windmills were noted within a one-mile radius of the site. The property containing these wells was posted and inaccessible.

SOIL BORING/SAMPLING TECHNIQUES

Five monitor wells (TMW-1, 2, 3, 5 and 6) were drilled as part of this investigation. Soil samples were collected from each boring, and selected samples were submitted for analysis. Monitor well TMW-4 was to be located on NNG property west of MW-6 but access for well drilling was denied.

Monitor well TMW-1 is located west of the NNG west fenceline, between two 20-inch gas lines. TMW-2 is located to the southwest of TMW-1, approximately 45 feet southwest of NNG monitor well MW-3. Monitor well TMW-3 is located along the TEPI side of the NNG south fenceline, west of NNG well MW-2. TMW-5 was installed east of the Eunice South Gas Plant, west/southwest of the Brine Water Retention Pond and west of a former evaporative wastewater pit closed in 1980. Monitor well TMW-6 is located south of the southwest corner of NNG property, southeast of the area identified as a former earthen field oil pit area which was closed in 1980.

Drilling was conducted by Scarborough Drilling of Lamesa, Texas under the supervision of a Geraghty & Miller field geologist. Borings were advanced using air and mud rotary techniques. Soil samples were collected with a core barrel and a 2-foot split-spoon sampling device. Prior to drilling, the area surrounding the monitor well locations was covered with clean plastic sheeting to keep soil cuttings off the ground surface. A mud box was also put in place to collect produced mud and water. Soil cuttings generated during drilling activities were stockpiled on clean plastic sheeting, covered and secured to protect them from climatic influences. Stockpiled soil was sampled for disposal at a permitted facility. Produced fluids were containerized in clean 55-gallon drums and transferred to a large, pre-cleaned frac tank for disposal.

Soil samples were scanned in the field for organic vapors using a photoionization detector (PID). The PID was calibrated daily with 100 parts per million (ppm) isobutylene-in-air in accordance with manufacturer's operating instructions. Field screening for organic vapors consisted of placing a representative portion of cuttings into a clean, new Ziploc™ bag until the bag was nearly one-half full. For the cored intervals, a representative sample of the core was placed in a bag. The bag was then sealed. After at least 15 minutes holding time, the headspace gas above each sample was scanned for organic vapors by inserting the tip of the PID probe into the bag and recording the maximum reading. Results of the field screening for organic vapors are recorded on the monitor well logs in Appendix A. A representative portion of each sampled

interval was also placed into pre-cleaned, air-tight, sample jars fitted with Teflon™-lined lids and placed into a cooler with ice for possible laboratory analysis.

In addition to field screening for organic vapors, each sample was described and examined for odors and visual evidence of staining. Soil descriptions are included on the monitor well logs in Appendix A.

All tools and equipment used for soil sampling were cleaned prior to collection of each sample. Decontamination consisted of washing with a solution of Liquinox™ and potable water and rinsing with distilled water. All drilling equipment was steam-cleaned upon completion of each borehole. Each boring was completed as a monitor well.

Soil samples were collected from each boring. Samples with the highest recorded value from field screening for organic compounds were submitted for laboratory analysis. Samples were placed into an ice-filled cooler and shipped to Inchcape Testing Services (Inchcape) in Richardson, Texas under strict chain-of-custody guidelines. Samples were analyzed for aromatic VOCs by EPA Method 8020 and for total petroleum hydrocarbons (TPH) by EPA Method 418.1.

MONITOR WELL CONSTRUCTION

The five borings were completed as monitor wells. Each monitor well was constructed with 20 feet of 4-inch diameter (I.D.) Schedule 40 PVC screen with 0.010-inch slots. The screen was flush-threaded to a sufficient length of PVC blank pipe to complete the well to approximately 2-3 feet above grade (TMW-1, 2, 3 and 5) or just below grade (TMW-6). Centralizers were set to brace the PVC casing. A silica sand filter pack was placed in the annular space from the bottom of the hole to three feet above the top of the screen. A bentonite seal, three feet thick, was placed on top of the sand pack. The annular space above the bentonite seal was filled with a 5% bentonite cement grout to approximately one foot below ground surface. A monitor well cap with an expandable seal was placed in the top of the PVC riser prior to surface completion of the wells. Only TMW-6 was completed below grade. It was finished with a flush-mounted, steel

manhole cover set in a 3' x 3' concrete pad, contoured to direct drainage away from the well. The remaining monitor wells were completed above grade. For the remaining wells completed above grade, a steel protective casing with lockable cap was set over the PVC riser and secured with a 3'x 3' concrete pad. TMW-1 and TMW-2 were keyed to the same lock and identified as off-site wells since they are located outside the plant facility. TMW-3 and TMW-5 were locked and keyed the same and identified as on-site wells. TMW-6 was not secured with a lock; however, it is in a secure portion of the plant facility, and the steel cover is bolted in place. Construction details of each well showing the total depth of each boring, depth of the screened interval and other details are presented on Table 1.

Upon completion of well installation, each well was developed by surging and bailing. Bailed water was containerized in 55-gallon drums and transferred to a holding tank. The stainless-steel bailer used to develop each well was decontaminated by steam-cleaning after development of each well was completed.

GROUNDWATER SAMPLING AND MONITORING TECHNIQUES

Prior to sampling, water levels were gauged with an interface probe, and wells were purged of in excess of three casing volumes of groundwater. Samples were collected with a new, disposable, polyethylene bailer and new polyester rope. The first groundwater samples removed were collected for organic analyses (EPA Method 8020 and EPA Method 418.1) and placed into pre-cleaned, pre-acidified 40 ml vials fitted with Teflon™ septum caps and pre-cleaned, pre-acidified one-litre amber glass bottles. Then, samples were collected for analyses of poly-nuclear aromatic hydrocarbons (EPA Method 8310) and containerized in pre-cleaned one-litre amber glass bottles. Samples to be analyzed for major minerals and metals were collected last and placed into the appropriate plastic and glassware as specified by established methodologies. In addition, two background wells, one upgradient and one downgradient of the plant site, were also analyzed for these constituents to evaluate background water quality. The samples were packed in a cooler with ice and transported via overnight delivery to Inchcape under strict chain-of-custody.

Duplicate samples were collected for TMW-6 as a quality control measure for verifying analytical results. In addition, trip blanks were included with each cooler and analyzed to assure that there was no cross-contamination between samples.

Upon completion of field activities, wells were surveyed relative to the plant grid system and mean sea level by John W. West Engineering Company of Hobbs, New Mexico. In addition, two background wells were surveyed to a common reference to allow for greater control in establishing groundwater flow and quality. The two wells were: 1) the Abel water well, located approximately 0.6 miles northwest of the site; and 2) a TEPI water well located approximately 0.5 mile south of the site.

RESULTS OF HYDROGEOLOGIC INVESTIGATIONS

The water well inventory provided only two water wells to establish background water quality. Of these wells, one upgradient and one downgradient of the gas plant, only the downgradient well could be gauged for a water level. The level, when considered with water levels collected on the plant site, NNG property and the regional water table map provided in the Stephens report, supported a southerly direction of groundwater flow. Analytical results of the background wells are discussed under Groundwater Analyses.

GEOLOGIC AND HYDROGEOLOGIC CHARACTERISTICS

The geologic profile appears consistent across the site. The upper soil layer consists of a dry, light brown silty sand which extends to approximately two feet bgl. Caliche underlies the soil layer and extends from 10 - 20 feet bgl. Beneath the caliche, sand and silty sand were encountered.

Groundwater was first encountered between 52 and 53 bgl in each well. The water table elevation map (Figure 2) suggests that a mound has been created in the water table under the

NNG property. Based on the steep gradients off of the mound it would appear that the mound is recent in origin or is being maintained today by some source.

SOIL ANALYSES

Organic vapors were detected at low levels in each of the borings. In each boring, soil samples which exhibited the highest organic vapor concentration as measured with the PID were submitted for laboratory analysis.

Table 2 summarizes the results of the soil analytical analyses obtained from all site investigations. The laboratory reports for the G&M investigation are included as Appendix B. Based on data collected during this investigation, it appears that subsurface soil has been impacted at the water table interface at TMW-2, TMW-5 and TMW-6. TMW-2 is located southwest of NNG well MW-3 and northwest of the former earthen-waste pit area identified in Figure 1. TMW-6 is located south of MW-3 and southeast of the former waste pit. TMW-5 is located east of the gas plant, west/northwest of the pits identified in Figure 1. The soils have also been impacted above the water table interface at SB-1 located in the vicinity of the AST on the southeast corner of the NNG property, BH-14 north of SB-1 and south of MW-3, and at MW-3 which has phase-separated hydrocarbons on top of the water table.

GROUNDWATER ANALYSES

Groundwater samples were collected from each monitor well installed by G&M and analyzed for organic and inorganic constituents. Access to the NNG monitor wells for groundwater sampling could not be obtained. Tables 3 and 4 summarize the constituents detected in the groundwater sampled by G&M and Stephens beneath the respective TEPI and NNG properties. The NMWQCC standard is also given in each table for comparison. Analytical results indicate that groundwater collected from monitor wells TMW-2, 3, 5 and 6 under the TEPI property and MW-2, 3 and 5 under the NNG property have been significantly impacted by hydrocarbons. Groundwater samples were analyzed by EPA Method 8020 for the aromatic

volatile organic compounds benzene, toluene, ethylbenzene and xylenes. The NMWQCC standard for benzene is 10 micrograms per liter (µg/L). This concentration was exceeded in each of the above-mentioned wells. The NMWQCC standard for toluene and ethylbenzene is 750 µg/L. Only monitor wells MW-2 and MW-3 exhibited concentrations of these compounds above the standard. MW-3 had xylene concentrations in excess of the NMWQCC standard of 620 µg/L. Figure 3 shows the concentration of benzene, toluene, ethylbenzene and xylenes (BTEX) on TEPI property from sampling during this investigation, and on NNG property from sampling in October 1994. Figure 4 shows the relationship of total BTEX concentrations across both sites. The highest concentration of total BTEX in groundwater was detected in samples collected from MW-2 and MW-3 on NNG property during the 1994 investigation. Total BTEX concentrations in MW-2 and MW-3 were 7,600 µg/L and 7,800 µg/L, respectively. The highest concentration of total BTEX from the current G&M investigation was detected in TMW-5 at 358 µg/L. As the map indicates, this places the area of greatest impact within the NNG property boundary. Additional investigation may reveal a hydrocarbon source for the impacted groundwater in the vicinity of MW-3 which is different from the source of hydrocarbon impacted groundwater in the vicinity of MW-2 to TMW-5. However, an apparent water table mound under the NNG property has the same general shape as the contaminant plume.

There is, at present, no NMWQCC standard for TPH. Groundwater samples were analyzed for TPH by EPA Method 418.1 (modified) for the G&M samples and by EPA Method 8015 (modified) for the Stephens samples. Concentrations were above method detection limits in monitor wells TMW-2, 3 and 5 installed by G&M and in monitor wells MW-1, 2, 3, 5 and 7 installed by Stephens. Figure 5 shows TPH concentrations from both the TEPI sampling conducted in December 1995, and the NNG sampling conducted in October 1994. The highest concentration of TPH is in MW-2 and MW-3 located on NNG property and sampled during the 1994 investigation. As the map suggests, the area of greatest impact appears to be within the NNG property boundary.

Groundwater samples were also analyzed for polynuclear aromatic hydrocarbons by EPA Method 8310 for the G&M samples and EPA Method 8100 for the Stephens samples collected on

the NNG property. One compound, benzo(k)fluoranthene, was detected in TMW-1 at a concentration of 0.190 µg/L. The only other compound identified was benzo(a)anthracene which was noted in the sample collected from TMW-2 at a concentration of 0.380 µg/L. On the NNG property, napthalene was detected in MW-2 at 6.3 µg/L, in MW-3 at 95 µg/L and in MW-7 at 0.7 µg/L. MW-1 had a detected concentration of 1-methylnapthalene at 0.9 µg/L, MW-2 had a concentration of 1.7 µg/L, MW-3 had a concentration of 200 µg/L and MW-9 had a concentration of 0.9 µg/L. Monitor wells MW-2, 3, 4 and 7 had 2-methylnaphalene concentrations of 2.3, 88, 0.5 and 1.9 µg/L, respectively. Monitor wells MW-3, 4, 5, 6 and 7 had acenaphthene concentrations of 17, 1.1, 0.8, 0.7 and 0.6 µg/L, respectively. Fluorene was detected in MW-2 and MW-3 at 0.9 and 15 µg/L, respectively. Pyrene was detected in MW-3 at 130 µg/L. NMWQCC standards have not been set for these compounds. The detection limits for naphthalene, acenaphthalene, fluorene and pyrene were higher in the Method 8310 analysis than in the Method 8100 analysis. In addition, 1-methylnapthalene and 2-methylnapthalene was not analyzed in the G&M samples. Only the Stephens samples were analyzed for halogenated VOCs by Method 8010. None of the monitor wells contained levels above the NMWQCC standards of 25 µg/L for 1,1-dichloroethane, 10 µg/L for 1,2-dichloroethane or 10 µg/L for 1,1,2-trichloroethane. Table 3 summarizes organic constituents identified in the groundwater under both TEPI and NNG properties. Analytical data for monitor wells on TEPI property were obtained during December 1995, while data for monitor wells on NNG property are from an October 1994 sampling event. Two background wells were also analyzed for organic constituents, though none were detected.

During this investigation, groundwater samples were also analyzed for inorganic constituents. Analytical results indicate that groundwater samples from each well exceed the NMWQCC standards for TDS and chloride. Iron was exceeded in MW-1, 3, TMW-1, 2, 3, 5, 6, and WW-1RF. Manganese was exceeded in MW-2, 3, 4, TMW-1, 2, 3, 5 and 6. Aluminum was exceeded in TMW-1, 3, 5 and 6, but was not analyzed by Stephens. Barium exceeded the NMWQCC standard of 1.0 mg/L in MW-1, 2, 3, 7, TMW-3 and 6. Boron was not analyzed by Stephens but exceeded the 0.75 mg/L NMWQCC standard in TMW-1, 3, 5 and WW-1RF.

Cadmium was at the NMWQCC standard of 0.01 mg/L in TMW-2. Figure 6 shows the concentration of TDS on both TEPI and NNG properties from recent and previous investigations. The map indicates that TDS concentrations are highest at MW-2 and MW-5 (5,900 mg/L and 4,700 mg/L respectively), at the south and east fence line of the NNG Compressor Station. The highest concentration on the Eunice South Gas Plant was detected in TMW-5 at 3,370 mg/L. Figure 7 shows the concentration of chlorides on both properties. The highest concentration of chlorides was recorded in MW-2 during the 1994 NNG investigation at 3,000 mg/L. The highest chloride concentration recorded during the TEPI investigation was identified in TMW-5 at 1,800 mg/L. Additional investigation will be necessary to fully define the high chloride and TDS plume presently centered in the vicinity of MW-2.

As indicated above, two background wells were also analyzed for inorganic constituents. WW-1RF is a water well located approximately 0.5 miles south of the gas plant. NMWQCC standards for boron, iron, chlorides and TDS were exceeded in well WW-1RF. TDS and chloride concentrations from the Abell water well, located approximately 0.6 mile northwest of the plant, also exceeded NMWQCC standards. Table 4 summarizes the inorganic constituents identified in the groundwater collected from TEPI monitor wells sampled in December 1995, and from NNG monitor wells sampled in October 1994.

Collected development and purge water was containerized onsite. Bill Olsen (NMOCD) gave approval to Robert Browning (TEPI) to dispose of this water in a permitted onsite disposal well on December 12, 1995. A memo from Robert Browning regarding this conversation is included as Appendix C.

QUALITY ASSURANCE AND QUALITY CONTROL

The only problems associated with the analytical results for soil and groundwater samples collected during this investigation involve cation and anion balancing associated with the groundwater samples submitted for major minerals analyses from TMW-6 and the two background water wells. Interference may have been caused by sediment contained in the bottles.

No other samples or analytical parameters were affected. No constituents were identified within the trip blanks which accompanied each cooler. All samples were run within method holding time. The results from the duplicate sample to TMW-6 verify the analytical results for TMW-6.

SUMMARY AND CONCLUSIONS

This report summarizes the environmental investigation conducted by Geraghty & Miller at the TEPI Eunice South Gas Plant during November and December of 1995 and includes a summary of data from three prior investigations of the NNG property by others. The purpose of this investigation was to evaluate subsurface conditions in response to the occurrence of phase-separated hydrocarbons, dissolved hydrocarbons and high chlorides and total dissolved solids concentrations in the groundwater at NNG Eunice Compressor Station. Methods used during this investigation included: a background data review, sampling of background water wells located upgradient and downgradient of the gas plant, the installation of five monitor wells, soil sampling, groundwater sampling, surveying of new well installations and well gauging of new wells and existing NNG wells.

Based on data available at this time, the following conclusions may be made regarding hydrogeologic conditions in the Eunice South Gas Plant area:

- Groundwater occurs within shallow sand units approximately 52 feet below ground level. The water table elevation map suggests that a mound has been created in the water table under the NNG property. Based on the steep gradients off of the mound it would appear that the mound is of recent origin or is being actively maintained today by some source.
- Field headspace, laboratory analyses and PSH evaluation indicate that deep soils in the location of TMW-2, 3, 5 and 6, MW-3, BH-14 and SB-1 have been impacted by hydrocarbons. Affected soils occur at the water table interface.
- Groundwater samples collected from monitor wells TMW-2, 3, 5, 6 and MW-2, 3 and 5 had concentrations of benzene in excess of the NMWQCC standards

established for benzene. Toluene, ethylbenzene and xylenes concentrations were below the established NMWQCC standards in groundwater samples from TMW-1, 2, 3, 5 and 6. However, toluene was exceeded in MW-3, ethylbenzene was exceeded in MW-2 and MW-3 and xylene was exceeded in MW-3 on the NNG property.

- Inorganic analyses of sampled groundwater show that NMWQCC standards for chloride and total dissolved solids concentrations were exceeded in all monitor wells currently drilled on the both NNG and TEPI properties. The two background well samples also had concentrations of chloride and TDS in excess of NMWQCC standards.
- NMWQCC standards for aluminum, barium, boron, iron and manganese were also exceeded in groundwater samples collected from some of the monitor wells on both properties.
- The cadmium concentration in the groundwater at TMW-2 was at the NMWQCC standard.
- Phase-separated hydrocarbons (PSH) are present in the southwestern portion of the NNG property as evidenced by the 0.92 feet of PSH measured in the NNG monitor well MW-3.
- No source areas for contamination were identified on TEPI property from either soil or groundwater sampling during this investigation. However, the highest concentrations of individual organic contaminants, chlorides and TDS were found in groundwater beneath the NNG property.
- Based on the southerly flow of groundwater at the site, hydrocarbon contamination of the groundwater and soils may have originated to the north of the TEPI property. Phase-separated hydrocarbons are found in MW-3 on NNG property upgradient of the TEPI plant site.
- Additional investigation potentially may reveal a hydrocarbon source for the impacted groundwater in the vicinity of MW-3 which is different from the source of hydrocarbon impacted groundwater in the vicinity of MW-2 to TMW-5.

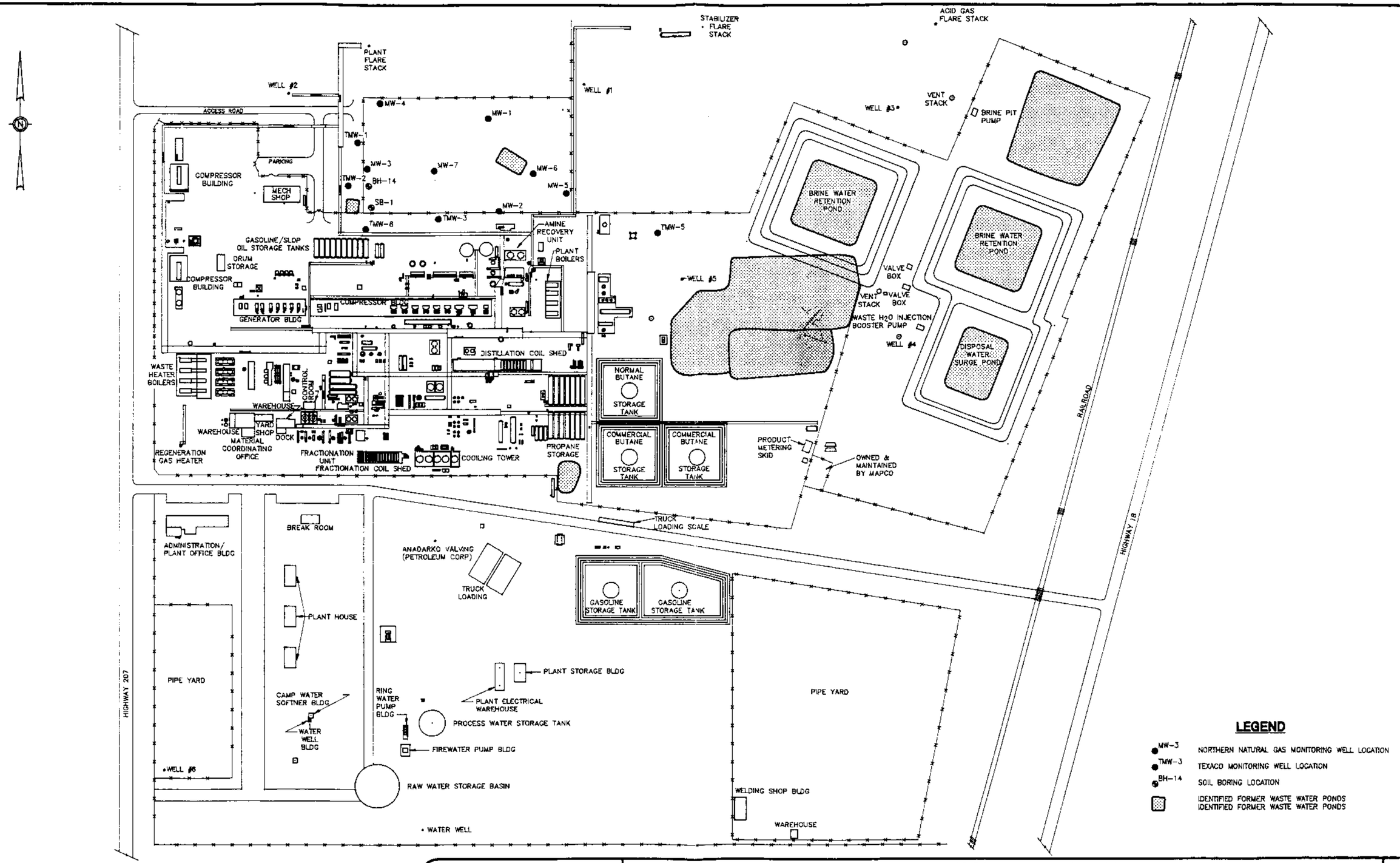
- Additional investigation will be necessary to fully define the high chloride and TDS plume presently centered in the vicinity of MW-2.

REFERENCES

D.B. Stephens & Associates, Inc., December 1994, Environmental Investigation Report, Northern Natural Gas Compressor Station, Lea County, New Mexico.

Nicholson, Jr. And Clebsch, Jr., 1960, Geology and Groundwater Conditions in Southern Lea County, New Mexico.

Soil Conservation Service, 1974, Lea County, New Mexico.



NOTICE

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0 200Feet

TEXACO EXPLORATION AND PRODUCTION, INC.
EUNICE SOUTH GAS PLANT

SITE MAP

LEA COUNTY, NEW MEXICO

FIGURE
1

31-014-00151

Explanation

MW-1 through MW-7 sampled in October, 1994
TMW-1 through TMW-6 sample in December, 1995

- ● Monitoring Well Location
- ◉ Boring Location

*3282.22'** Phase-separated hydrocarbons were encountered in MW-3. A specific gravity of 0.85 was used to adjust the water table elevation.

PLANT FLARE STACK
STABILIZER FLARE STACK
WELL #1
WELL #2
WELL #5
ACCESS ROAD
PARKING
COMPRESSOR BUILDING
MECH SHOP
GASOLINE/SLOP OIL STORAGE TANKS
DRUM STORAGE
COMPRESSOR BUILDING
GENERATOR BLDG
COMPRESSOR BLDG
AMINE RECOVERY UNIT
PLANT BOILERS
DISTILLATION COIL SHED
NORMAL BUTANE STORAGE TANK
WASTE HEATER BOILERS
CONTROL ROOM
WAREHOUSE
YARD SHOP
WAREHOUSE
MATERIAL COORDINATING OFFICE
DOCK
REGENERATION GAS HEATER
FRACTIONATION UNIT

MW-4 *3282.25'*
MW-1 *3282.23'*
TMW-1 *3281.60'*
MW-3 *3282.23'**
MW-7 *3282.27'*
MW-6 *3282.29'*
TMW-2 *3281.80'*
BH-14
SB-1
MW-5 *3282.28'*
MW-2 *3282.19'*
TMW-3 *3280.95'*
TMW-6 *3279.95'*
TMW-5 *3276.19'*

3282' 3281' 3280' 3279' 3278' 3277' 3276'

0 100 Feet

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TEXACO EXPLORATION AND PRODUCTION, INC.
EUNICE SOUTH GAS PLANT

WATER TABLE ELEVATIONS DECEMBER, 1995

LEA COUNTY, NEW MEXICO

FIGURE
2

STABILIZER FLARE STACK

PLANT FLARE STACK

WELL #2

WELL #1

ACCESS ROAD

PARKING

COMPRESSOR BUILDING

MECH SHOP

GASOLINE/SLOP OIL STORAGE TANKS

DRUM STORAGE

COMPRESSOR BUILDING

GENERATOR BLDG

COMPRESSOR BLDG

AMINE RECOVERY UNIT

PLANT BOILERS

DISTILLATION COIL SHED

WASTE HEATER BOILERS

CONTROL ROOM

WAREHOUSE

YARD

WAREHOUSE

SHOP

DOCK

MATERIAL COORDINATING OFFICE

REGENERATION GAS HEATER

FRACTIONATION UNIT

NORMAL BUTANE STORAGE TANK

BRINE WATER RETENTION POND

WELL #5

N

Explanation

MW-1 through MW-7 sampled in October, 1994
TMW-1 through TMW-6 sample in December, 1995

● Monitoring Well Location

◐ Boring Location

Benzene | Toluene
Ethylbenzene | Xylene

Concentrations in µg/L

MW-4
<0.5 | <0.5
<0.5 | <0.5

MW-1
1.6 | 0.6
1.1 | 0.9

TMW-1
<1.0 | <1.0
<1.0 | <1.0

MW-3
3000 | 1000
1200 | 2600

MW-7
8.1 | <0.5
42 | 99

MW-6
0.7 | <0.5
<0.5 | <0.5

MW-5
70 | <0.5
44 | 0.9

TMW-2
58.9 | 24.6
9.5 | 53.0

BH-14

SB-1

6300 | <0.5
1300 | <0.5

MW-2

TMW-6
15.4 | 1.3
15.6 | 29.2

TMW-3
48.3 | <1.0
18.3 | 4.5

TMW-5
106 | 16.1
99.8 | 136

0 100 Feet

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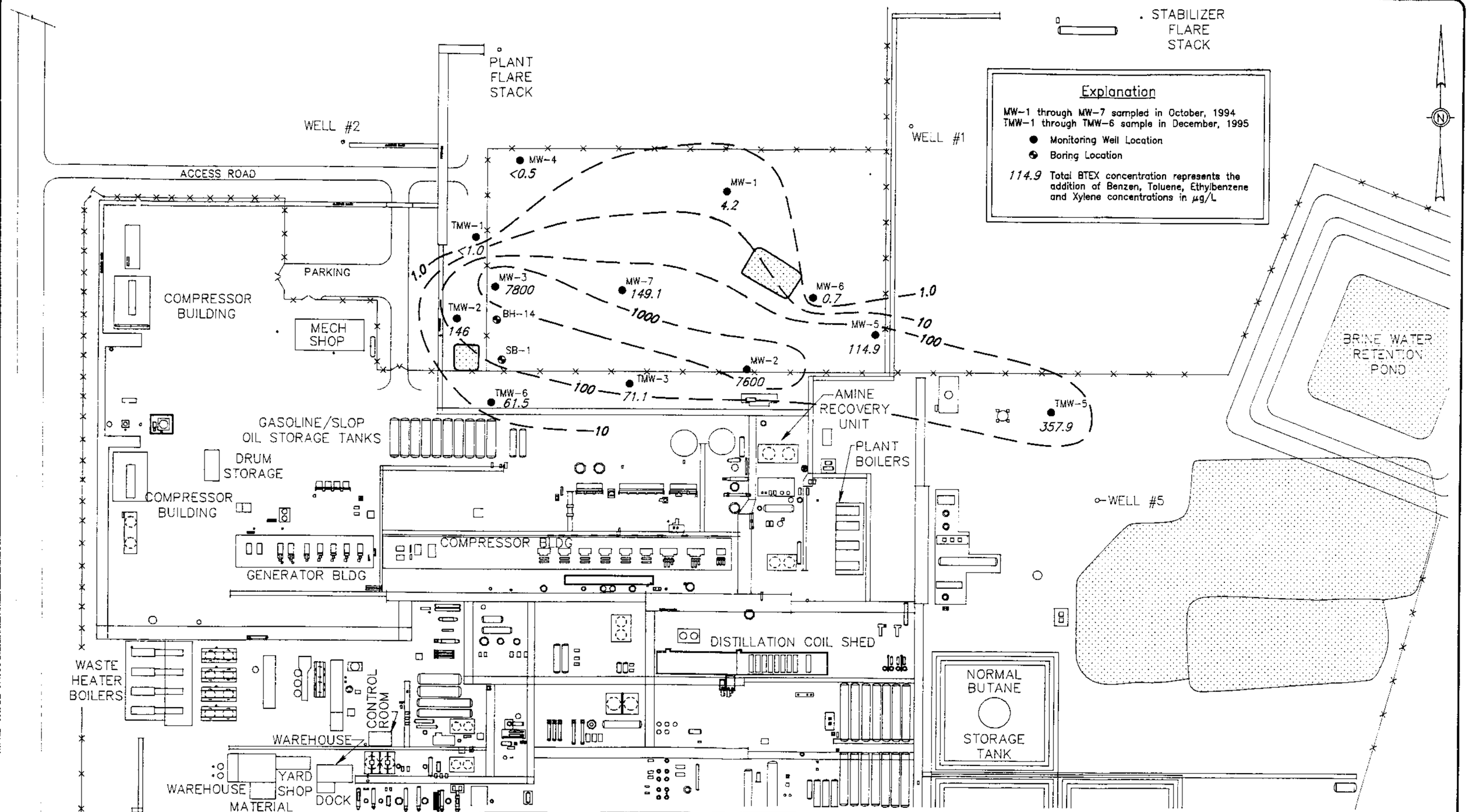
TEXACO EXPLORATION AND PRODUCTION, INC.
EUNICE SOUTH GAS PLANT

GROUNDWATER CONCENTRATION MAP - BTEX

LEA COUNTY, NEW MEXICO

FIGURE
3

31-014-00157



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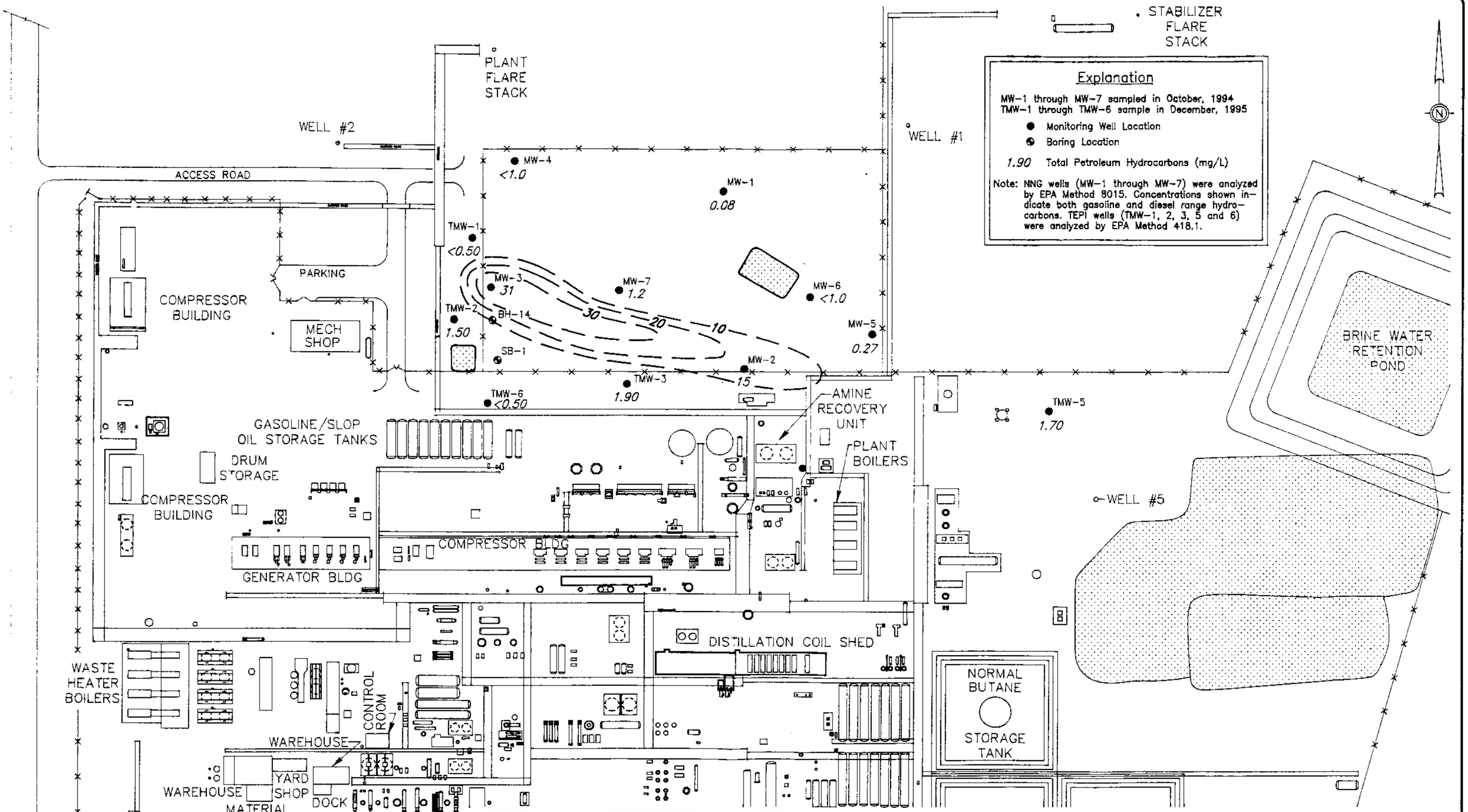
0 100 Feet

TEXACO EXPLORATION AND PRODUCTION, INC.
EUNICE SOUTH GAS PLANT

GROUNDWATER CONCENTRATION MAP - TOTAL BTEX

LEA COUNTY, NEW MEXICO

FIGURE
4



Explanation

MW-1 through MW-7 sampled in October, 1994
TMW-1 through TMW-6 sample in December, 1995

- Monitoring Well Location
- Boring Location

1.90 Total Petroleum Hydrocarbons (mg/L)

Note: NNG wells (MW-1 through MW-7) were analyzed by EPA Method 8015. Concentrations shown indicate both gasoline and diesel range hydrocarbons. TEPI wells (TMW-1, 2, 3, 5 and 6) were analyzed by EPA Method 418.1.

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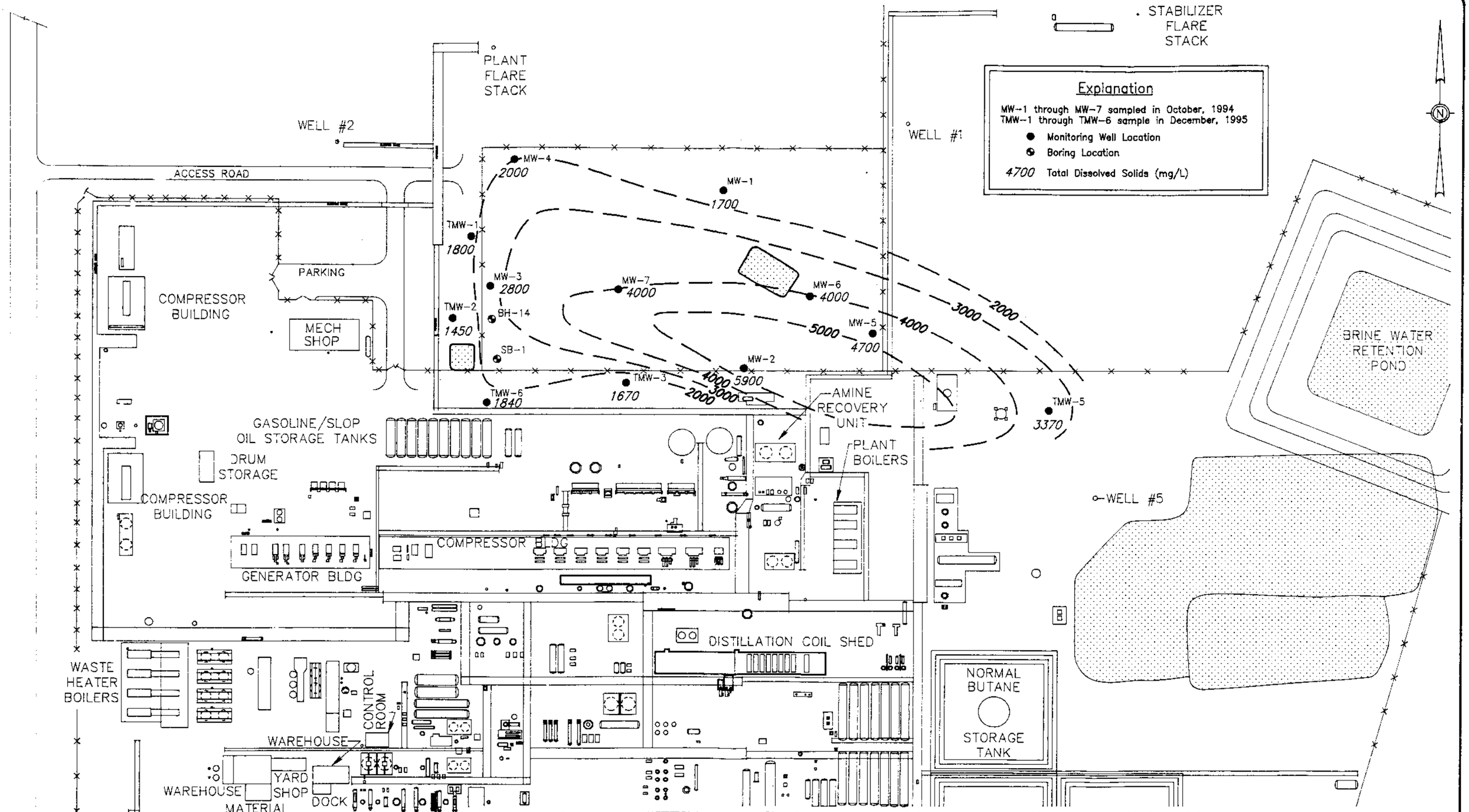
EUNICE SOUTH GAS PLANT

GROUNDWATER CONCENTRATION MAP - TPH

LEA COUNTY, NEW MEXICO

FIGURE
5



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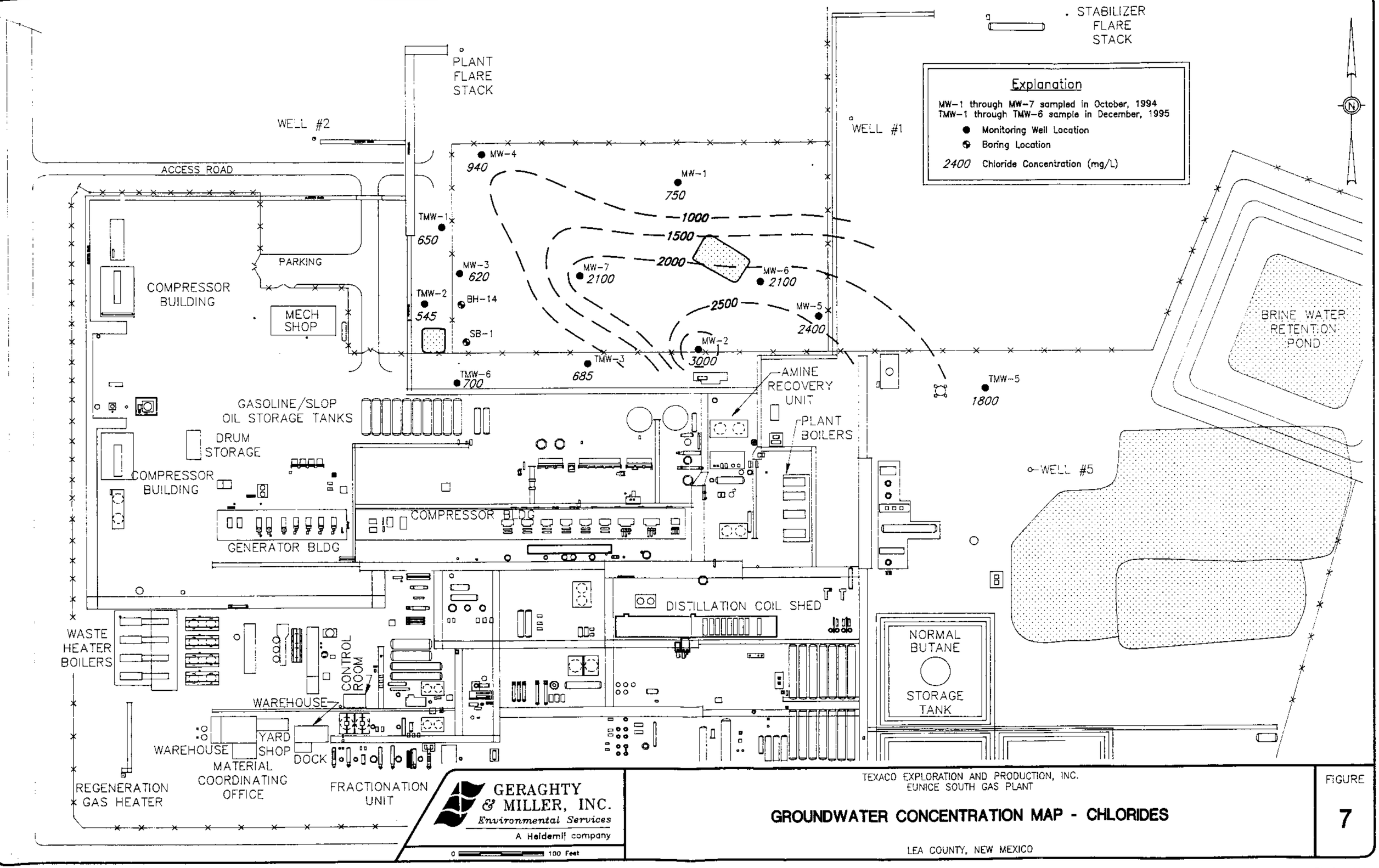
EUNICE SOUTH GAS PLANT

GROUNDWATER CONCENTRATION MAP - TDS

LEA COUNTY, NEW MEXICO

FIGURE
6

31-014-001160



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TEXACO EXPLORATION AND PRODUCTION, INC.
EUNICE SOUTH GAS PLANT

GROUNDWATER CONCENTRATION MAP - CHLORIDES

LEA COUNTY, NEW MEXICO

FIGURE 7

31-014-00161

Table 1
Monitor Well Construction
Texaco Eunice South Gas Plant
November - December 1995

Well Name	Elevation From MP (feet)	Total Depth (feet below grade)	Screened Interval (feet below grade)	Depth to Water From MP (feet)	Water Elevation (feet)
MW-1	3337.94	60	50-60	55.71	3282.23
MW-2	3336.75	59	49-59	54.56	3282.19
MW-3	3337.72	65	50-60	55.49	3282.23
MW-4	3335.93	67	49-64	53.68	3282.25
MW-5	3334.17	67	48-63	51.89	3282.28
MW-6	3334.20	70	45-60	51.91	3282.29
MW-7	3334.73	67	48-63	52.46	3282.27
TMW-1	3337.92	68	48-68	56.32	3281.60
TMW-2	3338.51	67	47-67	56.71	3281.80
TMW-3	3336.90	68	48-68	55.95	3280.95
TMW-5	3335.90	67	47-67	59.71	3276.19
TMW-6	3335.57	68	48-68	55.62	3279.95

MP is measuring point.

Table 2
Summary of Soil Analyses for Organic Constituents
Texaco Eunice South Gas Plant and NNG Eunice Compressor Station
1994 - 1995

Well ID	Volatile Organic Compounds - EPA Method 8020 (results in µg/kg)					Total Petroleum Hydrocarbons (results in mg/kg)
	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	
TEPI Property Nov. - Dec., 1995						**EPA Method 418.1**
TMW-1						
(11'-13')	<2.0	<2.0	<2.0	<2.0	<2.0	<10
(50'-52')	<2.0	<2.0	<2.0	<2.0	<2.0	<10
TMW-2						
(50'-52')	<2.0	<2.0	<2.0	<2.0	<2.0	120
(53'-55')	<100	523.0	4510.0	12600.0	17600.0	**2700**
TMW-3						
(54'-56')	12.0	<2.0	7.6	8.5	28.1	<10
TMW-5						
(51'-53')	<200	**3340.0**	**14500.0**	**39100.0**	**56900.0**	**4000**
TMW-6						
(10'-15')	<2.0	<2.0	<2.0	<2.0	<2.0	<10
(54'-56')	1040.0	4810.0	4930.0	11100.0	21900.0	**330**
(56'-58')	227.0	10.2	83.3	160.0	481.0	<10
(58'-60')	42.5	28.7	47.9	125.0	244.0	<10

Table 2
Summary of Soil Analyses for Organic Constituents
Texaco Eunice South Gas Plant and NNG Eunice Compressor Station
1994 - 1995

Well ID	Volatile Organic Compounds - EPA Method 8020 (results in µg/kg)					Total Petroleum Hydrocarbons (results in mg/kg)
	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	
NNG Property Oct., 1994						**EPA Method 8015**
MW-4						
(9')	<50	<50	<50	<50	<50	<10
(52')	<50	<50	<50	<50	<50	<10
MW-5						
(52')	<50	<50	<50	<50	<50	<10
MW-6						
(12')	<50	<50	<50	<50	<50	<10
(52')	<50	<50	<50	<50	<50	<10
MW-7						
(17')	<50	<50	<50	<50	<50	<10
(52')	<50	<50	<50	<50	<50	<10
SB-1						
(7')	<50	<50	<50	<50	<50	<10
(1012')	<50	<50	<50	<50	<50	<10
(15-17')	<50	<50	<50	<50	<50	<10
(20-22')	<50	<50	<50	<50	<50	<10
(27')	<50	<50	<50	<50	<50	<10
(32')	<50	<50	<50	<50	<50	<10
(37')	<50	<50	<50	<50	<50	<10
(42')	<50	<50	<50	<50	<50	<10
(47')	<50	<50	<50	<50	<50	<10
(52')	<50	<50	170	840	1010	680

Table 3
Summary of Groundwater Analyses for Organic Constituents
Texaco Eunice South Gas Plant and NNG Eunice Compressor Station

Constituent	MW-1 (10-3-94)	MW-2 (10-3-94)	MW-3 (10-3-94)	MW-4 (10-4-94)	MW-5 (10-6-94)	MW-6 (10-5-94)	MW-7 (10-7-94)	TMW-1 (12-7-95)	TMW-2 (12-7-95)	TMW-3 (12-7-95)	TMW-5 (12-8-95)	TMW-6 (12-8-95)	TMW-D (12-8-95)	WW-1RF (12-11-95)	ABELL (12-11-95)	NMWQCC Standard (µg/L)
Total Petroleum Hydrocarbons by EPA Method 8015 Modified (mg/L)								Total Petroleum Hydrocarbons by EPA Method 418.1 Modified (mg/L)								
*	0.08	15	31	<1.0	0.27	<1.0	1.2	<0.50	1.50	1.90	1.70	<0.50	<0.50	<0.50	<0.50	-
Aromatic VOCs by EPA Method 8020 (µg/L)								Aromatic VOCs by EPA Method 8020 (µg/L)								
Benzene	1.6	6300	3000	<0.5	70.0	0.7	8.1	<1.0	58.9	48.3	106.0	15.4	15.5	<1.0	<1.0	10
Toluene	0.6	20	1000	<0.5	<0.5	<0.5	<0.5	<1.0	24.6	<1.0	16.1	1.3	1.2	<1.0	<1.0	750
Ethylbenzene	1.1	1300	1200	<0.5	44.0	<0.5	42.0	<1.0	9.5	18.3	99.8	15.6	15.4	<1.0	<1.0	750
Total Xylenes	0.9	20	2600	<0.5	0.9	<0.5	99.0	<1.0	53.0	4.5	136.0	29.2	29.3	<1.0	<1.0	620
Total BTEX	4.2	7600	7800	<0.5	114.9	0.7	149.1	<1.0	146.0	71.1	357.9	61.5	61.4	<1.0	<1.0	-
Polynuclear Aromatic Hydrocarbons by EPA Method 8100 (µg/L)								Polynuclear Aromatic Hydrocarbons by EPA Method 8310 (µg/L)								
Benzo(k)fluoranthene	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0.190	<0.170	<0.170	<0.179	<0.170	<0.185	<0.170	<0.170	-
Benzo(a)anthracene	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.130	0.380	<0.130	<0.137	<0.130	<0.142	<0.130	<0.130	-
Napthalene	<0.5	6.3	95	<0.5	<0.5	<0.5	0.7	<10.0	<10.0	<10.0	<10.5	<10.0	<10.9	<10.0	<10.0	-
1-methylnapthalene	0.9	1.7	200	<0.5	<0.5	<0.5	0.9	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methylnapthalene	<0.5	2.3	88	0.5	<0.5	<0.5	1.9	NA	NA	NA	NA	NA	NA	NA	NA	-
Acenaphthene	<0.5	<0.5	17	1.1	0.6	0.7	0.6	<18.0	<18.0	<18.0	<18.0	<18.0	<19.6	<18.0	<18.0	-
Fluorene	<0.5	0.9	15	<0.5	<0.5	<0.5	<0.5	<2.10	<2.10	<2.10	<2.21	<2.10	<2.29	<2.10	<2.10	-
Pyrene	<0.5	<0.5	130	<0.5	<0.5	<0.5	<0.5	<2.70	<2.70	<2.70	<2.84	<2.70	<2.94	<2.70	<2.70	-
Halogenated VOCs by EPA Method 8010 (µg/L)								Halogenated VOCs by EPA Method 8010 (µg/L)								
1,2-dichlorobenzene	0.8	<8	<4	<0.2	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	-
1,4-dichlorobenzene	0.9	<8	<4	0.5	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1-dichloroethane	<0.2	<8	<4	0.4	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	25
1,2-dichloroethane	<0.2	<8	<4	0.4	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	10
cis-1,2-dichloroethene	0.3	<8	<4	<0.2	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	-
1,2-dichloropropane	0.3	<8	<4	0.7	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1,2-trichloroethane	<0.2	<8	<4	0.4	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	10

* Figure represents gasoline and diesel
VOCs Volatile Organic Compounds
NA Not analyzed

Table 4
Summary of Groundwater Analyses for Inorganic Constituents
Texaco Eunice South Gas Plant and NNG Eunice Compressor Station

Constituent	MW-1 (10-3-94)	MW-2 (10-3-94)	MW-3 (10-3-94)	MW-4 (10-4-94)	MW-5 (10-6-94)	MW-6 (10-5-94)	MW-7 (10-7-94)	TMW-1 (12-7-95)	TMW-2 (12-7-95)	TMW-3 (12-7-95)	TMW-5 (12-8-95)	TMW-6 (12-8-95)	TMW-D (12-8-95)	WW-1RF (12-11-95)	ABELL (12-11-95)	NMWQCC Standard (mg/L)
Major Ions (mg/L)																
Bicarbonate	NA	NA	NA	NA	NA	NA	NA	205	225	250	435	225	250	370	175	-
Carbonate (as C_aCO_3)	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Calcium	133	96.2	77.2	89.9	16.1	54.6	129	213	210	255	159	446	409	92.2	78.1	-
Chloride	750	3000	820	840	2400	2100	2100	800	845	865	1600	700	700	340	340	250.0
Magnesium	119	98.2	42.1	68.8	29.7	59.8	162	57.3	58.0	46.3	40.0	68.8	68.8	57.6	51.0	-
NO_2/NO_3-N, total	<0.06	<0.06	<0.06	<0.06	0.06	<0.06	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	-
Potassium	3.1	5.8	4.8	6.5	20.1	12.2	8.5	16.2	21.1	22.3	62.2	21.4	21.7	13.6	11.3	-
Sodium	348	2120	100	826	1840	1560	1130	525	501	709	1130	317	330	210	167	-
Sulfate	<5.0	20	20	<5.0	9	<5.0	<5.0	200	210	248	195	212	217	72.4	132	600.0
Total Alkalinity(as C_aCO_3)	582	1110	794	510	803	578	433	NA	NA	NA	NA	NA	NA	NA	NA	-
Total Dissolved Solids	1700	**5900**	**2800**	2000	**4700**	**4000**	**4000**	1800	1450	1670	3370	1840	1900	1200	1140	1000.0
Metals (mg/L)																
Aluminum	NA	NA	NA	NA	NA	NA	NA	**5.11**	4.59	**7.26**	**7.76**	**12.3**	**13.0**	<0.0200	<0.0200	5.0
Arsenic	0.039	0.029	0.027	0.015	0.027	0.017	0.012	0.0223	0.0266	0.0293	0.0783	0.323	0.0382	0.0231	0.0200	0.1
Barium	**1.52**	**1.33**	**5.01**	0.445	0.934	0.997	**9.72**	0.346	0.807	1.14	0.456	**1.38**	**1.26**	0.192	0.0849	1.0
Boron	NA	NA	NA	NA	NA	NA	NA	0.809	0.870	0.751	1.08	0.860	<0.0100	0.776	0.588	0.75
Cadmium	<0.0005	0.0011	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0200	<0.0200	0.0251	<0.0200	0.0318	0.0298	<0.0200	<0.0200	0.05
Cobalt	NA	NA	NA	NA	NA	NA	NA	<0.0200	<0.0200	<0.0200	<0.0200	0.0208	<0.0200	<0.0200	<0.0200	0.05
Copper	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0234	0.0384	0.0303	0.0372	0.0566	0.0488	<0.0100	<0.0100	1.0
Cyanide	NA	NA	NA	NA	NA	NA	NA	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.2
Iron	2.26	0.345	16.9	<0.020	0.047	<0.020	<0.020	5.35	8.63	17.0	10.2	19.7	21.6	1.82	<0.100	1.0
Lead	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.100	<0.050	0.021	0.015	<0.003	<0.003	0.05
Manganese	0.058	0.262	1.48	0.206	0.020	0.065	0.100	0.218	0.214	0.364	0.258	0.391	0.363	0.115	<0.0100	0.2
Mercury	<0.0002	<0.0002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.0002	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.002
Molybdenum	NA	NA	NA	NA	NA	NA	NA	<0.030	<0.030	<0.030	0.066	<0.030	<0.030	<0.030	<0.030	1.0
Nickel	NA	NA	NA	NA	NA	NA	NA	<0.0200	<0.0200	<0.0200	<0.0200	0.0208	0.0203	<0.0200	<0.0200	0.2
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.014	0.009	0.016	<0.005	0.030	0.011	0.006	0.010	0.05
Silver	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.05
Uranium	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	0.3	<0.1	<0.01	0.4	0.4	5.0
Zinc	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.840	0.107	0.145	0.244	0.185	0.112	0.0709	<0.0300	10.0

NA - Not Analyzed

APPENDIX A

WELL LOGS

WELL LOG

ELEVATION
GROUND LEVEL 3335.90' A.M.S.L.
MEASURING POINT 2.5' A.G.L.
WATER LEVEL 53.16' B.M.P.

DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

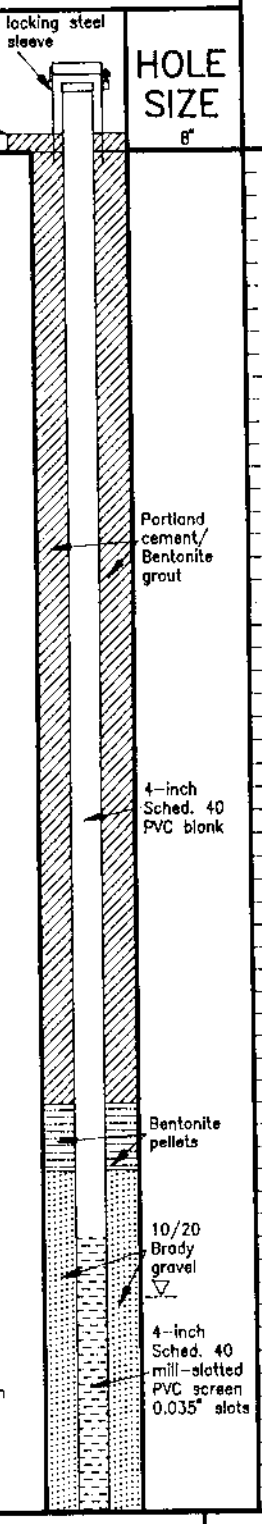
CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG
				0.0'-2.0' Silty Sand-Hand Auger, light brown, some black discoloration, caliche fragments, tip breathing zone: 0.0ppm.
			17.9	2.0'-3.5' Caliche--Gray to blue (bedrock), dry.
				3.5'-5.0' Sand-Light brown, dry, medium grained. Caliche-Grey to blue to tan, dry.
			6.4	5.0'-10.0' Caliche--Gray to tan, dry. Sand-Light brown, fine to medium grained, loose, dry.
10		0.1'	6.6	10.0'--11.0' Silty clay-Brown, dry. Caliche-Gray to buff, dry, breathing zone: 0.0ppm.
		1.5'	9.3	11.0'-13.0' Caliche-Buff, dry, some calcite and gypsum crystals.
			1.6	13.0'-15.0' Sand and Caliche-Buff, dry, fine to medium grained(sand).
			1.8	15.0'-20.0' Sand-Buff to rose,dry, fine to medium grained, poorly cemented, some caliche fragments.
20			1.6	20.0'-25.0' Sand-Rose, dry, poorly cemented, loose, fine to medium grained.
			1.6	25.0'-30.0' Sand--Rose, dry, poorly cemented, loose, fine to medium grained.
30			1.0	30.0'-35.0' Sand-Rose, dry, poorly cemented, loose, fine to medium grained, slightly damp.
			4.8	35.0'--40.0' Sand--Rose to tan, damp, loose , fine to medium grained, <20% gravel.
40			2.6	40.0'-45.0' Sand-Rose, tan, damp, loose, fine to medium grained, <20% gravel.
			1.6	45.0'-50.0' Sand--Rose, tan, damp, loose, fine to medium grained, <20% gravel, damp, moist.
50		1.0'	1.3	50.0'-52.0' Sand-Light brown, damp to wet, fine to medium grained, loose.
		0.7'	0.8	52.0'-54.0' Sand-Tan to light brown, wet, fine to medium grained, loose.
		0.8'	0.8	54.0'-56.0' Sand-Light brown to brown, wet, fine to medium grained, loose, slight discoloration (black).
		1.5'	0.5	56.0'-58.0' Sand-Light brown, saturated, fine to medium grained, loose, slight odor, some discoloration (black).
		2.0'	0.2	58.0'-60.0' Sand-Light brown, saturated, fine to medium grained, loose, slight odor, some discoloration (black), no odor.

COMPLETION



HOLE SIZE 8"

DEPTH

DATE: 12/5/95-12/6/95

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-1

MT38701F.DWG

WELL LOG

ELEVATION
GROUND LEVEL 3335.90' A.M.S.L.
MEASURING POINT 2.5' A.G.L.
WATER LEVEL 53.16' B.M.P.

DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	LITHOLOGY: SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG	COMPLETION: HOLE SIZE 8"	DEPTH
70	Not Sampled			Total depth 68.0'.	10/20 Brady gravel; 4-inch Sched. 40 mill-slotted PVC screen 0.035" slots; end cap	70

DATE: 12/5/95-12/6/95

GERAGHTY & MILLER, INC.
Environmental Services
A Halliburton company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-1

WELL LOG

ELEVATION
GROUND LEVEL 3335.40' A.M.S.L.
MEASURING POINT 2.5' A.G.L.
WATER LEVEL 53.06' B.M.P.

DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

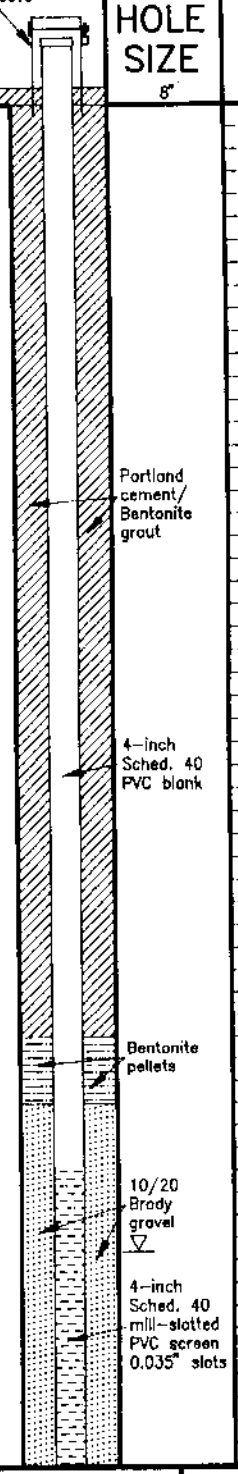
CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	SYMBOL	RECOVERY	VAPOR READING	LITHOLOGY — SAMPLE LOG
				0.0'-4.0' Sandy Silt-Light brown, dry, few gravel.
			0.0	4.0'-6.0' Caliche-Gray, blue, dry.
				6.0'-10.0' Caliche-Gray, blue, dry, slight odor, breathing space: 1ppm.
10		<1.0'	5.5	10.0'-13.0' Caliche--Light gray, slightly black discoloration, small calcite inclusion, dry.
				13.0'-24.0' Caliche-Buff, dry.
20				
				24.0'-30.0' Sand-Rose, dry, loose, medium grained, some caliche (30%), dry buff.
30		<1.0'	3.3	30.0'-32.0' Sand-Buff, rose, dry, loose, fine to medium grained, few small (<6 mm diameter) gravel.
				32.0'-40.0' Sand-Buff, rose, dry, loose, fine to medium grained, few small (<6 mm diameter) gravel, breathing zone: 0 ppm.
40				
				40.0'-43.0' Sand-Buff, rose, dry, loose, fine to medium grained, few small (<6 mm diameter) gravel, breathing zone: 0 ppm.
				43.0'-45.0' Silty Sand--Tan to light brown, dry, slightly moist, loose, fine to medium grained.
		<1.0'	1.6	45.0'-47.0' Sand-Tan to rose, slightly moist, loose, fine to medium grained, <20% quartzite fragments (gray), no odor.
				47.0'-50.0' Sand-Tan to rose, slightly moist, loose, fine to medium grained, <20% quartzite fragments (gray), no odor. Silty Sand--Tan to brown, moist to wet, loose, medium grained with some green discoloration .
50		1.0'	275	50.0'-52.0' Sand-Tan, moist to wet, loose, fine to very fine grained, some quartzite, breathing zone: 1 ppm.
		<1.0'	381	52.0'-53.0' Sand-Brown, wet, loose, fine to medium grained, some quartzite.
		<1.0'	655	53.0'-55.0' Sand-Brown, wet, fine to medium grained, loose, 20% quartzite.
		1.0'	84.0	55.0'-56.0' Sand-Brown, wet, fine to medium grained, loose, 20% quartzite, with slight odor.
	Not Sampled			

COMPLETION



DATE: 11/28/95

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-2

WELL LOG

ELEVATION
GROUND LEVEL 3335.40' A.M.S.L.
MEASURING POINT 2.5' A.G.L.
WATER LEVEL 53.06' B.M.P.

DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	LITHOLOGY: SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG	COMPLETION	HOLE SIZE 8"	DEPTH
70	Not Sampled			Total depth 67.0'.	10/20 Brady gravel; 4-inch Sched. 40 mill-slotted PVC screen 0.035" slots; end cap		70

DATE: 11/28/95

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-2

MT38701F.DWG

WELL LOG

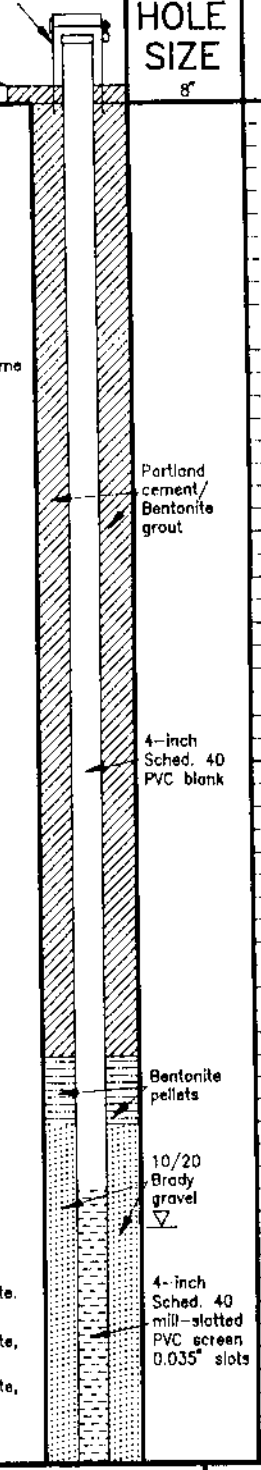
ELEVATION
GROUND LEVEL
MEASURING POINT
WATER LEVEL 52.7' B.M.P.
DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank
COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings
CEMENT Portland cement/5% Bentonite grout

DEPTH	SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG
				0.0'-2.0' Silty Sand-Light brown, dry.
			170.2	2.0'-4.0' Sandy Silt-Black, dry, some clay, slightly plastic, odor.
				4.0'-5.0' Caliche-Buff to gray to blue, dry, slight odor.
			31.9	5.0'-10.0' Caliche-Buff to gray to blue, dry, slight odor.
10		2	5.4	10.0'-13.0' Sandstone(top 3")- Gray, dry, very fine to medium grained, poorly sorted. Remainder: Sandstone-Buff to white, dry, fine to medium grained, poorly sorted, some yellow (organic roots), well cemented.
			22.5	13.0'-15.0' Sandstone-Buff to gray, dry, cemented, poorly sorted, some caliche.
				15.0'-17.0' Sandstone-Buff to gray, dry, cemented, poorly sorted, some caliche.
			8.5	17.0'-20.0' Sand-Tan to rose, dry, fine to medium grained, loose.
20			7.0	20.0'-25.0' Sand-Tan to rose, dry, fine to very fine grained.
			2.3	25.0'-30.0' Sand-Tan to rose, dry, fine to very fine grained.
30				30.0'-33.0' Sand-Tan to rose, dry, fine to very fine grained.
			2.3	33.0'-35.0' Sand-Gray, slightly damp, loose, fine to very fine grained, some fragments of conglomerate.
			2.3	35.0'-40.0' Sand-Gray, slightly damp, loose, fine to very fine grained, some fragments of conglomerate, 20% small gravel (<5mm diameter), varicolored grains.
40		SS/ 2.0"	3.8	40.0'-41.0' Sand-Tan, damp, loose, fine to medium grained. 41.0'-42.0' Sand-Gray, damp, loose, fine to medium grained.
			5.4	42.0'-50.0' Sand-Light brown, damp, fine to medium grained, loose.
50		1.0'	7.0	50.0'-51.0' Sand-Light brown, damp to wet, loose, fine to medium grained.
		1.0'	8.5	52.0'-53.0' Sand-Light brown, damp to wet, loose, fine to medium grained, trace buff quartzite.
		2.0'	16.8	54.0'-56.0' Sand-Light brown, damp to wet, loose, fine to medium grained, trace buff quartzite, saturated.
		2.0'	14.7	56.0'-58.0' Sand-Light brown, damp to wet, loose, fine to medium grained, trace buff quartzite, some sand, gray, very fine grained silt.
		Not Sampled		

COMPLETION



HOLE SIZE 8"

DEPTH

DATE: 11/29/95-11/30/95

GERAGHTY & MILLER, INC.
Environmental Services
A Halliburton company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-3

WELL LOG

ELEVATION
GROUND LEVEL
MEASURING POINT
WATER LEVEL 52.7' B.M.P.
DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank
COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings
CEMENT Portland cement/5% Bentonite grout

DEPTH	LITHOLOGY: SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG	COMPLETION: HOLE SIZE 8"	DEPTH
70	Not Sampled			Total depth 68.0'.	10/20 Brady gravel; 4-inch Sched. 40 mill-slotted PVC screen 0.035" slots; end cap	70

DATE: 11/29/95-11/30/95

GERAGHTY & MILLER, INC.
Environmental Services
A Halliburton company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-3

WELL LOG

ELEVATION
GROUND LEVEL 3333.00' A.M.S.L.
MEASURING POINT 0.5' B.G.L.
WATER LEVEL 56.06' B.M.P.
RILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

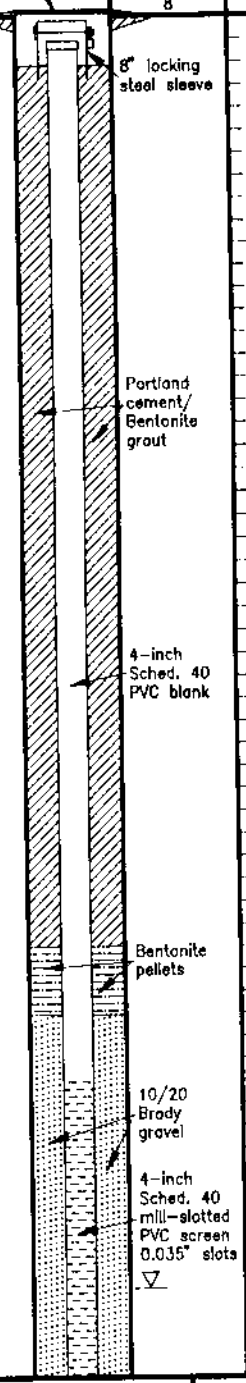
CASING 4-Inch Schedule 40 PVC blank

COMPLETION 4-Inch Schedule 40 PVC mill-slotted screen, 0.035-Inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	SYMBOL	RECOVERY	VAPOR READING	LITHOLOGY / SAMPLE LOG
				0.0'-2.0' Sandy Clay-Light brown, dry.
				2.0'-5.0' Caliche-Buff to rose, dry.
				5.0'-6.0' Caliche-Buff to gray, dry.
				6.0'-6.5' Caliche-Red, dry.
				6.5'-10.0' Caliche-Buff to gray, dry.
10				
				10.0'-15.0' Caliche-Buff to gray, dry.
				15.0'-17.0' Caliche and Silt--Buff to tan, dry.
				17.0'-20.0' Silty Sand-Rose to tan, dry.
20				20.0'-21.0' Silty Sand-White to buff, dry, moderately well cemented, core barrel
		3.0'	0.0	21.0'-23.0' Silty Sand-Rose, dry, well cemented.
				23.0'-32.0' Silty Sand-Rose to brown, dry, loose.
30				
				32.0'-40.0' Sand-Rose to brown, dry, loose, fine grained.
40		1.5'	4.8	40.0'-42.0' Sand-Rose to buff, dry, loose, fine grained.
				42.0'-51.0' Sand-Rose to light brown, dry, loose, fine to very fine grained.
50		1.5'	241	51.0'-53.0' Sand--Light brown, damp, loose, fine grained changing to Silty Clay, dark brown to black, wet, odor.
				53.0'-59.0' Silty Sand--Dark brown, wet, fine to medium grained, odor.
		2.0'	41.1	59.0'-60.0' Sand-Dark brown, wet, loose, fine to medium grained, odor.

COMPLETION



DATE: 11/27/95

GERAGHTY & MILLER, INC.
Environmental Services
A Halliburton company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-5

WELL LOG

ELEVATION
GROUND LEVEL 3333.00' A.M.S.L.
MEASURING POINT 0.5' B.G.L.
WATER LEVEL 56.06' B.M.P.

DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG	COMPLETION	HOLE SIZE 8"	DEPTH
70		2.0'	41.1	60.0'–61.0' Sand–Dark brown, wet, loose, fine to medium grained, odor.	10/20 Brady gravel; 4-inch Sched. 40 mill-slotted PVC screen 0.035" slots; end cap		70
		1.0'	22.3	61.0'–63.0' Sand–Dark brown, wet, loose, fine to medium grained, odor.			
				63.0'–65.0' Sand–Brown to dark brown, wet, loose, fine to medium grained, odor.			
				65.0'–67.0' Sand- Brown to black, wet, loose, medium grained, drill stem "locked up" @ 65.0'–67.0' interval, sample @ 65.0'–67.0' collected from dull stem (1–4 oz., 1–2 oz. soil jar). Total depth 67.0'.			

DATE: 11/27/95

GERAGHTY & MILLER, INC. Environmental Services
A Halliburton company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-5

WELL LOG

ELEVATION
GROUND LEVEL 3335.70' A.M.S.L.
MEASURING POINT 2.5' A.G.L.
WATER LEVEL 53.26' B.M.P.

DRILLING
COMPANY Scarborough Drilling
METHOD Air rotary

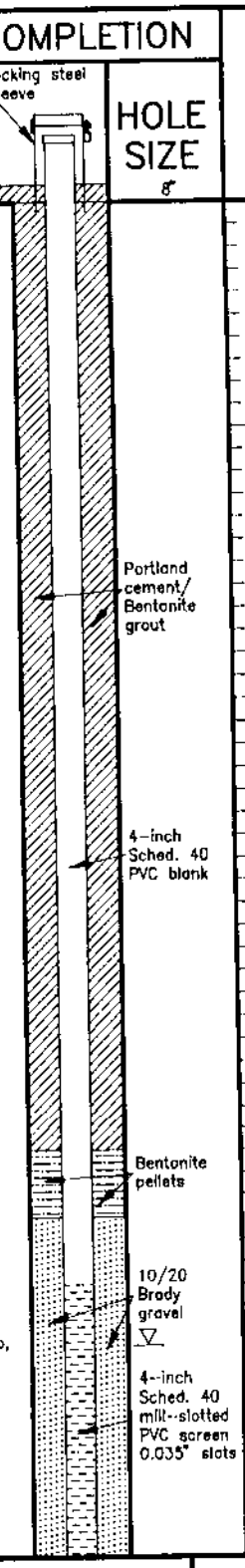
PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	SYMBOL	RECOVERY	VAPOR READING	LITHOLOGY / SAMPLE LOG
				0.0'-0.5' Silty Sand-Light brown, dry, caliche fragments.
				0.5'-2.0' Silty Sand-Light brown, dry, caliche fragments.
			17.8	2.0'-3.5' Silty Sand ((25% clay)--Gray to black, dry, some blue to green, caliche fragments.
				3.5'-5.0' Caliche-Blue to green, dry, breathing zone: 0.0ppm.
			5.2	5.0'-10.0' Caliche-Gray to blue, some tan fragments, dry, some silty sand, tan to gray, slight odor.
10			29.8	10.0'-15.0' Sand and Caliche-Buff to gray, dry, medium grained (sand).
			6.5	15.0'-20.0' Sand--Gray, dry, poorly cemented changing to Sand, tan, medium grained, poorly cemented, loose.
20			3.5	20.0'-25.0' Sand-Tan to rose, dry, loose, fine to medium grained.
			3.5	25.0'-30.0' Sand--Tan to rose, dry, loose, fine to medium grained, poorly cemented.
30			2.3	30.0'-35.0' Sand-Tan to light brown, damp, fine to medium grained, loose.
		<0.5'	3.5	36.0'-37.0' Sand-Tan to light brown, damp, fine to medium grained, loose, slightly damp (2-4 oz. jars).
			3.5	37.0'-40.0' Sand--Tan to rose, slightly damp, fine to medium grained, loose.
40			5.2	40.0'-45.0' Sand-Tan to rose, slightly damp, fine to medium grained, loose, some sandstone fragments.
			5.2	45.0'-50.0' Sand-Tan to rose, slightly damp, fine to medium grained, loose, some sandstone fragments.
50		<0.5'	3.5	50.0'-52.0' Sand-Light brown, damp, fine to medium grained, loose, sandstone fragments, damp, gray to rose.
		<0.5'	6.5	52.0'-54.0' Sand--Brown, some silt, gravel (<30%), slight odor.
		1.0'	474	54.0'-56.0' Sand-Brown, wet, medium to fine grained, loose, some gravel, slight odor.
		2.0'	90.7	56.0'-58.0' Sand-Brown, wet, medium to fine grained, loose, some gravel, slight odor.
		7.0'	23.2	58.0'-60.0' Sand-Brown, wet, <5% black discoloration, slight odor, medium grained, loose.



COMPLETION

HOLE SIZE 8"

DEPTH

DATE: 12/4/95

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-6

WELL LOG

ELEVATION
GROUND LEVEL 3335.70' A.M.S.L.
MEASURING POINT 2.5' A.G.L.
WATER LEVEL 53.26' B.M.P.
RILLING
COMPANY Scarborough Drilling
METHOD Air rotary

PERSONNEL
DRILLER L. Scarborough
LOGGER T. O'Connell

CASING 4-inch Schedule 40 PVC blank

COMPLETION 4-inch Schedule 40 PVC mill-slotted screen, 0.035-inch openings

CEMENT Portland cement/5% Bentonite grout

DEPTH	LITHOLOGY: SYMBOL	RECOVERY	VAPOR READING	SAMPLE LOG	COMPLETION	HOLE SIZE 8"	DEPTH
70				60.0'-68.0' Sand-Brown, wet, <5% black discoloration, slight odor, medium grained, loose.	10/20 Brady gravel; 4-inch Sched. 40 mill-slotted PVC screen 0.035" slots; -end cap		70

DATE: 12/4/95

GERAGHTY & MILLER, INC.
Environmental Services
A Halliburton company

CLIENT TEXACO EXPLORATION AND PRODUCTION, INC.
PROJECT EUNICE SOUTH GAS PLANT MT0387.001
LOCATION LEA COUNTY, NEW MEXICO

WELL NO. TMW-6

APPENDIX B

LABORATORY ANALYSES AND CHAIN-OF-CUSTODY DOCUMENTATION

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

ANALYTICAL REPORT

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295

Included in this data package are the analytical results for the sample group which you have submitted to Inchcape Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-1
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : WW-IRF
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : VHC
PREPARED ON : 14-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 20-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB648-1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

REPORT NUMBER : D95-12047-1
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	74.4 %

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-1
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SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : WW-IRF
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395A

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	99.7 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-1
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : WW-IRF
PROJECT : MT0387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 18-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 18-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-18

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	< 0.50 mg/L

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-1
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : WW-IRF
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7761 on 19-DEC-1995 by MPE QC Batch No : 12436F			
Aluminum	/1	0.200 mg/L	< 0.200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Arsenic	/1	0.0050 mg/L	0.0231 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7060 on 15-DEC-1995 by MPE QC Batch No : 12436F			
Barium	/1	0.0200 mg/L	0.192 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Boron	/1	0.100 mg/L	0.776 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

REPORT NUMBER : D95-12047-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	92.2 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Chromium	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Copper	/1	0.0100 mg/L	< 0.0100 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Iron	/1	0.100 mg/L	1.92 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 15-DEC-1995 by JLW QC Batch No : 12436			
Mercury	/2	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 18-DEC-1995 by CEL Analyzed using EPA 7470 on 20-DEC-1995 by MPE QC Batch No : HG-2065			

REPORT NUMBER : D95-12047-1

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	13.6 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Magnesium	/1	0.100 mg/L	57.6 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Manganese	/1	0.0100 mg/L	0.115 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Sodium	/1	1.0 mg/L	210 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Nickel	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Lead	/1	0.003 mg/L	< 0.003 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

REPORT NUMBER : D95-12047-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.005 mg/L	0.006 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7740 on 21-DEC-1995 by MPE QC Batch No : 12436F			
Uranium	/1	0.1 mg/L	0.4 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Zinc	/1	0.0300 mg/L	0.0709 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-1
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : WW-IRF
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	370 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	10 mg/L	346 mg/L
Dilution Factor : 10 Analyzed using EPA 9252 on 20-DEC-1995 by HMA QC Batch No : 610057			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 21-DEC-1995 by KPP QC Batch No : 640021A			
Total Dissolved Solids	/1	10.0 mg/L	1200 mg/L
Analyzed using EPA 160.1 on 15-DEC-1995 by RJS QC Batch No : 614030A			
Sulfate	/1	1.00 mg/L	72.4 mg/L
Dilution Factor : 1 Analyzed using EPA 9038 on 15-DEC-1995 by RJS QC Batch No : 597039A			

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-2
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blanks
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395A

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	99.1 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-3
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Abell Well
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : VHC
PREPARED ON : 14-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 20-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB648-1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

REPORT NUMBER : D95-12047-3
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	83.8 %

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-3
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Abell Well
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395A

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	99.2 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-3
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Abell Well
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 18-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 18-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-18

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	< 0.50 mg/L

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-3
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Abell Well
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7761 on 19-DEC-1995 by MPE QC Batch No : 12436F			
Aluminum	/1	0.200 mg/L	< 0.200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Arsenic	/1	0.0050 mg/L	0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7060 on 15-DEC-1995 by MPE QC Batch No : 12436F			
Barium	/1	0.0200 mg/L	0.0849 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Boron	/1	0.100 mg/L	0.588 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

REPORT NUMBER : D95-12047-3 PAGE 2

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	78.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Chromium	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Copper	/1	0.0100 mg/L	< 0.0100 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Iron	/1	0.100 mg/L	< 0.100 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 15-DEC-1995 by JLW QC Batch No : 12436			
Mercury	/2	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 18-DEC-1995 by CEL Analyzed using EPA 7470 on 20-DEC-1995 by MPE QC Batch No : HG-2065			

REPORT NUMBER : D95-12047-3 PAGE 3

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	11.3 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Magnesium	/1	0.100 mg/L	51.0 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Manganese	/1	0.0100 mg/L	< 0.0100 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Sodium	/1	1.0 mg/L	167 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 3-JAN-1996 by LSS QC Batch No : 12458			
Nickel	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Lead	/1	0.003 mg/L	< 0.003 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

REPORT NUMBER : D95-12047-3 PAGE 4

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.005 mg/L	0.010 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7740 on 21-DEC-1995 by MPE QC Batch No : 12436F			
Uranium	/1	0.1 mg/L	0.4 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Zinc	/1	0.0300 mg/L	< 0.0300 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-3
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Abell Well
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	175 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	10 mg/L	346 mg/L
Dilution Factor : 10 Analyzed using EPA 9252 on 20-DEC-1995 by HMA QC Batch No : 610057			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 21-DEC-1995 by KPP QC Batch No : 640021A			
Total Dissolved Solids	/1	10.0 mg/L	1140 mg/L
Analyzed using EPA 160.1 on 15-DEC-1995 by RJS QC Batch No : 614030A			
Sulfate	/1	2.00 mg/L	132 mg/L
Dilution Factor : 2 Analyzed using EPA 9038 on 15-DEC-1995 by RJS QC Batch No : 597039A			

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-4
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blanks
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 11-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395A

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	97.9 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 13-DEC-1995

REPORT NUMBER : D95-12047-5
REPORT DATE : 15-JAN-1996

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Method Blank
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 13-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395A

BTEX ANALYSIS				
TEST REQUESTED	DETECTION LIMIT		RESULTS	
Benzene	1.0	µg/L	< 1.0	µg/L
Toluene	1.0	µg/L	< 1.0	µg/L
Ethyl benzene	1.0	µg/L	< 1.0	µg/L
Xylenes	1.0	µg/L	< 1.0	µg/L
BTEX (total)			< 1.0	µg/L #

QUALITY CONTROL DATA				
SURROGATE COMPOUND	SPIKE LEVEL		SPIKE RECOVERED	
Bromofluorobenzene	50.0	µg/L	101	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MT0387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
BATCH NO.	AB648-1	AB648-1	AB648-1	AB648-1	AB648-1
LCS LOT NO.	AB525-86	AB525-86	AB525-86	AB525-86	AB525-86
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B
PREPARED BY	MK	MK	MK	MK	MK
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8310	EPA 8310
ANALYZED BY	JXA	JXA	JXA	JXA	JXA
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 18.0	< 23.0	< 18.0	< 2.10	< 6.40
SPIKE LEVEL	100	100	100	100	100
MS RESULT	81.9	80.1	73.0	80.1	78.4
MS RECOVERY %	81.9	80.1	73.0	80.1	78.4
MSD RESULT	76.0	69.6	63.1	69.5	68.6
MSD RECOVERY %	76.0	69.6	63.1	69.5	68.6
MS/MSD RPD %	7.47	14.0	14.5	14.2	13.3
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS RESULT	35.4	34.5	31.4	35.3	35.5
LCS RECOVERY %	70.8	69.0	62.8	70.6	71.0
SPIKE SAMPLE ID	12047-1	12047-1	12047-1	12047-1	12047-1
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Anthracene	Chrysene	Benzo(k)fluoranthene	Benzene	Ethylbenzene
BATCH NO.	AB648-1	AB648-1	AB648-1	34-121395A	34-121395A
LCS LOT NO.	AB525-86	AB525-86	AB525-86	AB214-70B	AB214-70B
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	---	---
PREPARED BY	MK	MK	MK	---	---
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8020	EPA 8020
ANALYZED BY	JXA	JXA	JXA	VHT	VHT
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 6.60	< 1.50	< 0.17	< 1.00	< 1.00
SPIKE LEVEL	100	100	100	500	500
MS RESULT	48.9	70.9	69.9	522	521
MS RECOVERY %	48.9	70.9	69.9	104	104
MSD RESULT	44.1	59.8	56.6	503	510
MSD RECOVERY %	44.1	59.8	56.6	101	102
MS/MSD RPD %	10.3	17.0	21.0	3.71	2.13
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS RESULT	22.5	22.7	13.6	51.2	50.5
LCS RECOVERY %	45.0	45.4	27.2	102	101
SPIKE SAMPLE ID	12047-1	12047-1	12047-1	12047-2	12047-2
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MT0387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Total Recoverable Hydrocarbons	Silver	Aluminum	Arsenic
BATCH NO.	AB646-18	12436F	12458	12436F
LCS LOT NO.	AA345-88B	590802AF	591009,591130	590802AF
PREP METHOD	EPA 418.1	EPA 3015	EPA 3015	EPA 3015
PREPARED BY	MTR	CEL	CEL	CEL
ANALYSIS METHOD	EPA 418.1	EPA 7761	EPA 6010A	EPA 7060
ANALYZED BY	MTR	MPE	JLW	MPE
UNITS	mg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 0.50	< 2.00	< 200	< 5.00
SPIKE LEVEL	5.00	20.0	1000	40.0
MS RESULT	NS	14.4	1060	65.8
MS RECOVERY %	NS	70.6	106	107
MSD RESULT	NS	18.2	1070	59.4
MSD RECOVERY %	NS	89.6	107	90.8
MS/MSD RPD %	NS	23.7	0.94	16.2
BS RESULT	5.05	NA	NA	NA
BS RECOVERY %	101	NA	NA	NA
BSD RESULT	4.87	NA	NA	NA
BSD RECOVERY %	97.4	NA	NA	NA
BS/BSD RPD %	3.63	NA	NA	NA
DUPLICATE RPD %	NA	NC	NC	1.31
LCS LEVEL	5.00	20.0	1000	40.0
LCS RESULT	SEE_BS	20.0	1110	41.4
LCS RECOVERY %	SEE_BS	99.9	111	104
SPIKE SAMPLE ID	---	12047-1	12047-3	12047-1
DUP SAMPLE ID	---	12047-1	12047-3	12047-1

NS Insufficient sample available for MS/MSD. BS/BSD used.
SEE_BS LCS and LCS Duplicate reported as BS and BSD.
NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Barium	Boron	Calcium	Cadmium	Cobalt
BATCH NO.	12458	12458	12458	12458	12458
LCS LOT NO.	591009,591130	591009,591130	591009,591130	591009,591130	591009,591130
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 3015	EPA 3015
PREPARED BY	CEL	CEL	CEL	CEL	CEL
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	JLW	JLW	JLW	JLW	JLW
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 20.0	< 100	< 100	< 10.0	< 15.0
SPIKE LEVEL	10000	1000	10000	1000	1000
MS RESULT	10600	1740	85900	1070	1030
MS RECOVERY %	105	115	78.0 F	107	103
MSD RESULT	10500	1750	85400	1060	1030
MSD RECOVERY %	104	116	73.0 F	106	103
MS/MSD RPD %	0.96	0.86	6.62 F	0.94	0.00
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	0.47	1.54	1.52	NC	NC
LCS LEVEL	10000	1000	10000	1000	1000
LCS RESULT	10500	1150	9780	1060	1030
LCS RECOVERY %	105	115	97.8	106	103
SPIKE SAMPLE ID	12047-3	12047-3	12047-3	12047-3	12047-3
DUP SAMPLE ID	12047-3	12047-3	12047-3	12047-3	12047-3

NA Not applicable
F Not applicable due to high analyte concentration in the QC sample.
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Chromium	Copper	Iron	Mercury	Potassium
BATCH NO.	12458	12458	12436	HG-2065	12458
LCS LOT NO.	591009,591130	591009,591130	590814,591009,5	AB300-22A	591009,591130
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 7470	EPA 3015
PREPARED BY	CEL	CEL	CEL	CEL	CEL
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 7470	EPA 6010A
ANALYZED BY	JLW	JLW	JLW	CGJ	JLW
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 20.0	< 5.00	< 100	< 0.20	< 1000
SPIKE LEVEL	1000	1000	1000	1.00	10000
MS RESULT	1040	1110	2900	1.05	25300
MS RECOVERY %	104	111	98.0	89.8	140 B
MSD RESULT	1040	1120	2880	1.05	25200
MSD RECOVERY %	104	112	96.0	89.8	139 B
MS/MSD RPD %	0.00	0.90	2.06	0.00	0.72 B
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	1.55	NC	2.62
LCS LEVEL	1000	1000	1000	1.00	10000
LCS RESULT	1030	1040	1100	0.929	8560
LCS RECOVERY %	103	104	110	92.9	85.6
SPIKE SAMPLE ID	12047-3	12047-3	12047-1	12188-1	12047-3
DUP SAMPLE ID	12047-3	12047-3	12047-1	12188-1	12047-3

NA Not applicable
NC Not calculable
_B Not applicable due to matrix interference in the QC Sample.

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Magnesium	Manganese	Molybdenum	Sodium	Nickel
BATCH NO.	12458	12458	12458	12458	12458
LCS LOT NO.	591009,591130	591009,591130	591009,591130	591009,591130	591009,591130
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 3015	EPA 3015
PREPARED BY	CEL	CEL	CEL	CEL	CEL
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	JLW	JLW	JLW	LSS	JLW
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 100	< 10.0	< 50.0	< 1000	< 15.0
SPIKE LEVEL	1000	1000	1000	10000	1000
MS RESULT	F	1070	1140	F	1020
MS RECOVERY %	F	107	114	F	102
MSD RESULT	F	1070	1140	F	1020
MSD RECOVERY %	F	107	114	F	102
MS/MSD RPD %	F	0.00	0.00	F	0.00
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	2.52	NC	NC	1.20	NC
LCS LEVEL	1000	1000	1000	10000	1000
LCS RESULT	1090	1060	1090	10500	1030
LCS RECOVERY %	109	106	109	105	103
SPIKE SAMPLE ID	12047-3	12047-3	12047-3	12047-3	12047-3
DUP SAMPLE ID	12047-3	12047-3	12047-3	12047-3	12047-3

F Not applicable due to high analyte concentration in the QC sample.
NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Lead	Selenium	Uranium	Zinc	Alkalinity
BATCH NO.	12458	12436F	12458	12458	271100
LCS LOT NO.	591009,591130	590802AF	591009,591130	591009,591130	9968
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 3015	---
PREPARED BY	CEL	CEL	CEL	CEL	---
ANALYSIS METHOD	EPA 6010A	EPA 7740	EPA 6010A	EPA 6010A	SM 2320B
ANALYZED BY	JLW	MPE	JLW	JLW	P_F
UNITS	µg/L	µg/L	µg/L	µg/L	mg/L
METHOD BLANK	< 10.0	< 5.00	< 100	< 10.0	< 1.00
SPIKE LEVEL	1000	20.0	10000	1000	458
MS RESULT	1050	24.2	11700	1130	725
MS RECOVERY %	105	89.4	113	113	104
MSD RESULT	1050	24.3	11800	1190	730
MSD RECOVERY %	105	89.9	114	119	105
MS/MSD RPD %	0.00	0.56	0.88	5.17	1.05
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	NC	NC	0.00
LCS LEVEL	1000	20.0	10000	1000	125
LCS RESULT	1070	22.3	11100	1050	125
LCS RECOVERY %	107	112	111	105	100
SPIKE SAMPLE ID	12047-3	12047-1	12047-3	12047-3	11945-1
DUP SAMPLE ID	12047-3	12047-1	12047-3	12047-3	11945-1

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 15-JAN-1996 REPORT NUMBER : D95-12047

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Chloride	Cyanide, Total	Total Dissolved Solids	Sulfate
BATCH NO.	610057	640021A	614030A	597039A
LCS LOT NO.	9968	ERA 9963	9968	9968
PREP METHOD	---	---	---	---
PREPARED BY	---	---	---	---
ANALYSIS METHOD	EPA 9252	EPA 9010	EPA 160.1	EPA 9038
ANALYZED BY	HMA	KPP	RJS	RJS
UNITS	mg/L	mg/L	mg/L	mg/L
METHOD BLANK	< 1.00	< 0.01	< 10.0	<1.0
SPIKE LEVEL	1.00	1.00	---	400
MS RESULT	F	1.05	NA	580
MS RECOVERY %	F	105	NA	95.0
MSD RESULT	F	1.00	NA	588
MSD RECOVERY %	F	99.7	NA	97.0
MS/MSD RPD %	F	5.18	NA	2.08
BS RESULT	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA
DUPLICATE RPD %	3.51	NC	0.84	0.83
LCS LEVEL	128	0.147	714	105
LCS RESULT	127	0.120	705	106
LCS RECOVERY %	99.2	81.6	98.7	101
SPIKE SAMPLE ID	---	12047-1	---	11945-5
DUP SAMPLE ID	12211-4	12047-1	12047-1	12047-1

F Not applicable due to high analyte concentration in the QC sample.
NA Not applicable
NC Not calculable

GERAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No. 4295

CHAIN-OF-CUSTODY RECORD

Page ___ of ___

Project Number MT0387.001

Project Location Texaco-Eunice

Laboratory Inchcape Testing Svcs

Sampler(s)/Affiliation Tara O'Connell Geraghty & Miller

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	BTEX (8020)	TPH (418.1)	PNA (8100)	Major Minerals*	Metals*		12047		TOTAL
WW-1RF	L	12-11-95		3	1	2	1	2			-1	9
TRIP BLANKS	L	—		2							2	2

ORIGINAL

Total No. of Bottles/Containers 11

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: Tara O'Connell	Organization: Geraghty & Miller	Date 12/12/95 Time 1640	Seal Intact? Yes No N/A (Yes circled)
Received by: Colleen McLain	Organization: ITS	Date 12/13/95 Time 11:15	
Relinquished by:	Organization:	Date / / Time	Seal Intact? Yes No N/A (Yes circled)
Received by:	Organization:	Date / / Time	

Special Instructions/Remarks:

COOLER TEMPERATURE WHEN RECEIVED 6 °C

SCREENED FOR RADIOACTIVITY

Delivery Method: ☐ In Person ☑ Common Carrier Fed X ☐ Lab Courier ☐ Other

SPFCII Southport 911 09

GERAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No. 4295

CHAIN-OF-CUSTODY RECORD

Page ___ of ___

Project Number MT0387.001

Project Location Texaco Eunice

Laboratory Inchcape Testing Svces.

Sampler(s)/Affiliation Tara O'Connell Geraghty & Miller

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	BTEX (8020)	TPH (418.1)	PNA (8100)	Major Minerals+	Metals*			112047		TOTAL
Abell Well	L	12-11-95		3	1	2	1	2				-3	9
Trip Blanks	L	—		2								4	2
												(MB) 5	

ORIGINAL

COOLER TEMPERATURE WHEN RECEIVED 5 °C

SCREENED FOR RADIOACTIVITY

Total No. of Bottles/ Containers 8 11

Sample Code: L = Liquid; S = Solid; A = Air

			Seal Intact?
Relinquished by: Tara O'Connell Received by: Colleen McNair	Organization: Geraghty & Miller Organization: ITS	Date 12/12/95 Time 1630 Date 12/13/95 Time 11:23	Yes (circled) No N/A
Relinquished by: Received by:	Organization: Organization:	Date / / Time Date / / Time	Yes (circled) No N/A

Special Instructions/Remarks: + including: calcium, magnesium, sodium, potassium, chloride, sulfate, bicarbonate, carbonate & TDS * As, Ba, Cd, Cr, CN, Pb, Hg, Se, Ag, U, Cu, Fe, Mn, Zn, Al, B, Co, Mo, Ni

Delivery Method: ☐ In Person ☒ Common Carrier Fed. Express (SPECIFY) ☐ Lab Courier ☐ Other ______ (SPECIFY)

Southpoint 91 1368

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED: 12-DEC-1995 REPORT NUMBER: D95-11986
REPORT DATE: 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
Midland, TX 79701
ATTENTION : Mr. Damian Reed
DATE SAMPLED : 8-DEC-1995

CASE NARRATIVE COMMENTS:

Ion Balance

Regarding samples D95-11986-1 and D95-11986-3 did, the cation-anion calculations did not balance, due to high cations. The samples contained a layer of sediment which could have attributed to the high cation results.

No further problems were encountered with the analysis for this job.

If you have any questions, please call Ms. Jacqueline Mayhew at (214) 238-5591.

Amy Pence
Data Review

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

ANALYTICAL REPORT

DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295

Included in this data package are the analytical results for the sample group which you have submitted to Inchcape Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-258-5591
Fax. 214-258-5592

DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-D
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : CLT
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 11
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	19.6 µg/L	< 19.6 µg/L
Acenaphthylene	10.9 µg/L	< 10.9 µg/L
Anthracene	7.19 µg/L	< 7.19 µg/L
Benzo(a)anthracene	0.142 µg/L	< 0.142 µg/L
Benzo(b)fluoranthene	0.196 µg/L	< 0.196 µg/L
Benzo(k)fluoranthene	0.185 µg/L	< 0.185 µg/L
Benzo(g,h,i)perylene	0.828 µg/L	< 0.828 µg/L
Benzo(a)pyrene	0.251 µg/L	< 0.251 µg/L
Chrysene	1.64 µg/L	< 1.64 µg/L
Dibenzo(a,h)anthracene	0.327 µg/L	< 0.327 µg/L
Fluoranthene	2.29 µg/L	< 2.29 µg/L
Fluorene	2.29 µg/L	< 2.29 µg/L
Indeno(1,2,3-cd)pyrene	0.469 µg/L	< 0.469 µg/L
Naphthalene	10.9 µg/L	< 10.9 µg/L

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REPORT NUMBER : D95-11986-1
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.98 µg/L	< 6.98 µg/L
Pyrene	2.94 µg/L	< 2.94 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	79.4 %

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SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-D
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	15.5 µg/L
Toluene	1.0 µg/L	1.2 µg/L
Ethyl benzene	1.0 µg/L	15.4 µg/L
Xylenes	1.0 µg/L	29.3 µg/L
BTEX (total)		61.4 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	93.9 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
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ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-D
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 18-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 18-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-18

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	< 0.50 mg/L

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ADDRESS : 1030 Andrews Hwy. Suite 120
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ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-D
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7761 on 19-DEC-1995 by MPE QC Batch No : 12436F			
Aluminum	/1	0.200 mg/L	13.0 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Arsenic	/1	0.0050 mg/L	0.0382 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7060 on 15-DEC-1995 by MPE QC Batch No : 12436F			
Barium	/1	0.0200 mg/L	1.26 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Boron	/1	0.100 mg/L	< 0.100 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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REPORT NUMBER : D95-11986-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	409 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Chromium	/1	0.0200 mg/L	0.0296 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Copper	/1	0.0100 mg/L	0.0488 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Iron	/1	0.100 mg/L	21.6 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 15-DEC-1995 by JLW QC Batch No : 12436			
Mercury	/1	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 12-DEC-1995 by CEL Analyzed using EPA 7470 on 14-DEC-1995 by CGJ QC Batch No : HG-2052			

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REPORT NUMBER : D95-11986-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	21.7 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Magnesium	/1	0.100 mg/L	68.8 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Manganese	/1	0.0100 mg/L	0.363 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Sodium	/1	1.0 mg/L	330 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Nickel	/1	0.0200 mg/L	0.0203 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Lead	/1	0.003 mg/L	0.015 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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REPORT NUMBER : D95-11986-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.005 mg/L	0.011 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7740 on 22-DEC-1995 by MPE QC Batch No : 12436F			
Uranium	/1	0.1 mg/L	< 0.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Zinc	/1	0.0300 mg/L	0.112 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-D
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	250 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	1.0 mg/L	700 mg/L
Dilution Factor : 1 Analyzed using EPA 9252 on 15-DEC-1995 by P_F QC Batch No : 520030			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 20-DEC-1995 by KPP QC Batch No : 640019A			
Total Dissolved Solids	/1	10.0 mg/L	1900 mg/L
Analyzed using EPA 160.1 on 14-DEC-1995 by RJS QC Batch No : 614029A			
Sulfate	/1	5.00 mg/L	217 mg/L
Dilution Factor : 5 Analyzed using EPA 9038 on 16-DEC-1995 by RJS QC Batch No : 597041A			

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-2
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blanks
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	99.4 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-6
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : CLT
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

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REPORT NUMBER : D95-11986-3
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	72.0 %

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ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-6
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT	RESULTS	
Benzene	1.0 µg/L	15.4 µg/L	
Toluene	1.0 µg/L	1.3 µg/L	
Ethyl benzene	1.0 µg/L	15.6 µg/L	
Xylenes	1.0 µg/L	29.2 µg/L	
BTEX (total)		61.5 µg/L	#

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	94.2 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-6
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 18-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 18-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-18

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	< 0.50 mg/L

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SAMPLE MATRIX : Liquid
ID MARKS : TMW-6
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7761 on 19-DEC-1995 by MPE QC Batch No : 12436F			
Aluminum	/1	0.200 mg/L	12.3 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Arsenic	/1	0.0050 mg/L	0.0323 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7060 on 15-DEC-1995 by MPE QC Batch No : 12436F			
Barium	/1	0.0200 mg/L	1.38 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Boron	/1	0.100 mg/L	0.688 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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REPORT NUMBER : D95-11986-3

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	446 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cobalt	/1	0.0200 mg/L	0.0208 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Chromium	/1	0.0200 mg/L	0.0318 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Copper	/1	0.0100 mg/L	0.0588 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Iron	/1	0.100 mg/L	19.7 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 15-DEC-1995 by JLW QC Batch No : 12436			
Mercury	/1	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 12-DEC-1995 by CEL Analyzed using EPA 7470 on 14-DEC-1995 by CGJ QC Batch No : HG-2052			

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REPORT NUMBER : D95-11986-3

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	21.4 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Magnesium	/1	0.100 mg/L	68.8 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Manganese	/1	0.0100 mg/L	0.391 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Sodium	/1	1.0 mg/L	317 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Nickel	/1	0.0200 mg/L	0.0208 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Lead	/1	0.003 mg/L	0.021 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			

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REPORT NUMBER : D95-11986-3

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.010 mg/L	0.030 mg/L
Dilution Factor : 2 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7740 on 22-DEC-1995 by MPE QC Batch No : 12436F			
Uranium	/1	0.1 mg/L	< 0.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Zinc	/1	0.0300 mg/L	0.185 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-6
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	225 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	1.0 mg/L	700 mg/L
Dilution Factor : 1 Analyzed using EPA 9252 on 15-DEC-1995 by P_F QC Batch No : 520030			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 20-DEC-1995 by KPP QC Batch No : 640019A			
Total Dissolved Solids	/1	10.0 mg/L	1840 mg/L
Analyzed using EPA 160.1 on 14-DEC-1995 by RJS QC Batch No : 614029A			
Sulfate	/1	5.00 mg/L	212 mg/L
Dilution Factor : 5 Analyzed using EPA 9038 on 16-DEC-1995 by RJS QC Batch No : 597041A			

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-4
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blanks
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	99.0 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-5
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : CLT
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 11
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.9 µg/L	< 18.9 µg/L
Acenaphthylene	10.5 µg/L	< 10.5 µg/L
Anthracene	6.93 µg/L	< 6.93 µg/L
Benzo(a)anthracene	0.137 µg/L	< 0.137 µg/L
Benzo(b)fluoranthene	0.189 µg/L	< 0.189 µg/L
Benzo(k)fluoranthene	0.179 µg/L	< 0.179 µg/L
Benzo(g,h,i)perylene	0.798 µg/L	< 0.798 µg/L
Benzo(a)pyrene	0.242 µg/L	< 0.242 µg/L
Chrysene	1.58 µg/L	< 1.58 µg/L
Dibenzo(a,h)anthracene	0.315 µg/L	< 0.315 µg/L
Fluoranthene	2.21 µg/L	< 2.21 µg/L
Fluorene	2.21 µg/L	< 2.21 µg/L
Indeno(1,2,3-cd)pyrene	0.452 µg/L	< 0.452 µg/L
Naphthalene	10.5 µg/L	< 10.5 µg/L

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REPORT NUMBER : D95-11986-5
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.72 µg/L	< 6.72 µg/L
Pyrene	2.84 µg/L	< 2.84 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	89.3 %

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-5
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	106 µg/L
Toluene	1.0 µg/L	16.1 µg/L
Ethyl benzene	1.0 µg/L	99.8 µg/L
Xylenes	1.0 µg/L	136 µg/L
BTEX (total)		358 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	98.2 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-5
PROJECT : MT0387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 18-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 18-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-18

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	1.70 mg/L

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-5
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7761 on 19-DEC-1995 by MPE QC Batch No : 12436F			
Aluminum	/1	0.200 mg/L	7.76 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Arsenic	/1	0.0250 mg/L	0.0783 mg/L
Dilution Factor : 5 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7060 on 15-DEC-1995 by MPE QC Batch No : 12436F			
Barium	/1	0.0200 mg/L	0.456 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Boron	/1	0.100 mg/L	1.08 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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REPORT NUMBER : D95-11986-5

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	159 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 29-DEC-1995 by LSS QC Batch No : 12458			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Chromium	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Copper	/1	0.0100 mg/L	0.0372 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Iron	/1	0.100 mg/L	10.2 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 15-DEC-1995 by JLW QC Batch No : 12436			
Mercury	/1	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 12-DEC-1995 by CEL Analyzed using EPA 7470 on 14-DEC-1995 by CGJ QC Batch No : HG-2052			

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REPORT NUMBER : D95-11986-5

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	62.2 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 29-DEC-1995 by LSS QC Batch No : 12458			
Magnesium	/1	0.100 mg/L	40.0 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Manganese	/1	0.0100 mg/L	0.256 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Molybdenum	/1	0.030 mg/L	0.066 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Sodium	/1	20 mg/L	1130 mg/L
Dilution Factor : 20 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 29-DEC-1995 by JLW QC Batch No : 12458			
Nickel	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			
Lead	/1	0.050 mg/L	< 0.050 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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REPORT NUMBER : D95-11986-5

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.005 mg/L	< 0.005 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 7740 on 22-DEC-1995 by MPE QC Batch No : 12436F			
Uranium	/1	0.1 mg/L	0.3 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 20-DEC-1995 by CEL Analyzed using EPA 6010A on 22-DEC-1995 by JLW QC Batch No : 12458			
Zinc	/1	0.0300 mg/L	0.244 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 14-DEC-1995 by CEL Analyzed using EPA 6010A on 21-DEC-1995 by JLW QC Batch No : 12458			

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : TMW-5
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	435 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	1.0 mg/L	1800 mg/L
Dilution Factor : 1 Analyzed using EPA 9252 on 15-DEC-1995 by P_F QC Batch No : 520030			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 20-DEC-1995 by KPP QC Batch No : 640019A			
Total Dissolved Solids	/1	10.0 mg/L	3370 mg/L
Analyzed using EPA 160.1 on 14-DEC-1995 by RJS QC Batch No : 614029A			
Sulfate	/1	10.0 mg/L	195 mg/L
Dilution Factor : 10 Analyzed using EPA 9038 on 16-DEC-1995 by RJS QC Batch No : 597041A			

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DATE RECEIVED : 12-DEC-1995

REPORT NUMBER : D95-11986-6
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blanks
PROJECT : MTO387.001 Texaco Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121395

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	97.7 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11986

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
BATCH NO.	AB625-78	AB625-78	AB625-78	AB625-78	AB625-78
LCS LOT NO.	AB525-86	AB525-86	AB525-86	AB525-86	AB525-86
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B
PREPARED BY	CLT	CLT	CLT	CLT	CLT
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8310	EPA 8310
ANALYZED BY	JXA	JXA	JXA	JXA	JXA
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 18.0	< 23.0	< 18.0	< 2.10	< 6.40
SPIKE LEVEL	100	100	100	100	100
MS RESULT	79.9	65.8	58.9	64.7	61.8
MS RECOVERY %	79.9	65.8	58.9	64.7	61.8
MSD RESULT	88.7	72.0	64.4	70.2	66.8
MSD RECOVERY %	88.7	72.0	64.4	70.2	66.8
MS/MSD RPD %	10.4	9.00	8.92	8.15	7.78
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS RESULT	41.1	31.3	28.8	32.6	34.0
LCS RECOVERY %	82.2	62.6	57.6	65.2	68.0
SPIKE SAMPLE ID	11945-1	11945-1	11945-1	11945-1	11945-1
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11986

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Anthracene	Chrysene	Benzo(k)fluoranthene	Benzene	Ethylbenzene
BATCH NO.	AB625-78	AB625-78	AB625-78	34-121395	34-121395
LCS LOT NO.	AB525-86	AB525-86	AB525-86	AB214-70B	AB214-70B
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	---	---
PREPARED BY	CLT	CLT	CLT	---	---
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8020	EPA 8020
ANALYZED BY	JXA	JXA	JXA	VHT	VHT
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 6.60	< 1.50	< 0.17	< 1.00	< 1.00
SPIKE LEVEL	100	100	100	500	500
MS RESULT	40.3	31.1	27.4	521	524
MS RECOVERY %	40.3	31.1	27.4	104	105
MSD RESULT	42.6	35.1	32.0	538	541
MSD RECOVERY %	42.6	35.1	32.0	108	108
MS/MSD RPD %	5.55	12.1	15.5	3.21	3.19
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS RESULT	21.8	29.1	25.8	51.0	51.8
LCS RECOVERY %	43.6	58.2	51.6	102	104
SPIKE SAMPLE ID	11945-1	11945-1	11945-1	11986-2	11986-2
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11986

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MT0387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Zinc	Silver	Arsenic	Barium	Cadmium
BATCH NO.	12458	12435	12435	12435	12435
LCS LOT NO.	591009,591130	591009,590814	591009,590814	591009,590814	591009,590814
PREP METHOD	EPA 3015	EPA 1311/3015	EPA 1311/3015	EPA 1311/3015	EPA 1311/3015
PREPARED BY	CEL	CEL	CEL	CEL	CEL
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	JLW	JLW	JLW	JLW	JLW
UNITS	µg/L	mg/L	mg/L	mg/L	mg/L
METHOD BLANK	< 10.0	< 0.01	< 0.10	< 1.00	< 0.02
SPIKE LEVEL	1000	0.100	5.00	10.0	1.00
MS RESULT	1130	0.0980	4.78	11.4	0.965
MS RECOVERY %	113	98.0	95.6	101	96.5
MSD RESULT	1190	0.0990	4.88	11.5	0.985
MSD RECOVERY %	119	99.0	97.6	102	98.5
MS/MSD RPD %	5.17	1.02	2.07	0.98	2.05
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	NC	0.80	0.00
LCS LEVEL	1000	0.100	5.00	10.0	1.00
LCS RESULT	1050	0.105	4.96	10.8	1.00
LCS RECOVERY %	105	105	99.2	108	100
SPIKE SAMPLE ID	12047-3	11968-5	11968-5	11968-5	11968-5
DUP SAMPLE ID	12047-3	11968-5	11968-5	11968-5	11968-5

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11986

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MT0387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Chromium	Mercury	Lead	Selenium	Alkalinity
BATCH NO.	12435	HG-2058	12435	12435	271100
LCS LOT NO.	591009,590814	AB300-22A	591009,590814	591009,590814	9968
PREP METHOD	EPA 1311/3015	EPA 1311/7470	EPA 1311/3015	EPA 1311/3015	---
PREPARED BY	CEL	A_O	CEL	CEL	---
ANALYSIS METHOD	EPA 6010A	EPA 7470	EPA 6010A	EPA 6010A	SM 2320B
ANALYZED BY	JLW	CGJ	JLW	JLW	P_F
UNITS	mg/L	mg/L	mg/L	mg/L	mg/L
METHOD BLANK	< 0.02	< 0.001	< 0.05	< 0.40	< 1.00
SPIKE LEVEL	1.00	0.00100	1.00	5.00	458
MS RESULT	0.985	0.00110	1.02	4.90	725
MS RECOVERY %	98.5	98.8	102	98.0	104
MSD RESULT	1.00	0.00100	1.03	4.84	730
MSD RECOVERY %	100	88.8	103	96.8	105
MS/MSD RPD %	1.91	10.7	0.98	1.23	1.05
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	NC	NC	0.00
LCS LEVEL	1.00	0.00100	1.00	5.00	125
LCS RESULT	1.00	0.00106	0.964	4.86	125
LCS RECOVERY %	100	106	96.4	97.2	100
SPIKE SAMPLE ID	11968-5	11941-6	11968-5	11968-5	11945-1
DUP SAMPLE ID	11968-5	11941-6	11968-5	11968-5	11945-1

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11986

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Chloride	Cyanide, Reactive	Cyanide, Total	pH	Cyanide, Reactive
BATCH NO.	520030	635010A	640019A	633014	635010A/635010B
LCS LOT NO.	9968	AB 106072A	ERA 9963	9968	106072A
PREP METHOD	---	---	---	---	---
PREPARED BY	---	---	---	---	---
ANALYSIS METHOD	EPA 9252	EPA 9010	EPA 9010	EPA 9040/45	7.3 SW846
ANALYZED BY	P_F	KPP	KPP	P_F	KPP
UNITS	mg/L	mg/Kg	mg/L	---	mg/L
METHOD BLANK	< 1.00	< 0.10	< 0.01		< 0.10
SPIKE LEVEL	1050	---	1.00	---	1000
MS RESULT	1050	NA	1.01	NA	NA
MS RECOVERY %	99.5	NA	101	NA	NA
MSD RESULT	1070	NA	1.05	NA	NA
MSD RECOVERY %	101	NA	105	NA	NA
MS/MSD RPD %	1.90	NA	3.88	NA	NA
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	0.00	NA	NC	1.20	NA
LCS LEVEL	128	2.00	0.147	9.09	2.00
LCS RESULT	115	1.60	0.120	9.10	1.60
LCS RECOVERY %	89.8	80.0	81.6	100	80.0
SPIKE SAMPLE ID	11941-5	---	11986-5	---	---
DUP SAMPLE ID	11941-5	---	11986-5	11986-9	---

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214 238-5592

REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11986

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Sulfide, Reactive	Total Dissolved Solids	Sulfate	Sulfide, Reactive
BATCH NO.	635010A/635010B	614029A	597041A	635010B
LCS LOT NO.	---	9968	9968	AB1190828
PREP METHOD	---	---	---	---
PREPARED BY	---	---	---	---
ANALYSIS METHOD	7.3 SW846	EPA 160.1	EPA 9038	EPA 9030
ANALYZED BY	KPP	RJS	RJS	KPP
UNITS	mg/L	mg/L	mg/L	mg/Kg
METHOD BLANK	< 10.0	< 10.0	< 1.00	< 10.0
SPIKE LEVEL	---	---	400	---
MS RESULT	NA	NA	592	NA
MS RECOVERY %	NA	NA	99.3	NA
MSD RESULT	NA	NA	588	NA
MSD RECOVERY %	NA	NA	98.3	NA
MS/MSD RPD %	NA	NA	1.01	NA
BS RESULT	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA
DUPLICATE RPD %	NA	1.06	1.52	NA
LCS LEVEL	720	714	105	720
LCS RESULT	108	731	105	108
LCS RECOVERY %	15.0	102	100	15.0
SPIKE SAMPLE ID	---	---	11986-5	---
DUP SAMPLE ID	---	11986-1	11986-7	---

NA Not applicable

Inchcape Testing Services Environmental Laboratories 1089 East Collins Blvd., #100 Richardson, TX 75081 (214) 238-5591

CHAIN OF CUSTODY RECORD

Report to:
Company: Geraghty & Miller
Address: 1030 Andrews Hwy Ste 120, Midland, TX
Contact: Joe Reed
Phone: 915 699 1381
Fax: 915 699 1978

Invoice to
Company:
Address:
Contact:
Phone:
PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 2 3 4 5

Custody Seal N Y
Intact N Y

Screened For Radioactivity

Sampler's Name: Tara O'Connell
Sampler's Signature: Tara O'Connell

Proj. No.: MT0387.001
Project Name: Texaco Eunice

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No./Type of Containers: VOA	A/G 1 Lt.	250 ml	P/O	BTEX (8020)	TPH (418.1)	PNA (8100)	Major Minerals +	Metals ★ + Cyanide	Lab Sample ID (Lab Use Only)
W	12/8		X		TMW-5	3	4		2	✓	✓	✓	✓	✓	11986-5 6
W					TRIP BLANKS	2				✓					

Turn around time [ ] Priority 1 or Standard [ ] Priority 2 or 50% [ ] Priority 3 or 100% [ ] Priority 4 ERS *

* BTEX (602/8020), TPH (418.1 or 8015), VOLATILES (624/8240), IGNITABILITY, TOTAL LEAD (6010)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			B. Wilson	12/12/95	10:45
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Remarks + including: calcium, magnesium, sodium, potassium, chloride, sulfate, bicarbonate, carbonate, TDS
★ As, Ba, Cd, Cr, CN, Pb, Hg, Se, Ag, U, Cu, Fe, Mn, Zn, Al, B, Ca, Mo, Ni

Client's delivery of samples constitutes acceptance of Inchcape/ITS-Dallas terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge; O - Oil
[2] Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

Inchcape cannot accept verbal changes. Please Fax written changes to 214-238-5592

OFFICE USE ONLY

Inchcape Testing Services Environmental Laboratories 4089 East Collins Blvd., #400 Richardson, TX 75081 (214) 238-5591

CHAIN OF CUSTODY RECORD

Report to:
Company: Meredith & Miller
Address: 1030 Andrews Hwy Ste 120, Midland, TX
Contact: Joe Reed
Phone: 915 699 1387
Fax: 915 699 1978

Invoice to
Company:
Address:
Contact:
Phone:
PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 2 3 4 5

Custody Seal N Y
Intact N Y

Screened For Radioactivity

Sampler's Name: Tara O'Connell
Sampler's Signature:

Proj. No.: MT0287.001
Project Name: Texaco Eunice

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No./Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	BTEX (8020)	TPH (418.1)	PNA (8100)	Major Minerals +	Metals ★ + Cyanide	Lab Sample ID (Lab Use Only)
W	12/8		X		TMW-6	3	4		2	✓	✓	✓	✓	✓	11986-3 4
W					TRIP BLANKS	2				✓					

Turn around time: [ ] Priority 1 or Standard [ ] Priority 2 or 50% [ ] Priority 3 or 100% [ ] Priority 4 ERS *

* BTEX (602/8020), TPH (418.1 or 8015), VOLATILES (624/8240), IGNITABILITY, TOTAL LEAD (6010)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			B. Wilson	12/9/95	10:40
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Remarks + including: calcium, magnesium, sodium, potassium, chloride, sulfate, bicarbonate, carborate, TDS
★ As, Ba, Cd, Cr, CN, Pb, Hg, Se, Ag, U, Cu, Fe Mn, Zn, Al, B, Co, Mo, Ni.

Client's delivery of samples constitutes acceptance of Inchcape/ITS-Dallas terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge; O - Oil
[2] Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

Inchcape cannot accept verbal changes. Please Fax written changes to 214-238-5592

OFFICE USE ONLY

Inchcape Testing Services Environmental Laboratories 1089 East Collins Blvd., #100 Richardson, TX 75081 (214) 238-5591

CHAIN OF CUSTODY RECORD

Report to:
Company: Braughton Muller
Address: 1030 Andrews Hwy Ste 120, Midland, TX
Contact: Joe Reed
Phone: 915 699 1387
Fax: 915 699 1978

Invoice to
Company:
Address:
Contact:
Phone:
PO/SO #:

Sampler's Name: Tara O'Connell
Sampler's Signature: Tara O'Connell

Proj. No.: MID38700
Project Name: Texaco Eunice

Lab use only
Due Date:

Temp. of coolers when received (C°): 3 | 2 | 3 | 4 | 5

Custody Seal N Y
Intact N Y

Screened For Radioactivity

ANALYSIS REQUESTED

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No./Type of Containers[2] VOA	A/G 1 Lt	250 ml	P/O	BTEX (8020)	TPH (418.1)	PNA (8100)	Major Minerals + Metals* + Cyanide	Lab Sample ID (Lab Use Only)
W	12/8			✓	TMW-D	3	4		2	✓	✓	✓	✓	✓	11986-1
W					TRIP Blanks	2				✓					2

Turn around time: [✓] Priority 1 or Standard [ ] Priority 2 or 50% [ ] Priority 3 or 100% [ ] Priority 4 ERS *

* BTEX (602/8020), TPH (418.1 or 8015), VOLATILES (624/8240), IGNITABILITY, TOTAL LEAD (6010)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			B. Wilson	12/12/95	10:30
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Remarks + including: Calcium, magnesium, sodium, potassium, chloride, sulfate, bicarbonate, carbonate, TDS
*As, Ba, Cd, Cr, CN, Pb, Hg, Se, Ag, U, Cu, Fe, Mn, Zn, Al, B, Co, Mo, Ni

Client's delivery of samples constitutes acceptance of Inchcape/ITS-Dallas terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; Sl. - Sludge; O - Oil
[2] Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

Inchcape cannot accept verbal changes. Please Fax written changes to 214-238-5592

OFFICE USE ONLY

ORIGINAL

INCHCAPE TESTING SERVICES
Dallas

SAMPLE PRESERVATION INFORMATION SHEET

Observed By	Client	JOB NUMBER	11986
Date	12-12-95		
Time	1552	Client Name	Hargrave

BATCH A

Sample No.	Container Type	Apparent Volume (mLs)	Initial pH* (20± 2°C)	Final pH	Preservative Added	Filtration	Comments
11986-1	2HG	1L	6.9	6.9	8		NP
-1	1P		7.0	7.0	1		1
-1	1		<2	<2	3/1		Metals
-1	1AG		>12	>12	5/1		CN
-1	1		<2	<2	4/1		TPH
-3	2HG		7.1	7.1	8		NP
-3	1P		7.2	7.2	1		1
-3	1P		<2	<2	3/1		Metals
		BATCH B					
-3	1AG	1L	<2	<2	4/1		TPH
-3	1		>12	>12	5/1		CN
-5	2HG		8.0	8.0	8		NP
-5	1P		8.1	8.1	1		1
-5	1AG		<2	<2	4/1		TPH
-5	1		>12	>12	5/1		CN
-5	1P		<2	<2	3/1		Metals
-7	2AG	1	7.6	7.6	8		NP
		BATCH C					
-7	1P	1L	7.6	7.6	8		NP
-7	1	1	<2	<2	3/1		Metals
-7	1AG	1	1	1	4/1		TPH
-7	1	1	>12	>12	5/1		CN
							12-12-95
							1613

pH Duplicate (maximum difference = 0.2):
Sample No. 11986-1 — 6.9

pH LCS (pH = 7.0 ± 0.2):
Number: AA090 — 7.0

PRESERVATIVE / FILTRATION KEY

1 = Pre-preserved
2 = H_2SO_4 to pH<2
3 = HNO_3 to pH<2
4 = HCl to pH<2
5 = NaOH to pH>12
6 = $Na_2S_2O_3$ (0.008%)
7 = 2 mL ZnOAc/NaOH to pH>12
8 = No Preservative Required

F = Chain-of-Custody indicates sample was filtered in the field
L = Sample filtered (0.45 pm) in the laboratory before preservation

* Initial pH is determined in accordance with EPA methods 150.1 / SW-846 9040 using a sample aliquot which has been adjusted to 20 ± 2°C

1089 East Collins Blvd. • Richardson TX 75081 • (214) 238-5591 • Fax (214) 238-5592

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

ANALYTICAL REPORT

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295

Included in this data package are the analytical results for the sample group which you have submitted to Inchcape Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-1
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-2-11-95 (50-52')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 28-NOV-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 8-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 27-120795

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	2.0 µg/Kg	< 2.0 µg/Kg
Toluene	2.0 µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0 µg/Kg	< 2.0 µg/Kg
Xylenes	2.0 µg/Kg	< 2.0 µg/Kg
BTEX (total)		< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	98.4 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-1
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-2-11-95 (50-52')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 28-NOV-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	120 mg/Kg

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-1
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-2-11-95 (50-52')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 28-NOV-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	92.2 %
Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP QC Batch No : 643056C			

Inchcape Testing Services
Environmental Laboratories

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Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-2
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-2-11-95 (53-55')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 28-NOV-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 50
METHOD FACTOR : 1
QC BATCH NO : 25-120795

BTEX ANALYSIS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Benzene	100	µg/Kg	< 100	µg/Kg	
Toluene	100	µg/Kg	523	µg/Kg	
Ethyl benzene	100	µg/Kg	4510	µg/Kg	
Xylenes	100	µg/Kg	12600	µg/Kg	
BTEX (total)			17600	µg/Kg	#

QUALITY CONTROL DATA					
SURROGATE COMPOUND	SPIKE LEVEL		SPIKE RECOVERED		
Bromofluorobenzene (SS)	50.0	µg/Kg	125	%	

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-2
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-2-11-95 (53-55')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 28-NOV-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 10
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	100 mg/Kg	2700 mg/Kg

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-2
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-2-11-95 (53-55')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 28-NOV-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	93.8 %

Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP
QC Batch No : 643056C

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Environmental Laboratories

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-3
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-3-11-95 (54-56')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 29-NOV-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 27-120795

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	2.0 µg/Kg	12.0 µg/Kg
Toluene	2.0 µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0 µg/Kg	7.6 µg/Kg
Xylenes	2.0 µg/Kg	8.5 µg/Kg
BTEX (total)		28.1 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	96.3 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-3
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-3-11-95 (54-56')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 29-NOV-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Total Petroleum Hydrocarbon	10	mg/Kg	<	10	mg/Kg

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-3
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-3-11-95 (54-56')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 29-NOV-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	84.5 %

Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP
QC Batch No : 643056C

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-4
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-5-11-95 (51-53')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 27-NOV-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 100
METHOD FACTOR : 1
QC BATCH NO : 25-120795

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	200 µg/Kg	< 200 µg/Kg
Toluene	200 µg/Kg	3340 µg/Kg
Ethyl benzene	200 µg/Kg	14500 µg/Kg
Xylenes	200 µg/Kg	39100 µg/Kg
BTEX (total)		56900 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	117 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-4
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-5-11-95 (51-53')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 27-NOV-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 10
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	100 mg/Kg	4000 mg/Kg

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-4
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-5-11-95 (51-53')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 27-NOV-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	89.5 %

Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP
QC Batch No : 643056C

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-5
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (54-56')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 8-DEC-1995
DILUTION FACTOR : 100
METHOD FACTOR : 1
QC BATCH NO : 25-120795

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	200 µg/Kg	1040 µg/Kg
Toluene	200 µg/Kg	4810 µg/Kg
Ethyl benzene	200 µg/Kg	4930 µg/Kg
Xylenes	200 µg/Kg	11100 µg/Kg
BTEX (total)		21900 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	88.7 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-5
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (54-56')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 10
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	100 mg/Kg	330 mg/Kg

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-5
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (54-56')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	86.0 %

Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP
QC Batch No : 643056C

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-6
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (56-58')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 5
METHOD FACTOR : 1
QC BATCH NO : 27-120795

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	10.0 µg/Kg	227 µg/Kg
Toluene	10.0 µg/Kg	10.2 µg/Kg
Ethyl benzene	10.0 µg/Kg	83.3 µg/Kg
Xylenes	10.0 µg/Kg	160 µg/Kg
BTEX (total)		481 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	97.1 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-6
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (56-58')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Total Petroleum Hydrocarbon	10	mg/Kg	<	10	mg/Kg

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-6
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (56-58')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	84.8 %

Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP
QC Batch No : 643056C

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-7
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (58-60')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 5
METHOD FACTOR : 1
QC BATCH NO : 27-120795

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	10.0 µg/Kg	42.5 µg/Kg
Toluene	10.0 µg/Kg	28.7 µg/Kg
Ethyl benzene	10.0 µg/Kg	47.9 µg/Kg
Xylenes	10.0 µg/Kg	125 µg/Kg
BTEX (total)		244 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	97.0 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

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Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-7
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (58-60')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	< 10 mg/Kg

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-7
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95 (58-60')
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 4-DEC-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	86.9 %

Analyzed using ASTM D2216 mod. on 11-DEC-1995 by RRP
QC Batch No : 643056C

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DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-8
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : Method Blank
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 6-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 27-120795

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT	RESULTS	
Benzene	2.0 µg/Kg	< 2.0 µg/Kg	
Toluene	2.0 µg/Kg	< 2.0 µg/Kg	
Ethyl benzene	2.0 µg/Kg	< 2.0 µg/Kg	
Xylenes	2.0 µg/Kg	< 2.0 µg/Kg	
BTEX (total)		< 2.0 µg/Kg	#

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	109 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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Fax. 214-238-5592

DATE RECEIVED : 6-DEC-1995

REPORT NUMBER : D95-11796-8
REPORT DATE : 13-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Soil
ID MARKS : Method Blank
PROJECT : MT0387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO#4295
DATE SAMPLED : 6-DEC-1995
ANALYSIS METHOD : EPA 8020 /2
ANALYZED BY : S_S
ANALYZED ON : 7-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 25-120795

BTEX ANALYSIS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Benzene	2.0	µg/Kg	<	2.0	µg/Kg
Toluene	2.0	µg/Kg	<	2.0	µg/Kg
Ethyl benzene	2.0	µg/Kg	<	2.0	µg/Kg
Xylenes	2.0	µg/Kg	<	2.0	µg/Kg
BTEX (total)			<	2.0	µg/Kg #

QUALITY CONTROL DATA				
SURROGATE COMPOUND	SPIKE LEVEL		SPIKE RECOVERED	
Bromofluorobenzene (SS)	50.0	µg/Kg	100	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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Environmental Laboratories

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REPORT DATE : 13-DEC-1995 REPORT NUMBER : D95-11796

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MT0387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Benzene	Ethylbenzene	Benzene	Ethylbenzene
BATCH NO.	27-120795	27-120795	25-120795	25-120795
LCS LOT NO.	AB214-82A	AB214-82A	AB214-82A	AB214-82A
PREP METHOD	---	---	---	---
PREPARED BY	---	---	---	---
ANALYSIS METHOD	EPA 8020	EPA 8020	EPA 8020	EPA 8020
ANALYZED BY	MKS	MKS	S_S	S_S
UNITS	µg/Kg	µg/Kg	µg/Kg	µg/Kg
METHOD BLANK	< 2.00	< 2.00	< 2.00	< 2.00
SPIKE LEVEL	50.0	50.0	50.0	50.0
MS RESULT	42.1	46.9	56.0	52.8
MS RECOVERY %	84.2	93.8	112	106
MSD RESULT	41.4	44.5	57.4	55.2
MSD RECOVERY %	82.8	89.0	115	110
MS/MSD RPD %	1.68	5.25	2.47	4.44
BS RESULT	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0
LCS RESULT	44.3	49.5	57.1	56.6
LCS RECOVERY %	88.6	99.0	114	113
SPIKE SAMPLE ID	11777-1	11777-1	11777-1	11777-1
DUP SAMPLE ID	---	---	---	---

NA Not applicable

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REPORT DATE : 13-DEC-1995 REPORT NUMBER : D95-11796

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MT0387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Total Recoverable Hydrocarbons
BATCH NO.	AB569-70
LCS LOT NO.	AA345-888
PREP METHOD	EPA 418.1 mod.
PREPARED BY	MTR
ANALYSIS METHOD	EPA 418.1 mod.
ANALYZED BY	MTR
UNITS	mg/Kg
METHOD BLANK	< 10.0
SPIKE LEVEL	100
MS RESULT	103
MS RECOVERY %	103
MSD RESULT	107
MSD RECOVERY %	107
MS/MSD RPD %	3.81
BS RESULT	102
BS RECOVERY %	102
BSD RESULT	104
BSD RECOVERY %	104
BS/BSD RPD %	1.94
DUPLICATE RPD %	NA
LCS LEVEL	100
LCS RESULT	SEE_BS
LCS RECOVERY %	SEE_BS
SPIKE SAMPLE ID	11796-3
DUP SAMPLE ID	---

SEE_BS LCS and LCS Duplicate reported as BS and BSD.
NA Not applicable

GRAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No. ____

CHAIN-OF-CUSTODY RECORD

Page ____ of 1

Project Number MTO387.001

Project Location Texaco-Eunice

Laboratory InchCape/NDRC

Sampler(s)/Affiliation T. O'Connell Graghty & Miller

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	BTEX (8020) TPH (418.1)										TOTAL
TMW-2-11-95	●	11-28-95												
(50-52')	S	↓		3										3
(53-55')	S	↓		2										2
TMW-3-11-95		11-29-95												
(54-56)	S	"		TO #3										3
TMW-5-11-95				3										
(51-53)	S	11-27-95		3										3
TMW-6-12-95		↓												
(54-56)	S	12-4-95		2										2
(56-58)	S	↓		2										2
(58-60)	S	↓		2										2
Total No. of Bottles/ Containers														

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: T. O'Connell	Organization: Graghty & Miller	Date 12/5/95 Time ____	Seal Intact? Yes No N/A
Received by: ____	Organization: ____	Date ____ Time ____	
Relinquished by: ____	Organization: ____	Date ____ Time ____	Seal Intact? Yes No N/A
Received by: ____	Organization: ____	Date ____ Time ____	

Special Instructions/Remarks: ____

Delivery Method: ☐ In Person ☐ Common Carrier ____ SPECIFY ☐ Lab Courier ☐ Other ____ SPECIFY

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

ANALYTICAL REPORT

DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice

Included in this data package are the analytical results for the sample group which you have submitted to Inchcape Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

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Environmental Laboratories

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Richardson, TX 75081
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Fax. 214-238-5592

DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-1
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-1-12-95(11-13')
PROJECT : MT0387.001 Texaco Eunice
DATE SAMPLED : 6-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 25-121195

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT	RESULTS	
Benzene	2.0 µg/Kg	< 2.0 µg/Kg	
Toluene	2.0 µg/Kg	< 2.0 µg/Kg	
Ethyl benzene	2.0 µg/Kg	< 2.0 µg/Kg	
Xylenes	2.0 µg/Kg	< 2.0 µg/Kg	
BTEX (total)		< 2.0 µg/Kg	#

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	96.9 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-1
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-1-12-95(11-13')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 6-DEC-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	< 10 mg/Kg

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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-1
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-1-12-95(11-13')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 6-DEC-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	93.0 %

Analyzed using ASTM D2216 mod. on 15-DEC-1995 by RRP
QC Batch No : 643067B

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Environmental Laboratories

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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-2
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-1-12-95(50-52')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 6-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 11-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 25-121195

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT	RESULTS	
Benzene	2.0 µg/Kg	< 2.0 µg/Kg	
Toluene	2.0 µg/Kg	< 2.0 µg/Kg	
Ethyl benzene	2.0 µg/Kg	< 2.0 µg/Kg	
Xylenes	2.0 µg/Kg	< 2.0 µg/Kg	
BTEX (total)		< 2.0 µg/Kg	#

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	98.6 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-2
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-1-12-95(50-52')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 6-DEC-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	< 10 mg/Kg

Inchcape Testing Services
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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-2
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-1-12-95(50-52')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 6-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	93.1 %
Analyzed using ASTM D2216 mod. on 15-DEC-1995 by RRP QC Batch No : 643067B			

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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-3
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95(10-15')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 4-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 11-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 25-121195

BTEX ANALYSIS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Benzene	2.0	µg/Kg	<	2.0	µg/Kg
Toluene	2.0	µg/Kg	<	2.0	µg/Kg
Ethyl benzene	2.0	µg/Kg	<	2.0	µg/Kg
Xylenes	2.0	µg/Kg	<	2.0	µg/Kg
BTEX (total)			<	2.0	µg/Kg #

QUALITY CONTROL DATA				
SURROGATE COMPOUND	SPIKE LEVEL		SPIKE RECOVERED	
Bromofluorobenzene (SS)	50.0	µg/Kg	99.3	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-3
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95(10-15')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 4-DEC-1995
PREPARATION METHOD : EPA 418.1 mod.
PREPARED BY : MTR
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 418.1 mod. /1
ANALYZED BY : MTR
ANALYZED ON : 13-DEC-1995
DILUTION FACTOR : 1
QC BATCH NO : AB569-70

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10 mg/Kg	< 10 mg/Kg

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Environmental Laboratories

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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-3
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : TMW-6-12-95(10-15')
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 4-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	90.3 %
Analyzed using ASTM D2216 mod. on 15-DEC-1995 by RRP QC Batch No : 643067B			

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Environmental Laboratories

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DATE RECEIVED : 8-DEC-1995

REPORT NUMBER : D95-11892-4
REPORT DATE : 16-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Mr. Damian Reed

SAMPLE MATRIX : Soil
ID MARKS : Method Blank
PROJECT : MTO387.001 Texaco Eunice
DATE SAMPLED : 8-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : S_S
ANALYZED ON : 11-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 25-121195

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	2.0 µg/Kg	< 2.0 µg/Kg
Toluene	2.0 µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0 µg/Kg	< 2.0 µg/Kg
Xylenes	2.0 µg/Kg	< 2.0 µg/Kg
BTEX (total)		< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene (SS)	50.0 µg/Kg	97.4 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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Environmental Laboratories

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REPORT DATE : 16-DEC-1995 REPORT NUMBER : D95-11892

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Mr. Damian Reed
PROJECT : MTO387.001 Texaco Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Benzene	Ethylbenzene	Total Recoverable Hydrocarbons
BATCH NO.	25-121195	25-121195	AB569-70
LCS LOT NO.	AB214-82A	AB214-82A	AA345-88B
PREP METHOD	---	---	EPA 418.1 mod.
PREPARED BY	---	---	MTR
ANALYSIS METHOD	EPA 8020	EPA 8020	EPA 418.1 mod.
ANALYZED BY	S_S	S_S	MTR
UNITS	µg/Kg	µg/Kg	mg/Kg
METHOD BLANK	< 2.00	< 2.00	< 10.0
SPIKE LEVEL	50.0	50.0	100
MS RESULT	55.9	54.1	103
MS RECOVERY %	112	108	103
MSD RESULT	55.3	53.3	107
MSD RECOVERY %	111	107	107
MS/MSD RPD %	1.08	1.49	3.81
BS RESULT	NA	NA	102
BS RECOVERY %	NA	NA	102
BSD RESULT	NA	NA	104
BSD RECOVERY %	NA	NA	104
BS/BSD RPD %	NA	NA	1.94
DUPLICATE RPD %	NA	NA	NA
LCS LEVEL	50.0	50.0	100
LCS RESULT	50.0	49.7	SEE_BS
LCS RECOVERY %	100	99.4	SEE_BS
SPIKE SAMPLE ID	11892-2	11892-2	11796-3
DUP SAMPLE ID	---	---	---

NA Not applicable
SEE_BS LCS and LCS Duplicate reported as BS and BSD.

Inchcape Testing Services Environmental Laboratories 1089 East Collins Blvd., #100 Richardson, TX 75081 (214) 238-5591

CHAIN OF CUSTODY RECORD

Report to:
Company: Geraghty & Miller
Address: 1030 Andrews Hwy Ste 120, Midland, TX
Contact: Joe Reed
Phone: 915 699 1381
Fax: 915 699 1978

Invoice to
Company:
Address:
Contact:
Phone:
PO/SO #:

Lab Only
Due Date:

Temp. of coolers when received (C°): 3 (1 2 3 4 5)
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ✓

Sampler's Name: Tara O'Connell
Sampler's Signature: Tara O'Connell

Proj. No.: MT0387.001
Project Name: TEXACO - EUNICE

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No./Type of Containers[2] VOA	A/G 1 Lt	250 ml	P/O	TPH (418.1)	BTEX (8020)	Lab Sample ID (Lab Use Only)	OVM (ppm)
S	12/6			✓	TMW-1-12-95 (11-13')			2		✓	✓	11892 -1	9.3
S	12/6			✓	TMW-1-12-95 (50-52')			3		✓	✓	-2	1.3
S	12/4			✓	TMW-6-12-95 (10-15')			3		✓	✓	-3	29.8
												MB -4	38.8

Turn around time: ( ) Priority 1 or Standard ( ) Priority 2 or 50% ( ) Priority 3 or 100% ( ) Priority 4 ERS *

* BTEX (602/8020), TPH (418.1 or 8015), VOLATILES (624/8240), IGNITABILITY, TOTAL LEAD (6010)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Tara O'Connell	12-6-95	2030	Collin McNair	12/8/95	10:45
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Remarks: ORIGINAL

Client's delivery of samples constitutes acceptance of Inchcape/ITS-Dallas terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge; O - Oil
[2] Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

Inchcape cannot accept verbal changes. Please Fax written changes to 214-238-5592

OFFICE USE ONLY

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

ANALYTICAL REPORT

DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295

Included in this data package are the analytical results for the sample group which you have submitted to Inchcape Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TWM-3-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : VHC
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

Inchcape Testing Services
Environmental Laboratories

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Fax. 214-238-5592

REPORT NUMBER : D95-11945-1
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	58.6 %

Inchcape Testing Services
Environmental Laboratories

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TWM-3-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	48.3 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	18.3 µg/L
Xylenes	1.0 µg/L	4.5 µg/L
BTEX (total)		71.1 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	94.4 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Inchcape Testing Services
Environmental Laboratories

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TWM-3-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 14-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-17

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	1.90 mg/L

Inchcape Testing Services
Environmental Laboratories

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TWM-3-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7761 on 14-DEC-1995 by MPE QC Batch No : 12413F			
Aluminum	/1	0.200 mg/L	7.26 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Arsenic	/1	0.0050 mg/L	0.0293 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7060 on 12-DEC-1995 by AH QC Batch No : 12413F			
Barium	/1	0.0200 mg/L	1.14 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Boron	/1	0.100 mg/L	0.751 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			

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REPORT NUMBER : D95-11945-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	255 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Chromium	/1	0.0200 mg/L	0.0251 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Copper	/1	0.0100 mg/L	0.0303 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Iron	/1	0.100 mg/L	17.0 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Mercury	/1	0.0002 mg/L	0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 12-DEC-1995 by CEL Analyzed using EPA 7470 on 14-DEC-1995 by CGJ QC Batch No : HG-2052			

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REPORT NUMBER : D95-11945-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	22.3 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Magnesium	/1	0.100 mg/L	46.3 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Manganese	/1	0.0100 mg/L	0.364 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Sodium	/1	10 mg/L	709 mg/L
Dilution Factor : 10 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by LSS QC Batch No : 12413			
Nickel	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Lead	/1	0.100 mg/L	< 0.100 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			

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REPORT NUMBER : D95-11945-1

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.010 mg/L	0.016 mg/L
Dilution Factor : 2 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7740 on 12-DEC-1995 by AH QC Batch No : 12413F			
Uranium	/1	0.1 mg/L	< 0.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			
Zinc	/1	0.0300 mg/L	0.145 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by LSS QC Batch No : 12413			

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-1
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TWM-3-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	250 mg/L CaCO3
Analyzed using SM 23208 on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 23208 on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	1.0 mg/L	685 mg/L
Dilution Factor : 1 Analyzed using EPA 9252 on 15-DEC-1995 by P_F QC Batch No : 520030			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 18-DEC-1995 by KPP QC Batch No : 640016A			
Total Dissolved Solids	/1	10.0 mg/L	1670 mg/L
Analyzed using EPA 160.1 on 13-DEC-1995 by RJS QC Batch No : 614027A			
Sulfate	/1	10.0 mg/L	248 mg/L
Dilution Factor : 10 Analyzed using EPA 9038 on 15-DEC-1995 by RJS QC Batch No : 597039A			

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-2
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blank
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	98.6 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-2-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : VHC
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	0.380 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

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REPORT NUMBER : D95-11945-3
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	85.4 %

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-2-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	58.9 µg/L
Toluene	1.0 µg/L	24.6 µg/L
Ethyl benzene	1.0 µg/L	9.5 µg/L
Xylenes	1.0 µg/L	53.0 µg/L
BTEX (total)		146 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	91.6 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-2-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 14-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-17

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	1.50 mg/L

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REPORT NUMBER : D95-11945-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-2-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7761 on 14-DEC-1995 by MPE QC Batch No : 12413F			
Aluminum	/1	0.200 mg/L	4.59 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Arsenic	/1	0.0050 mg/L	0.0268 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7060 on 12-DEC-1995 by AH QC Batch No : 12413F			
Barium	/1	0.0200 mg/L	0.807 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Boron	/1	0.100 mg/L	0.670 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			

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REPORT NUMBER : D95-11945-3

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	210 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Chromium	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Copper	/1	0.0100 mg/L	0.0384 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Iron	/1	0.100 mg/L	8.63 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Mercury	/1	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 12-DEC-1995 by CEL Analyzed using EPA 7470 on 14-DEC-1995 by CGJ QC Batch No : HG-2052			

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REPORT NUMBER : D95-11945-3

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	21.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Magnesium	/1	0.100 mg/L	58.0 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Manganese	/1	0.0100 mg/L	0.241 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by AWH Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Sodium	/1	10 mg/L	501 mg/L
Dilution Factor : 10 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by LSS QC Batch No : 12413			
Nickel	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Lead	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			

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REPORT NUMBER : D95-11945-3

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.005 mg/L	0.009 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7740 on 12-DEC-1995 by AH QC Batch No : 12413F			
Uranium	/1	0.1 mg/L	< 0.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			
Zinc	/1	0.0300 mg/L	0.107 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by LSS QC Batch No : 12413			

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-3
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-2-11-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995

MISCELLANEOUS ANALYSES

TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	225 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	1.0 mg/L	545 mg/L
Dilution Factor : 1 Analyzed using EPA 9252 on 15-DEC-1995 by P_F QC Batch No : 520030			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 18-DEC-1995 by KPP QC Batch No : 640016A			
Total Dissolved Solids	/1	10.0 mg/L	1450 mg/L
Analyzed using EPA 160.1 on 13-DEC-1995 by RJS QC Batch No : 614027A			
Sulfate	/1	10.0 mg/L	210 mg/L
Dilution Factor : 10 Analyzed using EPA 9038 on 15-DEC-1995 by RJS QC Batch No : 597039A			

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-4
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blank
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	99.3 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-1-12-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : VHC
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	0.190 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

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REPORT NUMBER : D95-11945-5
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	63.4 %

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-1-12-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	98.7 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-1-12-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
PREPARATION METHOD : EPA 418.1
PREPARED BY : MTR
PREPARED ON : 14-DEC-1995
ANALYSIS METHOD : EPA 418.1 /1
ANALYZED BY : MTR
ANALYZED ON : 14-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AB646-17

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	< 0.50 mg/L

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REPORT NUMBER : D95-11945-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-1-12-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995

TOTAL METALS

TEST REQUESTED		DETECTION LIMIT	RESULTS
Silver	/1	0.002 mg/L	< 0.002 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7761 on 14-DEC-1995 by MPE QC Batch No : 12413F			
Aluminum	/1	0.200 mg/L	5.11 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Arsenic	/1	0.0050 mg/L	0.0223 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7060 on 12-DEC-1995 by AH QC Batch No : 12413F			
Barium	/1	0.0200 mg/L	0.346 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Boron	/1	0.100 mg/L	0.809 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			

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REPORT NUMBER : D95-11945-5

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Calcium	/1	0.10 mg/L	213 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Cadmium	/1	0.01 mg/L	< 0.01 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Cobalt	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Chromium	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Copper	/1	0.0100 mg/L	0.0234 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Iron	/1	0.100 mg/L	5.35 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Mercury	/1	0.0002 mg/L	< 0.0002 mg/L
Dilution Factor : 1 Prepared using EPA 7470 on 12-DEC-1995 by CEL Analyzed using EPA 7470 on 14-DEC-1995 by CGJ QC Batch No : HG-2052			

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REPORT NUMBER : D95-11945-5

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Potassium	/1	1.0 mg/L	16.2 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Magnesium	/1	0.100 mg/L	57.3 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Manganese	/1	0.0100 mg/L	0.218 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by JLW QC Batch No : 12413			
Molybdenum	/1	0.030 mg/L	< 0.030 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Sodium	/1	10 mg/L	525 mg/L
Dilution Factor : 10 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by LSS QC Batch No : 12413			
Nickel	/1	0.0200 mg/L	< 0.0200 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by LSS QC Batch No : 12583			
Lead	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			

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REPORT NUMBER : D95-11945-5

TOTAL METALS			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Selenium	/1	0.005 mg/L	0.014 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 7740 on 12-DEC-1995 by AH QC Batch No : 12413F			
Uranium	/1	0.1 mg/L	< 0.1 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 27-DEC-1995 by A_O Analyzed using EPA 6010A on 28-DEC-1995 by JLW QC Batch No : 12583			
Zinc	/1	0.0300 mg/L	0.0840 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 11-DEC-1995 by CEL Analyzed using EPA 6010A on 12-DEC-1995 by LSS QC Batch No : 12413			

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-5
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : TMW-1-12-95
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Bicarbonate	/1	1.0 mg/L CaCO3	205 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Carbonate (As CaCO3)	/1	1.0 mg/L CaCO3	< 1.0 mg/L CaCO3
Analyzed using SM 2320B on 18-DEC-1995 by P_F QC Batch No : 271100			
Chloride	/1	1.0 mg/L	650 mg/L
Dilution Factor : 1 Analyzed using EPA 9252 on 15-DEC-1995 by P_F QC Batch No : 520030			
Cyanide, Total	/1	0.010 mg/L	< 0.010 mg/L
Dilution Factor : 1 Analyzed using EPA 9010 on 18-DEC-1995 by KPP QC Batch No : 640016A			
Total Dissolved Solids	/1	10.0 mg/L	1800 mg/L
Analyzed using EPA 160.1 on 13-DEC-1995 by RJS QC Batch No : 614027A			
Sulfate	/1	10.0 mg/L	200 mg/L
Dilution Factor : 10 Analyzed using EPA 9038 on 15-DEC-1995 by RJS QC Batch No : 597039A			

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-6
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Trip Blank
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 7-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	98.9 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-7
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Method Blank
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 9-DEC-1995
PREPARATION METHOD : EPA 3520B
PREPARED BY : VHC
PREPARED ON : 12-DEC-1995
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 19-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB625-78

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	18.0 µg/L	< 18.0 µg/L
Acenaphthylene	10.0 µg/L	< 10.0 µg/L
Anthracene	6.60 µg/L	< 6.60 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	1.50 µg/L	< 1.50 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	2.10 µg/L	< 2.10 µg/L
Fluorene	2.10 µg/L	< 2.10 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	10.0 µg/L	< 10.0 µg/L

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REPORT NUMBER : D95-11945-7
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	6.40 µg/L	< 6.40 µg/L
Pyrene	2.70 µg/L	< 2.70 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	63.6 %

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DATE RECEIVED : 9-DEC-1995

REPORT NUMBER : D95-11945-7
REPORT DATE : 29-DEC-1995

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ADDRESS : 1030 Andrews Hwy. Suite 120
: Midland, TX 79701
ATTENTION : Ms. Tara O'Connel

SAMPLE MATRIX : Liquid
ID MARKS : Method Blank
PROJECT : MTO387.001 Texaco-Eunice
PURCHASE ORDER NO : LTO #4295
DATE SAMPLED : 9-DEC-1995
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : VHT
ANALYZED ON : 12-DEC-1995
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-121295

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
Bromofluorobenzene	50.0 µg/L	98.3 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
BATCH NO.	AB625-78	AB625-78	AB625-78	AB625-78	AB625-78
LCS LOT NO.	AB525-86	AB525-86	AB525-86	AB525-86	AB525-86
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B
PREPARED BY	CLT	CLT	CLT	CLT	CLT
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8310	EPA 8310
ANALYZED BY	JXA	JXA	JXA	JXA	JXA
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 18.0	< 23.0	< 18.0	< 2.10	< 6.40
SPIKE LEVEL	100	100	100	100	100
MS RESULT	79.9	65.8	58.9	64.7	61.8
MS RECOVERY %	79.9	65.8	58.9	64.7	61.8
MSD RESULT	88.7	72.0	64.4	70.2	66.8
MSD RECOVERY %	88.7	72.0	64.4	70.2	66.8
MS/MSD RPD %	10.4	9.00	8.92	8.15	7.78
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS RESULT	41.1	31.3	28.8	32.6	34.0
LCS RECOVERY %	82.2	62.6	57.6	65.2	68.0
SPIKE SAMPLE ID	11945-1	11945-1	11945-1	11945-1	11945-1
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Anthracene	Chrysene	Benzo(k)fluoranthene	Benzene	Ethylbenzene
BATCH NO.	AB625-78	AB625-78	AB625-78	34-121295	34-121295
LCS LOT NO.	AB525-86	AB525-86	AB525-86	AB214-70B	AB214-708
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	---	---
PREPARED BY	CLT	CLT	CLT	---	---
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8020	EPA 8020
ANALYZED BY	JXA	JXA	JXA	VHT	VHT
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 6.60	< 1.50	< 0.17	< 1.00	< 1.00
SPIKE LEVEL	100	100	100	500	500
MS RESULT	40.3	31.1	27.4	498	500
MS RECOVERY %	40.3	31.1	27.4	99.6	100
MSD RESULT	42.6	35.1	32.0	497	492
MSD RECOVERY %	42.6	35.1	32.0	99.4	98.4
MS/MSD RPD %	5.55	12.1	15.5	0.20	1.61
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS RESULT	21.8	29.1	25.8	51.9	52.4
LCS RECOVERY %	43.6	58.2	51.6	104	105
SPIKE SAMPLE ID	11945-1	11945-1	11945-1	11945-2	11945-2
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Total Recoverable Hydrocarbons	Silver	Aluminum	Arsenic
BATCH NO.	AB646-17	12413F	12583	12413F
LCS LOT NO.	AA345-88B	590802AF	591009,591130,5	590802AF
PREP METHOD	EPA 418.1	EPA 3015	EPA 3015	EPA 3015
PREPARED BY	MTR	CEL	A_O	CEL
ANALYSIS METHOD	EPA 418.1	EPA 7761	EPA 6010A	EPA 7060
ANALYZED BY	MTR	MPE	LSS	AH
UNITS	mg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 0.50	< 2.00	< 200.0	< 5.00
SPIKE LEVEL	5.00	20.0	1000	40.0
MS RESULT	NS	16.7	1080	43.6
MS RECOVERY %	NS	83.5	108	109
MSD RESULT	NS	14.1	1140	43.1
MSD RECOVERY %	NS	70.5	114	108
MS/MSD RPD %	NS	16.9	5.41	1.15
BS RESULT	4.91	NA	NA	NA
BS RECOVERY %	98.2	NA	NA	NA
BSD RESULT	5.07	NA	NA	NA
BSD RECOVERY %	101	NA	NA	NA
BS/BSD RPD %	3.21	NA	NA	NA
DUPLICATE RPD %	NA	NC	NC	NC
LCS LEVEL	5.00	20.0	1000	40.0
LCS RESULT	SEE_BS	15.8	1030	42.6
LCS RECOVERY %	SEE_BS	79.0	103	107
SPIKE SAMPLE ID	---	11874-13	12420-18	11874-13
DUP SAMPLE ID	---	11874-13	12420-18	11874-13

NS Insufficient sample available for MS/MSD. BS/BSD used.
SEE_BS LCS and LCS Duplicate reported as BS and BSD.
NA Not applicable
NC Not calculable

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Barium	Boron	Calcium	Cadmium	Cobalt
BATCH NO.	12413	12583	12413	12413	12583
LCS LOT NO.	590814,591009,5	591009,591130,5	590814,591009,5	590814,591009,5	591009,591130,5
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 3015	EPA 3015
PREPARED BY	CEL	A_O	CEL	CEL	A_O
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	JLW	JLW	JLW	JLW	LSS
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 20.0	<100	< 100	< 10.0	< 20.0
SPIKE LEVEL	10000	1000	10000	1000	1000
MS RESULT	10400	1330	10300	1090	1020
MS RECOVERY %	104	104	101	109	102
MSD RESULT	9920	1360	9830	1030	1030
MSD RECOVERY %	99.2	108	96.6	103	103
MS/MSD RPD %	4.72	3.21	4.75	5.66	0.98
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	2.51	5.78	NC	NC
LCS LEVEL	10000	1000	10000	1000	1000
LCS RESULT	10400	1010	10000	1080	1020
LCS RECOVERY %	104	101	100	108	102
SPIKE SAMPLE ID	11874-13	12420-18	11874-13	11874-13	12420-18
DUP SAMPLE ID	11874-13	12420-18	11874-13	11874-13	12420-18

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Chromium	Copper	Iron	Mercury	Potassium
BATCH NO.	12413	12413	12413	HG-2052	12413
LCS LOT NO.	590814,591009,5	590814,591009,5	590814,591009,5	AB300-22A	590814,591009,5
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 7470	EPA 3015
PREPARED BY	CEL	CEL	CEL	CEL	CEL
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 7470	EPA 6010A
ANALYZED BY	JLW	LSS	JLW	CGJ	JLW
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 10.0	<10.0	< 100	< 0.20	< 1000
SPIKE LEVEL	1000	10000	1000	1.00	10000
MS RESULT	1010	9260	1160	0.951	9460
MS RECOVERY %	101	92.6	110	95.1	94.6
MSD RESULT	991	9200	1120	0.968	8940
MSD RECOVERY %	99.1	92.0	106	96.8	89.4
MS/MSD RPD %	1.90	0.61	3.69	1.77	5.65
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	9.02	NC	NC
LCS LEVEL	1000	10000	1000	1.00	10000
LCS RESULT	993	9180	1060	0.963	9530
LCS RECOVERY %	99.3	91.8	106	96.3	95.3
SPIKE SAMPLE ID	11874-13	11874-13	11874-13	11833-2	11874-13
DUP SAMPLE ID	11874-13	11874-13	11874-13	11833-2	11874-13

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Magnesium	Manganese	Molybdenum	Sodium	Nickel
BATCH NO.	12413	12413	12583	12413	12583
LCS LOT NO.	590814,591009,5	590814,591009,5	591009,591130,5	590814,591009,5	591009,591130,5
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 3015	EPA 3015
PREPARED BY	CEL	CEL	A_O	CEL	A_O
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	JLW	JLW	LSS	JLW	LSS
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 100	< 10.0	< 30.0	< 1000	< 20.0
SPIKE LEVEL	1000	1000	1000	10000	1000
MS RESULT	1070	1060	1080	10600	1010
MS RECOVERY %	107	106	108	106	101
MSD RESULT	1080	1020	1010	10500	1020
MSD RECOVERY %	108	102	101	105	102
MS/MSD RPD %	0.93	3.85	6.70	0.95	0.99
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	NC	NC	NC
LCS LEVEL	1000	1000	1000	10000	1000
LCS RESULT	1050	1040	1050	10600	1010
LCS RECOVERY %	105	104	105	106	101
SPIKE SAMPLE ID	11874-13	11874-13	12420-18	11874-13	12420-18
DUP SAMPLE ID	11874-13	11874-13	12420-18	11874-13	12420-18

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

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REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MT0387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Lead	Selenium	Uranium	Zinc	Alkalinity
BATCH NO.	12583	12413F	12583	12413	271100
LCS LOT NO.	591009,591130,5	590802AF	591009,591130,5	590814,591009,5	9968
PREP METHOD	EPA 3015	EPA 3015	EPA 3015	EPA 3015	---
PREPARED BY	A_O	CEL	A_O	CEL	---
ANALYSIS METHOD	EPA 6010A	EPA 7740	EPA 6010A	EPA 6010A	SM 2320B
ANALYZED BY	JLW	AH	JLW	JLW	P_F
UNITS	µg/L	µg/L	µg/L	µg/L	mg/L
METHOD BLANK	<10.0	< 5.00	<100	< 30.0	< 1.00
SPIKE LEVEL	1000	20.0	10000	1000	458
MS RESULT	1010	22.4	10200	1050	725
MS RECOVERY %	101	86.5	102	105	104
MSD RESULT	997	24.2	10100	999	730
MSD RECOVERY %	99.7	95.5	101	99.9	105
MS/MSD RPD %	1.69	9.90	1.33	4.98	1.05
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUPLICATE RPD %	NC	NC	NC	NC	0.00
LCS LEVEL	1000	20.0	10000	1000	125
LCS RESULT	1010	23.8	10400	1050	125
LCS RECOVERY %	101	119	104	105	100
SPIKE SAMPLE ID	12420-18	11874-13	12420-18	11874-13	11945-1
DUP SAMPLE ID	12420-18	11874-13	12420-18	11874-13	11945-1

NA Not applicable
NC Not calculable

Inchcape Testing Services
Environmental Laboratories

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Fax. 214-238-5592

REPORT DATE : 29-DEC-1995 REPORT NUMBER : D95-11945

SAMPLE SUBMITTED BY : Geraghty & Miller, Inc.
ATTENTION : Ms. Tara O'Connel
PROJECT : MTO387.001 Texaco-Eunice

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Chloride	Cyanide, Total	Total Dissolved Solids	Sulfate
BATCH NO.	520030	640016A	614027A	597039A
LCS LOT NO.	9968	ERA 9963	9968	9968
PREP METHOD	---	---	---	---
PREPARED BY	---	---	---	---
ANALYSIS METHOD	EPA 9252	EPA 9010	EPA 160.1	EPA 9038
ANALYZED BY	P_F	KPP	RJS	RJS
UNITS	mg/L	mg/L	mg/L	mg/L
METHOD BLANK	< 1.00	< 0.01	< 10.0	<1.0
SPIKE LEVEL	1050	1.00	---	400
MS RESULT	1050	1.01	NA	580
MS RECOVERY %	99.5	101	NA	95.0
MSD RESULT	1070	1.05	NA	588
MSD RECOVERY %	101	105	NA	97.0
MS/MSD RPD %	1.90	3.88	NA	2.08
BS RESULT	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA
DUPLICATE RPD %	0.00	NC	0.69	0.83
LCS LEVEL	128	0.147	714	105
LCS RESULT	115	0.122	726	106
LCS RECOVERY %	89.8	83.0	102	101
SPIKE SAMPLE ID	11941-5	11927-1	---	11945-5
DUP SAMPLE ID	11941-5	11927-1	11945-3	12047-1

NA Not applicable
NC Not calculable

GERAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No. 4295

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number MT0387.001

Project Location Texaco-Eunice

Laboratory Inch Cape Testing

Sampler(s)/Affiliation Tara O'Connell Geraghty & Miller

SAMPLE BOTTLE / CONTAINER DESCRIPTION

ORIGINAL

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	BTEX (8020)	TPH (418.1)	Metals NMWQC*	TDS + Major Minerals **	PNA (8100)	** Cyanide		11945	-1	TOTAL
TWM-3-11-95	L	12-7-95		3	1	1	1	2	1				9
trip blanks	L			2								2	2

SCREENED FOR RADIOACTIVITY

Total No. of Bottles/ Containers: 11

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: Tara O'Connell	Organization: Geraghty & Miller	Date 12/7/95 Time 1830	Seal Intact? (Yes) No N/A
Received by: Kim Harvey	Organization: ITS	Date 12/9/95 Time 1140	
Relinquished by:	Organization:	Date / / Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / / Time	

Special Instructions/Remarks: * See Attached
** - Ca, Mg, K, Na, Cl, SO4, Bicarbonate, carbonate

Delivery Method: ☐ In Person ☐ Common Carrier ______ SPECIFY ☐ Lab Courier ☐ Other ______ SPECIFY

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GERAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No.

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number MTO387.001
Project Location Texaco-Eunice
Laboratory InchCape-NDRS
Sampler(s)/Affiliation Tara O'Connell / Geraghty & Miller

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	BTEX (8020)	TPH (418.1)	Metals (NMWQCC)*	TDS + Major Minerals **	PNA (8100)	* Cyanide				TOTAL
MW-2-11-95	L	12-7-95		3	1	1	1	2	1		11945	-3	9
trip blanks	L			2								4	2

COOLER TEMPERATURE WHEN RECEIVED 4 °C

Total No. of Bottles/ Containers

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: Tara O'Connell	Organization: Geraghty & Miller	Date 12/7/95 Time 1830	Seal Intact? Yes No N/A
Received by: D. Fields	Organization: JTS - DALLAS	Date 12/9/95 Time 11:15	
Relinquished by:	Organization:	Date / / Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / / Time	

Special Instructions/Remarks: * Metals - See Attached
** - Calcium, magnesium, sodium, potassium, chloride, sulfate, bicarbonate, TDS

Delivery Method: ☐ In Person ☐ Common Carrier ____ SPECIFY ☐ Lab Courier ☐ Other ____ SPECIFY

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GERAGHTY & MILLER, INC. Environmental Services

Laboratory Task Order No.

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number MT0387.001

Project Location Texaco - Eunice

Laboratory Inchcape - NDRS

Sampler(s)/Affiliation Tara O'Connell Geraghty & Miller

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	BTEX (8020)	TPH (418.1)	Metals-NMWQC * see attached	TDS ** Major Minerals	PNA (8100)	* + Cyanide				TOTAL
TMW-1-12-95	L	12-7-95		3	1	1	1	2	1		11945	-5	9
tripblank	L			2								6	2
											MB	7	

COOLER TEMPERATURE WHEN RECEIVED 4 °C

SCREENED FOR RADIOACTIVITY

Total No. of Bottles/Containers 11

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: Tara O'Connell	Organization: Geraghty & Miller	Date 12/7/95 Time 1830	Seal Intact? (Yes) No N/A
Received by: Kim Haney	Organization: ETS	Date 12/9/95 Time 1130	
Relinquished by:	Organization:	Date / / Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / / Time	

Special Instructions/Remarks: * See Attached

** - Ca, Mg, K, Na, SO4, Cl, Bicarbonate, Carbonate.

Delivery Method: ☐ In Person ☐ Common Carrier ____ SPECIFY ☐ Lab Courier ☐ Other ____ SPECIFY

Southpoint 91-1768

INCHCAPE TESTING SERVICES
Dallas

SAMPLE PRESERVATION INFORMATION SHEET

rved By	KKH
Date	12-9-95
Time	

JOB NUMBER 11945

Client Name G+M

Batch A

Sample No.	Container Type	Apparent Volume (mLs)	Initial pH* (20± 2°C)	Final pH	Preservative Added	Filtration	Comments
11945-1	1P	1L	<2	<2	3,1		metals
-1	1	1	7,3	7,3	8		NP
-1	2AG	1	1	1	1		1
-1	1AG	1	<2	<2	4,1		TPH
-1	1	1	>12	>12	5,1		CN
-3	1P	1	<2	<2	3,1		metals
-3	1	1	7,4	7,4	8		NP
-3	1AG	1	1	1	1		1
-3	1	1	<2	<2	4,1		TPH
Batch B -3	1AG	1L	>12	>12	5,1		CN
-3	2AG	1	7,4	7,4	8		NP
-5	1P	1	<2	<2	3,1		metals
-5	1	1	7,5	7,5	8		NP
-5	2AG	1	1	1	1		1
-5	1AG	1	<2	<2	4,1		TPH
-5	1	1	>12	>12	5,1		CN

pH Duplicate (maximum difference = 0.2):
Sample No. 11945-1 — 7,3

pH LCS (pH = 7.0 ± 0.2):
Number: m090 — 7,0

PRESERVATIVE / FILTRATION KEY

1 = Pre-preserved
2 = H_2SO_4 to pH<2
3 = HNO_3 to pH<2
4 = HCl to pH<2
5 = NaOH to pH>12
6 = $Na_2S_2O_3$ (0.008%)
7 = 2 mL ZnOAc/NaOH to pH>12
8 = No Preservative Required

F = Chain-of-Custody indicates sample was filtered in the field
L = Sample filtered (0.45 pm) in the laboratory before preservation

* The initial pH is determined in accordance with EPA methods 150.1 / SW-846 9040 using a sample aliquot which has been adjusted to 20 ± 2°C

1089 East Collins Blvd. • Richardson TX 75081 • (214) 238-5591 • Fax (214) 238-5592

APPENDIX C

MEMO FROM ROBERT BROWNING

DATE: December 12, 1995

TO: Memo To File

FROM: Robert W. Browning

SUBJECT: **WASTE DISPOSAL**
South Eunice Gas Plant

I visited with Mr. Bill Olson, Hydrologist, New Mexico Oil Conservation Division (NMOCD), Santa Fe, New Mexico, on 12/12/95 at 2:30 pm concerning the disposal of waters generated in association with the drilling and development of the five groundwater monitoring wells located at the Eunice Gas Plant No. 1 (South), Lea County, New Mexico. The purpose of the telephone call was to inquire as to the necessary analysis required by the NMOCD prior to the disposal of the waters.

I informed Mr. Olson that the waters had been collected and stored in a rental tank located at the plant. I further informed Mr. Olson that it was Texaco's intent to dispose of the water in the Eunice Gas Plant No. 1 Saltwater Disposal Well (SWD) No. 5. Mr. Olson stated that the development water should be treated as RCRA exempt "plant oil and gas waste" in as much as any constituents found in the water would have been generated as a result of exploration and production operations. Mr. Olson further stated that the Plant's SWD well was permitted to take plant waste water. Therefore, the development water could be handled in the same manner as with other plant waste waters with no analysis required. I inquired more specifically as to whether TPH, BTEX or RCRA metals would be necessary. Once again, the answer was that no analysis would be required for the disposal of the water into our own SWD system.

I informed Mr. Olson that we would take this course of action with the water as soon as possible. He requested that we make note in the written report to the NMOCD as to the method of disposal and further stated that if we felt necessary we could include a statement to the effect that we had received his verbal approval to dispose of the water in this manner. I thanked Mr. Olson for his time and assistance and concluded the telephone call at approximately 2:40 pm.

Robert W. Browning

Robert W. Browning