GW - 4

REPORTS

YEAR(S):

03/16/2000

FINAL GROUNDWATER PLUME DELINEATION REPORT

EUINCE #2 (NORTH) GAS PLANT
EUNICE, NEW MEXICO

MARCH 2000

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OIL CONSERVATION DIVISION

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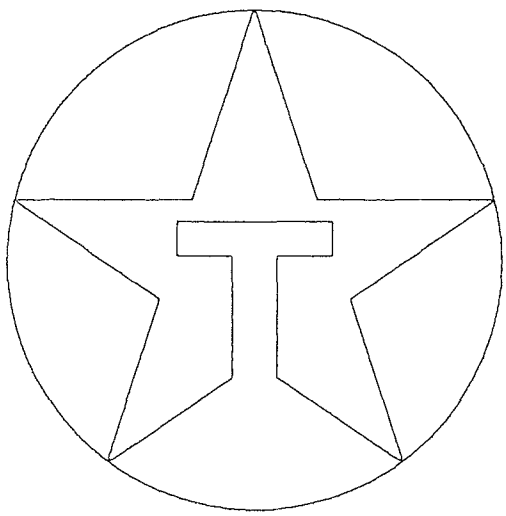


Prepared by

Highlander Environmental Corp.

6N004

Highlander Environmental Corp.

Midland, Texas

March 14, 2000

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Final Groundwater Plume Delineation Report, Texaco Exploration and Production Inc., Former Eunice #2 (North) Gas Plant, Eunice, New Mexico

Dear Mr. Olson:

Texaco Exploration and Production, Inc. (Texaco) has retained Highlander Environmental Corp. (Highlander) to investigate the lateral and vertical extent of a groundwater contaminant plume in the vicinity of its former Eunice #2 (North) Gas Plant (Site), located near Eunice, New Mexico. The Site is located in the SE/4, NE/4, and NE/4, SE/4, Section 28, Township 21 South, Range 37 East, Lea County, New Mexico (Figure 1). The investigations were conducted between January and November 1999.

1.0 BACKGROUND

During August 1996, the New Mexico Oil Conservation Division (NMOCD), as a condition for renewal of the Site's groundwater Discharge Plan (Number GW-004), required an initial investigation to evaluate the integrity of process area sumps. Dissolved benzene was detected above the New Mexico Water Quality Control Commission (NMWQCC) human health standard of 0.01 milligrams per liter (mg/L), in groundwater from monitoring well MW-1. Dissolved chromium was also observed above the NMWQCC standard of 0.05 mg/L, in groundwater from the Site's water supply well (WW-1). A report titled, "Subsurface Environmental Assessment Report, Texaco Exploration and Production Inc., Eunice # 2 (North) Gas Plant", was prepared by Highlander, and submitted to the NMOCD in September 1996. Additional investigations were conducted from March 31 through May 12, 1997, to evaluate potential sources, and the extent of the dissolved hydrocarbon and chromium. The investigation was detailed in the report titled, "Final Investigation Report, Texaco Exploration and Production Inc., Eunice #2 (North) Gas Plant, Lea County, New Mexico, May 1997", which was submitted to the NMOCD. A subsequent investigation was conducted from August through December 1998, to further characterize the extent of the groundwater impact. A report titled, "Addendum Final Investigation Report, Texaco Exploration and Production Inc., Eunice # 2 (North) Gas Plant, Lea County, New Mexico, January 1998", detailed the investigation results, and was submitted to the NMOCD.

Following its review of the January 1998 report, the NMOCD requested additional information, including copies of aerial photographs, groundwater potentiometric surface maps, and isopleth maps of chloride and total dissolved solids (TDS) for the upper (shallow) and lower (deep) portions of the aquifer. This information

was submitted to the NMOCD on July 14, 1998. On October 9, 1998, the NMOCD requested Texaco to prepare a work plan to complete the delineation of the groundwater contaminant plume.

During a meeting between NMOCD, Texaco and Highlander personnel on December 1, 1998, it was decided that seven (7) additional monitoring wells would be necessary to define the remaining groundwater impact. Highlander was requested to prepare a work plan ("Work Plan for Delineation of Groundwater Contaminant Plume, Texaco Exploration and Production Inc., Former Eunice #2 (North) Gas Plant, Eunice, New Mexico"). The work plan was submitted to the NMOCD on December 17, 1998, and approved on January 13, 1999. The work plan proposed installation of three wells in the lower portion of the aquifer, east, north and northeast of the Site (MW-20A, MW-21A and MW-22A), and four wells in the upper portion of the aquifer, east, northeast, west and south of the Site (MW-11, MW-15, MW-20 and MW-21). The work plan also included collection of groundwater samples for laboratory analyses, from a representative number of wells to evaluate current plume conditions. Texaco also proposed installation of a test (recovery) well near the south-central area of the Site, to assist in future remediation efforts. The NMOCD correspondence is presented in Appendix A.

2.0 GROUNDWATER PLUME DELINEATION ACTIVITIES

The seven additional wells were installed from January 5 through 7, 1999, in accordance with the approved work plan. Groundwater samples were collected from the new wells (7), nineteen (19) existing monitoring wells, and three (3) water wells on January 18 through 22, 1999. Dissolved chromium was reported at concentrations above the NMWQCC human health standard in samples from well MW-22A, which was installed in the lower (deep) portion of the aquifer, and wells MW-11 and MW-15, which were installed in the upper (shallow) portion of the aquifer.

Base on the laboratory analyses, monitoring well (MW-12) was consequently installed in the upper portion of the aquifer near the southwest corner of the Site, adjacent to deep monitoring well MW-12A (February 11, 1999). Three (3) additional shallow monitoring wells (MW-14, MW-18 and MW-25) were also installed south, southeast and southwest of the Site (May 6 and 7, 1999). A shallow well (MW-23) and a deep well (MW-24A) were installed west and north of the Site, respectively (May 16, 1999). Groundwater samples collected for dissolved chromium analyses indicated that additional plume delineation was needed in the upper portion of the aquifer west, south and southwest of the Site. Four (4) shallow wells (MW-26 through MW-29) were installed from October 27, 1999 through November 11, 1999, to complete the plume delineation. The additional wells were installed in accordance with the previously approved work plan, and Highlander (verbal communication) notified the NMOCD prior to installing the wells. Figure 2 presents a drawing for the Site, and well locations. Table 1 presents a summary of well drilling and completion details. Appendix B presents geologic and construction logs for the wells.

3.0 GROUNDWATER PLUME DELINEATION RESULTS

3.1 Depth-to-Groundwater and Flow Conditions

Measurements of depth-to-groundwater and phase-separated hydrocarbon (PSH) were collected from all wells on November 16, 1999. The measurements recorded PSH in monitoring wells MW-5 and MW-6, located adjacent to the sump on the east side of the Site. The apparent PSH thickness was 0.38 feet (MW-5) and 2.75 feet (MW-6). The previous PSH thickness measurements from wells MW-5 and MW-6 were 0.47 and 2.78 feet, respectively (December 18, 1997). The November 16, 1999 depth-to-groundwater and PSH measurements are summarized in Table 1. The measurements were used to prepare depth-to-groundwater and groundwater potentiometric surface maps for the upper (shallow) and lower (deep) portions of the aquifer, which are presented as Figures 3 through 6.

Referring to Figure 3, depth-to-groundwater in the upper portion of the aquifer generally increases from east to west, across the study area. The depth-to-groundwater ranged from 38.30 feet below ground surface (BGS) at well MW-18, to 71.91 feet BGS at well MW-28, on November 16, 1999. The depth-to-groundwater generally coincides with increases in ground elevation. For example, the difference in ground elevation between well MW-28 and MW-18 is 32.63 feet. The difference in depth-to-groundwater between wells MW-28 and MW-18 was 33.61 feet, on November 16, 1999. Figure 4 presents a depth-to-groundwater map for the lower portion of the aquifer, and indicates that depth-to-groundwater is generally controlled by pumping from well WW-1, in the vicinity of the Site. Depth-to-groundwater in the deep portion of the aquifer ranged from 37.70 feet BGS at well MW-18A, to 64.03 feet BGS at well WW-1, on November 16, 1999.

The elevation of the shallow groundwater surface ranged from 3379.09 feet above mean sea level (AMSL) at wells MW-18 and MW-26, to 3374.09 feet AMSL at well MW-21, on November 16, 1999 (Figure 5). Groundwater flow in the upper portion of the aquifer was generally from southwest to northeast. However, groundwater flow southwest of the Site was to the west and southwest, due to an apparent groundwater divide, located south of the Site. The divide was oriented southwest to northeast, and located in the vicinity of wells MW-18 and MW-26, approximately 1,500 to 2,000 feet south of the Site. A trough was also apparent west and southwest of the Site. Groundwater west of the trough appeared to flow to the southeast, and was consistent with the regional groundwater flow direction. The hydrologic features may be associated with pumping from the plant water well (WW-1), located on the north side of the Site.

Groundwater flow in the lower portion of the aquifer was generally towards well WW-1, due to a cone of depression developed from pumping. The elevation of the potentiometric surface ranged from 3379.26 feet AMSL at well MW-17A, to 3364.75 feet AMSL, at well WW-1, on November 16, 1999.

3.2 Groundwater Sample Results

Groundwater samples were collected from the new monitoring wells (MW-11, MW-15, MW-20, MW-20A, MW-21, MW-21A and MW-22A), nineteen (19) existing monitoring wells, and three (3) water wells on January 18 through 22, 1999. Additional groundwater samples were collected on May 19 and 23, 1999, and November 17 through 22, 1999, to complete the delineation of the groundwater contaminant plume. The samples were analyzed for dissolved metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver), BTEX, cations (calcium, magnesium, sodium and potassium), anions (nitrate, chloride, sulfate, fluoride and alkalinity), and TDS, depending on well location. Trace Analysis, Inc., Lubbock, Texas, performed the analyses, and received the samples under preservation and chain-of-custody control. Volatile organic compounds, including BTEX, detected in groundwater samples are presented in Table 2. Table 3 presents a summary of the dissolved metals detected in groundwater samples, and Table 4 presents a summary of the general chemistry parameters, including cations, anions and TDS. The laboratory reports are presented in Appendix C.

Referring to Table 2, BTEX was only detected, above the test method detection limits, in groundwater samples from well MW-1 (January 20, 1999 and November 17, 1999). The detected levels of BTEX were well below the NMWQCC human health standards of 0.01 mg/L (benzene), 0.75 mg/L (toluene), 0.75 mg/L (ethylbenzene) and 0.62 mg/L (xylene).

Dissolved metals detected in the groundwater samples included barium, cadmium, chromium, mercury, selenium and silver. Barium was reported at 0.13 mg/L in groundwater from monitoring well MW-21A (deep), and was below the NMWQCC standard (1.0 mg/L). Cadmium was reported at 0.01 and 0.02 mg/L in groundwater from wells MW-8 (shallow) and MW-8A (deep), respectively. The NMWQCC standard for cadmium is 0.01 mg/L. Mercury was reported in groundwater from MW-18 (shallow) at 0.0067 mg/L, and was above the NMWQCC standard of 0.002 mg/L. The mercury does not appear to be associated with the Site, since mercury was not detected in the remaining groundwater samples. Selenium, reported in groundwater from shallow well MW-15 (0.08 mg/L), deep well MW-8A (0.2 mg/L), and the Lord water well (0.11 mg/L), exceeded the NMWQCC standard of 0.05 mg/L. The selenium does not appear to be associated with the Site, since it was not detected in the remaining samples. Silver was reported at 0.17 and 0.19 mg/L in groundwater from wells MW-8 (shallow) and MW-8A (deep), respectively. The silver concentrations exceed the NMWQCC standard of 0.05 mg/L. Dissolved chromium was detected in shallow groundwater at concentrations from 0.09 mg/L (MW-13) to 6.2 mg/L (MW-11). Chromium was also detected in the deep groundwater at concentrations from 0.05 mg/L (MW-4A) to 2.9 mg/L (MW-8A). The extent of dissolved chromium in the upper (shallow) and lower (deep) portions of the aquifer are depicted on Figure 7 and Figure 8, respectively.

Figure 7 presents the distribution of dissolved chromium in shallow portion of the aquifer, and indicates that the plume extends approximately 1,300 feet southwest of the Site. The distribution of chromium in the shallow portion of the aquifer appears to

coincide with hydrologic features observed on November 16, 1999. Movement of the plume southwest of the Site is likely the result of the groundwater divide, influenced from pumping by wells in the vicinity of the Site. Chromium is concentrated in the southwest area of the Site.

Figure 8 presents the distribution of dissolved chromium in the deep portion of the aquifer, and indicates that the plume is generally confined to the Site, except for a small area southeast of the Site. Pumping from wells southeast of the Site (Lord and Rowland wells) appears to have caused the plume to migrate southeast. The wells are not currently in use. Groundwater samples collected from the Rowland well on September 29, 1997, reported 0.16 mg/L of dissolved chromium. The sample collected on January 19, 1999, did not report chromium above the test method detection limit (0.05 mg/L), indicating that the plume may be retracting toward the Site.

Groundwater quality in the shallow and deep portions of the aquifer was generally variable across the area, based on the cation and anion analyses of groundwater samples. Nitrate was detected in groundwater from wells sampled during January and November 1999. The nitrate concentrations in the shallow portion of the aquifer ranged from 3.6 mg/L in wells MW-21, MW-27 and MW-28, to 24 mg/L in well MW-2 (November 1999). Groundwater from wells MW-2 (background), MW-1 and MW-14 reported nitrate levels above the NMWQCC human health standard (10 mg/L). Nitrate was also reported at the NMWQCC standard in groundwater from wells MW-8 and MW-11. Nitrate in groundwater from the deep portion of the aquifer was generally lower, however, concentrations were reported at or above the NMWQCC standard in samples from wells MW-8A, WW-1 and the Rowland well. Nitrate is typically associated with agricultural practices, fertilizers and domestic sanitation systems.

Groundwater from wells MW-8A and MW-9A (deep) exceeded the NMWQCC domestic water supply standard for sulfate (600 mg/L). Sulfate is typically associated with naturally occurring isotopes of sulfur, which is present in soil. Sulfate concentrations were generally higher in the shallow portion of the aquifer, possibly due to leaching from soil. The sulfate concentrations ranged from 220 mg/L (MW-27) to 1,600 mg/L (MW-8 and MW-11).

Chloride in the shallow portion of the aquifer ranged from 240 mg/L (MW-27) to 3,100 mg/L (MW-15). The NMWQCC standard for chloride in domestic water supplies is 250 mg/L. Chloride concentrations in the shallow portion of the aquifer are depicted on Figure 9, and indicates that the highest concentrations occurred in the vicinity of well MW-15 (3,100 mg/L), located south of the Site. Well MW-15 is located upgradient of the Site, and chloride levels decrease toward the Site (downgradient). Well MW-15 is also located in the vicinity of subsurface pipeline right-of-way, which may be a potential source if leaks have occurred. Groundwater from well MW-1, located near the center of the Site, reported a chloride concentration of 250 mg/L (November 1999). Chloride in the deep portion of the aquifer, depicted on Figure 10, ranged in concentration from 57 mg/L at well MW-13A, to 7,000 mg/L at well MW-21A (January 1999). Well MW-21A is located approximately 700 feet east-northeast of the Site, in an area of active oil and gas production. The chloride level reported in groundwater from well WW-1 (900 mg/L)

may be due, in part, to the cone of depression extending away from the well. Chloride was also observed above the NMWQCC domestic water supply standard in groundwater from well MW-8A, which reported a concentration of 1,000 mg/L. Well MW-8A is located near the south-central area of the Site. Chloride was also reported above the NMWQCC domestic water supply standard in samples from the Lord and Rowland wells, located southeast of the Site. The chloride levels may be due to pumping from the wells, by creating a cone of depression that would allow contaminants to migrate toward the wells.

Groundwater samples from the shallow and deep portions of the aquifer reported TDS concentrations that coincided with the reported chloride values. The NMWQCC domestic water supply standard for TDS is 1,000 mg/L. The distribution of TDS in the shallow and deep portions of the aquifer is presented on Figure 11 and Figure 12, respectively. The highest TDS concentrations in the shallow portion of the aquifer occurred in the vicinity of well MW-15 (5,900 mg/L), which is hydraulically upgradient from the Site. The TDS concentrations decrease toward the Site. The NMWQCC domestic water supply standard was exceeded in samples from background monitoring well MW-2 (1,400 mg/L), located near the northwest corner of the Site. The TDS concentration in groundwater from the deep portion of the aquifer was greatest in the vicinity of MW-21A (9,200 mg/L), located northeast of the Site. The area of elevated TDS and chloride is likely associated with oil and gas production. Concentrations of TDS were also noted above the NMWQCC standard in the deep portion of the aquifer near the south-central area of the Site and southeast of the Site. These results are also consistent with the distribution of chloride.

3.3 Water Well Search

A search of water wells within a 1-mile of the Site was previously through a review of the files of the New Mexico State Engineer, and field reconnaissance. The New Mexico State Engineer's file revealed records for twelve (12) water wells. The nearest well to the Site was identified approximately 500 feet southeast of the Site (Lord Water Well). There were no wells identified south and southwest of the Site, within the area of the shallow chromium plume.

4.0 CONCLUSIONS

1. PSH was only observed in monitoring wells MW-5 and MW-6, at 0.38 and 2.75 feet, respectively, on November 16, 1999. These measurements are consistent with previous measurements.

2. The only samples reporting BTEX above test method detection limits were from well MW-1, on January 20, 1999 and November 17, 1999. The BTEX concentrations were well below the NMWQCC human health standards of 0.01 mg/L (benzene), 0.75 mg/L (toluene), 0.75 mg/L (ethylbenzene) and 0.62 mg/L (xylene).

3. Barium (0.13 mg/L) was only detected in groundwater from monitoring well MW-21A (deep), and was below the NMWQCC standard (1.0 mg/L).

4. Cadmium was reported at 0.01 and 0.02 mg/L in groundwater from wells MW-8 (shallow) and MW-8A (deep), respectively. The NMWQCC standard for cadmium is 0.01 mg/L.

5. Mercury was reported in groundwater from well MW-18 (shallow) at 0.0067 mg/L, and was above the NMWQCC standard of 0.002 mg/L. The mercury does not appear to be associated with the Site.

6. Selenium was reported in groundwater from shallow well MW-15 (0.08 mg/L), deep well MW-8A (0.2 mg/L), and the Lord water well (0.11 mg/L). The NMWQCC standard for selenium (0.05 mg/L) was exceeded, however, it doe not appear to be associated with the Site.

7. Silver exceeded the NMWQCC standard (0.05 mg/L) in groundwater from wells MW-8 (shallow) and MW-8A (deep), respectively. The silver concentrations were 0.17 (MW-8) and 0.19 mg/L (MW-8A).

8. Chromium was reported in samples from the upper (shallow) portion of the aquifer, at concentrations from 0.09 mg/L (MW-13) to 6.2 mg/L (MW-11). The vertical and lateral extent of dissolved chromium in the shallow portion of the aquifer was delineated during the investigation. Dissolved chromium in the shallow portion of the aquifer extends approximately 1,300 feet southwest of the Site, and appears coincide with hydrologic features observed on November 16, 1999.

9. Chromium was reported in samples from the lower (deep) portion of the aquifer, at concentrations from 0.05 mg/L (MW-4A) to 2.9 mg/L (MW-8A). The extent of dissolved chromium in the lower (deep) portion of the aquifer was delineated during the investigation. Dissolved chromium in the lower portion of the aquifer is generally confined to the Site, except for a small area that extends southeast of the Site. Pumping from wells southeast of the Site (Lord and Rowland wells) appeared to have allowed the plume to migrate southeast. The wells are not currently in use. Groundwater samples collected from the Rowland well on September 29, 1997, reported 0.16 mg/L of dissolved chromium. The sample collected on January 19, 1999, did not report chromium above the test method detection limit (0.05 mg/L), indicating that the plume may be retracting toward the Site.

10. Nitrate in the shallow portion of the aquifer ranged from 3.6 mg/L (MW-21, MW-27 and MW-28) to 24 mg/L (MW-2). The nitrate levels reported in samples from

wells MW-2 (background), MW-1 and MW-14 were above the NMWQCC human health standard (10 mg/L). Nitrate was reported at the NMWQCC standard in groundwater from wells MW-8 and MW-11. Nitrate in the deep portion of the aquifer was generally lower, however, concentrations were reported at or above the NMWQCC standard in samples from MW-8A, WW-1 and the Rowland well. Nitrate is typically associated with agricultural practices, fertilizers and domestic sanitation systems.

11. Sulfate was reported above the NMWQCC domestic water supply standard (600 mg/L) in groundwater from deep wells MW-8A and MW-9A. Sulfate is typically associated with naturally occurring isotopes of sulfur, which is present in soil. Sulfate concentrations were generally higher in the shallow portion of the aquifer, possibly due to leaching from soil. The sulfate concentrations ranged from 220 mg/L (MW-27) to 1,600 mg/L (MW-8 and MW-11).

12. Chloride reported in groundwater from the upper portion of the aquifer, ranged from 240 mg/L (MW-27) to 3,100 mg/L (MW-15). The NMWQCC standard for domestic water supplies is 250 mg/L. The distribution of chloride indicates that the highest concentration was in the vicinity of well MW-15 (3,100 mg/L), located south of the Site. Well MW-15 is located hydraulically upgradient of the Site, and in the vicinity of a subsurface pipeline right-of-way, which may have contributed to the impact if leaks have occurred.

13. Chloride in the lower portion of the aquifer ranged from 57 mg/L (MW-13A), to 7,000 mg/L (MW-21A). Well MW-21A is located approximately 700 feet east-northeast of the Site, and in an area of active oil and gas production. Chloride reported in groundwater from well WW-1 (900 mg/L) may be due, in part, to the cone of depression extending away from the well. Chloride was reported above the NMWQCC standard in samples from well MW-8A (1,000 mg/L), Lord and Rowland wells. The chloride levels may be due to southeast migration during periods of pumping.

14. Groundwater in the shallow and deep portions of the aquifer reported TDS levels that coincided with chloride concentrations. The highest TDS concentration in the shallow portion of the aquifer occurred in the vicinity of well MW-15 (5,900 mg/L), which is hydraulically upgradient from the Site. The TDS concentrations decrease toward the Site. The NMWQCC domestic water supply standard for TDS (1,000 mg/L) was exceeded in shallow groundwater from background monitoring well MW-2 (1,400 mg/L), located near the northwest corner of the Site. The TDS concentration in groundwater from the deep portion of the aquifer was greatest in the vicinity of MW-21A (9,200 mg/L), located northeast of the Site. The area of elevated TDS and chloride is likely associated with oil and gas

production. Concentrations of TDS were also noted above the NMWQCC standard in the deep portion of the aquifer near the south-central area of the Site and southeast of the Site. These results are also consistent with the distribution of chloride.

15. Groundwater quality in the shallow and deep groundwater is generally variable across the area, based on the cation and anion analyses of groundwater samples.

16. No water wells were identified south and southwest of the Site, within the area of the shallow chromium plume.

The extent of groundwater impact has been defined vertically and laterally, therefore, no further investigation is required. Please call if you have any questions.

Sincerely,
Highlander Environmental Corp.

Mark J. Larson
Senior Project Manager

Encl.

cc: Robert Patterson, Texaco Exploration and Production Inc.
Chris Williams, NMOCD – Hobbs District

TABLES

Table 1: Summary of Monitor Well and Water Well Drilling and Completion Details
Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant
Lea County, New Mexico

Monitor Well	Date Drilled	Drilled Depth Feet, BGS	Ground Elev. Feet, MSL	TOC Elev. Feet, MSL	Well Diameter Inches	Well Screen Feet/BGS	Depth-to-Ground Water Feet, BGS 11/16/99
MW-14	5/6/99	65.00	3424.31	3424.08	4	45.00-65.00	45.45
MW-14A	10/27/97	109.00	3424.05	3423.90	4	95.15-105.15	45.19
MW-15	1/6/99	55.00	3420.55	3420.4	4	35.00-55.00	41.61
MW-15A	10/28/97	103.00	3420.65	3420.55	4	92.20-102.30	41.43
MW-16A	10/29/97	91.60	3419.99	3419.92	4	81.51-91.60	40.78
MW-17A	10/30/97	106.00	3424.48	3424.38	4	93.50-103.60	45.22
MW-18	5/6/99	55.00	3417.39	3417.15	4	35.00-55.00	38.06
MW-18A	11/3/97	81.55	3417.04	3416.86	4	71.38-81.55	37.70
MW-19A	11/6/97	72.40	3414.95	3414.74	4	62.20-72.40	38.33
MW-20	1/5/99	55.00	3418.50	3420.85	4	35.00-55.00	42.23
MW-20A	1/5/99	81.00	3418.50	3421.14	4	71.00-81.00	42.06
MW-21	1/7/99	55.00	3420.41	3422.72	4	35.00-55.00	45.51
MW-21A	1/6/99	81.00	3420.41	3422.94	4	71.00-81.00	45.88
MW-22A	1/6/99	105.00	3428.50	3431.13	4	95.00-105.00	54.66
MW-23	6/16/99	67.00	3433.99	3436.44	4	46.64-66.04	55.97
MW-24A	6/16/99	105.00	3428.98	3430.77	4	83.72-103.12	52.51
MA-25	5/7/99	65.00	3432.36	3432.69	4	45.00-65.00	53.43
MW-26	10/27/99	67.00	3432.52	3432.04	4	43.13-61.78	53.43
MW-27	10/27/99	71.50	3443.72	3443.33	4	51.39-70.43	65.04
MW-28	11/2/99	85.00	3450.02	3451.63	4	63.29-82.33	71.91
MW-29	11/11/99	80.00	3444.76	3446.89	4	59.89-78.54	66.49

Notes:

1. BGS: Denotes depth in feet below ground surface.
2. MSL: Denotes elevation in feet above mean sea level.
3. *: Denotes depth-to-ground corrected from phase separated hydrocarbons, assuming specific gravity of 0.75.

Table 1: Summary of Monitor Well and Water Well Drilling and Completion Details
Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant
Lea County, New Mexico

Monitor Well	Date Drilled	Drilled Depth Feet, BGS	Ground Elev. Feet, MSL	TOC Elev. Feet, MSL	Well Diameter Inches	Well Screen Feet/BGS	Depth-to-Ground Water Feet, BGS 11/16/99
Lord Water Well	3/7/63	93.00	3419.47	3419.97	6	--	42.17
Rowland Water Well	--	--	3418.47	3419.47	6	--	40.58
WW-1	--	100.00	3428.78	3429.95	6	--	64.03
RW-1	1/13/99	111.00	3425.73	3428.32	6	44.08 - 104.84	47.92

Notes:

1. BGS: Denotes depth in feet below ground surface.
2. MSL: Denotes elevation in feet above mean sea level.
3. *: Denotes depth-to-ground corrected from phase separated hydrocarbons, assuming specific gravity of 0.75.
4. (0.47'): Phase-separated hydrocarbon thinkess in feet.
5. -: No date available.

Table 2: Summary of Volatile Organic Parameters Detected in Groundwater Samples from Monitor Wells and Water Wells
Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant
Lea County, New Mexico

Well Number	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Dichlorodifluoromethane (ug/L)	Tetrachloroethene (ug/L)
MW-1	8/1/96	9	69	82	169	-	-
	4/23/97	11	33	75	49	98	<1
	1/20/99	6	19	29	29	-	-
	11/17/99	8	18	14	42	-	-
*MW-1	1/20/99	6	17	28	24	-	-
MW-2	4/22/97	<1	<1	<1	<1	<1	<1
MW-3	4/22/97	<1	<1	<1	<1	6	<1
MW-4	4/23/97	<1	<1	<1	<1	8	<1
	1/21/99	<1	<1	<1	<1	-	-
	11/18/99	<1	<1	<1	<1	-	-
*MW-4	1/21/99	<1	<1	<1	<1	-	-
MW-4A	10/23/97	<1	<1	<1	<1	<1	<1
	1/21/99	<1	<1	<1	<1	-	-
MW-5	4/22/97	540	310	93	245	37	<1
MW-6	4/22/97	340	280	110	330	50	<1
MW-7	8/19/97	<1	<1	<1	<1	5	<1
MW-7A	10/22/97	<1	<1	<1	<1	<1	<1
MW-8	8/20/97	<1	<1	<1	<1	12	<1
MW-8A	10/28/97	<1	<1	<1	<1	<1	<1
MW-9	8/20/97	2	<1	<1	<1	<1	<1
MW-9A	10/23/97	<1	<1	<1	<1	<1	<1
MW-10	9/16/97	<1	<1	<1	<1	<1	<1
MW-11A	10/23/97	<1	<1	<1	<1	<1	<1
MW-12A	11/4/97	<1	<1	<1	<1	<1	<1
MW-21	1/18/99	<1	<1	<1	<1	-	-
	11/17/99	<5	<5	<5	<5	-	-
MW-21A	1/18/99	<1	<1	<1	<1	-	-
RW-1	2/17/99	<1	<1	<1	<1	-	-
WW-1	6/14/96	<1	<1	<1	<1	113	<1
	4/23/97	<1	<1	<1	<1	-	-
Trip Blank	1/20/99	<1	<1	<1	<1	-	-

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. ug/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No data available
4. *: Denotes duplicate sample

Table 3: Summary of Disolved Metals Analysis of Groundwater Samples from Monitor Wells and Water Wells
Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant
Lea County, New Mexico

Well No	Sample Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Chromium +6 (mg/L)	Chromium +3 (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
MW-1	4/23/97	<0.10	<0.20	<0.02	<0.05	-	-	0.1	<0.001	<0.10	<0.01
	1/20/99	<0.10	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
*MW-1	1/20/99	<0.10	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-2	4/22/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/20/99	<0.10	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-3	4/22/97	<0.10	<0.20	<0.02	0.36	-	-	<0.10	<0.001	<0.10	<0.01
	6/11/97	<0.10	<0.10	<0.02	0.22	-	-	<0.10	<0.001	<0.10	<0.05
MW-4	4/23/97	<0.10	<0.20	<0.02	0.08	-	-	0.1	<0.001	<0.10	<0.01
	6/11/97	<0.10	<0.10	<0.02	0.08	-	-	<0.10	<0.001	<0.10	<0.05
	1/21/99	<0.10	<1.0	<0.01	0.09	-	-	<0.05	<0.0002	<0.05	<0.05
	11/18/99	-	-	-	0.42	-	-	-	-	-	-
*MW-4	1/21/99	<0.10	<1.0	<0.01	0.09	-	-	<0.05	<0.0002	<0.05	<0.05
MW-4A	10/23/97	<0.10	<0.20	<0.02	0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/21/99	<0.10	<1.0	<0.01	0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-5	4/22/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
MW-6	4/22/97	<0.10	0.3	<0.02	<0.05	-	-	0.1	<0.001	<0.10	<0.01
MW-7	8/19/97	<0.10	<0.20	<0.20	0.35	-	-	<0.10	<0.001	<0.10	<0.05
	8/25/97	-	-	-	0.39	-	-	-	-	-	-
	1/21/99	<0.10	<1.0	<0.01	0.31	-	-	<0.05	<0.0002	<0.05	<0.05
	11/18/99	-	-	-	0.38	-	-	-	-	-	-
MW-7A	10/22/97	<0.10	<0.20	<0.02	0.06	-	-	<0.10	<0.001	<0.10	<0.01
	1/21/99	<0.10	<1.0	<0.01	0.06	-	-	<0.05	<0.0002	<0.05	<0.05
MW-8	8/20/97	<0.10	<0.20	<0.02	5.2	-	-	<0.10	<0.001	0.5	<0.01
	9/16/97	-	-	-	5.4	6.46	0	-	-	0.2	-
	10/28/97	-	-	-	4.6	3.31	0	-	-	-	-
	1/22/99	<0.10	<1.0	0.01	4.4	-	-	<0.05	<0.0002	<0.05	0.17
	11/18/99	-	-	-	6.1	-	-	-	-	-	-
MW-8A	10/28/97	<0.10	<0.20	<0.02	2.3	-	-	<0.10	<0.001	0.1	<0.01
	1/22/99	<0.10	<1.0	0.02	2.9	-	-	<0.05	<0.0002	0.2	0.19

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No data available

Table 3: (continued) Summary of Disolved Metals Analysis of Groundwater Samples from Monitor Wells and Water Wells

Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant

Lea County, New Mexico

Well No	Sample Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Chromium +6 (mg/L)	Chromium +3 (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
MW-9	8/20/97	<0.10	<0.20	<0.02	0.26	-	-	<0.10	<0.001	<0.10	<0.01
	9/16/97	-	-	-	0.16	-	-	-	-	-	-
	1/21/99	<0.10	<1.0	<0.01	0.06	-	-	<0.05	<0.0002	<0.05	<0.05
	11/18/99	-	-	-	0.33	-	-	-	-	-	-
MW-9A	10/23/97	<0.10	<0.20	<0.02	1.5	-	-	<0.10	<0.001	0.1	<0.01
	1/21/99	<0.10	<1.0	<0.01	1.0	-	-	<0.05	<0.0002	<0.05	<0.05
MW-10	9/16/97	<0.10	<0.20	0.03	0.14	-	-	<0.10	<0.001	<0.10	0.13
	1/19/99	<0.10	<1.0	<0.01	0.37	-	-	<0.05	<0.0002	<0.05	<0.05
	11/18/99	-	-	-	0.32	-	-	-	-	-	-
MW-11	1/20/99	<0.10	<1.0	<0.01	4.6	-	-	<0.05	<0.0002	<0.05	<0.05
	11/18/99	-	-	-	6.2	-	-	-	-	-	-
MW-11A	10/23/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/20/99	<0.10	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-12	2/19/99	-	-	-	3.0	-	-	-	-	-	-
	11/18/99	-	-	-	3.0	-	-	-	-	-	-
MW-12A	11/4/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
MW-13	12/4/97	<0.10	<0.20	<0.02	0.16	-	-	<0.10	<0.001	<0.10	<0.01
	1/19/99	<0.10	<1.0	<0.01	0.16	-	-	<0.05	<0.0002	<0.05	<0.05
	11/18/99	-	-	-	0.09	-	-	-	-	-	-
MW-13A	10/28/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/20/99	<0.10	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-14	5/19/99	<0.10	<0.10	<0.02	1.0	-	-	<0.10	<0.0002	<0.10	<0.05
	11/18/99	-	-	-	0.92	-	-	-	-	-	-
MW-14A	11/4/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
MW-15	1/19/99	<0.10	<1.0	<0.01	0.07	-	-	<0.05	<0.0002	0.08	<0.05
	5/19/99	-	-	-	<0.05	-	-	-	-	-	-
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-15A	11/4/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/19/99	<0.10	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-16A	11/7/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
MW-17A	11/10/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No data available

Table 3: (continued) Summary of Disolved Metals Analysis of Groundwater Samples from Monitor Wells and Water Wells
Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant
Lea County, New Mexico

Well No	Sample Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Chromium +6 (mg/L)	Chromium +3 (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
MW-18	5/19/99	<0.10	<0.10	<0.02	<0.05	-	-	<0.10	0.0067	<0.10	<0.05
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-18A	11/7/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/19/99	<0.1	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-19A	11/10/97	<0.10	<0.20	<0.02	<0.05	-	-	<0.10	<0.001	<0.10	<0.01
	1/19/99	<0.1	<1.0	<0.01	<0.05			<0.05	<0.0002	<0.05	<0.05
*MW-19A	1/19/99	<0.01	<0.01	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-20	1/19/99	<0.1	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-20A	1/19/99	<0.1	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
MW-21	1/18/99	<0.10	<0.10	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-21A	1/18/99	<0.10	0.13	<0.01	0.05	-	-	<0.05	<0.0002	<0.05	<0.05
	1/20/99	-	-	-	<0.05	-	-	-	-	-	-
MW-22A	1/21/99	<0.10	<1.0	<0.01	0.13	-	-	<0.05	<0.0002	<0.05	<0.05
MW-23	5/23/99	-	-	-	2.0	-	-	-	-	-	-
	11/18/99	-	-	-	2.56	-	-	-	-	-	-
	1/7/00	-	-	-	2.8	-	-	-	-	-	-
MW-24A	5/23/99	-	-	-	0.03	-	-	-	-	-	-
MW-25	5/19/99	<0.10	<0.10	<0.02	4.5	-	-	<0.10	<0.0002	<0.10	<0.05
	11/18/99	-	-	-	4.4	-	-	-	-	-	-
*MW-25	11/18/99	-	-	-	4.7	-	-	-	-	-	-
MW-26	11/17/99	-	-	-	<0.05	-	-	-	-	-	-
MW-27	11/18/99	-	-	-	<0.05	-	-	-	-	-	-
MW-28	11/18/99	-	-	-	<0.05	-	-	-	-	-	-
MW-29	11/18/99	-	-	-	<0.05	-	-	-	-	-	-
WW-1	6/14/96	<0.10	<0.20	<0.02	0.66	-	-	<0.10	<0.001	<0.1	<0.01
	8/1/96	-	-	-	0.82	-	-	-	-	-	-
	4/23/97	<0.10	<0.20	<0.02	0.52	-	-	<0.10	<0.001	<0.10	<0.01
	1/20/99	<0.10	<1.0	<0.01	0.69	-	-	<0.05	<0.0002	<0.05	<0.05

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No data available

Table 3: (continued) Summary of Disolved Metals Analysis of Groundwater Samples from Monitor Wells and Water Wells
Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant
Lea County, New Mexico

Well No	Sample Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Chromium +6 (mg/L)	Chromium +3 (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
Lord Water Well	9/29/97	<0.10	<0.10	<0.02	0.59	-	-	<0.10	<0.001	<0.10	<0.05
	1/19/99	<0.10	<1.0	<0.01	0.52	-	-	<0.05	<0.0002	0.11	<0.05
Roland Water Well	9/29/87	<0.10	<0.10	<0.02	0.16	-	-	<0.10	<0.001	<0.10	<0.05
	1/19/99	<0.1	<1.0	<0.01	<0.05	-	-	<0.05	<0.0002	<0.05	<0.05
RW-1	2/17/99	-	-	-	1.3	-	-	-	-	-	-
	2/18/99	-	-	-	1.4	-	-	-	-	-	-
	2/18/99	-	-	-	1.4	-	-	-	-	-	-

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No data available

Table 4: Summary of General Chemistry Analysis of Groundwater Samples from Monitor Wells and Water Wells, Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant, Lea County, New Mexico

Well No.	Sample Date	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)	Sodium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Alkalinity (mg/L)	Nitrate (mg/L)	TDS (mg/L)
MW-1	4/23/97	-	-	-	-	200	-	-	-	-	2000
	1/20/99	9.2	74	238	468	370	3.7	860	460	10	2400
	11/17/99	12	72	251	421	250	2.6	850	482	12	2200
*MW-1	1/20/99	7.6	63	265	454	350	3.1	820	510	7.1	2200
	11/17/99	9	68	149	201	350	2.9	300	248	5.1	1270
MW-2	4/22/97	-	-	-	-	350	-	-	-	-	1200
	1/20/99	8.6	61	135	157	350	3.1	230	190	8.2	1100
	11/17/99	9.7	80	170	183	470	2.6	260	200	24	1400
MW-3	4/22/97	-	-	-	-	430	-	-	-	-	2000
MW-4	4/23/97	-	-	-	-	290	-	-	-	-	1600
	1/21/99	12	49	191	357	310	3.5	450	460	1.9	1600
	11/18/99	13	84	296	384	620	2.8	710	366	4.6	2600
*MW-4	1/21/99	12	49	198	362	320	3.2	450	470	1.9	1600
MW-4A	10/23/97	-	-	-	-	170	-	-	-	-	790
	1/21/99	10	40	74	124	240	3.9	180	180	1.7	830
MW-5	4/22/97	-	-	-	-	800	-	-	-	-	2800
MW-6	4/22/97	-	-	-	-	1500	-	-	-	-	3200
MW-7	8/19/97	-	-	-	-	550	-	-	-	-	2600
	1/21/99	13	71	288	530	550	2.8	850	240	4.7	2500
	11/18/99	11	94	309	442	520	2.6	1200	240	6.9	2700
MW-7A	10/22/97	-	-	-	-	260	-	-	-	-	1200
	1/21/99	12	38	84	174	190	3.7	260	180	1.8	920
MW-8	1/22/99	20	111	438	633	960	4.4	1500	160	10	3800
	11/18/99	22	155	626	685	1100	4.0	1600	164	10	4500
MW-8A	10/28/97	-	-	-	-	13	-	-	-	-	3700
	1/22/99	22	215	397	630	1000	3.3	1700	130	11	3200
MW-9	1/21/99	13	81	316	257	410	3.6	700	240	5.5	2000
	11/18/99	13	110	347	353	490	3.2	1200	278	6.8	2700
MW-9A	10/23/97	-	-	-	-	910	-	-	-	-	3600
	1/21/99	21	148	319	542	780	3.0	950	220	7.0	2930
MW-10	9/16/97	-	-	-	-	520	-	-	-	-	2400
	1/19/99	17	167	490	460	1100	2.6	1000	170	7.1	3100
	11/18/99	17	192	528	484	1100	3.0	1200	178	6.6	3800
MW-11	1/20/99	31	105	516	600	990	3.8	1200	300	10	3600
	11/18/99	22	159	689	678	1200	5.4	1600	150	10	4600
MW-11A	10/23/97	-	-	-	-	210	-	-	-	-	940
	1/20/99	10	47	78	139	170	3.5	280	160	4.9	930
MW-12	2/19/99	23	128	465	517	850	5.1	1400	127	9.0	3500
	11/18/99	34	134	496	518	820	4.7	1400	122	8.1	4300
*MW-12	11/18/99	15	142	364	412	760	1.6	970	164	9.6	2900
MW-12A	11/4/97	-	-	-	-	74	-	-	-	-	480
MW-13	12/4/97	-	-	-	-	1100	-	-	-	-	4000
	1/19/99	20	146	513	739	1100	2.7	1400	290	6.5	4000
	11/18/99	17	142	495	678	1200	2.3	1400	372	5.7	4500

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No Data Available
4. *: Denotes duplicate sample

Table 4: (continued) Summary of General Chemistry Analysis of Groundwater Samples from Monitor Wells and Water Wells, Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant, Lea County, New Mexico

Well No.	Sample Date	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)	Sodium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Alkalinity (mg/L)	Nitrate (mg/L)	TDS (mg/L)
MW-13A	10/29/97	-	-	-	-	26	-	-	-	-	520
	1/20/99	5.4	24	43	102	57	4.2	100	210	4.6	530
MW-14	5/19/99	28	125	407	978	1700	-	670	334	9.9	4400
	11/18/99	32	98	321	1179	2000	3.1	760	452	13	4600
MW-14A	11/4/97	-	-	-	-	97	-	-	-	-	510
MW-15	1/19/99	52	81	265	695	1400	2.4	410	180	6.5	3000
	11/17/99	20	201	456	1253	3100	2.6	620	278	6.9	5900
MW-15A	11/4/97	-	-	-	-	230	-	-	-	-	650
	1/19/99	14	26	46	140	140	3.8	97	210	4.6	630
MW-16A	11/7/97	-	-	-	-	210	-	-	-	-	950
MW-17A	11/10/97	-	-	-	-	120	-	-	-	-	570
MW-18	5/19/99	15	60	161	206	420		290	239	5.0	1300
	11/17/99	8.7	62	140	189	370	2.9	300	246	5.1	1300
MW-18A	11/07/97	-	-	-	-	360	-	-	-	-	1500
	1/19/99	12	76	140	196	390	2.9	450	170	6.0	1400
MW-19A	11/10/97	-	-	-	-	480	-	-	-	-	1500
	1/19/99	12	86	156	236	520	3.0	340	200	4.9	1500
*MW-19A	1/19/99	12	89	165	217	500	3.0	330	210	5.0	1500
MW-20	1/19/99	11	70	165	243	570	2.7	270	230	4.5	1680
	11/17/99	12	81	166	282	570	2.6	320	250	3.7	1600
MW-20A	1/19/99	11	55	106	122	250	3.1	260	150	5.1	1000
MW-21	1/18/99	14	58	147	776	740	3.1	660	629	4.4	2700
	11/17/99	16	57	142	876	780	2.7	820	666	3.6	3100
MW-21A	1/18/99	107	292	656	2590	7000	2.0	460	130	4.8	9200
MW-22A	1/21/99	49	52	119	206	350	2.8	270	170	2.0	1200
MW-23	6/23/99	16	133	361	638	910	2.8	1300	222	7.6	3500
	11/18/99	18	168	435	693	1100	3.1	1400	222	8.1	4100
MW-24A	6/23/99	7.1	35	59	95	140	3.7	140	180	3.8	680
MW-25	5/19/99	20	129	342	393	800	-	770	203	6.8	2600
	11/18/99	15	141	358	399	760	1.7	940	210	9.5	2800
MW-26	11/17/99	12	86	242	163	500	2.1	420	174	3.8	1500
MW-27	11/18/99	8.8	44	147	106	240	2.0	220	180	3.6	960
MW-28	11/18/99	14	69	238	559	1200	2.1	230	188	3.6	2400
MW-29	11/18/99	7.9	49	159	158	250	2.4	340	182	7.2	1200
RW-1	2/17/99	18	140	434	644	910	3.2	1400	219	6.9	3600
	2/18/99	13	140	415	602	920	3.3	1400	221	6.9	3700
	2/18/99	13	142	411	598	1000	3.2	1300	214	7.0	3700
WW-1	6/14/96	12.4	142	268	393	782	2.6	-	340	10.4	-
	4/23/97	-	-	-	-	800	-	-	-	-	2600
	1/20/99	15	164	294	436	900	3.7	740	320	11	2800
Lord Water Well	9/29/97	-	-	-	-	480	-	-	-	-	2200
	1/19/99	18	162	390	502	800	2.7	1300	200	8.9	3100

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No Data Available
4. *: Denotes duplicate sample

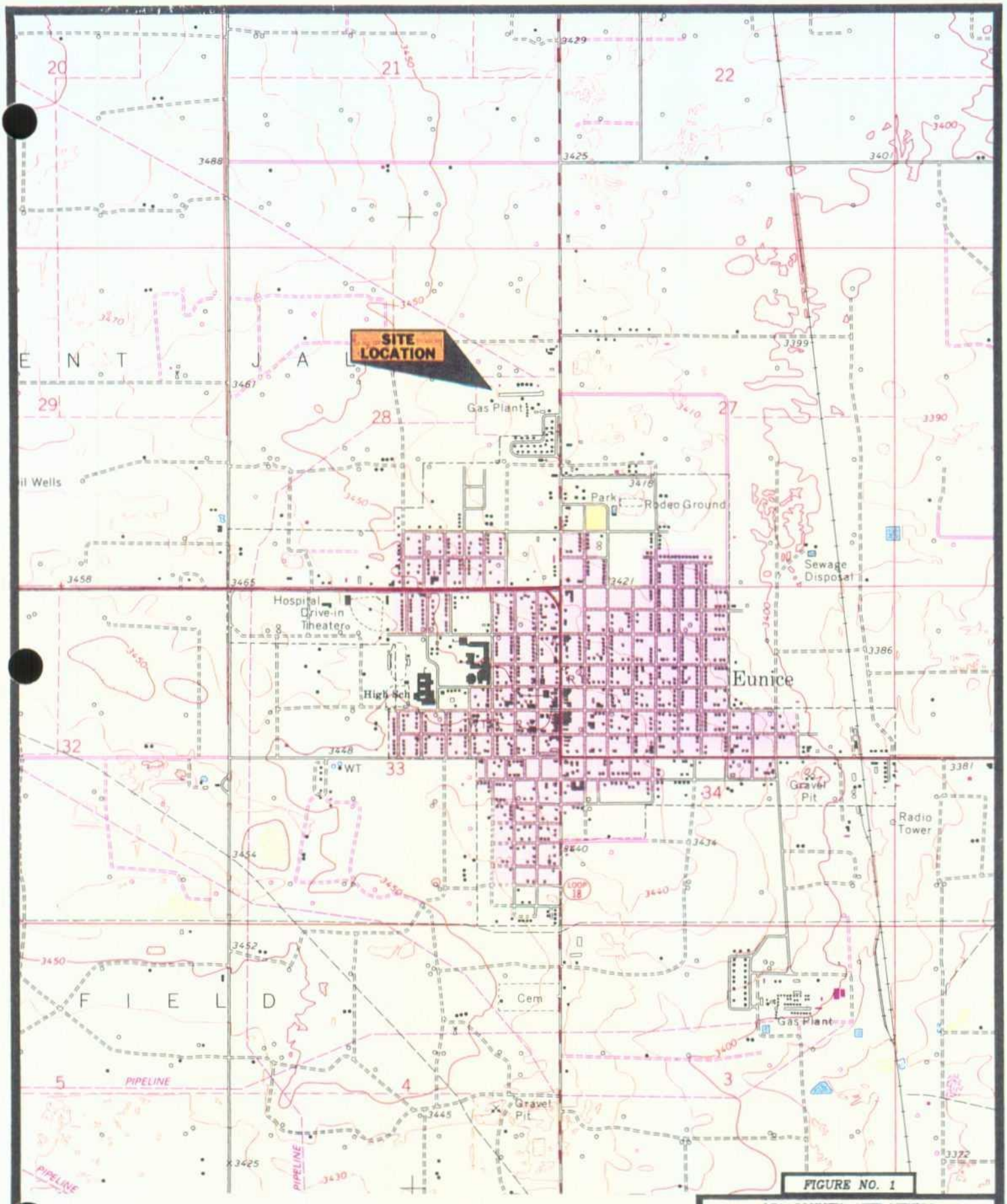
Table 4: (continued) Summary of General Chemistry Analysis of Groundwater Samples from Monitor Wells and Water Wells, Texaco Exploration and Production, Inc., Eunice #2 (North) Gas Plant, Lea County, New Mexico

Well No.	Sample Date	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)	Sodium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Alkalinity (mg/L)	Nitrate (mg/L)	TDS (mg/L)
Roland Water Well	9/29/97	-	-	-	-	1100	-	-	-	-	2700
	1/19/99	14	97	243	392	920	3.7	460	240	10	2300

Note: All analysis performed by Trace Analysis, Inc., Lubbock, Texas

1. mg/L: Denotes analyte concentration in milligrams per liter
2. <: Denotes analyte concentration below test method detection limit
3. -: No Data Available
4. *: Denotes duplicate sample

FIGURES



TAKEN FROM U.S.G.S.
EUNICE, NEW MEXICO
7.5' QUADRANGLE

SCALE: 1" = 2,000'

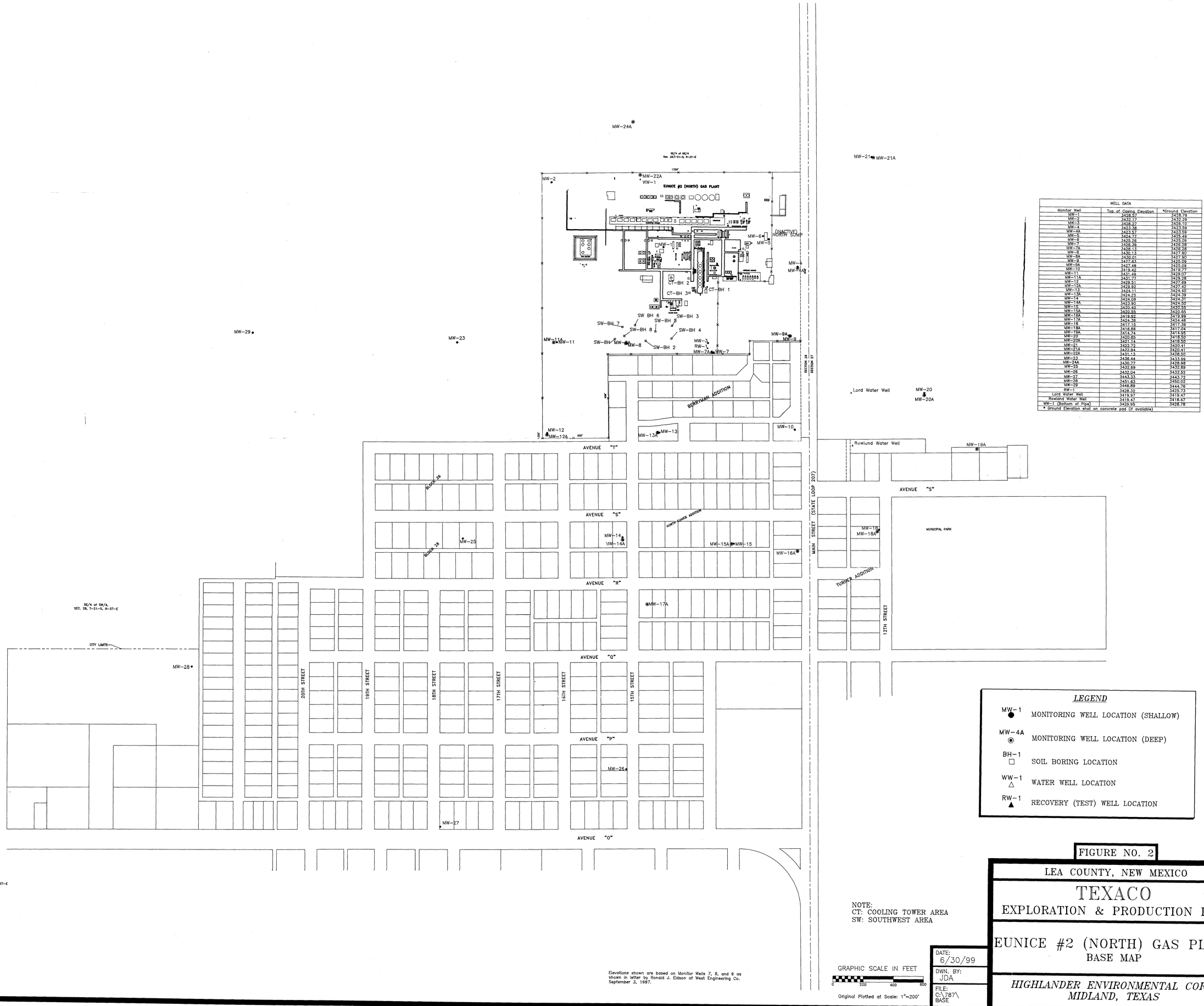
FIGURE NO. 1

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION AND PRODUCTION

TOPOGRAPHIC
MAP

HIGHLANDER ENVIRONMENTAL
MIDLAND, TEXAS



WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3428.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.72	3425.49
MW-6	3425.26	3425.09
MW-7	3428.38	3428.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.80	3424.30
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.65
MW-16A	3419.92	3419.99
MW-17A	3424.38	3424.48
MW-18	3417.15	3417.39
MW-18A	3416.86	3417.04
MW-19A	3414.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.84	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.98
MW-24A	3430.77	3428.98
MW-25	3432.69	3432.89
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- MW-1 ● MONITORING WELL LOCATION (SHALLOW)
- MW-4A ◉ MONITORING WELL LOCATION (DEEP)
- BH-1 □ SOIL BORING LOCATION
- WW-1 △ WATER WELL LOCATION
- RW-1 ▲ RECOVERY (TEST) WELL LOCATION

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
BASE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 6/30/99
DWN. BY: JDA
FILE: C:\787\BASE

WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3426.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3425.77	3425.49
MW-6	3425.26	3425.09
MW-7	3428.39	3428.28
MW-7A	3428.13	3426.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3418.42	3419.07
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.59
MW-14	3424.08	3424.31
MW-14A	3423.98	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.66
MW-16A	3419.92	3419.99
MW-17A	3424.38	3424.48
MW-18	3417.39	3417.39
MW-18A	3418.88	3417.04
MW-19A	3417.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.99
MW-24A	3428.98	3428.98
MW-25	3432.69	3432.89
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.83	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3415.97	3418.47
Rowland Water Well	3419.47	3418.47
MW-1 (Bottom of Pipe)	3429.95	3428.78

* Ground Elevation shot on concrete pad (if available)

LEGEND

- 2,200 MW-1 ● — MONITORING WELL LOCATION (SHALLOW), AND TDS CONCENTRATION IN GROUNDWATER, Mg/L, 11/17-18/99
- MW-4A ◉ — MONITORING WELL LOCATION (DEEP)
- BH-1 □ — SOIL BORING LOCATION
- WW-1 △ — WATER WELL LOCATION
- RW-1 ▲ — RECOVERY (TEST) WELL LOCATION
- 2,000 — CONTOUR OF TDS CONCENTRATION IN GROUNDWATER, (SHALLOW), mg/L, 11/17-18/99

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 800
Original Plotted at Scale: 1"=200'

FIGURE NO. 11

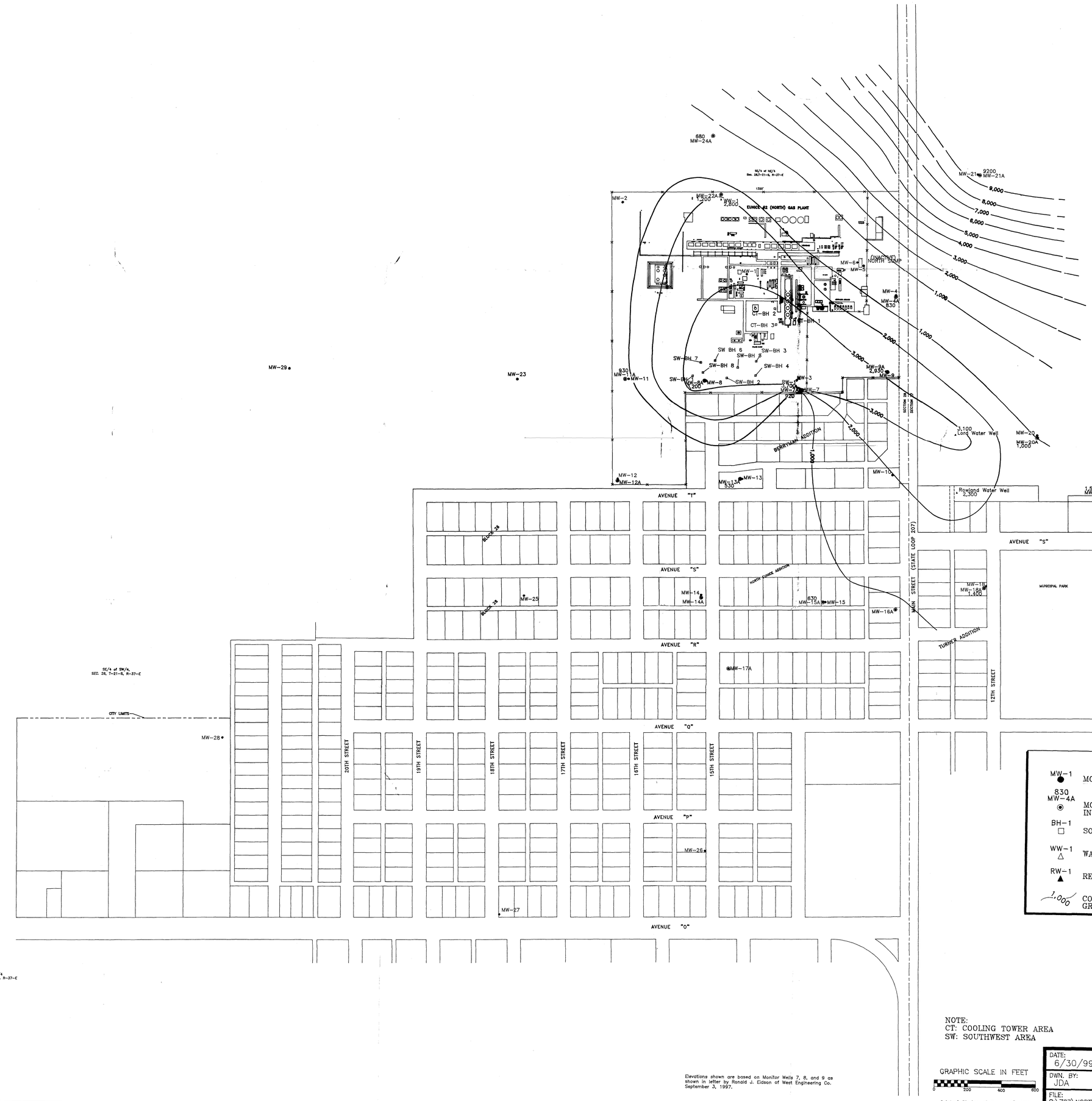
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
ISOPLETH MAP OF TDS CONCENTRATION IN GROUNDWATER (SHALLLOW), 11/17-18/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 01/31/00
DWN. BY: JDA
FILE: C:\787\NORTH\TDS-S-12-99



WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.78
MW-2	3432.17	3432.29
MW-3	3428.22	3428.10
MW-4	3423.38	3423.59
MW-4A	3423.32	3423.59
MW-5	3424.77	3425.49
MW-6	3425.28	3425.09
MW-7	3428.39	3428.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3427.80
MW-8A	3430.01	3427.80
MW-9	3427.83	3426.09
MW-9A	3427.48	3426.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.89
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.46
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.60	3420.85
MW-15A	3420.55	3420.85
MW-16A	3418.99	3418.99
MW-17A	3424.38	3424.48
MW-18	3417.39	3417.39
MW-18A	3416.86	3417.04
MW-19A	3414.95	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3438.44	3433.89
MW-24A	3430.77	3428.98
MW-25	3432.69	3432.89
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.83	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3428.73
Lard Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- MW-1 ● — MONITORING WELL LOCATION (SHALLOW)
- 830 MW-4A ◉ — MONITORING WELL LOCATION (DEEP) AND TDS CONCENTRATION IN GROUNDWATER, mg/L, 1/18/99-6/23/99
- BH-1 □ — SOIL BORING LOCATION
- WW-1 △ — WATER WELL LOCATION
- RW-1 ▲ — RECOVERY (TEST) WELL LOCATION
- 1,000 — CONTOUR OF TDS CONCENTRATION IN GROUNDWATER, (DEEP), mg/L, 1/18/99-6/23/99

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

DATE: 6/30/99
DWN. BY: JDA
FILE: C:\787\NORTH\TDS-D-12-99

FIGURE NO. 12

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
ISOPLETH MAP OF TDS CONCENTRATION IN GROUNDWATER (DEEP) 1/18/99-6/23/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3426.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.77	3425.48
MW-6	3425.26	3425.09
MW-7	3426.39	3426.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3428.21	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.93	3424.30
MW-15	3420.40	3420.55
MW-15A	3420.35	3420.65
MW-16A	3419.92	3419.99
MW-17A	3424.38	3424.48
MW-18	3417.15	3417.39
MW-18A	3416.86	3417.04
MW-19A	3414.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.22	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.98
MW-24A	3430.27	3428.98
MW-25	3432.69	3432.69
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- 51.54 MW-1 ● — MONITORING WELL LOCATION (SHALLOW), AND DEPTH-TO-GROUNDWATER, FEET BGS, 11/16/99
- MW-4A ◉ — MONITORING WELL LOCATION (DEEP)
- BH-1 □ — SOIL BORING LOCATION
- WW-1 △ — WATER WELL LOCATION
- RW-1 ▲ — RECOVERY (TEST) WELL LOCATION
- 50 — CONTOUR OF DEPTH-TO-GROUNDWATER, FEET,BGS, 11/16/99

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA
* : DEPTH-TO-GROUNDWATER CORRECTED FOR PSH

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
DEPTH-TO-GROUNDWATER (SHALLOW), 11/16/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 01/11/00
DWN. BY: JDA
FILE: C:\787\NORTH\DEPTH-GW-S-12-99

WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.28
MW-3	3428.27	3428.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.72	3425.45
MW-6	3425.26	3425.09
MW-7	3428.30	3426.28
MW-7A	3428.13	3426.28
MW-8	3430.11	3427.90
MW-8A	3429.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3428.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3423.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.95	3420.65
MW-16	3419.92	3419.99
MW-17A	3424.48	3424.48
MW-18	3417.15	3417.39
MW-18A	3418.86	3417.04
MW-19A	3414.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.22	3420.41
MW-21A	3422.84	3420.51
MW-22A	3431.13	3428.50
MW-23	3438.44	3433.99
MW-24A	3430.27	3428.98
MW-25	3432.69	3432.89
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- MW-1 ● — MONITORING WELL LOCATION (SHALLOW)
- 47.02 MW-4A ◉ — MONITORING WELL LOCATION (DEEP) AND DEPTH-TO-GROUNDWATER, FEET, BGS, 11/16/99
- BH-1 □ — SOIL BORING LOCATION
- 64.03 WW-1 △ — WATER WELL LOCATION , AND DEPTH-TO-GROUNDWATER, FEET, BGS, 11/16/99
- 47.92 RW-1 ▲ — RECOVERY (TEST) WELL LOCATION, AND DEPTH-TO-GROUNDWATER, FEET, BGS, 11/16/99
- 50 — CONTOUR OF DEPTH-TO-GROUNDWATER, FEET, BGS, 11/16/99

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

FIGURE NO. 4

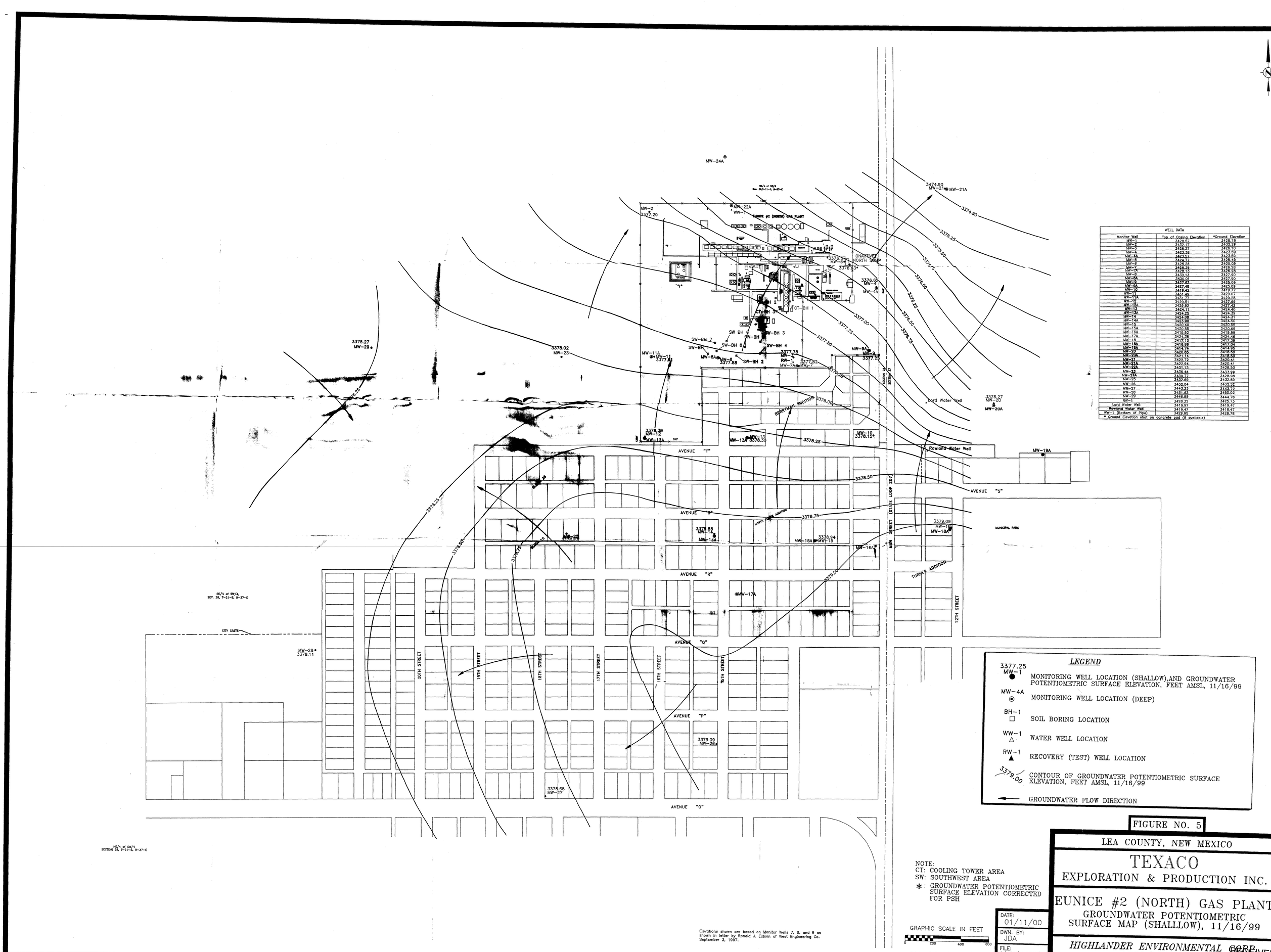
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
DEPTH-TO-GROUNDWATER (DEEP)
11/16/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 01/11/00
DWN. BY: JDA
FILE: C:\787\NORTH\DEPTH-GW-12-99



WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3428.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3428.77	3428.49
MW-6	3425.26	3426.09
MW-7	3428.38	3428.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3427.80
MW-8A	3430.01	3427.90
MW-9	3427.43	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.48	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.89
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.01
MW-14A	3423.80	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.65
MW-16A	3419.99	3419.99
MW-17A	3424.38	3424.48
MW-18	3417.15	3417.39
MW-18A	3418.88	3417.04
MW-19A	3414.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.99
MW-24A	3430.77	3428.98
MW-25	3432.69	3432.89
MW-26	3432.04	3432.32
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3448.89	3444.76
RW-1	3428.32	3425.13
Lord Water Well	3419.97	3419.47
Rowland Water Well	3418.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- 3377.25 / MW-1 — MONITORING WELL LOCATION (SHALLOW),AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/16/99
- MW-4A — MONITORING WELL LOCATION (DEEP)
- BH-1 — SOIL BORING LOCATION
- WW-1 — WATER WELL LOCATION
- RW-1 — RECOVERY (TEST) WELL LOCATION
- 3379.00 — CONTOUR OF GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/16/99
- GROUNDWATER FLOW DIRECTION

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA
*: GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CORRECTED FOR PSH

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 800
Original Plotted at Scale: 1"=200'

DATE: 01/11/00
DWN. BY: JDA
FILE: C:\787\NORTH\GPS-S-12-99

FIGURE NO. 5

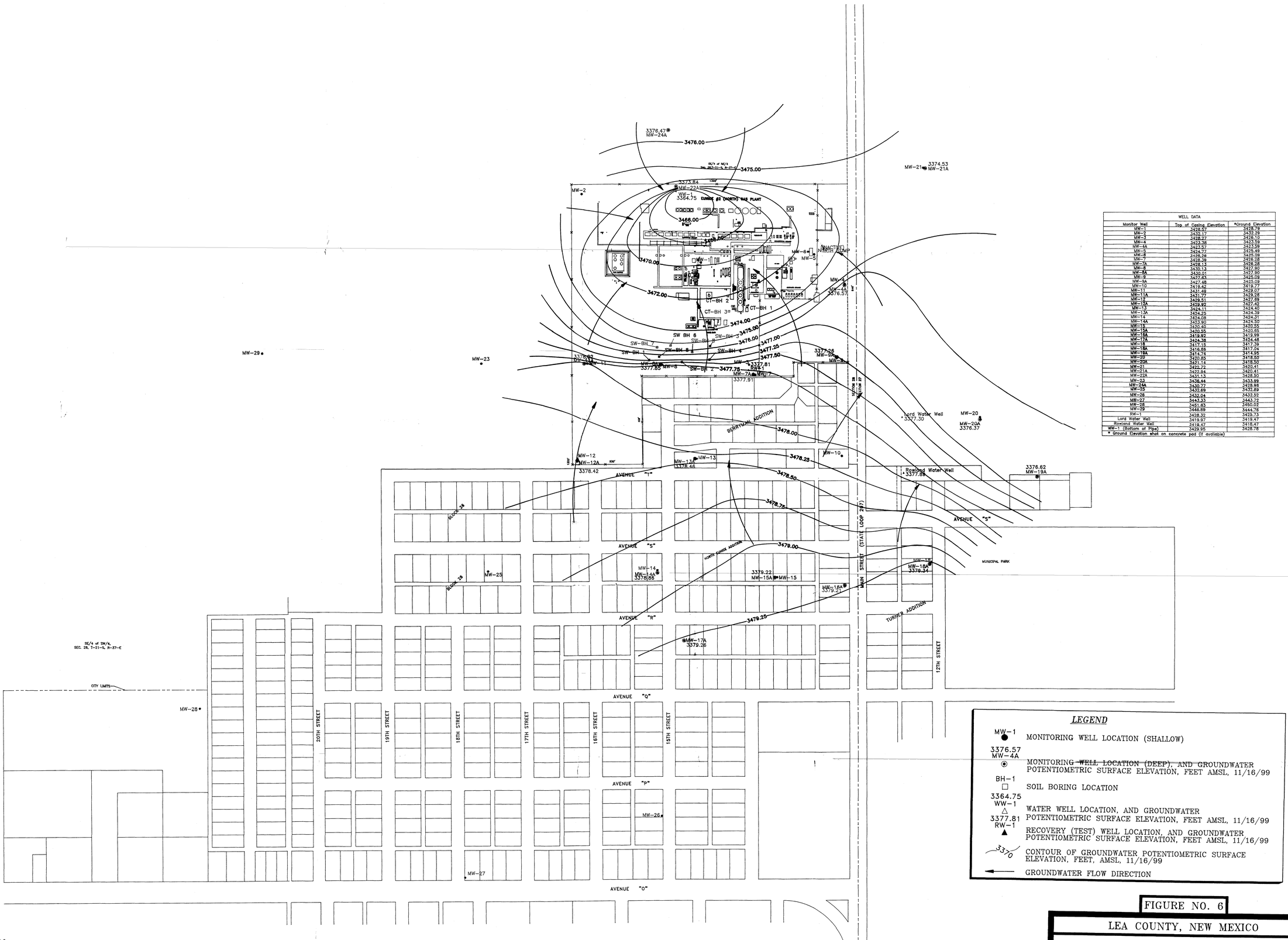
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
GROUNDWATER POTENTIOMETRIC SURFACE MAP (SHALLOW), 11/16/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.47	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3426.10
MW-4	3433.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.77	3425.49
MW-6	3425.28	3425.09
MW-7	3428.39	3428.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3428.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.40	3420.05
MW-15A	3420.55	3420.65
MW-16	3419.92	3419.99
MW-17A	3423.98	3424.48
MW-18	3417.15	3417.39
MW-18A	3416.85	3417.04
MW-19A	3414.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3423.84	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.99
MW-24A	3430.77	3428.98
MW-25	3432.69	3432.69
MW-26	3432.04	3432.32
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
MW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		



LEGEND

- MW-1 ● — MONITORING WELL LOCATION (SHALLOW)
- 3376.57 MW-4A ⊙ — MONITORING ~~WELL LOCATION (DEEP),~~ AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/16/99
- BH-1 □ — SOIL BORING LOCATION
- 3364.75 WW-1 △ — WATER WELL LOCATION, AND GROUNDWATER
- 3377.81 RW-1 ▲ — POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/16/99
- RECOVERY (TEST) WELL LOCATION, AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/16/99
- 3370 — CONTOUR OF GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET, AMSL, 11/16/99
- GROUNDWATER FLOW DIRECTION

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

DATE: 01/11/00
DWN. BY: JDA
FILE: O:\787\NORTH\POT-DEEP-12-99

FIGURE NO. 6

LEA COUNTY, NEW MEXICO

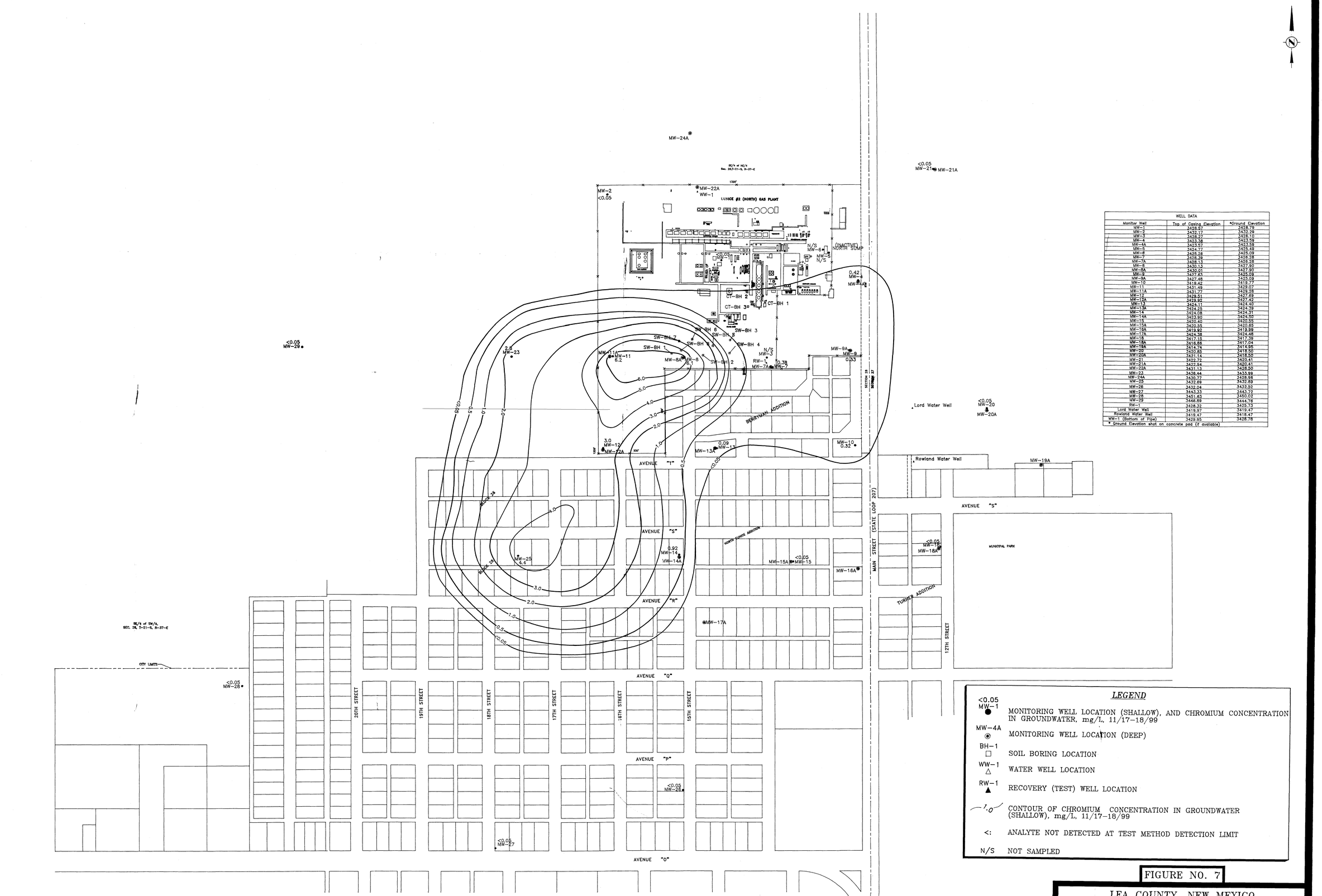
TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
GROUNDWATER POTENTIOMETRIC SURFACE MAP (DEEP)
11/16/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3428.10
MW-4	3423.36	3423.59
MW-4A	3423.57	3423.58
MW-5	3424.77	3425.49
MW-6	3425.26	3425.09
MW-7	3428.39	3428.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3429.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3425.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.48	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.23	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.65
MW-16	3419.92	3419.99
MW-16A	3424.38	3424.45
MW-17	3417.15	3417.39
MW-17A	3416.86	3417.04
MW-18	3415.74	3414.95
MW-18A	3420.85	3418.50
MW-19	3421.14	3418.50
MW-19A	3422.72	3420.41
MW-20	3422.94	3420.41
MW-20A	3431.13	3428.50
MW-21	3438.44	3433.99
MW-21A	3430.77	3428.98
MW-22	3432.69	3432.89
MW-22A	3432.04	3432.52
MW-23	3443.33	3443.72
MW-24	3451.63	3450.02
MW-24A	3446.89	3444.76
MW-25	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
MW-1 (Bottom of Pipe)	3429.95	3428.78

* Ground Elevation shot on concrete pad (if available)



LEGEND

<0.05 MW-1 ●	MONITORING WELL LOCATION (SHALLOW), AND CHROMIUM CONCENTRATION IN GROUNDWATER, mg/L, 11/17-18/99
MW-4A ◉	MONITORING WELL LOCATION (DEEP)
BH-1 □	SOIL BORING LOCATION
WW-1 △	WATER WELL LOCATION
RW-1 ▲	RECOVERY (TEST) WELL LOCATION
1.0	CONTOUR OF CHROMIUM CONCENTRATION IN GROUNDWATER (SHALLOW), mg/L, 11/17-18/99
<	ANALYTE NOT DETECTED AT TEST METHOD DETECTION LIMIT
N/S	NOT SAMPLED

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

FIGURE NO. 7

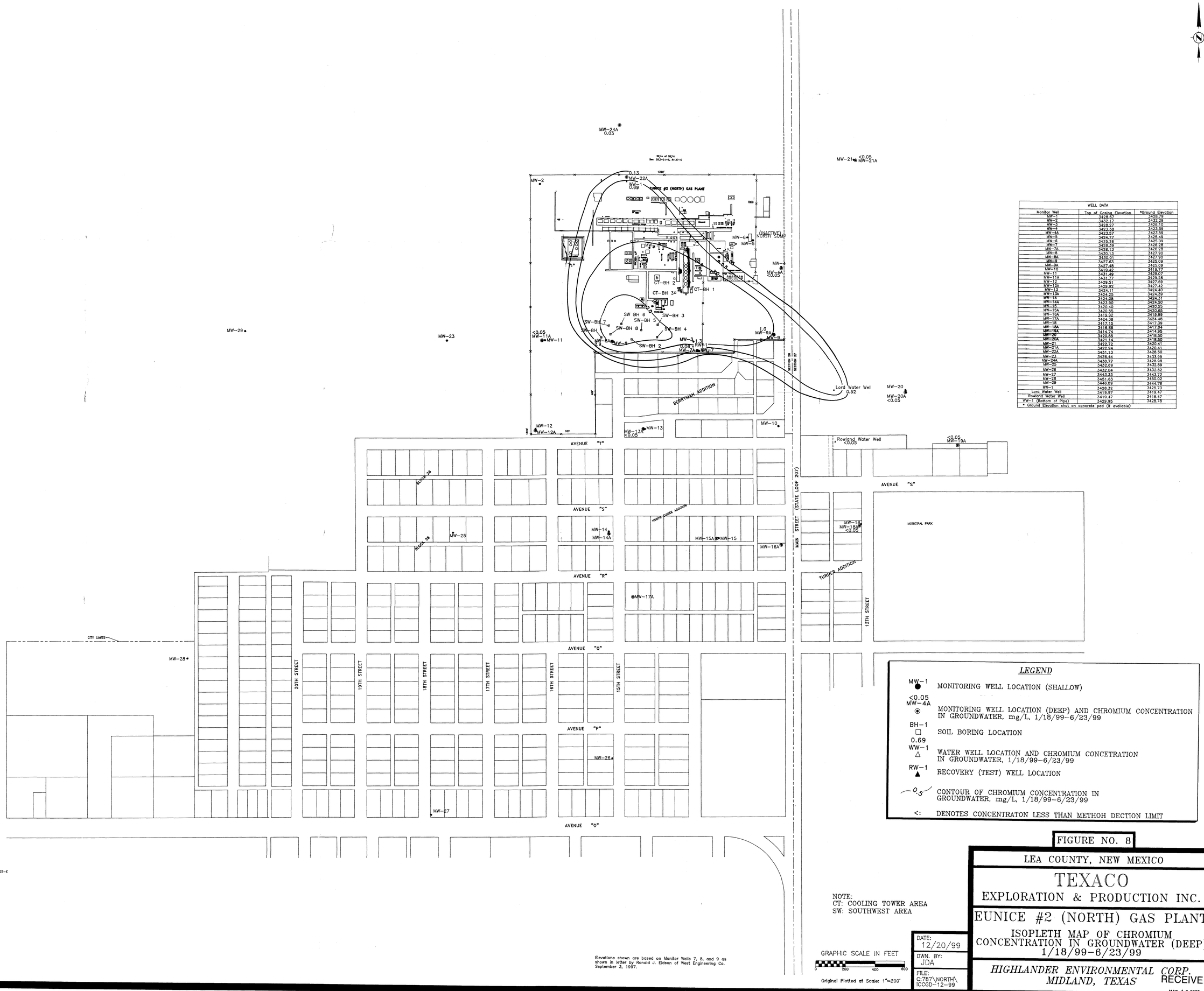
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
ISOPLETH MAP OF CHROMIUM CONCENTRATION IN GROUNDWATER (SHALLOW), 11/17-18/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 6/30/99
DWN. BY: JDA
FILE: C:\787\BASE



WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.57	3428.79
MW-2	3432.17	3432.39
MW-3	3426.27	3426.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.77	3425.49
MW-6	3425.26	3425.09
MW-7	3428.39	3428.28
MW-7A	3428.14	3428.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.89
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.65
MW-16A	3419.82	3419.99
MW-17A	3424.38	3424.48
MW-18	3417.15	3417.39
MW-18A	3416.86	3417.04
MW-19A	3413.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3438.44	3433.89
MW-24A	3430.77	3428.98
MW-25	3432.69	3432.80
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
MW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- MW-1 ● — MONITORING WELL LOCATION (SHALLOW)
- <0.05 MW-4A ◉ — MONITORING WELL LOCATION (DEEP) AND CHROMIUM CONCENTRATION IN GROUNDWATER, mg/L, 1/18/99-6/23/99
- BH-1 □ — SOIL BORING LOCATION
- 0.69 WW-1 △ — WATER WELL LOCATION AND CHROMIUM CONCETRATION IN GROUNDWATER, 1/18/99-6/23/99
- RW-1 ▲ — RECOVERY (TEST) WELL LOCATION
- 0.5 — CONTOUR OF CHROMIUM CONCENTRATION IN GROUNDWATER, mg/L, 1/18/99-6/23/99
- <: — DENOTES CONCENTRATON LESS THAN METHOH DECTION LIMIT

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

DATE: 12/20/99
DWN. BY: JDA
FILE: C:787\NORTH\ICCGD-12-99

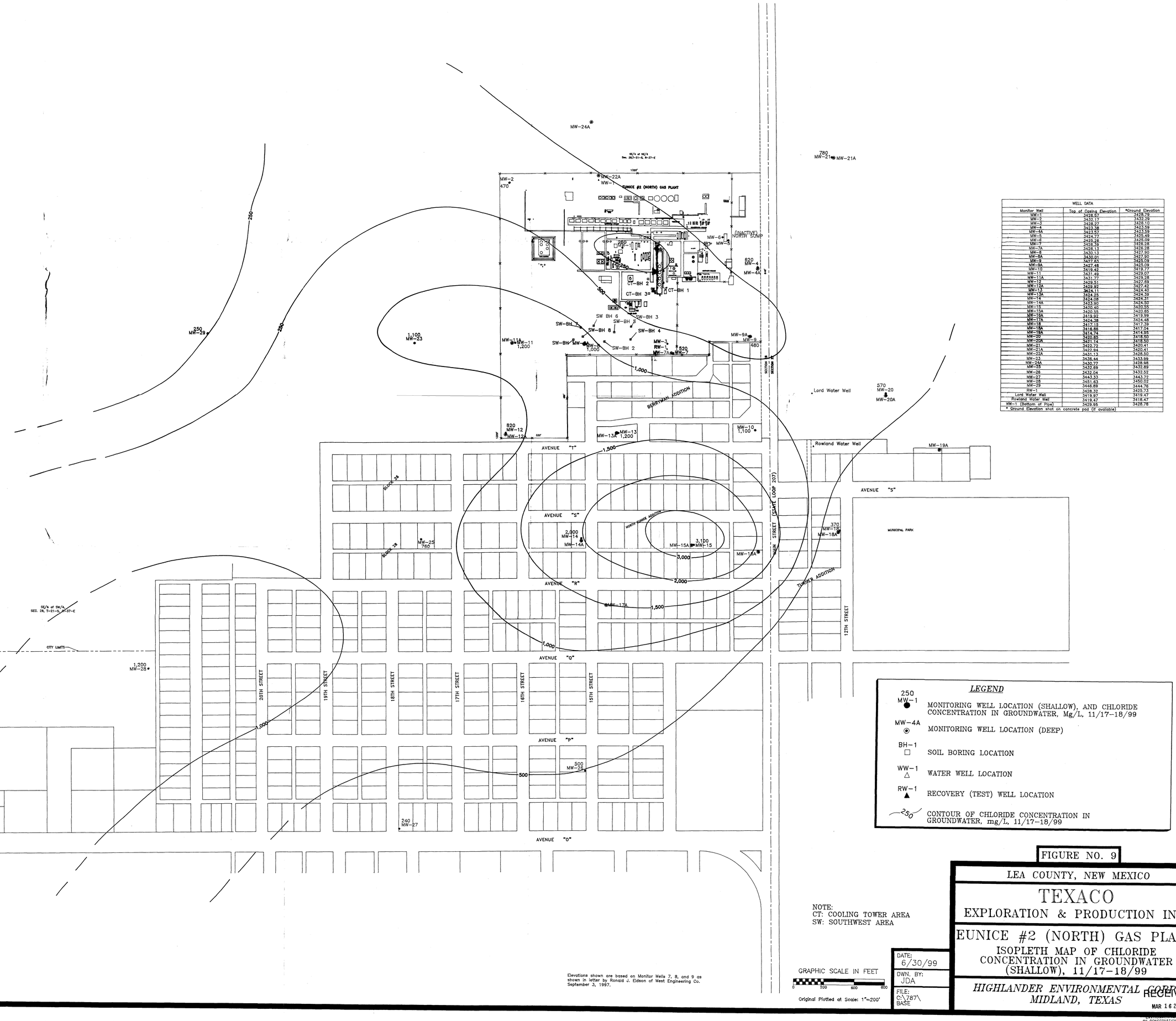
FIGURE NO. 8

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
ISOPLETH MAP OF CHROMIUM CONCENTRATION IN GROUNDWATER (DEEP) 1/18/99-6/23/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS



WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.67	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3428.10
MW-4	3423.36	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.77	3425.48
MW-6	3425.26	3426.09
MW-7	3428.33	3428.28
MW-7A	3426.13	3426.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.85
MW-16A	3419.92	3419.99
MW-17A	3424.38	3424.48
MW-18	3417.15	3417.39
MW-18A	3418.86	3417.04
MW-19A	3415.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.99
MW-24A	3430.77	3428.98
MW-25	3432.69	3432.89
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3418.97	3419.47
Rowland Water Well	3419.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- 250 / MW-1 — MONITORING WELL LOCATION (SHALLOW), AND CHLORIDE CONCENTRATION IN GROUNDWATER, Mg/L, 11/17-18/99
- MW-4A — MONITORING WELL LOCATION (DEEP)
- BH-1 — SOIL BORING LOCATION
- WW-1 — WATER WELL LOCATION
- RW-1 — RECOVERY (TEST) WELL LOCATION
- 250 — CONTOUR OF CHLORIDE CONCENTRATION IN GROUNDWATER, mg/L, 11/17-18/99

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

FIGURE NO. 9

LEA COUNTY, NEW MEXICO

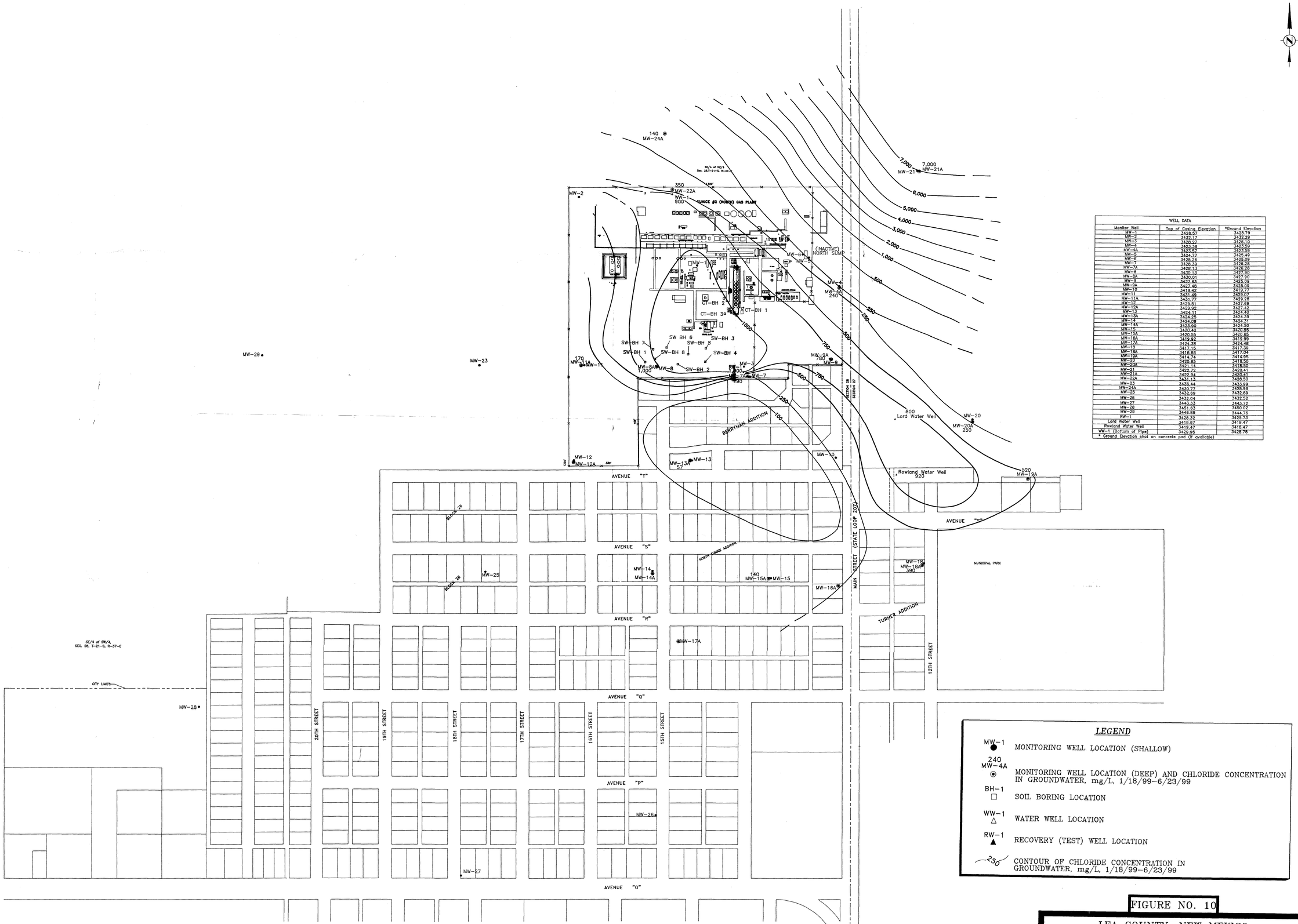
TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
ISOPLETH MAP OF CHLORIDE CONCENTRATION IN GROUNDWATER (SHALLOW), 11/17-18/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 6/30/99
DWN. BY: JDA
FILE: C:\787\BASE

RECEIVED
MAR 16 2000
ENVIRONMENTAL
OIL CONSERVATION DIVISION



WELL DATA		
Monitor Well	Top of Casing Elevation	*Ground Elevation
MW-1	3428.52	3428.79
MW-2	3432.17	3432.29
MW-3	3428.27	3428.10
MW-4	3423.38	3423.59
MW-4A	3423.57	3423.59
MW-5	3424.27	3425.49
MW-6	3425.26	3425.09
MW-7	3428.39	3428.28
MW-7A	3428.13	3428.28
MW-8	3430.13	3427.90
MW-8A	3430.01	3427.90
MW-9	3427.63	3425.09
MW-9A	3427.48	3425.09
MW-10	3419.42	3419.77
MW-11	3431.49	3429.07
MW-11A	3431.77	3429.28
MW-12	3429.51	3427.69
MW-12A	3429.92	3427.42
MW-13	3424.11	3424.40
MW-13A	3424.25	3424.39
MW-14	3424.08	3424.31
MW-14A	3423.90	3424.50
MW-15	3420.40	3420.55
MW-15A	3420.55	3420.65
MW-16A	3419.92	3419.89
MW-17A	3424.38	3424.48
MW-18	3417.15	3417.39
MW-18A	3416.86	3417.04
MW-19A	3414.74	3414.95
MW-20	3420.85	3418.50
MW-20A	3421.14	3418.50
MW-21	3422.72	3420.41
MW-21A	3422.94	3420.41
MW-22A	3431.13	3428.50
MW-23	3436.44	3433.99
MW-24A	3430.77	3428.98
MW-25	3432.89	3432.89
MW-26	3432.04	3432.52
MW-27	3443.33	3443.72
MW-28	3451.63	3450.02
MW-29	3446.89	3444.76
RW-1	3428.32	3425.73
Lord Water Well	3419.97	3419.47
Rowland Water Well	3419.47	3418.47
WW-1 (Bottom of Pipe)	3429.95	3428.78
* Ground Elevation shot on concrete pad (if available)		

LEGEND

- MW-1 ● — MONITORING WELL LOCATION (SHALLOW)
- 240 MW-4A ◉ — MONITORING WELL LOCATION (DEEP) AND CHLORIDE CONCENTRATION IN GROUNDWATER, mg/L, 1/18/99-6/23/99
- BH-1 □ — SOIL BORING LOCATION
- WW-1 △ — WATER WELL LOCATION
- RW-1 ▲ — RECOVERY (TEST) WELL LOCATION
- 250 — CONTOUR OF CHLORIDE CONCENTRATION IN GROUNDWATER, mg/L, 1/18/99-6/23/99

NOTE:
CT: COOLING TOWER AREA
SW: SOUTHWEST AREA

Elevations shown are based on Monitor Wells 7, 8, and 9 as shown in letter by Ronald J. Eidson of West Engineering Co. September 3, 1997.

GRAPHIC SCALE IN FEET
0 200 400 600
Original Plotted at Scale: 1"=200'

FIGURE NO. 10

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION INC.

EUNICE #2 (NORTH) GAS PLANT
ISOPLETH MAP OF CHLORIDE CONCENTRATION IN GROUNDWATER (DEEP) 1/18/99-6/23/99

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 12/20/99
DWN. BY: JDA
FILE: C:\787\NORTH\ICCG-D-12-99

APPENDICES

APPENDIX A

NMOCD Correspondence

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

January 13, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-589

Mr. Robert Foote
Texaco Exploration and Production, Inc.
P.O. Box 2100
Denver, Colorado 80201

RE: GROUND WATER INVESTIGATIONS
TEXACO EUNICE NORTH GAS PLANT

Dear Mr. Foote:

The New Mexico Oil Conservation Division (OCD) has reviewed Texaco Exploration and Production, Inc.'s (TEPI) December 17, 1998 "WORK PLAN FOR DELINEATION OF GROUNDWATER CONTAMINATE PLUME, TEXACO EXPLORATION AND PRODUCTION, INC., FORMER EUNICE #2 (NORTH) GAS PLANT, EUNICE, NEW MEXICO" which was submitted on behalf of TEPI by their consultant Highlander Environmental Corp. This document contains TEPI's work plan for additional investigation of the extent of ground water contamination at TEPI's Eunice North Gas Plant in Lea County, New Mexico.

The above referenced work plan is **approved**. Please be advised that OCD approval does not relieve TEPI of liability if the work plan fails to define the extent of contamination or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve TEPI of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Wayne Price, OCD Hobbs District Office
Mark Larson, Highlander Environmental Corp.
Robert Lord
Bob Patterson, Rowland Trucking Co.

APPENDIX B

Geologic and Well Completion Logs

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-11

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3429.07		
		Sand and Sandstone Tan, fine grained, with traces of reddish clay at 5'			Locking Above-Grade Cover and Cap
		Interbedded with sandstone from 10-20'			4" Sch. 40 PVC Riser (Threaded)
		Sandstone dense from 38 to 40'			
20					Cement/Bentonite Grout
		Well sorted sand below 60', loose			
40					Bentonite Chips
					8-16 Silica Sand
					4" Sch. 40 PVC Screen, 0.02" Slot
					Depth-to-Water: 51.16' BGS
60					(11/16/99)
			3362.57		4" Sch. 40 PVC Cap (Threaded)
		TD: 66.5'			
80					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 06-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-12

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3427.69		
		Sand and Sandstone Tan and brown, fine grained, with traces of caliche at 5'			Locking Above-Grade Cover and Cap
					4" Sch. 40 PVC Riser (Threaded)
		Interbedded with sandstone and traces of caliche from 10-30'			
20					Cement/Bentonite Grout
40					Bentonite Chips
					8-16 Silica Sand
					Depth-to-Water: 49.3' BGS (11/16/99)
60					4" Sch. 40 PVC Screen, 0.02" Slot
			3362.69		4" Sch. 40 PVC Cap (Threaded)
		TD: 66.5'			
80					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 11-Feb-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-14

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3424.31		
		Sand and Sandstone Tan and brown, fine grained, with traces of caliche			Water-Tight Below-Grade Cover and Locking Cap
		Interbedded with sandstone and traces of caliche from 10-30'			4" Sch. 40 PVC Riser (Threaded)
20					Cement/Bentonite Grout
40					Bentonite Chips
					Depth-to-Water: 45.45' BGS
					8-16 Silica Sand
					(11/16/99)
60					4" Sch. 40 PVC Screen, 0.02" Slot
			3359.31		4" Sch. 40 PVC Cap (Threaded)
		TD: 65'			
80					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 06-May-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-15

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3420.55		
		Sand and Sandstone Tan and brown, fine grained, with traces of caliche			Water-Tight Below-Grade Cover and Locking Cap
		Interbedded with sandstone and dense caliche from 10-20'			4" Sch. 40 PVC Riser (Threaded)
20		Interbedded loose sand and dense sandstone below 20'			Cement/Bentonite Grout
					Bentonite Chips
					8-16 Silica Sand
40					4" Sch. 40 PVC Screen, 0.02" Slot
					Depth-to-Water: 41.61' BGS (11/16/99)
			3365.55		4" Sch. 40 PVC Cap (Threaded)
		TD: 55'			
60					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 06-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-18

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3417.39		
		Sand and Sandstone Tan and brown, fine grained, with traces of caliche			Water-Tight Below-Grade Cover and Locking Cap
		Interbedded with sandstone and dense caliche from 10-20'			4" Sch. 40 PVC Riser (Threaded)
20		Interbedded loose sand and dense sandstone below 20'			Cement/Bentonite Grout
					Bentonite Chips
					8-16 Silica Sand
					Depth-to-Water: 38.06' BGS (11/16/99)
40					4" Sch. 40 PVC Screen, 0.02" Slot
					4" Sch. 40 PVC Cap (Threaded)
			3359.39		
60		TD: 55'			

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 06-May-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-20

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3418.5		
		Sand and Sandstone Tan and brown, fine grained, with traces of dense caliche			Above-Grade Cover and Locking Cap
		Interbedded sandstone and dense caliche from 10-20'			4" Sch. 40 PVC Riser (Threaded)
20		Interbedded loose sand and dense sandstone below 20'			Cement/Bentonite Grout
					Bentonite Chips
					4" Sch. 40 PVC Screen, 0.02" Slot
40					Depth-to-Water: 42.23' BGS (11/16/99)
					8-16 Silica Sand
			3363.5		4" Sch. 40 PVC Cap (Threaded)
		TD: 55'			
60					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 05-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-20A

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
		Ground Surface	3418.5		
0		*Sand and Sandstone* Tan fine grained sand, with traces of caliche from 0 to 10 feet			Locking Above-Grade Cover and Cap
		Dense caliche, interbedded with sandstone from 10 to 20 feet			
20		Interbedded sandstone and loose sand from 20 to 60 feet			4" Sch. 40 PVC Riser (Threaded)
		Loose sand, with traces of gravel from 63 to 65 feet			Cement/Bentonite Grout
40					Depth-to-Water: 42.06' BGS (11/16/99)
60			3353.5		Bentonite Chips
		Gravelly Sand gravel and fine grained sand, with traces of brown and re clay			8-16 Silica Sand
					4" Sch. 40 PVC Screen, 0.02" Slot
80			3338.5		4" Sch. 40 PVC Cap (Threaded)
		Clay red and brown clay (redbed)			
		TD: 81'			
100					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 05-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-21

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev	Well Construction	Remarks
0		Ground Surface	3420.41		
		Sand and Sandstone Tan, fine grained sand, with traces of caliche from 0 to 10 feet			Locking Above-Grade Cover and Cap
		Dense caliche, interbedded with sandstone from 10 to 20 feet			4" Sch. 40 PVC Riser (Threaded)
20		Interbedded with sandstone and loose sand from 20 to 60 feet			Cement/Bentonite Grout
					Bentonite Chips
40					8-16 Silica Sand
					Depth-to-Water: 45.51' BGS (11/16/99)
					4" Sch. 40 PVC Screen, 0.02" Slot
			3360.41		4" Sch. 40 PVC Cap (Threaded)
60		TD: 55'			

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 07-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-21A

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3420.41		
		Sand and Sandstone Tan fine grained sand, with traces of caliche from 0 to 10 feet			Locking Above-Grade Cover and Cap
		Dense caliche, interbedded with sandstone from 10 to 20 feet			
20		Interbedded sandstone and loose sand from 20 to 60 feet			4" Sch. 40 PVC Riser (Threaded)
		Loose sand, with traces of gravel from 63 to 65 feet			Cement/Bentonite Grout
40					Depth-to-Water: 45.88' BGS (11/16/99)
60			3355.41		
		Gravelly Sand gravel and fine grained sand, with traces of brown and re clay	3345.41		Bentonite Chips
		Clay Rredbed - clay			8-16 Silica Sand
80			3335.41		4" Sch. 40 PVC Screen, 0.02" Slot
		TD: 81'			4" Sch. 40 PVC Cap (Threaded)
100					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 06-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-22A

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3428.5		
		Sand and Sandstone Tan, fine grain sand,			Locking Above-Grade Cover and Cap
		Interbedded with dense caliche and sandstone from 10 to 30 feet			
20		Interbedded dense sandstone and loose sand from 30 to 80 feet			4" Sch. 40 PVC Riser (Threaded)
					Cement/Bentonite Grout
40		gravel at 88'			
		sand and gravel , with traces of clay from 90 to 105 feet			Depth-to-Water: 54.66' BGS (11/16/99)
60					
		clay (redbed) at 105 feet			
80					Bentonite Chips
					4" Sch. 40 PVC Screen, 0.02" Slot
100					8-16 Silica Sand
			3323.5		4" Sch. 40 PVC Cap (Threaded)
		TD: 105'			

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 06-Jan-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-23

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3433.99		
		Caliche 7.5YR 7/3, pink, fill			Locking Above-Grade Cover and Cap
		Sand 7.5YR 5/6 to 6/6, strong brown to reddish yellow, very fine grained quartz sand, dry, loose	3428.99		4" Sch. 40 PVC Riser (Threaded)
		Caliche 7.5YR 7/3, pink, sandy, moderately hard below 15 feet			
20			3413.99		Cement/Bentonite Grout
		Sandstone 7.5YR 5/6 to 5YR 5/6, strong brown to reddish yellow, very fine grained quartz sand, soft from 20 to 28 feet, interbedded with caliche from 23 to 25 feet, hard below 28 feet			
40					Bentonite Chips
					8-16 Silica Sand
					4" Sch. 40 PVC Screen, 0.02" Slot
					Depth-to-Water: 55.97' BGS (11/16/99)
60					
			3367.49		4" Sch. 40 PVC Cap (Threaded)
		TD: 67'			

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 16-June-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-24A

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3428.98		
		Caliche 7.5YR 7/3, pink, fill	3422.98		Locking Above-Grade Cover and Cap
		Sand 7.5YR 5/6 to 6/6, strong brown to reddish yellow, very fine grained quartz sand, dry, loose			
20		*Caliche* 7.5YR 7/3, pink, sandy, moderately hard	3408.98		
		Sandstone 7.5YR 5/6 to 5YR 5/6, strong brown to reddish yellow, very fine grained quartz sand, moderately well cemented, interbedded with minor clay units			
40		Very well cemented from 33 to 35 feet, 44 to 47 feet and 57 to 59 feet			4" Sch. 40 PVC Riser (Threaded)
					Depth-to-Groundwater: 52.51' BGS (11/16/99)
60					Cement/Bentonite Grout
80			3348.98		Bentonite Chips
		Sandy Clay 7.5YR 5/6 to 5YR 5/6, yellowish red to red, very fine grained quartz sand, medium plasticity, soft	3338.98		8-16 Silica Sand
		Gravelly Clay 7.5YR 5/6 to 5YR 5/6, yellowish red to red, fine to coarse grained quartz sand, gravel to 0.04', round			4" Sch. 40 PVC 0.02" Slot Screen 4" Sch. 40 PVC Cap (Threaded)
100			3323.98		
		Clay 2.5YR 4/6 to 5YR 5/6, red, firm, silty			
		TD: 105'			
120					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 16-June-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-25

Enclosure: 1 of 1

Engineer: IT

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3432.36		
		Sand and Sandstone Tan and brown, fine grained, with traces of caliche at 5'			Locking Above-Grade Cover and Cap
					4" Sch. 40 PVC Riser (Threaded)
		Interbedded with sandstone and traces of caliche from 10-30'			
20					Cement/Bentonite Grout
40					Bentonite Chips
					8-16 Silica Sand
					Depth-to-Water: 53,43' BGS (11/16/99)
60					4" Sch. 40 PVC Screen, 0.02" Slot
			3367.36		4" Sch. 40 PVC Cap (Threaded)
		TD: 65'			
80					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 07-May-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-26

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3432.52		
		Silty Sand 7.5YR 5/4 to 5/6, reddish brown to yellowish red, very fine grained quartz sand, interbedded with clay and caliche	3415.52		Below-Grade Cover and Water-Tight Locking Cap
20		*Sand* 7.5YR 6/4 to 6/6, light brown to reddish yellow, very fine grained quartz sand, interbedded with caliche, poorly sorted	3401.52		4" Sch. 40 PVC Riser (Threaded) Cement/Bentonite Grout
40		*Caliche* 7.5YR 7/3 to 7/4, pink, indurated, to interbedded with fine grained quartz sand	3384.52		Bentonite Chips 8-16 Silica Sand
		Sand 7.5YR 6/4 to 6/6, light brown to reddish brown, very fine to fine grained quartz sand interbedded with caliche, poorly sorted, round			4" Sch. 40 PVC Screen, 0.02: slot Depth-to-Water: 53.43 Feet BGS (11/16/99)
60			3368.52		4" Sch. 40 PVC Cap (Threaded)
		TD: 67'			

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 27-Oct-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-27

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3443.72		
		Silty Sand 5YR 5/6 to 5/8, yellowish red, very fine to fine grained quartz sand, poorly sorted, round	3439.72		Below-Grade Cover and Water-Tight Locking Cap
		Caliche 7.5YR 7/3 to 7/4, pink, indurated to interbedded with fine grained quartz sand, poorly sorted	3436.72		
20		*Sandstone* 7.5YR 7/3 to 7/4, pink, very fine to fine grained quartz sand, moderately well cemented, poorly sorted			4" Sch. 40 PVC Riser (Threaded)
			3411.72		Cement/Bentonite Grout
		Silty-Clayey Sand 7.5YR 6/3 to 6/4, light brown, very fine to fine grained quartz sand, round, poorly to moderately sorted			
40					Bentonite Chips
					8-16 Silica Sand
					4" Sch. 40 PVC Screen, 0.02" Slot
60			3379.72		Depth-to-Water: 65.04 Feet BGS (11/16/99)
		Sand 5YR 5/6 to 4/6, yellowish red, very fine to fine grained quartz sand, round, poorly sorted, soft	3372.22		4" Sch. 40 PVC Cap (Threaded)
		TD: 71.5'			
80					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 27-Oct-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-28

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3450.02		
		Silty-Clayey Sand 5YR 4/6 to 5/6, yellowish red, very fine to fine grained quartz sand, poorly sorted, soft	3443.02		Locking Above-Grade Cover and Cap
		Interbedded with caliche below 5'			
		Silty Sand 5YR 5/6 to 5/8, yellowish red, very fine to fine grained quartz sand, round, poorly sorted, round	3430.02		
20		*Caliche* 7.5YR 6/4 to 7/4, light brown, to pink, indurated from 20 to 23', interbedded with sand below 23', very fine to fine graqined quartz sand	3426.02		4" Sch. 40 PVC Riser (Threaded)
		Silty Sand 7.5YR 6/3 to 6/4, light brown, very fine to fine grained quartz sand, soft, poorly sorted			Cement/Bentonite Grout
40			3399.02		
60		*Sandstone* 7.5YR 6/3 to 6/4, light brown, very fine to fine grained quartz sand, moderately well cemented, poorly to moderately sorted, round	3380.02		Bentonite Chips 4" Sch. 40 PVC Screen, 0.02" Slot 8-16 Silica Sand Depth-to-Water: 71.91 Feet BGS (11/16/99)
80		*Silty Sand* 5YR 5/6 to 6/6, yellowish red to reddish yellow, very fine to medium grained quartz sand, poorly sorted, round, soft	3365.02		4" Sch. 40 PVC Cap (Threaded)
		TD: 85'			
100					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 02-Nov-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice # 2 (North) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: Lea County, New Mexico

Well ID: MW-29

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev.	Well Construction	Remarks
0		Ground Surface	3444.76		
		Caliche Fill materiaql for pad construction	3439.76		Locking Above-Grade Cover and Cap
		Silty Sand 5YR 5/4 to 5/6, reddish brown to yellowish red, very fine to fine grained quartz sand, poorly sorted, round			
		Silty-Clayey Sand 5YR 6/4 to 6/6, light reddish brown to reddish yellow, very fine to fine grained quartz sand, interbedded with clay and thin caliche units	3428.76		
20		*Sandstone* 5YR 7/3 to 7/4, pink, very fine to fine grained quartz sand, round, moderately sorted, interbedded with thin caliche units, moderately hard	3414.76		4" Sch. 40 PVC Riser (Threaded) Cement/Bentonite Grout
		Sand 7.5YR 6/4, light reddish brown, very fine to fine grained quartz sand, poorly sorted, minor caliche	3404.76		
40					Bentonite Chips
		Sandstone 5YR 5/4 to 4/4, reddish brown, very fine grained quartz sand, moderately well sorted and cemented			8-16 Silica Sand 4" Sch. 40 PVC Screen, 0.02" Slot Depth-to-Water: 66.49' BGS (11/16/99)
60					
80		TD: 80'	3364.76		4" Sch. 40 PVC Cap (Threaded)
100					

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (Water)

Drill Date: 11-Nov-99

Highlander Environmental
1910 N. Big Spring
Midland, Texas 79705
(915) 682-4559

Hole Size: 7 7/8"

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 787

Project: Eunice #2 (North) Gas Plant

Client: Texaco Exploration and Production, Inc.

Location: Eunice, New Mexico

Borehole #: RW-1

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE | SAMPLE

Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft (20 40 60 80)	Well Data	Remarks
0		Elevation: 3425.73	0							
		Sand 7.5YR 5/6, yellowish red, very fine to fine grained quartz sand, poorly sorted, silty, dry	425.73 4 421.73							Above-grade Cover
5										Sch. 40 PVC Riser 6" (Threaded)
10		**Caliche** 7.5YR 7/6, reddish yellow, indurated, hard, some sand								
15			19							
20		**Sand** 7.5YR 6/6, reddish yellow, very fine to fine grained quartz sand, poorly sorted Minor beds of moderately cemented sandstone, approximately 1' thick, below 25 feet	406.73							Cement/Bentonite Grout
25										
30										
35										Bentonite Chips
40										
45										
50										Sch. 40 PVC Screen 6" (0.020" Slot)
55										
60										
65										
70										
75										
80			83							8-16 Silica Sand
85		**Chert** 2.5YR 4/6, red, silicious, hard	342.73 87							
90		**Sand** 7.5YR 6/6, reddish yellow, very fine to fine grained quartz sand, poorly sorted, loose	338.73							
95										
100										
105										Sch. 40 PVC Cap 6" (Threaded)
			108.4396							
110		**Shale** 2.5YR 4/6, red, silty, soft	317.2904 314.73							
115		TD: 111 Feet								

Drilled By: Scarborough Drilling, Inc.

Drill Method: Rotary (water)

Drill Date: 13-Jan-99

Highlander Environmental Corp.
1910 N. Big Spring Street
Midland, Texas
(915) 682-4559

Hole Size: 10"

Datum: Geodetic

Sheet: 1 of 1

APPENDIX C

Analytical Laboratory Reports

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9901000302
Sampling Date: 1/20/99
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Jan 26, 1999
Date Rec: 1/22/99
Project: 787
Proj Name: Texaco
Proj Loc: Texaco North Eunice Gas Plant, NM

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
117313	MW-1	Water	0.006	0.019	0.029	0.029	0.083
117314	MW-1 Duplicate	Water	0.006	0.017	0.028	0.024	0.075
117315	Trip Blank	Water	<0.001	<0.001	<0.001	<0.001	<0.001
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.102	0.099	0.096	0.283	
RPD			1	0	5	6	
% Extraction Accuracy			102	100	100	100	
% Instrument Accuracy			102	99	96	94	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	1/25/99	EPA 8021B	1/25/99	RC	0.100 ea	0.1 ea

BL

Director, Dr. Blair Leftwich

1-26-99

Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 2, 1999
Receiving Date: 1/22/99
Sample Type: Water
Project No: 787
Project Location: N/A

Sampling Date: 1/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Texaco

TA#	Field Code	DISSOLVED Cr (mg/L)
T117307	MW-21A	<0.05
ICV		1.0
CCV		1.0
Reporting Limit		0.05
RPD		0
% Extraction Accuracy		90
% Instrument Accuracy		100

CHEMIST: Cr: RR
METHODS: EPA SW 846-3015, 6010B.
DISSOLVED METALS SPIKE: 1.0 mg/L Cr
DISSOLVED METALS CV: 1.0 mg/L Cr

Director, Dr. Blair Leftwich

2-2-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 2, 1999
Receiving Date: 1/22/99
Sample Type: Water
Project No: 787
Project Location: N/A

Project Name: Texaco
Sampling Date: 1/20/99
Sample Condition: Intact & Cool
Sample Received by: VW

TA#	Field Code	DISSOLVED As (mg/L)	DISSOLVED Se (mg/L)	DISSOLVED Cd (mg/L)	DISSOLVED Cr (mg/L)	DISSOLVED Pb (mg/L)	DISSOLVED Ag (mg/L)	DISSOLVED Ba (mg/L)	DISSOLVED Hg (mg/L)
T117308	MW-13A	<0.10	<0.05	<0.01	<0.05	<0.05	<0.05	<1.0	<0.0002
T117309	WW-1	<0.10	<0.05	<0.01	0.69	<0.05	<0.05	<1.0	<0.0002
T117310	MW-2	<0.10	<0.05	<0.01	<0.05	<0.05	<0.05	<1.0	<0.0002
T117311	MW-11A	<0.10	<0.05	<0.01	<0.05	<0.05	<0.05	<1.0	<0.0002
T117312	MW-11	<0.10	<0.05	<0.01	4.6	<0.05	<0.05	<1.0	<0.0002
T117313	MW-1	<0.10	<0.05	<0.01	<0.05	<0.05	<0.05	<1.0	<0.0002
ICV		0.20	1.0	0.94	1.0	0.94	0.98	0.90	0.00090
CCV		0.20	1.0	0.98	1.0	0.95	0.96	0.99	0.00091
Reporting Limit		0.05	0.10	1.0	0.01	0.05	0.05	0.05	0.0002
RPD		0	5	5	5	5	6	0	0
% Extraction Accuracy		90	100	95	90	0	85	100	86
% Instrument Accuracy		97	100	100	98	100	95	99	91
Prep Date:		01/22/99	01/22/99	01/22/99	01/22/99	01/22/99	01/22/99	01/22/99	01/25/99
Analysis Date:		01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/26/99

CHEMIST: Ag, As, Ba, Cd, Cr, Pb, Se: RR
METHODS: EPA 200.7
DISSOLVED METALS SPIKE: 2.0 mg/L As, Ba, Cd, Cr, Pb, Se .40: Ag Hg 0.0010 mg/L
DISSOLVED METALS CV: 1.0 mg/L As, Ba, Cd, Cr , Pb, Se, .20: Ag Hg. CV 0.0010 mg/L

Director, Dr. Blair Leftwich

2-2-99
Date

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E-Mail: lab@traceanalysis.com

February 2, 1999
Receiving Date: 1/22/99
Sample Type: Water
Project No: 787
Project Location: N/A
Project Name: Texaco

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 01/23/99
Analysis Date: 02/01/99
Sampling Date: 1/20/99
Sample Condition: Intact & Cool
Sample Received by: VW

TA#	Field Code	DISSOLVED Ag (mg/L)	DISSOLVED As (mg/L)	DISSOLVED Ba (mg/L)	DISSOLVED Cd (mg/L)	DISSOLVED Cr (mg/L)	DISSOLVED Pb (mg/L)	DISSOLVED Se (mg/L)	DISSOLVED Hg (mg/L)
T117314	MW-1(DUP)	<0.05	<0.10	<1.0	<0.01	<0.05	<0.05	<0.05	<0.0002
ICV		0.20	1.0	0.94	1.0	0.94	0.98	0.90	0.00090
CCV		0.20	1.0	0.98	1.0	0.95	0.96	0.99	0.00091
Reporting Limit		0.05	0.10	1.0	0.01	0.05	0.05	0.05	0.0002
RPD		5	0	0	5	0	0	0	0
% Extraction Accuracy		78	90	85	85	80	80	85	86
% Instrument Accuracy		100	100	96	100	94	97	94	91
Prep Date:		01/23/99	01/23/99	01/23/99	01/23/99	01/23/99	01/23/99	01/23/99	01/25/99
Analysis Date:		02/01/99	02/01/99	02/01/99	02/01/99	02/01/99	02/01/99	02/01/99	01/26/99

CHEMIST: Ag, As, Ba, Cd, Cr, Pb, Se: RR Hg: BP
METHODS: EPA 200.7, 7470A
DISSOLVED METALS SPIKE: 2.0 mg/L As, Ba, Cd, Cr, Pb, Se .40: Ag Hg SPIKE: 0.0010
DISSOLVED METALS CV: 1.0 mg/L As, Ba, Cd, Cr , Pb, Se, .20: Ag Hg CV: 0.0010

Director, Dr. Blair Leftwich

2-2-99
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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 2, 1999
Receiving Date: 01/22/99
Sample Type: Water
Project No: 787
Project Location:

Prep Date: 01/22/99
Analysis Date: 01/27/99
Sampling Date: 01/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Texaco

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117308	MW-13A	5.4	24	43	102	206
T117309	WW-1	15	164	294	436	1,400
T117310	MW-2	8.6	61	135	157	588
T117311	MW-11A	10	47	78	139	194
T117312	MW-11	31	105	516	600	1,720
T117313	MW-1	9.2	74	238	468	900
ICV		25	25	25	26	---
CCV		26	26	25	26	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		2	3	0	1	---
% Extraction Accuracy		112	100	105	89	---
% Instrument Accuracy		102	102	100	104	---

METHODS: EPA SW 846-6010B, 3015, SM 2340B.
CHEMIST: RR
SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
CV: 25 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

2-2-99
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E-Mail: lab@traceanalysis.com

February 2, 1999
Receiving Date: 01/22/99
Sample Type: Water
Project No: 787
Project Location:

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Texaco

TA#	FIELD CODE	FLUORIDE (mg/L)	CHLORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	SULFATE (mg/L)	N03-N (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117308	MW-13A	4.2	57	------	------	100	4.6	210	<1.00
T117309	WW-1	3.7	------	900	740	------	11	320	<1.00
T117310	MW-2	3.1	------	350	------	230	8.2	190	<1.00
T117311	MW-11A	3.5	170	------	280	------	4.9	160	<1.00
T117312	MW-11	3.8	------	990	1,200	------	10	260	40
T117313	MW-1	3.7	------	370	860	------	10	460	<1.00
T117314	MW-1 (Duplicate)	3.1	------	350	820	------	7.1	510	<1.00
ICV		2.45	11.46	11.63	11.49	11.81	4.81	2,180	980
CCV		2.57	11.44	11.79	11.72	11.70	4.80	2,220	940
PREP DATE		01/25/99	01/25/99	01/26/99	01/26/99	01/25/99	01/25/99	01/25/99	
ANALYSIS DATE		01/25/99	01/25/99	01/26/99	01/26/99	01/25/99	01/25/99	01/25/99	
RPD		0	0	1	1	1	1	0	0
% Extraction Accuracy		95	92	97	93	93	92	----	----
% Instrument Accuracy		100	92	94	93	94	96	93	93
REPORTING LIMIT		0.1	0.5	0.5	0.5	0.5	0.2	1.00	1.00

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1.
CHEMIST: pH: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS ALKALINITY/TDS: MD
FLUORIDE SPIKE: 125 mg/L FLUORIDE. FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE SPIKE: 625 mg/L CHLORIDE. CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE. SULFATE CV: 12.5 mg/L SULFATE.

Director, Dr. Blair Leftwich

2-2-99
Date

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E-Mail: lab@traceanalysis.com

February 2, 1999
Receiving Date: 01/22/99
Sample Type: Water
Project No: 787
Project Location:

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Texaco

TA#	FIELD CODE	FLUORIDE (mg/L)	CHLORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	SULFATE (mg/L)	N03-N (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117308	MW-13A	4.2	57	------	------	100	4.6	210	<1.00
T117309	WW-1	3.7	------	900	740	------	11	320	<1.00
T117310	MW-2	3.1	------	350	------	230	8.2	190	<1.00
T117311	MW-11A	3.5	170	------	280	------	4.9	160	<1.00
T117312	MW-11	3.8	------	990	1,200	------	10	260	40
T117313	MW-1	3.7	------	370	860	------	10	460	<1.00
T117314	MW-1 (Duplicate)	3.1	------	350	820	------	7.1	510	<1.00
ICV		2.45	11.46	11.63	11.49	11.81	4.81	2,180	980
CCV		2.57	11.44	11.79	11.72	11.70	4.80	2,220	940
PREP DATE		01/25/99	01/25/99	01/26/99	01/26/99	01/25/99	01/25/99	01/25/99	
ANALYSIS DATE		01/25/99	01/25/99	01/26/99	01/26/99	01/25/99	01/25/99	01/25/99	
RPD		0	0	1	1	1	1	0	0
% Extraction Accuracy		95	92	97	93	93	92	----	----
% Instrument Accuracy		100	92	94	93	94	96	93	93
REPORTING LIMIT		0.1	0.5	0.5	0.5	0.5	0.2	1.00	1.00

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1.
CHEMIST: pH: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS ALKALINITY/TDS: MD
FLUORIDE SPIKE: 125 mg/L FLUORIDE.
CHLORIDE SPIKE: 625 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE.
FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE CV: 12.5 mg/L SULFATE.

Director, Dr. Blair Leftwich

2-2-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 4,1999
Receiving Date: 1/22/99
Sample Type: Water
Project No: 787
Project Location: NA

Prep Date: 1/26/99
Analysis Date: 1/26/99
Sampling Date: 1/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

CORRECTED

TA#	FIELD CODE	TDS (mg/L)
T117308	MW-13A	530
T117309	WW-1	2,800
T117310	MW-2	1,100
T117311	MW-11A	930
T117312	MW-11	3600
T117313	MW-1	2,400
T117314	MW-1(DUP)	2,200
RPD		3
% Instrument Accuracy		98

Corrected field code MW-11A to MW-11 for sample T117312.

METHODS: EPA 160.1.
CHEMIST: RS

Director, Dr. Blair Leftwich

2-4-99
DATE

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 1, 1999
Receiving Date: 1/22/99
Sample Type: Water
Project No: 787
Project Location: NA

Prep Date: 1/22/99
Analysis Date: 1/22/99
Sampling Date: 1/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

TA#	Field Code	pH (s.u.)
T117308	MW-13A	7.9
T117309	WW-1	7.0
T117310	MW-2	7.8
T117311	MW11-A	7.9
T117312	MW-11	9.2
T117313	MW-1	7.2
T117314	MW-1(DUP)	7.1
ICV		4.0
CCV		7.0
RPD		0
% Extraction Accuracy		---
% Instrument Accuracy		100

METHODS: EPA 150.1.
CHEMIST: SA

BL

Director, Dr. Blair Leftwich

2-1-99

DATE

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9901000316
Sampling Date: 1/21/99
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Jan 26, 1999
Date Rec: 1/23/99
Project: 787
Proj Name: Texaco
Proj Loc: Texaco North Eunice Gas Plant, NM

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
117391	MW-4A	Water	<0.001	<0.001	<0.001	<0.001	<0.001
117392	MW-4	Water	<0.001	<0.001	<0.001	<0.001	<0.001
117393	MW-4 Duplicate	Water	<0.001	<0.001	<0.001	<0.001	<0.001
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.102	0.099	0.096	0.283	
RPD			1	0	5	6	
% Extraction Accuracy			102	100	100	100	
% Instrument Accuracy			102	99	96	94	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	1/25/99	EPA 8021B	1/25/99	RC	0.100 ea	0.1 ea

Director, Dr. Blair Leftwich

1-26-99
Date

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E-Mail: lab@traceanalysis.com

February 01, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

DISSOLVED METALS (mg/L)

TA#	Field Code	As	Se	Cd	Cr	Pb	Ag	Ba	Hg
T117391	MW-4A	<0.10	<0.05	<0.01	0.05	<0.05	<0.05	<1.0	<0.0002
T117392	MW-4	<0.10	<0.05	<0.01	0.09	<0.05	<0.05	<1.0	<0.0002
T117393	MW-4 (Duplicate)	<0.10	<0.05	<0.01	0.09	<0.05	<0.05	<1.0	<0.0002
ICV		1.0	1.0	1.0	1.0	1.0	0.20	1.0	0.00090
CCV		1.0	1.0	1.0	1.0	1.0	0.20	1.0	0.00091
Reporting Limit		0.10	0.05	0.01	0.05	0.05	0.05	1.0	0.0002
RPD		0	0	0	0	0	3	0	0
% Extraction Accuracy		95	100	95	95	90	92	100	86
% Instrument Accuracy		100	100	100	100	100	100	100	91
PREP DATE		01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99
ANALYSIS DATE		01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/26/99

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: BP
METHODS: EPA SW 846-3005A, 6010B, 7470A.
DISSOLVED METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.

BR
Director Dr. Blair Leftwich

2-1-99
Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

February 01, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

DISSOLVED METALS (mg/L)

TA#	Field Code	As	Se	Cd	Cr	Pb	Ag	Ba	Hg
T117394	MW-9A	<0.10	<0.05	<0.01	1.0	<0.05	<0.05	<1.0	<0.0002
T117395	MW-9	<0.10	<0.05	<0.01	0.06	<0.05	<0.05	<1.0	<0.0002
T117396	MW-22A	<0.10	<0.05	<0.01	0.13	<0.05	<0.05	<1.0	<0.0002
ICV		1.0	1.0	1.0	1.0	1.0	0.20	1.0	0.00090
CCV		1.0	1.0	1.0	1.0	1.0	0.20	1.0	0.00097
Reporting Limit		0.10	0.05	0.01	0.05	0.05	0.05	1.0	0.0002
RPD		0	0	0	0	0	3	0	0
% Extraction Accuracy		95	100	95	95	90	92	100	91
% Instrument Accuracy		100	100	100	100	100	100	100	94
PREP DATE		01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99
ANALYSIS DATE		01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/26/99

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: BP
METHODS: EPA SW 846-3005A, 6010B, 7470A.
DISSOLVED METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.

Director Dr. Blair Leftwich

2-1-99
Date

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 01, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

DISSOLVED METALS (mg/L)

TA#	Field Code	As	Se	Cd	Cr	Pb	Ag	Ba	Hg
T117397	MW-7	<0.10	<0.05	<0.01	0.31	<0.05	<0.05	<1.0	<0.0002
T117398	MW-7A	<0.10	<0.05	<0.01	0.06	<0.05	<0.05	<1.0	<0.0002
ICV		1.0	1.0	1.0	1.0	1.0	0.20	1.0	0.00090
CCV		1.0	1.0	1.0	1.0	1.0	0.20	1.0	0.00097
Reporting Limit		0.10	0.05	0.01	0.05	0.05	0.05	1.0	0.0002
RPD		0	0	0	0	0	3	0	0
% Extraction Accuracy		95	100	95	95	90	92	100	91
% Instrument Accuracy		100	100	100	100	100	100	100	94
PREP DATE		01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99	01/25/99
ANALYSIS DATE		01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/26/99

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: BP
METHODS: EPA SW 846-3005A, 6010B, 7470A.
DISSOLVED METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.

Director, Dr. Blair Leftwich

2-1-99
Date

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 01, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Prep Date: 01/25/99
Analysis Date: 01/28/99
Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117391	MW-4A	10	40	74	124	350
T117392	MW-4	12	49	191	357	680
T117393	MW-4 (Duplicate)	12	49	198	362	696
T117394	MW-9A	21	148	319	542	1,400
T117395	MW-9	13	81	316	257	1,120
T117396	MW-22A	49	52	119	206	511
T117397	MW-7	13	71	288	530	590
T117398	MW-7A	12	38	84	174	366
ICV		26	25	23	26	---
CCV		24	23	23	25	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		1	1	2	1	---
% Extraction Accuracy		114	99	105	90	---
% Instrument Accuracy		100	96	92	102	---

METHODS: EPA 200.7, SM 2340B.
CHEMIST: RR
SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
CV: 25 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

2-1-99
Date

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: MB
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	TDS (mg/L)	pH (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	N03-N* (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117391	MW-4A	830	7.9	3.9	240	1.7	180	180	<1.0
T117392	MW-4	1,600	6.9	3.5	310	1.9	450	460	<1.0
ICV		---	7.0	2.5	11	0.157	11	1,240	980
CCV		---	7.0	2.4	11	0.157	11	1,160	1,000
REPORTING LIMIT		10	---	0.1	0.5	0.10	0.5	1.0	1.0
RPD		3	0	1	0	1	0	0	0
% Extraction Accuracy		---	---	94	91	113	91	---	---
% Instrument Accuracy		99	100	99	93	98	92	93	93
PREP DATE		01/26/99	01/23/99	01/25/99	01/25/99	01/28/99	01/25/99	01/26/99	
ANALYSIS DATE		01/26/99	01/23/99	01/25/99	01/25/99	01/28/99	01/25/99	01/26/99	

***NOTE: Samples were preserved past the 24 hour holding time.**

METHODS: EPA 160.1, 150.1, 300.0, 310.1.
CHEMIST: pH: MD/MS TDS: SA ALKALINITY: MD CHLORIDE/SULFATE/FLUORIDE/N03-N: JS
CHLORIDE SPIKE: 625 mg/L CHLORIDE. CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE. SULFATE CV: 12.5 mg/L SULFATE.
FLUORIDE SPIKE: 125 mg/L FLUORIDE. FLUORIDE CV: 2.5 mg/L FLUORIDE.
N03-N SPIKE: 4.00 mg/L N03-N. N03-N CV: 0.16 mg/L N03-N.

Director, Dr. Blair Leftwich

2-2-99
Date

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: MB
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	TDS (mg/L)	pH (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	N03-N* (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117393	MW-4 (Duplicate)	1,600	6.9	3.2	320	1.9	450	470	<1.0
ICV		---	7.0	2.5	11	0.157	11	1,240	980
CCV		---	7.0	2.4	11	0.157	11	1,160	1,000
REPORTING LIMIT		10	---	0.1	0.5	0.10	0.5	1.0	1.0
RPD		10	0	1	0	1	0	0	0
% Extraction Accuracy		---	---	94	91	113	91	---	---
% Instrument Accuracy		99	100	99	93	98	92	93	93
PREP DATE		01/27/99	01/23/99	01/25/99	01/25/99	01/28/99	01/25/99	01/26/99	
ANALYSIS DATE		01/27/99	01/23/99	01/25/99	01/25/99	01/28/99	01/25/99	01/26/99	

***NOTE: Samples were preserved past the 24 hour holding time.**

METHODS: EPA 160.1, 150.1, 300.0, 310.1.
CHEMIST: pH: MD/MS TDS: SA ALKALINITY: MD CHLORIDE/SULFATE/FLUORIDE/N03-N: JS
CHLORIDE SPIKE: 625 mg/L CHLORIDE. CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE. SULFATE CV: 12.5 mg/L SULFATE.
FLUORIDE SPIKE: 125 mg/L FLUORIDE. FLUORIDE CV: 2.5 mg/L FLUORIDE.
N03-N SPIKE: 4.00 mg/L N03-N. N03-N CV: 0.16 mg/L N03-N.

BR
Director, Dr. Blair Leftwich

2-2-99
Date

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E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: MB
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	TDS (mg/L)	pH (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	N03-N* (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117397	MW-7	2,500	7.4	2.8	550	4.7	850	240	<1.0
T117398	MW-7A	920	7.7	3.7	190	1.8	260	180	<1.0
ICV		---	7.0	2.4	11	0.157	11	1,240	980
CCV		---	7.0	2.4	11	0.157	11	1,160	1,000
REPORTING LIMIT		10	---	0.1	0.5	0.10	0.5	1.0	1.0
RPD		10	0	2	0	1	0	0	0
% Extraction Accuracy		---	---	98	91	113	90	---	---
% Instrument Accuracy		99	100	97	93	98	92	93	93
PREP DATE		01/27/99	01/23/99	01/26/99	01/26/99	01/28/99	01/26/99	01/26/99	
ANALYSIS DATE		01/27/99	01/23/99	01/26/99	01/26/99	01/28/99	01/26/99	01/26/99	

NOTE: Samples were preserved past the 24 hour holding time.

METHODS: EPA 160.1, 150.1, 300.0, 310.1.
CHEMIST: pH: MD/MS TDS: SA ALKALINITY: MD CHLORIDE/SULFATE/FLUORIDE/N03-N: JS
CHLORIDE SPIKE: 625 mg/L CHLORIDE. CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE. SULFATE CV: 12.5 mg/L SULFATE.
FLUORIDE SPIKE: 125 mg/L FLUORIDE. FLUORIDE CV: 2.5 mg/L FLUORIDE.
N03-N SPIKE: 4.00 mg/L N03-N. N03-N CV: 0.16 mg/L N03-N.

Director, Dr. Blair Leftwich

2-2-99
Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date: 01/21/99
Sample Condition: Intact & Cool
Sample Received by: MB
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	TDS (mg/L)	pH (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	N03-N* (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117394	MW-9A	2,930	7.1	3.0	780	7.0	950	220	<1.0
T117395	MW-9	2,000	7.6	3.6	410	5.5	700	240	<1.0
T117396	MW-22A	1,200	8.2	2.8	350	2.0	270	170	<1.0
ICV		---	7.0	2.4	12	0.157	11	1,240	980
CCV		---	7.0	2.4	11	0.157	11	1,160	1,000
REPORTING LIMIT		10	---	0.1	0.5	0.10	0.5	1.0	1.0
RPD		10	0	1	0	1	0	0	0
% Extraction Accuracy		---	---	94	92	113	91	---	---
% Instrument Accuracy		99	100	97	95	98	93	93	93
PREP DATE		01/27/99	01/23/99	01/26/99	01/26/99	01/28/99	01/26/99	01/26/99	
ANALYSIS DATE		01/27/99	01/23/99	01/26/99	01/26/99	01/28/99	01/26/99	01/26/99	

***NOTE: Samples were preserved past the 24 hour holding time.**

METHODS: EPA 160.1, 150.1, 300.0, 310.1.
CHEMIST: pH: MD/MS TDS: SA ALKALINITY: MD CHLORIDE/SULFATE/FLUORIDE/N03-N: JS
CHLORIDE SPIKE: 625 mg/L CHLORIDE. CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE. SULFATE CV: 12.5 mg/L SULFATE.
FLUORIDE SPIKE: 125 mg/L FLUORIDE. FLUORIDE CV: 2.5 mg/L FLUORIDE.
N03-N SPIKE: 4.00 mg/L N03-N. N03-N CV: 0.16 mg/L N03-N.

Director, Dr. Blair Leftwich

2-2-99
Date

Cation-Anion Balance Sheet

DATE: 2/2/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
117391	74	40	124	10	180.00	180	240	1.7	3.9	830	
117392	191	49	357	12	460.00	450	310	1.9	3.5	1600	
117393	198	49	362	12	470.00	450	320	1.9	3.2	1600	
117394	319	148	542	21	220.00	950	780	7	3	2930	
117395	316	81	257	13	240.00	700	410	5.5	3.6	2000	
117396	119	52	206	49	170.00	270	350	2	2.8	1200	
117397	288	71	530	13	240.00	850	550	4.7	2.8	2500	
117398	84	38	174	12	180.00	260	190	1.8	3.7	920	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
117391	3.69	3.29	5.39	0.26	3.60	3.75	6.77	0.121363	0.205296	12.63	14.44	13.37332842
117392	9.53	4.03	15.53	0.31	9.20	9.37	8.75	0.135641	0.18424	29.40	27.63	6.191404775
117393	9.88	4.03	15.75	0.31	9.40	9.37	9.03	0.135641	0.168448	29.97	28.10	6.427375131
117394	15.92	12.18	23.58	0.54	4.40	19.78	22.00	0.49973	0.15792	52.21	46.84	10.84434232
117395	15.77	6.67	11.18	0.33	4.80	14.57	11.57	0.392645	0.189504	33.95	31.52	7.404149732
117396	5.94	4.28	8.96	1.25	3.40	5.62	9.87	0.14278	0.147392	20.43	19.19	6.292946566
117397	14.37	5.84	23.06	0.33	4.80	17.70	15.52	0.335533	0.147392	43.60	38.50	12.43874986
117398	4.19	3.13	7.57	0.31	3.60	5.41	5.36	0.128502	0.194768	15.19	14.70	3.333517336

	EC/Cation	EC/Anion				
117391	1263.4	1444.4659	range	0	to	0
117392	2939.957	2763.3981	range	0	to	0
117393	2996.637	2810.0289	range	0	to	0
117394	5221.12	4684.045	range	0	to	0
117395	3394.593	3152.2249	range	0	to	0
117396	2043.16	1918.5072	range	0	to	0
117397	4360.133	3849.5425	range	0	to	0
117398	1519.458	1469.637	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.66	0.57	needs to be 0.55-0.77
#DIV/0!	0.54	0.58	needs to be 0.55-0.77
#DIV/0!	0.53	0.57	needs to be 0.55-0.77
#DIV/0!	0.56	0.63	needs to be 0.55-0.77
#DIV/0!	0.59	0.63	needs to be 0.55-0.77
#DIV/0!	0.59	0.63	needs to be 0.55-0.77
#DIV/0!	0.57	0.65	needs to be 0.55-0.77
#DIV/0!	0.61	0.63	needs to be 0.55-0.77

117391 98

316

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: Texaco

SITE MANAGER: M. Larson

PROJECT NO.: 787

PROJECT NAME: Eunice #2 (North)

PAGE: (OF:)

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/825	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, (TDS) Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Anions Cations
117391	1/21/99	8:45				MW-4A	4	Y	✓	✓	✓		✓				✓									✓				✓
92	1/21/99	9:35				MW-4	4	Y	✓	✓	✓		✓				✓									✓				✓
93	1/21/99	9:35				MW-4 (Duplicate)	4	Y	✓	✓	✓		✓				✓									✓				✓
94	1/21/99	10:35				MW-9A	2	Y		✓	✓						✓									✓				✓
95	1/21/99	11:10				MW-9	2	Y		✓	✓						✓									✓				✓
96	1/21/99	13:37				MW-22A	2	Y		✓	✓						✓									✓				✓
97	1/21/99	14:22				MW-7	2	Y		✓	✓						✓									✓				✓
98	1/21/99	15:16				MW-7A	2	Y		✓	✓						✓									✓				✓
																	✓													

RELINQUISHED BY: (Signature) Date: 1/22/99 Time: 07:30

RECEIVED BY: (Signature) Date: 1/22/99 Time: 3:30 PM

RELINQUISHED BY: (Signature) Date: 1/22/99 Time: 6:00PM

RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis Inc.
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP:
CONTACT: Nell PHONE: 1-800-378-1296

RECEIVED BY: (Signature)
DATE: 1-23-99 TIME: 9:30

SAMPLED BY: (Print & Sign) Greg Miller Date: 1/21/99 Time: 16:00

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED AIRBILL # 159 384 4560 OTHER:

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other)

REMARKS: Dissolved Metals

2/2

Please Fill out all copies. - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

TRACEANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/26/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/22/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

DISSOLVED METALS (mg/L)

TA#	Field Code	Ag	As	Ba	Cd	Cr	Pb	Se	Hg
T117576	MW-8	0.17	<0.10	<1.0	0.01	4.4	<0.05	<0.05	<0.0002
T117577	MW-8A	0.19	<0.10	<1.0	0.02	2.9	<0.05	0.20	<0.0002
ICV		0.20	0.97	0.93	0.96	0.97	0.98	1.0	0.00096
CCV		0.20	1.0	0.97	1.0	0.97	1.0	1.0	0.00098
Reporting Limit		0.05	0.10	1.0	0.01	0.05	0.05	0.05	0.0002
RPD		4	5	0	0	5	0	5	2
% Extraction Accuracy		88	90	95	90	90	95	100	87
% Instrument Accuracy		100	98	95	98	97	99	100	97
PREP DATE		01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/28/99
ANALYSIS DATE		02/01/99	02/01/99	02/01/99	02/01/99	02/01/99	02/01/99	02/01/99	02/01/99

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: BP
METHODS: EPA SW 846-3005A, 6010B, 7470A.
DISSOLVED METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.40 mg/L Ag; 0.0010 mg/L Hg.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.

BL

Director, Dr. Blair Leftwich

2-2-99

Date

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/23/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Prep Date: 01/26/99
Analysis Date: 02/01/99
Sampling Date: 01/22/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117576	MW-8	20	111	438	633	1,550
T117577	MW-8A	22	215	397	630	1,880
ICV		26	25	24	26	---
CCV		26	25	25	27	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		2	3	2	1	---
% Extraction Accuracy		111	90	90	93	---
% Instrument Accuracy		104	100	98	106	---

METHODS: EPA 200.7, SM 2340B.
CHEMIST: RR
SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
CV: 25 mg/L POTASSIUM, MAGNESIUM, CALC

BL

Director, Dr. Blair Leftwich

2-2-99

Date

TRACEANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 02, 1999
Receiving Date: 01/26/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date: 01/22/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	TDS (mg/L)	pH (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	N03-N* (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117576	MW-8	3,800	7.5	4.4	960	10	1,500	160	<1.0
T117577	MW-8A	3,200	7.5	3.3	1,000	11	1,700	130	<1.0
ICV		---	7.0	2.4	11	4.8	11	1,270	980
CCV		---	7.0	2.4	11	4.8	11	1,300	1,000
REPORTING LIMIT		10	---	0.1	0.5	0.2	0.5	1.0	1.0
RPD		10	0	0	0	0	1	1	1
% Extraction Accuracy		---	---	88	89	92	89	---	---
% Instrument Accuracy		99	100	98	93	96	95	94	94
PREP DATE		01/27/99	01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/27/99	
ANALYSIS DATE		01/27/99	01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/27/99	

***NOTE: Samples out of holding time for N03-N.**

METHODS: EPA 160.1, 150.1, 300.0, 310.1.
CHEMIST: pH/TDS: SA ALKALINITY: MD CHLORIDE/SULFATE/FLUORIDE/N03-N: JS
CHLORIDE SPIKE: 125 mg/L CHLORIDE.
SULFATE SPIKE: 125 mg/L SULFATE.
FLUORIDE SPIKE: 25 mg/L FLUORIDE.
N03-N SPIKE: 50 mg/L N03-N.
CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE CV: 12.5 mg/L SULFATE.
FLUORIDE CV: 2.5 mg/L FLUORIDE.
N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

2-2-99
Date

Cation-Anion Balance Sheet

DATE: 2/3/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
117576	438	111	633	20	160.00	1500	960	10	4.4	3800	
117577	397	215	630	22	130.00	1700	1000	11	3.3	3200	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
117576	21.86	9.13	27.54	0.51	3.20	31.23	27.08	0.7139	0.231616	59.04	62.46	5.629263903
117577	19.81	17.69	27.41	0.56	2.60	35.39	28.21	0.78529	0.173712	65.47	67.16	2.552285996

	EC/Cation	EC/Anion					TDS/EC	TDS/Cat	TDS/Anion	
117576	5903.749	6245.7116	range	0	to	0	#DIV/0!	0.64	0.61	needs to be 0.55-0.77
117577	6547.041	6716.3002	range	0	to	0	#DIV/0!	0.49	0.48	needs to be 0.55-0.77

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 02, 1999
Receiving Date: 01/26/99
Sample Type: Water
Project No: 787
Project Location: NA

Prep Date: 01/26/99
Analysis Date: 02/01/99
Sampling Date: 01/22/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T117578	MW-8 Drums	1.8
T117579	MW-8A Drums	0.55
ICV		0.97
CCV		0.97
REPORTING LIMIT		0.05
RPD		5
% Extraction Accuracy		90
% Instrument Accuracy		97

METHODS: EPA SW 846-3005A, 6010B.
CHEMIST: RR
DISSOLVED Cr SPIKE: 2.0 mg/L DISSOLVED Cr.
DISSOLVED Cr CV: 1.0 mg/L DISSOLVED Cr.

Director, Dr. Blair Leftwich

2-2-99
DATE

117576-79

355

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Texaco

SITE MANAGER: M. Larson

PROJECT NO.: 787

PROJECT NAME: Eunice #2 North

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, (TDS), Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	TDS, Anions, Cations
117576	1/22/99	8:58	W			MW-8	2	Y		✓	✓						✓									✓				✓
77	1/22/99	10:45	W			MW-8A	2	Y		✓	✓						✓									✓				✓
78	1/22/99	9:58	W			MW-8 Drums	1	Y		✓	✓			Dissolved Cr																
79	1/22/99	10:55	W			MW-8A Drums	1	Y		✓	✓			Dissolved Cr																

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 1/22/99 Time: 6:01 pm — RECEIVED BY: (Signature) Helen Shelton — Date: 1/25/99 Time: 3:00 PM

SAMPLED BY: (Print & Sign) Greg Miller — Date: 1/22/99 Time: 6:01 pm

RELINQUISHED BY: (Signature) Helen Shelton — Date: 1/25/99 Time: 10:15 AM — RECEIVED BY: (Signature) — Date: — Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED — AIRBILL #: 159384 — OTHER: 7550

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

RECEIVING LABORATORY: Trace Analysis Inc. — RECEIVED BY: (Signature) Vicki Wonder

ADDRESS: 6701 Aberdeen

CITY: Lubbock STATE: TX ZIP:

CONTACT: Neil PHONE: 1-800-378-1296 — DATE: 1-26-99 TIME: 9:20

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W-Water) A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: Dissolved Metals

43

Please Fill out all copies. - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Date: Feb 23, 1999
Date Rec: 2/20/99
Project: 787
Proj Name: Texaco
Proj Loc: Texaco North Eunice Gas Plant, NM

Lab Receiving # : 9902000333
Sampling Date: 2/17/99
Sample Condition: Intact and Cool
Sample Received By: BP

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
119296	RW-1-14:05	Water	<0.001	<0.001	<0.001	<0.001	<0.001
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.093	0.092	0.094	0.277	
RPD			8	7	7	8	
% Extraction Accuracy			108	109	108	110	
% Instrument Accuracy			93	92	94	92	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	2/22/99	EPA 8021B	2/22/99	RC	0.100 ea	0.1 ea

Director, Dr. Blair Leftwich

2-23-99
Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.

Prep Date: 05/20/99
Analysis Date: 05/22/99
Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW
Project Name: Texaco/North Eunice Gas Plant Lea County, NM

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
25134	MW-15	<0.05
ICV		1.03
CCV		1.03
RPD		0
% Extraction Accuracy		92
% Instrument Accuracy		103
REPORTING LIMIT		0.05

METHODS: EPA SW 846-6010B, 3015
CHEMIST: RR
DISSOLVED Cr SPIKE: 2.4 mg/L TOTAL Cr
DISSOLVED Cr CV: 1.0 mg/L TOTAL Cr

Director, Dr. Blair Leftwich

5-24-99
Date

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Marc Larson
1910 N. Big Spring St.
Midland, TX 79705

February 24, 1999
Receiving Date: 2/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco

Project Name: Eurice #1
Sampling Date: 2/17/99
Sample Condition: Intact & Cool
Sample Received by: BP

TA#	Field Code	Cr (mg/L)	Na (mg/L)	K (mg/L)	Mg (mg/L)	Ca (mg/L)	Hardness (mg/L)
T119296	RW-1	1.3	644	18	140	434	1660
ICV		1.0	25	25	26	25	---
CCV		0.97	24	24	26	24	---
Reporting Limit		0.05	0.50	0.50	0.50	0.5	---
RPD		0	3*	0	1	0*	---
% Extraction Accuracy		105	106*	97	82	104*	---
% Instrument Accuracy		98	98	98	104	98	---
Prep Date:		2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
Analysis Date:		2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99

CHEMIST: Cr, Na, K, Mg, Ca, Hardness: RR
METHODS: EPA 200.7
METALS SPIKE: 2.0 mg/L Cr 100 mg/L Na, K, Mg, Ca
METALS CV: 1.0 mg/L Cr 25 mg/L Na, K, Mg, Ca

*Used LCS/LCSD for EA/RPD for Na, Ca due to high conc. in sample.

Director, Dr. Blair Leftwich

2-24-99
Date

Cation-Anion Balance Sheet

DATE: 2/2/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
117308	43	24	102	5.4	210.00	100	57	4.6	4.2	530	
117309	294	164	436	15	320.00	740	900	11	3.7	2800	
117310	135	61	157	8.6	190.00	230	350	8.2	3.1	1100	
117311	78	47	139	10	160.00	200	170	4.9	3.5	930	
117312	516	105	600	31	260.00	1200	990	10	3.8	3600	
117313	238	74	468	9.2	460.00	860	370	10	3.7	2400	
117314	205	63	454	7.6	510.00	820	350	7.1	3.1	2200	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
117308	2.15	1.97	4.44	0.14	4.20	2.08	1.61	0.328394	0.221088	8.70	8.44	2.991962064
117309	14.67	13.50	18.97	0.38	6.40	15.41	25.39	0.78529	0.194768	47.52	48.18	1.379425542
117310	6.74	5.02	6.83	0.22	3.80	4.79	9.87	0.585398	0.163184	18.81	19.21	2.130682685
117311	3.89	3.87	6.05	0.26	3.20	4.16	4.80	0.349811	0.18424	14.06	12.69	10.22862226
117312	25.75	8.64	26.10	0.79	5.20	24.98	27.93	0.7139	0.200032	61.28	59.03	3.750381252
117313	11.88	6.09	20.36	0.24	9.20	17.91	10.44	0.7139	0.194768	38.56	38.45	0.27899549
117314	10.23	5.18	19.75	0.19	10.20	17.07	9.87	0.506869	0.163184	35.36	37.82	6.720431301

	EC/Cation	EC/Anion				
117308	869.5792	843.9452	range	0	to	0
117309	4751.586	4817.5858	range	0	to	0
117310	1880.5678	1921.0682	range	0	to	0
117311	1406.213	1269.3751	range	0	to	0
117312	6128.183	5902.5832	range	0	to	0
117313	3855.8996	3845.1568	range	0	to	0
117314	3535.7178	3781.5953	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.61	0.63	needs to be 0.55-0.77
#DIV/0!	0.59	0.58	needs to be 0.55-0.77
#DIV/0!	0.58	0.57	needs to be 0.55-0.77
#DIV/0!	0.66	0.73	needs to be 0.55-0.77
#DIV/0!	0.59	0.61	needs to be 0.55-0.77
#DIV/0!	0.62	0.62	needs to be 0.55-0.77
#DIV/0!	0.62	0.58	needs to be 0.55-0.77

1173[illegible]-15

302[illegible]

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Texaco

SITE MANAGER: M. Larsen

PROJECT NO.: 787

PROJECT NAME: Eunice #2 (North)

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Chlorides	Sulfates	Dissolved Chromium
117307	1/20/99	8:57	W		✓	MW-21A	1	✓		✓	✓																					✓
117308	1/20/99	10:05	W		✓	MW-13A	2	✓		✓	✓						✓													✓	✓	
9	1/20/99	10:38	W		✓	WW-1	2	✓		✓	✓						✓													✓	✓	
10	1/20/99	11:15	W		✓	MW-2	2	✓		✓	✓						✓													✓	✓	
11	1/20/99	13:15	W		✓	MW-11A	2	✓		✓	✓						✓													✓	✓	
12	1/20/99	13:55	W		✓	MW-11	2	✓		✓	✓						✓													✓	✓	
13	1/20/99	15:10	W		✓	MW-1	(HS) 4 (2 VW)			✓	✓		✓				✓													✓	✓	
14	1/20/99	15:10	W		✓	MW-1 (Duplicate)	(HS) 4 (2 VW)			✓	✓		✓				✓													✓	✓	
15	1/20/99	15:10	W			Trip Blank	2				✓		✓																			

Handwritten beside PAH 8270: Dissolved metals. Handwritten in the filtered column: 1-22-99

RELINQUISHED BY: (Signature)	Date / Time	RECEIVED BY: (Signature)	Date / Time
[signature]	1/21/99 / 08:45	Helen Shelton	1/21/99 / 11:20 AM
Helen Shelton	1/21/99 / 6:00 PM		

SAMPLED BY: (Print & Sign) M. Larsen — Date: 1/20/99 Time: 8:10

SAMPLE SHIPPED BY: (Circle) FEDEX, (BUS), HAND DELIVERED, UPS — Greyhound — AIRBILL # 15[illegible]354449 — OTHER:

HIGHLANDER CONTACT PERSON: Mark Larsen

Results by: ASAP please

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP:
CONTACT: Bill PHONE: (806) 378-1296

RECEIVED BY: (Signature) Vicki Winder
DATE: 1-22-99 TIME: 9:30 4°

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W)-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: Dissolved Metals — need verbal on dissolved chromium ASAP ML

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

TRACE ANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
Highlander Environmental Service
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9901000236
Date Rec: 1/19/99
Sampling Date: 1/18/99
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Jan 21, 1999
Project: 787
Proj Name: Texaco
Proj Loc: Texaco North Eunice Gas Plant, NM

TA#	Field Code	MATRIX	MTBE (mg/L)	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
116944	MW-21	Water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
116945	MW-21A	Water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Method Blank			<0.001	<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	0.001	
QC			0.095	0.099	0.099	0.100	0.295	
RPD			1	1	1	1	1	
% Extraction Accuracy			97	98	98	97	97	
% Instrument Accuracy			95	99	99	100	98	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	1/19/99	EPA 8021B	1/19/99	RC	0.100 ea	0.1 ea

BL

Director, Dr. Blair Leftwich

1-21-99

Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

January 27, 1999
Receiving Date: 01/19/99
Sample Type: Water
Project No: 787
Project Location: NA

Sampling Date: 01/18/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

CORRECTED **DISSOLVED METALS (mg/L)**

TA#	Field Code	As	Se	Cd	Cr	Pb	Ag	Ba	Hg
T116944	MW-21	<0.10	<0.05	<0.01	<0.05	<0.05	<0.05	<0.10	<0.0002
T116945	MW-21A	<0.10	<0.05	<0.01	0.06	<0.05	<0.05	0.13	<0.0002
ICV		0.97	1.1	1.0	1.0	2.0	0.21	2.0	0.0010
CCV		1.0	1.0	1.0	1.0	2.0	0.21	2.0	0.0010
Reporting Limit		0.10	0.05	0.01	0.05	0.05	0.05	0.10	0.0002
RPD		5	5	5	0	0	2	0	1
% Extraction Accuracy		100	105	95	100	100	105	95	98
% Instrument Accuracy		98	105	100	100	100	105	100	95
PREP DATE		01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/21/99
ANALYSIS DATE		01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/21/99

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: BP **CORRECTED TOTAL TO DISSOLVED**
METHODS: EPA SW 846-3015, 6010B, 7470A.
DISSOLVED METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.40 mg/L Ag; 0.0010 mg/L Hg.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr; 2.0 mg/L Pb, Ba; 0.20 mg/L Ag; 0.0010 mg/L Hg.

Director, Dr. Blair Leftwich

1-27-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

January 27, 1999
Receiving Date: 01/19/99
Sample Type: Water
Project No: 787
Project Location:

Sampling Date: 01/18/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T116945	MW-21-A	0.05*
ICV		1.0
CCV		0.98
REPORTING LIMIT		0.05
RPD		0
% Extraction Accuracy		95
% Instrument Accuracy		99

***Redigest, re-run**

PREP DATE	01/21/99
ANALYSIS DATE	01/21/99

METHODS: EPA SW 846-3015, 6010B
CHEMIST: RR
DISSOLVED Cr SPIKE: 2.0 mg/L Cr
DISSOLVED Cr CV: 1.0 mg/L Cr

Director, Dr. Blair Leftwich

1-27-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

January 22, 1999
Receiving Date: 01/19/99
Sample Type: Water
Project No: 787
Project Location:
Project Name: Eunice #2 (North)

Prep Date: 01/19/99
Analysis Date: 01/19/99
Sampling Date: 01/18/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T116944	MW-21	14	58	147	776	606
T116945	MW-21A	107	292	656	2,590	2,840
ICV		24	25	25	25	---
CCV		24	25	25	25	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		1	4	3	1	---
% Extraction Accuracy		102	93	94	87	---
% Instrument Accuracy		96	100	100	100	---

METHODS: EPA SW 846-6010B, 3015, SM 2340B.
CHEMIST: RR
SPIKE: POTASSIUM, MAGNESIUM, CALCIUM, SODIUM 100 mg/L
CV: POTASSIUM, MAGNESIUM, CALCIUM, SODIUM 25 mg/L

Director, Dr. Blair Leftwich

1-22-99
Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

January 22, 1999
Receiving Date: 01/19/99
Sample Type: Water
Project No: 787
Project Location:

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/18/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	pH (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	N03-N (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	ALKALINITY (mg/L as CaCo3) C03	TDS (mg/L)
T116944	MW-21	7.0	3.1	740	660	4.4	629	<1.00	2,700
T116945	MW-21 A	7.6	2.0	7,000	460	4.8	130	<1.00	9,200
ICV		7.0	2.45	12.88	11.86	4.91	2,220	1,000	1,026
CCV		7.0	2.45	11.68	11.74	4.86	2,240	1,220	967
PREP DATE		01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/20/99		01/19/99
ANALYSIS DATE		01/19/99	01/19/99	01/19/99	01/19/99	01/19/99	01/20/99		01/19/99
RPD		0	1	2	2	1	3	3	7
% Extraction Accuracy		---	95	101	93	107	----	----	---
% Instrument Accuracy		100	98	98	94	98	93	93	97
REPORTING LIMIT		---	0.1	0.5	0.5	0.2	1.00	1.00	10

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1.
CHEMIST: pH: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS ALKALINITY/TDS: MD
FLUORIDE SPIKE: 250 mg/L FLUORIDE.
CHLORIDE SPIKE: 1250 mg/L CHLORIDE.
SULFATE SPIKE: 1250 mg/L SULFATE.
N03-N SPIKE: 500 mg/L N03-N.
FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE CV: 12.5 mg/L SULFATE.
N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

1-22-99
Date

Cation-Anion Balance Sheet

DATE: 1/21/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
116944	147	58	776	14	629.00	660	740	4.4	3.1	2700	
116945	656	292	2590	107	130.00	460	7000	4.8	2	9200	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
116944	7.34	4.77	33.76	0.36	12.58	13.74	20.88	0.314116	0.163184	46.22	47.67	3.092054689
116945	32.73	24.03	112.67	2.74	2.60	9.58	197.47	0.342672	0.10528	172.17	210.10	19.84512271

	EC/Cation	EC/Anion					TDS/EC	TDS/Cat	TDS/Anion	
116944	4622.224	4767.39	range	0	to	0	#DIV/0!	0.58	0.57	needs to be 0.55-0.77
116945	17216.514	21009.5152	range	0	to	0	#DIV/0!	0.53	0.44	needs to be 0.55-0.77

used Alkalinity 1/21/99

used ~~0~~ cations 1/21/99

236

PAGE: 1 OF: 1

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: Texaco
SITE MANAGER: M. Larson
PROJECT NO.: 787
PROJECT NAME: Eunice #2 (North)

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, (TDS), Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Anions	Cations Na K Mg Ca hardness
116944	1/18/99	13:30	W	✓		MW-21	4	Y	✓	✓	✓		✓				✓									✓				✓	✓
45	1/18/99	13:05	W	✓		MW-21A	4	Y	✓	✓	✓		✓				✓									✓				✓	✓

RELINQUISHED BY: (Signature) [signature] Date: 1/18/99 Time: 13:?
RECEIVED BY: (Signature) Ellen Shelton Date: 1/18/99 Time: 6:10 PM
RELINQUISHED BY: (Signature) Ellen Shelton Date: 1/18/99 Time: 6:45 PM
RECEIVED BY: (Signature) Date: Time:
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
RECEIVING LABORATORY: Trace Analysis, Inc
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP:
CONTACT: Neil PHONE: (806) 378-1296
RECEIVED BY: (Signature) [signature] DATE: 1-19-99 TIME: 10:00 Am

SAMPLED BY: (Print & Sign) M. Larson [signature] Date: 1/18/99 Time: 15:15
SAMPLE SHIPPED BY: (Circle) FEDEX (BUS) UPS HAND DELIVERED -1° AIRBILL # 159-384-4840 OTHER:
HIGHLANDER CONTACT PERSON: Mark Larson
Results by: (ASAP)
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:
MATRIX: (W-Water) A-Air SD-Solid S-Soil SL-Sludge O-Other
REMARKS: Dissolved Metals 1/22

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

8 Samples - HS

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E-Mail: lab@traceanalysis.com

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:
Project Name: Eunice #2 (North)

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 01/21/99
Analysis Date: 01/21/99
Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

CORRECTED **DISSOLVED**

TA#	Field Code	As (mg/L)	Ag (mg/L)	Ba (mg/L)	Cd (mg/L)	Cr (mg/L)	Pb (mg/L)	Se (mg/L)
T117159	MW-20	<0.1	<0.05	<1.0	<0.01	<0.05	<0.05	<0.05
T117160	MW-20A	<0.1	<0.05	<1.0	<0.01	<0.05	<0.05	<0.05
T117161	MW-19A	<0.1	<0.05	<1.0	<0.01	<0.05	<0.05	<0.05
T117162	MW-19A (Duplicate)	<0.1	<0.05	<1.0	<0.01	<0.05	<0.05	<0.05
T117163	MW-18A	<0.1	<0.05	<1.0	<0.01	<0.05	<0.05	<0.05
T117164	Rowland Water Well	<0.1	<0.05	<1.0	<0.01	<0.05	<0.05	<0.05
ICV		1.0	0.21	1.0	0.98	1.0	1.0	0.92
CCV		1.0	0.20	0.97	0.95	0.98	0.95	0.92
Reporting Limit		0.10	0.05	1.0	0.01	0.05	0.05	0.05
RPD		5	0	0	5	0	5	0
% Extraction Accuracy		110	95	95	90	95	85	85
% Instrument Accuracy		100	100	98	98	99	97	92

***Corrected field code Raw Land to Rowland.**

METHODS: EPA 200.7
CHEMIST: RR
DISSOLVED METAL SPIKE: Ag: 0.40 mg/L As, Ba, Cd, Cr, Pb, Se: 2.0 mg/L
DISSOLVED METAL CV: Ag: 0.20 mg/L As, Ba, Cd, Cr, Pb, Se: 1.0 mg/L

Director, Dr. Blair Leftwich

2-4-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:
Project Name: Eunice #2 (North)

CORRECTED

Prep Date: 01/21/99
Analysis Date: 01/21/99
Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

TA#	FIELD CODE	DISSOLVED Hg (mg/L)
T117159	MW-20	<0.0002
T117160	MW-20A	<0.0002
T117161	MW-19A	<0.0002
T117162	MW-19A (Duplicate)	<0.0002
T117163	MW-18A	<0.0002
T117164	Rowland Water Well	<0.0002
T117165	MW-10	<0.0002
T117166	Lord Water Well	<0.0002
T117167	MW-15	<0.0002
T117168	MW 15A	<0.0002
ICV		0.0010
CCV		0.00089

Corrected from Total to Dissolved and field codes Raw Land to Rowland and Land to Lord.

REPORTING LIMIT	0.0002
RPD	10
% Extraction Accuracy	110
% Instrument Accuracy	95

METHODS: EPA SW 846 7470A
CHEMIST: BP
DISSOLVED Hg SPIKE: 0.0010 mg/L DISSOLVED Hg.
DISSOLVED Hg CV: 0.0010 mg/L DISSOLVED Hg.

Director, Dr. Blair Leftwich

2-4-99
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	pH* (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	N03-N (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	ALKALINITY (mg/L as CaCo3) C03	TDS (mg/L)
T117159	MW-20	7.7	2.7	------	------	4.5	230	<1.00	1,680
T117160	MW-20 A	8.0	3.1	------	------	5.1	150	<1.00	1,000
T117161	MW-19 A	7.5	3.0	------	------	4.9	200	<1.00	1,500
T117162	MW-19 A (Duplicate)	7.5	3.0	------	------	5.0	210	<1.00	1,500
T117163	Mw- 18 A	7.8	2.9	------	------	6.0	170	<1.00	1,400
T117164	Rowland Water Well	7.4	3.7	------	------	10	240	<1.00	2,300
T117165	MW-10	7.6	2.6	------	------	7.1	170	<1.00	3,100
T117166	Lord Water Well	7.3	2.7	800	1,300	8.9	200	<1.00	3,100
T117167	MW-15	7.9	2.4	1,400	410	6.5	--------	--------	3,000
T117168	MW-15 A	8.2	------	------	------	------	--------	--------	630
T117169	MW-13	7.4	------	1,100	1,400	------	--------	--------	------
ICV		7.0	2.47	11.38	11.36	4.79	2,240	1,030	1,000
CCV		7.0	2.52	11.48	11.68	4.81	2,170	1,000	971
PREP DATE		01/21/99	01/21/99	01/22/99	01/22/99	01/21/99	01/21/99		01/21/99
ANALYSIS DATE		01/21/99	01/21/99	01/22/99	01/22/99	01/21/99	01/21/99		01/21/99
RPD		0	9	0	0	7	5	5	0
% Extraction Accuracy		---	93	92	94	92	----	----	---
% Instrument Accuracy		100	100	91	92	96	93	93	100
REPORTING LIMIT		---	0.1	0.5	0.5	0.2	1.0	1.0	10

Corrected

***Corrected field code Raw land to Rowland and Land Water to Lord Water**

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1. ***Sample out of holding time.**

CHEMIST: pH: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS ALKALINITY: MD/SA TDS: MD

FLUORIDE SPIKE: 25 mg/L FLUORIDE.
CHLORIDE & SULFATE SPIKE: 1250 mg/L
N03-N SPIKE: 50 mg/L N03-N.

FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE & SULFATE CV: 12.5 mg/L
N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

2-4-99
Date

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E-Mail: lab@traceanalysis.com

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:
Project Name: Eunice #2 (North)

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 01/21/99
Analysis Date: 01/22/99
Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

CORRECTED **TOTAL**

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117159	MW-20	11	70	165	243	700
T117160	MW-20A	11	55	106	122	490
T117162	MW-19A (Duplicate)	12	89	165	217	780
T117164	Rowland Water Well	14	97	243	392	1,000
ICV		25	25	25	25	---
CCV		25	24	24	25	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		1	4	2	6	---
% Extraction Accuracy		102	98	102	89	---
% Instrument Accuracy		100	100	98	98	---

Corrected: Removed 117161 and 117163. Rerun on separate report.

METHODS: EPA SW 846-6010B, 3015, SM 2340B.
CHEMIST: RR
SPIKE: POTASSIUM, MAGNESIUM, CALCIUM, SODIUM 100 mg/L
CV: POTASSIUM, MAGNESIUM, CALCIUM, SODIUM 25 mg/L

Director, Dr. Blair Leftwich

2-4-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

January 25, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	CHLORIDE (mg/L)	SULFATE (mg/L)
T117159	MW - 20	570	270
		11.46	11.81
		11.44	11.70
REPORTING LIMIT		0.5	0.5
RPD		0	1
% Extraction Accuracy		92	93
% Instrument Accuracy		92	94
PREP DATE		01/22/99	01/22/99
ANALYSIS DATE		01/22/99	01/22/99

METHODS: EPA 300.0
CHEMIST: CHLORIDE, SULFATE JS
TOTAL CHLORIDE SPIKE: 625 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 625 mg/L SULFATE
TOTAL CHLORIDE CV: 12.5 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 12.5 mg/L SULFATE

Director, Dr. Blair Leftwich

1-25-99
DATE

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:

CORRECTED

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	CHLORIDE (mg/L)	SULFATE (mg/L)
T117160	MW - 20A	250	260
T117162	MW - 19A Duplicate	500	330
T117168	MW - 15A	140	-------
ICV			
CCV		11.44	11.70
		11.46	11.74
REPORTING LIMIT		0.5	0.5
RPD		0	0
% Extraction Accuracy		87	91
% Instrument Accuracy		92	94

Corrected: Removed samples 117161 and 117163. Rerun on separate report.

PREP DATE	01/22/99	01/22/99
ANALYSIS DATE	01/22/99	01/22/99

METHODS: EPA 300.0
CHEMIST: CHLORIDE, SULFATE JS

TOTAL CHLORIDE SPIKE: 62.5 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 62.5 mg/L SULFATE

TOTAL CHLORIDE CV: 12.5 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 12.5 mg/L SULFATE

Director, Dr. Blair Leftwich

2-4-99
DATE

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:

CORRECTED

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	CHLORIDE (mg/L)	SULFATE (mg/L)
T117164	Rowland Water Well	920	460
T117165	MW - 10	1,100	1,000

rrected field code from Raw Land to Rowland

ICV	11.46	
CCV	11.50	11.83
REPORTING LIMIT	0.5	0.5
RPD	0	0
% Extraction Accuracy	89	95
% Instrument Accuracy	92	95
PREP DATE	01/22/99	01/22/99
ANALYSIS DATE	01/22/99	01/22/99

METHODS: EPA 300.0
CHEMIST: CHLORIDE, SULFATE JS
TOTAL CHLORIDE SPIKE: 625 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 625 mg/L SULFATE
TOTAL CHLORIDE CV: 12.5 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 12.5 mg/L SULFATE

Director, Dr. Blair Leftwich

2-4-99
DATE

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 04, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location: NA

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

CORRECTED **DISSOLVED METALS (mg/L)**

TA#	Field Code	As	Se	Cd	Cr	Pb	Ag	Ba
T117165	MW-10	<0.10	<0.05	<0.01	0.37	<0.05	<0.05	<1.0
T117166	Lord Water Well	<0.10	0.11	<0.01	0.52	<0.05	<0.05	<1.0
T117167	MW-15	<0.10	0.08	<0.01	0.07	<0.05	<0.05	<1.0
T117168	MW-15A	<0.10	<0.05	<0.01	<0.05	<0.05	<0.05	<1.0
T117169	MW-13	<0.10	<0.05	<0.01	0.16	<0.05	<0.05	<1.0
ICV		0.92	0.98	1.0	0.99	1.0	0.21	0.99
CCV		0.92	0.95	1.0	0.98	1.0	0.21	0.94
Reporting Limit		0.10	0.05	0.01	0.05	0.05	0.05	1.0
RPD		5	20	0	10	5	2	5
% Extraction Accuracy		100	85	110	100	105	105	110
% Instrument Accuracy		92	96	100	98	100	105	96
PREP DATE		01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99
ANALYSIS DATE		01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/26/99	01/26/99

Corrected field code from Land to Lord.
CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR
METHODS: EPA SW 846-3005A, 6010B.
DISSOLVED METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.40 mg/L Ag.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.20 mg/L Ag.

Director, Dr. Blair Leftwich

2-4-99
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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:
Project Name: Eunice #2 (North)

Prep Date: 01/21/99
Analysis Date: 01/21/99
Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

CORRECTED

TA#	FIELD CODE	DISSOLVED Hg (mg/L)
T117169	MW-13	<0.0002
ICV		0.0010
CCV		0.0010

Corrected from Total to Dissolved.

REPORTING LIMIT	0.0002
RPD	1
% Extraction Accuracy	95
% Instrument Accuracy	98

METHODS: EPA SW 846 7470A
CHEMIST: BP
TOTAL Hg SPIKE: 0.0010 mg/L TOTAL Hg.
TOTAL Hg CV: 0.0010 mg/L TOTAL Hg.

Director, Dr. Blair Leftwich

2-4-99
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E-Mail: lab@traceanalysis.com

February 04, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location: NA
Project Name: Eunice #2 (North)

ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

Prep Date: 01/21/99
Analysis Date: 01/26/99
Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

CORRECTED

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117165	MW-10	17	167	490	460	1,900
T117166	Lord Water Well	18	162	390	502	1,140
T117167	MW-15	52	81	265	695	995
T117168	MW-15A	14	26	46	140	220
T117169	MW-13	20	146	513	739	1,880
ICV		27	25	26	25	---
CCV		26	25	25	25	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		5	9	6	0*	---
% Extraction Accuracy		106	119	108	106*	---
% Instrument Accuracy		104	100	100	100	---

***NOTE: Used LCS and LCSD for Extraction Accuracy and RPD for Na due to high concentration in sample.**
Corrected field code from Land Water to Lord Water.

METHODS: EPA 200.7, SM 2340B.
CHEMIST: RR
SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
CV: 25 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

2-4-99
Date

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February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:
Project Name: Eunice #2 (North)

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 01/21/99
Analysis Date: 02/03/99
Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

TOTAL

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117161	MW-19A	12	86	156	236	744
T117163	MW-18A	12	76	140	196	662
ICV		25	25	25	26	---
CCV		25	25	25	25	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		0*	0*	1*	0*	---
% Extraction Accuracy		108*	104*	105*	108*	---
% Instrument Accuracy		100	100	100	102	---

***LCS's were used for RPD & %EA.**

METHODS: EPA SW 846-6010B, 3015, SM 2340B.
CHEMIST: RR
SPIKE: POTASSIUM, MAGNESIUM, CALCIUM, SODIUM 100 mg/L
CV: POTASSIUM, MAGNESIUM, CALCIUM, SODIUM 25 mg/L

Director, Dr. Blair Leftwich

2-4-99
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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 4, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	CHLORIDE (mg/L)	SULFATE (mg/L)
T117161	MW -19A	520	340
T117163	MW -18A	390	450
IC			
CCV		12.13	11.57
		11.91	11.54
REPORTING LIMIT		0.5	0.5
RPD		0	1
% Extraction Accuracy		95*	82
% Instrument Accuracy		95	92
PREP DATE		02/03/99	02/03/99
ANALYSIS DATE		02/03/99	02/03/99

***LRB spikes used due to matrix spikes %EA low.**

METHODS: EPA 300.0
CHEMIST: CHLORIDE, SULFATE JS
TOTAL CHLORIDE SPIKE: 62.5 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 62.5 mg/L SULFATE
TOTAL CHLORIDE CV: 12.5 mg/L CHLORIDE
TOTAL SULFATE SPIKE: 12.5 mg/L SULFATE

Director, Dr. Blair Leftwich

2-4-99
DATE

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 1, 1999
Receiving Date: 01/21/99
Sample Type: Water
Project No: 787
Project Location:

Sampling Date: 01/19/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North)

TA#	FIELD CODE	FLUORIDE (mg/L)	TDS (mg/L)	SULFATE (mg/L)	N03-N (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03
T117167	MW-15	-----	-----	-----	-----	180	<1.00
T117168	MW 15A	3.8	-----	97	4.6	210	<1.00
T117169	MW 13	2.7	4,000	-----	6.5	290	<1.00
ICV		2.52	1,013	12.25	4.81	2,260	1,100
CCV		2.54	967	11.36	4.81	2,220	1,000
REPORTING LIMIT		0.1	19	0.5	0.2	1.00	1.00
PREP DATE		01/21/99	01/21/99	01/21/99	01/21/99	01/22/99	
ANALYSIS DATE		01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	
RPD		0	4	1	0	1	1
% Extraction Accuracy		93	-----	91	92	----	----
% Instrument Accuracy		101	97	94	96	94	94

METHODS: EPA 300.0, 310.1, 160.1.

CHEMIST: FLUORIDE/SULFATE/N03-N: JS ALKALINITY/TDS: MD
FLUORIDE SPIKE: 25 mg/L FLUORIDE.
SULFATE SPIKE: 125 mg/L SULFATE
N03-N SPIKE: 50 mg/L N03-N.
FLUORIDE CV: 2.5 mg/L FLUORIDE.
SULFATE CV: 12.0 mg/L SULFATE
N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

2-1-99
Date

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E-Mail: lab@traceanalysis.com

February 24, 1999
Receiving Date: 2/20/99
Sample Type: Water
Project No: 787
Client's Name: Texaco

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Marc Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date:2/17/99
Sample Condition: Intact & Cool
Sample Received by: BP
Project Name: Eurice #1 (North)

TA#	FIELD CODE	pH* (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	N03-N* (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03	TDS (mg/L)
T119296	RW-1	7.2	3.2	910	1,400	6.9	219	0	3,600
ICV		7.0	2.46	12.04	12.04	4.72	0	2160	970
CCV		7.1	2.45	11.94	12.06	4.74	160	2200	982
RPD		0	1**	3**	1**	1**	1	1	0
% Extraction Accuracy		---	97**	95**	95**	95**	---	---	---
% Instrument Accuracy		100	98	96	96	96	91	91	97
REPORTING LIMIT		---	0.1	0.5	0.5	0.2	0	0	10

***NOTE: Out of holding time.**
****LRB Spikes used. The IC did not load the matrix spike.**

PREP DATE	02/22/98	2/24/99	2/24/99	2/24/99	2/24/99	2/22/99	2/22/99	2/22/99
ANALYSIS DATE	02/22/98	2/24/99	2/24/99	2/24/99	2/24/99	2/22/99	2/22/99	2/22/99

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1.
CHEMIST: pH,ALKALINITY/TDS: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS

FLUORIDE SPIKE: 125 mg/L FLUORIDE.
CHLORIDE SPIKE: 625 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE.
N03-N SPIKE: 250mg/L N03-N.

FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE CV: 12.5 mg/L SULFATE.
N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

2-24-99
Date

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.

February 24, 1999
Receiving Date: 2/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco

Attention: Marc Larson
1910 N. Big Spring St.
Midland, TX 79705

Project Name: Eurice #1
Sampling Date: 2/18/99
Sample Condition: Intact & Cool
Sample Received by: BP

TA#	Field Code	Cr (mg/L)	Na (mg/L)	K (mg/L)	Mg (mg/L)	Ca (mg/L)	Hardness (mg/L)
T119297	RW-1	1.4	602	13	140	415	1610
T119298	RW-1	1.4	598	13	142	411	1610
ICV		1.0	25	25	26	25	---
CCV		0.97	24	24	26	24	---
Reporting Limit		0.05	0.50	0.50	0.50	0.5	---
RPD		0	3*	0	1	0*	---
% Extraction Accuracy		105	106*	97	82	104*	---
% Instrument Accuracy		98	98	98	104	98	---
Prep Date:		2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
Analysis Date:		2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99

CHEMIST: Cr, Na, K, Mg, Ca, Hardness: RR
METHODS: EPA 200.7
METALS SPIKE: 2.0 mg/L Cr 100 mg/L Na, K, Mg, Ca
METALS CV: 1.0 mg/L Cr 25 mg/L Na, K, Mg, Ca

*Used LCS/LCSD for EA/RPD for Na, Ca due to high conc. in sample.

BL 2-24-99

Director, Dr. Blair Leftwich Date

TRACEANALYSIS, INC.
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February 24, 1999
Receiving Date: 2/20/99
Sample Type: Water
Project No: 787
Client's Name: Texaco

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Marc Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date:2/18/99
Sample Condition: Intact & Cool
Sample Received by: BP
Project Name: Eurice #1 (North)

TA#	FIELD CODE	pH* (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	N03-N* (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03	TDS (mg/L)
T119297	RW-1	7.2	3.3	920	1,400	6.9	221	0	3,700
T119298	RW-1	7.2	3.2	1,000	1,300	7.0	214	0	3,700
ICV		7.0	2.46	12.04	12.04	4.72	0	2160	970
CCV		7.1	2.45	11.94	12.06	4.74	160	2200	982
RPD		0	1**	3**	1**	1**	1	1	0
% Extraction Accuracy		---	97**	95**	95**	95**	---	---	---
% Instrument Accuracy		100	98	96	96	96	91	91	97
REPORTING LIMIT		---	0.1	0.5	0.5	0.2	0	0	10
PREP DATE		02/22/98	2/24/99	2/24/99	2/24/99	2/24/99	2/22/99	2/22/99	2/22/99
ANALYSIS DATE		02/22/98	2/24/99	2/24/99	2/24/99	2/24/99	2/22/99	2/22/99	2/22/99

***NOTE: Out of holding time.**
****LRB Spikes used. The IC did not load the matrix spike.**

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1.
CHEMIST: pH,ALKALINITY/TDS: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS
FLUORIDE SPIKE: 125 mg/L FLUORIDE.
CHLORIDE SPIKE: 625 mg/L CHLORIDE.
SULFATE SPIKE: 625 mg/L SULFATE.
N03-N SPIKE: 250mg/L N03-N.
FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE CV: 12.5 mg/L SULFATE.
N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

2-24-99
Date

Cation-Anion Balance Sheet

DATE: 2/25/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
119296	434	140	644	18	219.00	1400	910	6.9	3.2	3600	
119297	415	140	602	13	221.00	1400	920	6.9	3.3	3700	
119298	411	142	598	13	214.00	1300	1000	7	3.2	3700	
119299	465	128	517	23	127.00	1400	850	9	5.1	3500	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
119296	21.66	11.52	28.01	0.46	4.38	29.15	25.67	0.492591	0.168448	61.65	59.86	2.948686975
119297	20.71	11.52	26.19	0.33	4.42	29.15	25.95	0.492591	0.173712	58.75	60.19	2.419555509
119298	20.51	11.69	26.01	0.33	4.28	27.07	28.21	0.49973	0.168448	58.54	60.22	2.836820695
119299	23.20	10.53	22.49	0.59	2.54	29.15	23.98	0.64251	0.268464	56.81	56.58	0.417994458

	EC/Cation	EC/Anion				
119296	6165.164	5986.0139	range	0	to	0
119297	5874.864	6018.7503	range	0	to	0
119298	5853.962	6022.4178	range	0	to	0
119299	5681.446	5657.7474	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.58	0.60	needs to be 0.55-0.77
#DIV/0!	0.63	0.61	needs to be 0.55-0.77
#DIV/0!	0.63	0.61	needs to be 0.55-0.77
#DIV/0!	0.62	0.62	needs to be 0.55-0.77

TRACEANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 24, 1999
Receiving Date: 2/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Marc Larson
1910 N. Big Spring St.
Midland, TX 79705

Project Name: Eurice #1
Sampling Date: 2/19/99
Sample Condition: Intact & Cool
Sample Received by: BP

TA#	Field Code	Cr (mg/L)	Na (mg/L)	K (mg/L)	Mg (mg/L)	Ca (mg/L)	Hardness (mg/L)
T119299	MW-12	3.0	517	23	128	465	1690
ICV		1.0	25	25	26	25	---
CCV		0.97	24	24	26	24	---
Reporting Limit		0.05	0.50	0.50	0.50	0.5	---
RPD		0	3*	0	1	0*	---
% Extraction Accuracy		105	106*	97	82	104*	---
% Instrument Accuracy		98	98	98	104	98	---
Prep Date:		2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
Analysis Date:		2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99

CHEMIST: Cr, Na, K, Mg, Ca, Hardness: RR
METHODS: EPA 200.7
METALS SPIKE: 2.0 mg/L Cr 100 mg/L Na, K, Mg, Ca
METALS CV: 1.0 mg/L Cr 25 mg/L Na, K, Mg, Ca

*Used LCS/LCSD for EA/RPD for Na, Ca due to high conc. in sample.

Director, Dr. Blair Leftwich

2-24-99
Date

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E-Mail: lab@traceanalysis.com

February 24, 1999
Receiving Date: 2/20/99
Sample Type: Water
Project No: 787
Client's Name: Texaco

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Marc Larson
1910 N. Big Spring Street
Midland, TX 79705

Sampling Date:2/17/99
Sample Condition: Intact & Cool
Sample Received by: BP
Project Name: Eurice #1 (North)

TA#	FIELD CODE	pH* (s.u.)	FLUORIDE (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	N03-N* (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	C03	TDS (mg/L)
T119299	MW-12	7.9	5.1	850	1,400	9.0	127	0	3,500
ICV		7.0	2.45	11.94	12.06	4.74	0	2160	970
CCV		7.1	2.48	11.90	12.02	4.76	160	2200	982
RPD		0	0	0	0	0	1	1	0
% Extraction Accuracy		---	96	88	92	94	---	---	---
% Instrument Accuracy		100	99	95	96	95	91	91	97
REPORTING LIMIT		---	0.1	0.5	0.5	0.2	0	0	10
PREP DATE		02/22/99	02/23/99	02/23/99	02/23/99	02/23/99	2/22/99	2/22/99	2/22/99
ANALYSIS DATE		02/22/99	02/23/99	02/23/99	02/23/99	02/23/99	2/22/99	2/22/99	2/22/99

***NOTE: Out of holding time.**

METHODS: EPA 150.1, 300.0, 353.3, 310.1, 160.1.
CHEMIST: pH,ALKALINITY/TDS: SA FLUORIDE/CHLORIDE/SULFATE/N03-N: JS
FLUORIDE SPIKE: 25 mg/L FLUORIDE. FLUORIDE CV: 2.5 mg/L FLUORIDE.
CHLORIDE SPIKE: 125 mg/L CHLORIDE. CHLORIDE CV: 12.5 mg/L CHLORIDE.
SULFATE SPIKE: 125 mg/L SULFATE. SULFATE CV: 12.5 mg/L SULFATE.
N03-N SPIKE: 50mg/L N03-N. N03-N CV: 5.0 mg/L N03-N.

Director, Dr. Blair Leftwich

2-24-99
Date

111216 ..   553

Analysis Request and Chain of Custody Record

PAGE: 1 **OF:** 1

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559   Fax (915) 682-3946

CLIENT NAME: Texaco   **SITE MANAGER:** M. Larson

PROJECT NO.: 787   **PROJECT NAME:** Eunice #1 (North)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	[illegible]	[illegible]
119296	2/17/99	14:05	W		✓	Rw-1	5	Y	✓	✓	✓		✓				✓									✓				✓	✓
97	2/18/99	10:30	W		✓	Rw-1	5	Y	✓	✓	✓		*				✓									✓				✓	✓
98	2/19/99	10:30	W		✓	Rw-1	5	Y	✓	✓	✓		*				✓									✓				✓	✓
99	2/19/99	10:10	W		✓	MW-12	5	Y		✓	✓						✓									✓				✓	✓

RELINQUISHED BY: (Signature) [signature] Date: 2/19/99 Time: 14:50
RECEIVED BY: (Signature) Helen Shelton Date: 2/19/99 Time: 2:50 PM

RELINQUISHED BY: (Signature) Helen Shelton Date: 2/19/99 Time: 5:00 PM
RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: [illegible]
ADDRESS: [illegible]
CITY: Lubbock **STATE:** TX **ZIP:**
CONTACT: [illegible] **PHONE:** (806) 7[illegible]-1296
RECEIVED BY: (Signature) [signature] **DATE:** 2-20-99 **TIME:** 10:40

SAMPLED BY: (Print & Sign) Mark Larson Date: 2/19/99 Time: 10:10

SAMPLE SHIPPED BY: (Circle) FEDEX, (BUS), UPS, HAND DELIVERED **AIRBILL #** **OTHER:**

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP please
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W)-Water S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS: * Hold + Call
Do Not Run Holds per Mark 2-23
Greyhound GI 1559844835

2/26

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

18 samples - HS   40

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.

Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW
Project Name: Texaco/North Eunice Gas Plant Lea County, NM

TA#	FIELD CODE	DISSOLVED As (mg/L)	DISSOLVED Se (mg/L)	DISSOLVED Cr (mg/L)	DISSOLVED Pb (mg/L)	DISSOLVED Ag (mg/L)	DISSOLVED Ba (mg/L)	DISSOLVED Cd (mg/L)
T125133	MW-14	<0.10	<0.10	1.0	<0.10	<0.05	<0.10	<0.02
T125135	Mw-18	<0.10	<0.10	<0.05	<0.10	<0.05	<0.10	<0.02
T125136	Mw-25	<0.10	<0.10	4.5	<0.10	<0.05	<0.10	<0.02
ICV		0.97	0.97	0.99	0.99	0.19	1.0	0.99
CCV		0.92	0.93	0.95	0.95	0.19	0.96	0.96
REPORTING LIMIT		0.01	0.01	0.01	0.005	0.002	0.01	0.001
RPD		1	3	0	1	0	1	1
% Extraction Accuracy		107	94	92	92	100	94	90
% Instrument Accuracy		102	102	103	103	101	104	104
PREP DATE		05/20/99	05/20/99	05/20/99	05/20/99	05/20/99	05/20/99	05/20/99
ANALYSIS DATE		05/22/99	05/22/99	05/22/99	05/22/99	05/22/99	05/22/99	05/22/99

METHODS: EPA SW 846-6010B, 3015
CHEMIST: As, Se, Cr, Pb, Ag, Ba, Cd, Zn: RR
TOTAL METALS SPIKE: 2.0 mg/L As, Se, Cr, Pb, Ba, Cd, Zn: 0.25 mg/L Ag
TOTAL METALS CV: 1.0 mg/L As, Se, Cr, Pb, Ba, Cd, Zn: 0.20 mg/L Ag

Director, Dr. Blair Leftwich

5-24-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 25, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.
Project Name: Texaco/North Eunice Gas Plant

Digestion Date: 05/24/99
Analysis Date: 05/24/99
Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW

TA#	FIELD CODE	DISSOLVED Hg (mg/L)
T125133	MW-14	<0.0002
T125135	MW-18	0.0067
T125136	MW-25	<0.0002
ICV		0.00095
CCV		0.00088
RPD		1
% Extraction Accuracy		84
% Instrument Accuracy		92
REPORTING LIMIT		0.0002

METHODS: EPA 7470A
CHEMIST: BP
DISSOLVED Hg SPIKE: 0.0010 mg/L TOTAL Hg.
DISSOLVED Hg CV: 0.0010 mg/L TOTA

Director, Dr. Blair Leftwich

5-25-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.
Project Name: Texaco/North Eunice Gas Plant
Lea Country, NM

Prep Date: 05/20/99
Analysis Date: 05/22/99
Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T125133	MW-14	28	125	407	978	1,530
T125135	MW-18	15	60	161	206	650
T125136	MW-25	20	129	342	393	1,385
ICV		20.6	20.6	20.7	19.5	---
CCV		18.9	20.5	20.7	19.5	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		2	1	2	1*	---
% Extraction Accuracy		87	91	79	94*	---
% Instrument Accuracy		102	94	103	97	---

***LCS/LCSD used for EA/RPD due to high concentration in sample.**

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 120 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

5-24-99
Date

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Project Name: Texaco/North Eunice Gas Plant
Lea Country, NM

Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW
Client Name: Texaco E & P Inc.

TA#	Field Code	CHLORIDE (mg/L)	NITRATE (mg/L)	SULFATE (mg/L)
T125133	MW-14	1,700	9.9	670
ICV		12.34	4.61	11.85
CCV		12.35	4.62	11.97
Reporting Limit		0.1	0.2	0.5
RPD		1	1	1
% Extraction Accuracy		95	83	95
% Instrument Accuracy		99	92	95
PREP DATE		05/20/99	05/20/99	04/05/99
ANALYSIS DATE		05/20/99	05/20/99	04/05/99

METHODS: EPA 300.0
CHEMIST: JS
NITRATE SPIKE: 250 mg/L NITRATE
SULFATE SPIKE: 625 mg/L SULFATE
CHLORIDE SPIKE: 625 mg/L CHLORIDE

NITRATE CV: 5.0 mg/L NITRATE
SULFATE CV: 625 mg/L SULFATE
CHLORIDE CV: 12.5 mg/L CHLORIDE

Director, Dr. Blair Leftwich

5-24-99
Date

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 25, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.

Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW
Project Name: Texaco/North Eunice
Gas Plant Lea County, NM

TA#	FIELD CODE	CHLORIDE (mg/L)	NITRATE (mg/L)	SULFATE (mg/L)
T125135	MW -18	420	5.0	290
T125136	MW -25	800	6.8	770
CV		12.34	4.61	11.85
CCV		12.35	4.62	11.97
REPORTING LIMIT		0.5	0.2	0.5
RPD		1	1	0
% Extraction Accuracy		95	83	95
% Instrument Accuracy		99	92	95
PREP DATE		05/20/99	05/20/99	05/20/99
ANALYSIS DATE		05/20/99	05/20/99	05/20/99

METHODS: EPA 300.0
CHEMIST: CHLORIDE, NO3-N, SO4 : JS
CHLORIDE SPIKE: 625 mg/L CHLORIDE
TOTAL NO3-N SPIKE: 5.0 mg/L NO3-N
TOTAL SO4 SPIKE: 125 mg/L SO4

CHLORIDE CV: 12.5 mg/L CHLORIDE
TOTAL NO3-N CV: 5.0 mg/L NO3-N
TOTAL SO4 SPIKE: 12.5 mg/L SO4

Director, Dr. Blair Leftwich

5-25-99
Date

TRACEANALYSIS, INC.

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.

Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW
Project Name: Texaco/North Eunice
Gas Plant Lea County, NM

TA#	FIELD CODE	pH* (s.u.)	TDS (mg/L)	ALKALINITY (mg/L as CaCo3) OH	CO3	HC03	TOTAL
T125133	MW-14	--------	4,400	0	0	334	334
T125135	MW-18	7.3	1,300	0	0	239	239
T125136	MW-25	7.3	2,600	0	0	203	203
ICV		7.0	978			2,280	
CCV		7.0	985			2,280	
REPORTING LIMIT		-----	10			5	
RPD		0	1			2	
% Extraction Accuracy		-----	--------			95	
% Instrument Accuracy		100	98			95	
PREP DATE		05/20/99	05/20/99			05/21/99	
ANALYSIS DATE		05/20/99	05/20/99			05/21/99	

***Out of holding time.**

METHODS: EPA 150.1 9040B, 160.1, 310.1
CHEMIST: pH: RS TDS/ALKALINITY: SA

Director, Dr. Blair Leftwich

5-24-99
Date

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Ike Tavarez
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 05/20/99
Sample Type: Water
Project #: 787
Client Name: Texaco E & P Inc.

Prep Date: 05/20/99
Analysis Date: 05/22/99
Sampling Date: 05/19/99
Sample Condition: I & C
Sample Received by: VW
Project Name: Texaco/North Eunice Gas Plant Lea County, NM

TA#	FIELD CODE	pH* (s.u.)
T125133	MW-14	7.1
ICV		7.0
CCV		7.0
RPD		0
% Instrument Accuracy		100

***Out of holding time.**

METHODS: EPA 150.1 9040B
CHEMIST: RS

Director, Dr. Blair Leftwich

5-24-99
Date

Cation-Anion Balance Sheet

DATE: 05/25/99 TS

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
125133	407	125	978	28	334	670	1700	9.9		4400	
125135	161	60	206	15	239	290	420	5		1300	
125136	342	129	393	20	203	770	800	6.8		2600	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
125133	20.31	10.29	42.54	0.72	6.68	13.95	47.96	0.706761	0	73.85	69.29	6.373306734
125135	8.03	4.94	8.96	0.38	4.78	6.04	11.85	0.35695	0	22.32	23.02	3.118510685
125136	17.07	10.62	17.10	0.51	4.06	16.03	22.57	0.485452	0	45.29	43.14	4.847633968

	EC/Cation	EC/Anion
125133	7385.479	6929.3161
125135	2231.6	2302.295
125136	4528.831	4314.4852

range	0	to	0	
range	0	to	0	
range	0	to	0	

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.60	0.63	needs to be 0.55-0.77
#DIV/0!	0.58	0.56	needs to be 0.55-0.77
#DIV/0!	0.57	0.60	needs to be 0.55-0.77

125133-36 990520112

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Texaco E&P. Inc.

SITE MANAGER: Ike Tavarez

PROJECT NO.: 787

PROJECT NAME: Texaco/North Eunice Gas Plant, Lea County N.M.

ANALYSIS REQUEST (Circle or Specify Method No.)

PRESERVATIVE METHOD

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se (Dissolved)	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Ions
125133	5/19/99				X	MW-14	2			/	X						X													X
34	↓				X	MW-15	1			/	X						X	Dissolved Cr only per Mark 5/20												
35	↓				X	MW-18	2			/	X						X													X
36	↓				X	MW-25	2			/	X						X													X

RELINQUISHED BY: (Signature) [signature] Date: 5/19/99 Time: 4:45 PM

RECEIVED BY: (Signature) Helen Shelton Date: 5/19/99 Time: 4:45 PM

RELINQUISHED BY: (Signature) Helen Shelton Date: 5/19/99 Time: 6:45 PM

RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Vicki Winslow
DATE: 5-20-99 TIME: 10:30 am

SAMPLED BY: (Print & Sign) Ike Tavarez Date: 5/19/99 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS (circled) AIRBILL #
HAND DELIVERED UPS OTHER:

HIGHLANDER CONTACT PERSON: Ike Tavarez/Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water (circled) S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS:

5/25

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Enviromental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

10 ... Greyhound 7 samples - HS #155-284-495-6 3C

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ANALYTICAL RESULTS FOR
HIGHLANDER SERVICES CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, TX 79705

June 30, 1999
Receiving Date: 06/25/99
Sample Type: Water
Project No: 787
Project Location:

Prep Date: 06/28/99
Analysis Date: 06/30/99
Sampling Date: 06/23/99
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Eunice #2 (North)

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T127130	MW-24A	0.03
T127131	MW-23	2.0
ICV		1.01
CCV		1.01
REPORTING LIMIT		0.01
RPD		5
% Extraction Accuracy		83
% Instrument Accuracy		101

METHODS: EPA SW 846-6010B, 3015
CHEMIST: RR
DISSOLVED Cr SPIKE: 2.0 mg/L DISSOLVED Cr
DISSOLVED Cr CV: 1.0 mg/L DISSOLVED Cr

Director, Dr. Blair Leftwich

6-30-99
Date

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

July 6, 1999
Receiving Date: 09/25/98
Sample Type: Water
Project No: 787
Project Location: Eunice #2
Project Name: Texaco

Prep Date: 07/01/99
Analysis Date: 07/01/99
Sampling Date: 06/23/99
Sample Condition: I & C
Sample Received by: VW

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T127130	MW - 24A	7.1	35	59	95	291
ICV		20.0	20.3	19.5	20.3	---
CCV		20.1	20.6	20	20.8	---
Reporting Limit		1.0	1.0	1.0	1.0	---
RPD		6	5	4	2	---
% Extraction Accuracy		100	97	109	107	---
% Instrument Accuracy		102	102	100	102	---

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

7-6-99
Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

July 6, 1999
Receiving Date: 09/25/98
Sample Type: Water
Project No: 787
Project Location: Eunice #2
Project Name: Texaco

Prep Date: 07/01/99
Analysis Date: 07/05/99
Sampling Date: 06/23/99
Sample Condition: I & C
Sample Received by: VW

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T127131	MW - 23	16	133	361	638	1,450
ICV		20.1	20.0	20.2	20.1	---
CCV		19.5	19.6	20	19.7	---
Reporting Limit		1.0	1.0	1.0	1.0	---
RPD		1	1	0	1	---
% Extraction Accuracy		104	102	102	105	---
% Instrument Accuracy		99	99	100	99	---

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

7-6-99
Date

Cation-Anion Balance Sheet

DATE: 7/6/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
127130	59	35	95	7.1	180.00	140	140	3.8	3.7	680	
127131	361	133	638	16	222.00	1300	910	7.6	2.8	3500	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
127130	2.94	2.88	4.13	0.18	3.60	2.91	3.95	0.271282	0.194768	10.14	10.93	7.517170799
127131	18.01	10.94	27.75	0.41	4.44	27.07	25.67	0.542564	0.147392	57.12	57.87	1.298061118

	EC/Cation	EC/Anion					TDS/EC	TDS/Cat	TDS/Anion	
127130	1013.8368	1093.025	range	0	to	0	#DIV/0!	0.67	0.62	needs to be 0.55-0.77
127131	5712.075	5786.7056	range	0	to	0	#DIV/0!	0.61	0.60	needs to be 0.55-0.77

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Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spirng St.
Midland, TX 79705

Report Date: 7/2/99

Project Number: 786
Project Name: Texaco South Eunice Gas Plant
Project Location: Eunice Plant

Order ID Number: 99062504

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
127130	MW-24A	Water	6/23/99	9:10	6/25/99
127131	MW-23	Water	6/23/99	10:23	6/25/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 127130
Description: MW-24A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
Bicarbonate Alkalinity (mg/L as CaCo3)		180	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
Total Alkalinity (mg/L as CaCo3)		180	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
CL (mg/L)		140	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.5
Fluoride (mg/L)		3.7	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.1
Nitrate-N (mg/L)	*	3.8	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.2
Sulfate (mg/L)		140	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.5
pH (s.u.)		7.6	1	E 150.1	6/30/99	6/30/99	RS	PB01320	QC01651	
Total Dissolved Solids (mg/L)		680	1	E 160.1	6/30/99	6/30/99	JS	PB01303	QC01625	10

* Nitrate-N - Sample was added to the run sheet already past the holding time for NO3.

Sample Number: 127131
Description: MW-23

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
Bicarbonate Alkalinity (mg/L as CaCo3)		222	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
Total Alkalinity (mg/L as CaCo3)		222	1	E 310.1	7/1/99	7/1/99	MD	PB01309	QC01634	1
CL (mg/L)		910	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.5
Fluoride (mg/L)		2.8	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.1
Nitrate-N (mg/L)	*	7.6	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.2
Sulfate (mg/L)		1300	1	E 300.0	6/30/99	6/30/99	JS	PB01307	QC01632	0.5
pH (s.u.)		7.3	1	E 150.1	6/30/99	6/30/99	RS	PB01320	QC01651	
Total Dissolved Solids (mg/L)		3500	1	E 160.1	6/30/99	6/30/99	JS	PB01303	QC01625	10

* Nitrate-N - Sample was added to the run sheet already past the holding time for NO3.

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	7/1/99	PB01309	QC01634
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	7/1/99	PB01309	QC01634
Bicarbonate Alkalinity (mg/L as CaCo3)		<1.0	1	7/1/99	PB01309	QC01634
Total Alkalinity (mg/L as CaCo3)		<1.0	1	7/1/99	PB01309	QC01634

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	6/30/99	PB01307	QC01632
Fluoride (mg/L)		<0.1	0.1	6/30/99	PB01307	QC01632
Nitrate-N (mg/L)		<0.2	0.2	6/30/99	PB01307	QC01632
Sulfate (mg/L)		<0.5	0.5	6/30/99	PB01307	QC01632

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Dissolved Solids (mg/L)		18	10	6/30/99	PB01303	QC01625

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param		Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	*	140	1	125	255.23	92		80 - 120	0 - 20	QC01632
MS	Fluoride (mg/L)	*	3.7	1	25	27.14	94		80 - 120	0 - 20	QC01632
MS	Nitrate-N (mg/L)	*	3.8	1	50	50.92	94		80 - 120	0 - 20	QC01632
MS	Sulfate (mg/L)	*	140	1	125	290.59	120		80 - 120	0 - 20	QC01632

* CL - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 93.
* Fluoride - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 92.
* Nitrate-N - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 90.
* Sulfate - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 100.

Standard	Param		Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MSD	CL (mg/L)	*	140	1	125	255.85	93	1	80 - 120	0 - 20	QC01632
MSD	Fluoride (mg/L)	*	3.7	1	125	27.19	94	0	80 - 120	0 - 20	QC01632
MSD	Nitrate-N (mg/L)	*	3.8	1	50	50.63	94	1	80 - 120	0 - 20	QC01632
MSD	Sulfate (mg/L)	*	140	1	125	288.91	119	1	80 - 120	0 - 20	QC01632

* CL - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 93.
* Fluoride - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 92.
* Nitrate-N - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 90.
* Sulfate - I spiked the *10 dilution sample for the matrix spikes, but reported the *5 dilution. The correct % EA is 100

Quality Control Report
Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC01634
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC01634
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		304	308	1	1	0 - 20	QC01634
Duplicate	Total Alkalinity (mg/L as CaCo3)		304	308	1	1	0 - 20	QC01634

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		7.3	7.3	1	0	0 - 20	QC01651

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		2108	2100	1	0	0 - 20	QC01625

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	7/1/99	QC01634
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	1960	0	80 - 120	7/1/99	QC01634
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	240	0	80 - 120	7/1/99	QC01634
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2200	92	80 - 120	7/1/99	QC01634
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	80	0	80 - 120	7/1/99	QC01634
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	2160	0	80 - 120	7/1/99	QC01634
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	7/1/99	QC01634
CCV (1	Total Alkalinity (mg/L as CaCo3)		2400	2240	93	80 - 120	7/1/99	QC01634

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.64	93	80 - 120	6/30/99	QC01632
ICV	Fluoride (mg/L)		2.5	2.46	98	80 - 120	6/30/99	QC01632
ICV	Nitrate-N (mg/L)		5	4.76	95	80 - 120	6/30/99	QC01632
ICV	Sulfate (mg/L)		12.5	12.33	99	80 - 120	6/30/99	QC01632
CCV (1	CL (mg/L)		12.5	11.63	93	80 - 120	6/30/99	QC01632
CCV (1	Fluoride (mg/L)		2.5	2.42	97	80 - 120	6/30/99	QC01632
CCV (1	Nitrate-N (mg/L)		5	4.73	95	80 - 120	6/30/99	QC01632
CCV (1	Sulfate (mg/L)		12.5	12.17	97	80 - 120	6/30/99	QC01632

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	6/30/99	QC01651
CCV (1	pH (s.u.)		7	7.1	101	80 - 120	6/30/99	QC01651

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	989	99	80 - 120	6/30/99	QC01625
CCV (1	Total Dissolved Solids (mg/L)		1000	1001	100	80 - 120	6/30/99	QC01625

127130-31

99062504

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Texaco

SITE MANAGER: M. Larson

PROJECT NO.: ~~786~~ 787 (MF 6/25/99)

PROJECT NAME: Eunice #3 (North)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
127130	6/23/99	9:10	W	X		MW-24A	3	Y	X	X	X	
131	6/23/99	10:25	W	X		MW-23	3	Y	X	X	X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Cations	Anions	TDS
			X	X													*	*	*
			X	X													*	*	*

RELINQUISHED BY: (Signature) Date: 6/23/99 Time: 17:00

RECEIVED BY: (Signature) Helen Shelton Date: 6/24/99 Time: 4:10PM

SAMPLED BY: (Print & Sign) MJ Larson Date: 6/23/99 Time: 10:25

RELINQUISHED BY: (Signature) Helen Shelton Date: 6/24/99 Time: 6:45PM

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED Greyhound AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc RECEIVED BY: (Signature) Vicki Watson

ADDRESS: 6701 Aberdeen

CITY: Lubbock STATE: TX ZIP: 79424

CONTACT: Nall PHONE: (800) 378-1296 DATE: 6-25-99 TIME: 9:30A

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: 6/30/99

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: * Hold Sample called verbale 6/30 run TDS, Cation, anion 6/6/99

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Enviromental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

4° Greyhound 611-159-384-5517 MS in samples - HS per mail 6/30

TRACE ANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

December 14, 1999
Receiving Date: 11/19/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 12/08/99
Analysis Date: 12/08/99
Sampling Date: 11/17/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North) Gas Plant

TA#	Field Code	DISSOLVED Na (mg/L)	DISSOLVED K (mg/L)	DISSOLVED Mg (mg/L)	DISSOLVED Ca (mg/L)	HARDNESS
T135893	MW-1	421	12	72	251	923
T135894	Duplicate	201	9	68	149	652
ICV		20	20	21	20	---
CCV		20	20	21	21	---
Reporting Limit		0.50	0.50	0.50	0.50	---
METHOD BLANK		<0.50	<0.50	<0.50	<0.50	---
RPD		1	4	6	1	---
% Extraction Accuracy		98	101	108	104	---
% Instrument Accuracy		103	101	107	106	---

METHODS: EPA SW 846-3005A, 6010B.
CHEMIST: RR
SPIKE: 1,000 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.
CV: 20 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.

Director, Dr. Blair Leftwich

12-14-99
Date

TRACEANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

December 14, 1999
Receiving Date: 11/19/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 12/14/99
Analysis Date: 12/14/99
Sampling Date: 11/17/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2
(North) Gas Plant

TA#	Field Code	DISSOLVED Na (mg/L)	DISSOLVED K (mg/L)	DISSOLVED Mg (mg/L)	DISSOLVED Ca (mg/L)	HARDNESS
T135891	MW-15	1,253	20	201	456	1,966
ICV		20	19.	19	19	---
CCV		21	20	19	19	---
Reporting Limit		0.50	0.50	0.50	0.50	---
METHOD BLANK		<0.50	<0.50	<0.50	<0.50	---
RPD		5	5	4	4	---
% Extraction Accuracy		119	101	99	101	---
% Instrument Accuracy		104	99	99	97	---

METHODS: EPA SW 846-3005A, 6010B.
CHEMIST: RR
SPIKE: 1,000 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.
CV: 20 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.

Director, Dr. Blair Leftwich

12-14-99
Date

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Project Name: Eunice #2 North Plant

Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW
Client Name: Texaco

CORRECTED

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T135993	MW-4	0.42
T135994	MW-9	0.33
T135995	MW-7	0.38
T135996	MW-10	0.32
T135997	MW-13	0.09
T135998	MW-14	0.92
T136000	MW-25	4.4
T136001	MW-12	3.0
T136002	Duplicate	4.7
ICV		1.03
CCV		1.09
REPORTING LIMIT		0.05

***Corrected sampling date from 11/08/99 to 11/18/99.**

RPD	1
% Extraction Accuracy	102
% Instrument Accuracy	106
PREP DATE	11/23/99
ANALYSIS DATE	12/01/99

METHODS: EPA 200.7
CHEMIST: RR
DISSOLVED Cr SPIKE : 20 mg/L
DISSOLVED Cr CV : 1.0 mg/L

Director, Dr. Blair Leftwich

2-8-00
Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Project Name: Eunice #2 North Plant

CORRECTED

Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW
Client Name: Texaco

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T136003	MW-11	6.2
T136004	MW-8	6.1
T136005	MW-27	<0.05
T136006	MW-28	<0.05
ICV		1.09
CCV		1.08
REPORTING LIMIT		0.05

***Corrected sampling date from 11/08/99 to 11/18/99 and results for sample MW-27 & MW-28.**

RPD	1
% Extraction Accuracy	109
% Instrument Accuracy	108
PREP DATE	11/23/99
ANALYSIS DATE	11/30/99

METHODS: EPA 200.7
CHEMIST: RR
DISSOLVED Cr SPIKE : 20 mg/L
DISSOLVED Cr CV : 1.0 mg/L

BB

Director, Dr. Blair Leftwich

2-8-00

Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

December 14, 1999
Receiving Date: 11/19/99
Sample Type: Water
Project No: 787
Project Location: NA

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 12/03/99
Analysis Date: 12/06/99
Sampling Date: 11/17/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2
(North) Gas Plant

TA#	Field Code	DISSOLVED Na (mg/L)	DISSOLVED K (mg/L)	DISSOLVED Mg (mg/L)	DISSOLVED Ca (mg/L)	HARDNESS
T135887	MW-26	163	12	86	242	958
T135888	MW-21	876	16	57	142	589
T135889	MW-20	282	12	81	166	748
T135890	MW-18	189	8.7	62	140	605
T135892	MW-2	183	9.7	80	170	754
ICV		20	20	20	20	---
CCV		20	20	21	21	---
Reporting Limit		0.50	0.50	0.50	0.50	---
METHOD BLANK		<0.50	<0.50	<0.50	<0.50	---
RPD		3	1	1	1	---
% Extraction Accuracy		99	102	102	103	---
% Instrument Accuracy		101	101	104	104	---

METHODS: EPA SW 846-3005A, 6010B.
CHEMIST: RR
SPIKE: 1,000 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.
CV: 20 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.

Director, Dr. Blair Leftwich

12-14-99
Date

Cation-Anion Balance Sheet

DATE:

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
135887	242	86	163	12	174	420	500	3.8	2.1		
135888	142	57	876	16	666	820	780	3.6	2.7		
135889	166	81	282	12	250	320	570	3.7	2.6		
135890	140	62	189	8.7	246	300	370	5.1	2.9		
135891	456	201	1253	20	278	620	3100	6.9	2.6		
135892	170	80	183	9.7	200	260	470	24	2.6		
135893	251	72	421	12	482	850	250	12	2.6		
135894	149	68	201	9	248	300	350	5.1	2.9		

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
135887	12.08	7.08	7.09	0.31	3.48	8.74	14.11	0.271282	0.110544	26.55	26.71	0.604662744
135888	7.09	4.69	38.11	0.41	13.32	17.07	22.00	0.257004	0.142128	50.29	52.80	4.857495918
135889	8.28	6.67	12.27	0.31	5.00	6.66	16.08	0.264143	0.136864	27.52	28.14	2.228496673
135890	6.99	5.10	8.22	0.22	4.92	6.25	10.44	0.364089	0.152656	20.53	22.12	7.448192157
135891	22.75	16.54	54.51	0.51	5.56	12.91	87.45	0.492591	0.136864	94.31	106.55	12.18463179 *
135892	8.48	6.58	7.96	0.25	4.00	5.41	13.26	1.71336	0.136864	23.27	24.52	5.219153105
135893	12.52	5.92	18.31	0.31	9.64	17.70	7.05	0.85668	0.136864	37.07	35.38	4.657334787
135894	7.44	5.60	8.74	0.23	4.96	6.25	9.87	0.364089	0.152656	22.00	21.60	1.872879124

	EC/Cation	EC/Anion				
135887	2655.02	2671.1226	range	0	to	0
135888	5029.161	5279.5332	range	0	to	0
135889	2752.285	2814.3107	range	0	to	0
135890	2053.2026	2212.0445	range	0	to	0
135891	9431.179	10654.8855	range	0	to	0
135892	2327.4826	2452.2124	range	0	to	0
135893	3707.024	3538.3044	range	0	to	0
135894	2200.454	2159.6245	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.78
#DIV/0!	0.00	0.00	needs to be 0.55-0.79
#DIV/0!	0.00	0.00	needs to be 0.55-0.80
#DIV/0!	0.00	0.00	needs to be 0.55-0.81
#DIV/0!	0.00	0.00	needs to be 0.55-0.82

* Note: 135891 2% high after rerunning anions/cations 3 times

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Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: 12/8/99

Project Number: 787
Project Name: Texaco
Project Location: Texaco North Eunice Gas Plant, NM

Order ID Number: 99111918

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
135887	MW-26	Water	11/17/99	9:34	11/19/99
135888	MW-21	Water	11/17/99	13:22	11/19/99
135889	MW-20	Water	11/17/99	14:14	11/19/99
135890	MW-18	Water	11/17/99	15:00	11/19/99
135891	MW-15	Water	11/17/99	15:37	11/19/99
135892	MW-2	Water	11/17/99	16:54	11/19/99
135893	MW-1	Water	11/17/99	17:42	11/19/99
135894	Dup	Water	11/17/99	-	11/19/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: 2/8/00

Project Number: 787
Project Name: Texaco
Project Location: Texaco North Eunice Gas Plant, NM

Order ID Number: 99111918

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
135887	MW-26	Water	11/17/99	9:34	11/19/99
135888	MW-21	Water	11/17/99	13:22	11/19/99
135889	MW-20	Water	11/17/99	14:14	11/19/99
135890	MW-18	Water	11/17/99	15:00	11/19/99
135891	MW-15	Water	11/17/99	15:37	11/19/99
135892	MW-2	Water	11/17/99	16:54	11/19/99
135893	MW-1	Water	11/17/99	17:42	11/19/99
135894	Dup	Water	11/17/99	-	11/19/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

February 08, 2000
Receiving Date: 11/19/99
Sample Type: Water
Project No: 787
Project Location: NA

Prep Date: 11/23/99
Analysis Date: 11/23/99
Sampling Date: 11/17/99
Sample Condition: I & C
Sample Received by: VW
Client Name: Texaco
Project Name: Eunice #2 (North) Gas Plant

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T135887	MW-26	<0.05
T135888	MW-21	<0.05
T135889	MW-20	<0.05
T135890	MW-18	<0.05
T135891	MW-15	<0.05
T135892	MW-2	<0.05
T135893	MW-1	<0.05
T135894	Duplicate	<0.05
ICV		1.0
CCV		1.0
RPD		2
% Extraction Accuracy		89
% Instrument Accuracy		104
Reporting Limit		0.05

METHODS: EPA SW 846-3005A, 6010B.
CHEMIST: RR
DISSOLVED Cr SPIKE: 2.0 mg/L DISSOLVED Cr.
DISSOLVED Cr CV: 1.0 mg/L DISSOLVED Cr.

Director, Dr. Blair Leftwich

2-8-00
DATE

Analytical Results Report

Sample Number: 135887
Description: MW-26

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	174	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	174	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)									
CL	* 500	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.5
Fluoride	2.1	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.1
Nitrate-N	* 3.8	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.2
Sulfate	420	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.5

* CL - Chloride re-ran on IC112299.sch (PB03252; QC04243) ICV %IA = 97; CCV %IA = 97; Matrix spikes RPD = 0; Matrix spikes %EA = 94.

* Nitrate-N - Sample came in already out of holding time for NO3.

pH (s.u.)									
pH	* 7.2	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1

* pH - Out of holding time.

TDS (mg/L)									
Total Dissolved Solids	1500	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135888
Description: MW-21

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	666	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	666	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
BTEX (mg/L)									
Benzene	<0.005	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
Toluene	<0.005	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
Ethylbenzene	<0.005	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
M,P,O-Xylene	<0.005	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
Total BTEX	<0.005	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001

Surrogate (mg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT	0.52	5	0.1	104	72 - 128	RC	PB03194	QC04148
4-BFB	0.48	5	0.1	96	72 - 128	RC	PB03194	QC04148

Ion Chromatography (IC) (mg/L)									
CL	* 780	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.5
Fluoride	2.7	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.1
Nitrate-N	* 3.6	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.2
Sulfate	820	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04239	0.5

* CL - Chloride re-ran on IC112299.sch (PB03252; QC04243) ICV %IA = 97; CCV %IA = 97; Matrix spikes RPD = 0; Matrix spikes %EA = 94.
* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)									
pH	* 6.9	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1
* pH - Out of holding time.									
TDS (mg/L)									
Total Dissolved Solids	3100	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135889
Description: MW-20

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	250	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	250	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)									
CL	* 570	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.5
Fluoride	2.6	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.1
Nitrate-N	* 3.7	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.2
Sulfate	320	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.5

* CL - Chloride re-ran on IC112299.sch (PB03252; QC04243) ICV %IA = 97; CCV %IA = 97; Matrix spikes RPD = 0; Matrix spikes %EA = 94.
* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)									
pH	* 7.1	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1
* pH - Out of holding time.									
TDS (mg/L)									
Total Dissolved Solids	1600	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135890
Description: MW-18

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	246	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	246	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)									
CL	* 370	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.5
Fluoride	2.9	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.1
Nitrate-N	* 5.1	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.2
Sulfate	300	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.5

* CL - Chloride re-ran on IC112299.sch (PB03252; QC04243) ICV %IA = 97; CCV %IA = 97; Matrix spikes RPD = 0; Matrix spikes %EA = 94.
* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)									
pH	* 7.2	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1

* pH - Out of holding time.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)									
Total Dissolved Solids	1300	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135891
Description: MW-15

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	278	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	278	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)									
CL	* 3100	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.5
Fluoride	2.6	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.1
Nitrate-N	* 6.9	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.2
Sulfate	620	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04240	0.5

* CL - Chloride re-ran on IC112299.sch (PB03252; QC04243) ICV %IA = 97; CCV %IA = 97; Matrix spikes RPD = 0; Matrix spikes %EA = 94.
* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)									
pH	* 6.9	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1

* pH - Out of holding time.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)									
Total Dissolved Solids	5900	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135892
Description: MW-2

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	200	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	200	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)									
CL	470	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.5
Fluoride	2.6	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.1
Nitrate-N	* 24	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.2
Sulfate	260	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.5

* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)									
pH	* 7.2	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1

* pH - Out of holding time.

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)									
Total Dissolved Solids	1400	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135893
Description: MW-1

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	482	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	482	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
BTEX (mg/L)									
Benzene	0.008	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
Toluene	0.018	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
Ethylbenzene	0.14	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
M,P,O-Xylene	0.042	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001
Total BTEX	0.208	5	S 8021B	11/21/99	11/21/99	RC	PB03194	QC04148	0.001

Surrogate (mg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT	0.545	5	0.1	109	72 - 128	RC	PB03194	QC04148
4-BFB	0.512	5	0.1	102	72 - 128	RC	PB03194	QC04148

Ion Chromatography (IC) (mg/L)									
CL	250	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.5
Fluoride	2.6	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.1
Nitrate-N	* 12	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.2
Sulfate	850	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.5

* Nitrate-N - Sample came in already out of holding time for NO3.

pH (s.u.)									
pH	* 7.0	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1

* pH - Out of holding time.

TDS (mg/L)									
Total Dissolved Solids	2200	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Sample Number: 135894
Description: Dup

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity	<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity	248	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity	248	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)									
CL	350	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.5
Fluoride	2.9	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.1
Nitrate-N	* 5.1	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.2
Sulfate	300	1	E 300.0	11/19/99	11/19/99	JS	PB03251	QC04241	0.5

* Nitrate-N - Sample came in already out of holding time for NO3.

pH (s.u.)									
pH	* 7.2	1	E 150.1	11/19/99	11/19/99	RS	PB03238	QC04221	1

* pH - Out of holding time.

TDS (mg/L)									
Total Dissolved Solids	1270	1	E 160.1	11/21/99	11/22/99	MD	PB03209	QC04172	10

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Bicarbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Total Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Benzene (mg/L)		<0.001	0.001	11/21/99	PB03194	QC04148
Toluene (mg/L)		<0.001	0.001	11/21/99	PB03194	QC04148
Ethylbenzene (mg/L)		<0.001	0.001	11/21/99	PB03194	QC04148
M,P,O-Xylene (mg/L)		<0.001	0.001	11/21/99	PB03194	QC04148
Total BTEX (mg/L)		<0.001	0.001	11/21/99	PB03194	QC04148

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	11/19/99	PB03251	QC04239
Fluoride (mg/L)		<0.1	0.1	11/19/99	PB03251	QC04239
Nitrate-N (mg/L)		<0.2	0.2	11/19/99	PB03251	QC04239
Sulfate (mg/L)		<0.5	0.5	11/19/99	PB03251	QC04239
CL (mg/L)		<0.5	0.5	11/19/99	PB03251	QC04240
Fluoride (mg/L)		<0.1	0.1	11/19/99	PB03251	QC04240
Nitrate-N (mg/L)		<0.2	0.2	11/19/99	PB03251	QC04240
Sulfate (mg/L)		<0.5	0.5	11/19/99	PB03251	QC04240
CL (mg/L)		<0.5	0.5	11/19/99	PB03251	QC04241
Fluoride (mg/L)		<0.1	0.1	11/19/99	PB03251	QC04241
Nitrate-N (mg/L)		<0.2	0.2	11/19/99	PB03251	QC04241
Sulfate (mg/L)		<0.5	0.5	11/19/99	PB03251	QC04241

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Dissolved Solids (mg/L)		<10	10	11/22/99	PB03209	QC04172

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Fluoride (mg/L)	2.1	1	125	127.49	100		80 - 120	0 - 20	QC04239
MS	Nitrate-N (mg/L)	3.8	1	250	244.92	96		80 - 120	0 - 20	QC04239
MS	Sulfate (mg/L)	420	1	625	1023.44	97		80 - 120	0 - 20	QC04239
MSD	Fluoride (mg/L)	2.1	1	125	116.50	92	9	80 - 120	0 - 20	QC04239
MSD	Nitrate-N (mg/L)	3.8	1	250	244.98	96	0	80 - 120	0 - 20	QC04239
MSD	Sulfate (mg/L)	420	1	625	1018.94	96	1	80 - 120	0 - 20	QC04239

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Fluoride (mg/L)	2.6	1	125	117.52	92		80 - 120	0 - 20	QC04240
MS	Nitrate-N (mg/L)	3.7	1	250	244.42	96		80 - 120	0 - 20	QC04240
MS	Sulfate (mg/L)	320	1	625	911.91	95		80 - 120	0 - 20	QC04240
MSD	Fluoride (mg/L)	2.6	1	125	117.31	92	0	80 - 120	0 - 20	QC04240
MSD	Nitrate-N (mg/L)	3.7	1	250	243.65	96	0	80 - 120	0 - 20	QC04240
MSD	Sulfate (mg/L)	320	1	625	921.05	96	2	80 - 120	0 - 20	QC04240

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	470	1	625	1006.01	86		80 - 120	0 - 20	QC04241
MS	Fluoride (mg/L)	2.6	1	125	128.20	100		80 - 120	0 - 20	QC04241
MS	Nitrate-N (mg/L)	24	1	250	263.75	96		80 - 120	0 - 20	QC04241
MS	Sulfate (mg/L)	260	1	625	873.72	98		80 - 120	0 - 20	QC04241
MSD	CL (mg/L)	470	1	625	1007.58	86	0	80 - 120	0 - 20	QC04241
MSD	Fluoride (mg/L)	2.6	1	125	117.65	92	9	80 - 120	0 - 20	QC04241
MSD	Nitrate-N (mg/L)	24	1	250	265.39	97	1	80 - 120	0 - 20	QC04241
MSD	Sulfate (mg/L)	260	1	625	877.20	99	1	80 - 120	0 - 20	QC04241

Quality Control Report
Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04190
Duplicate	Carbonate Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04190
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		242	248	1	2	0 - 20	QC04190
Duplicate	Total Alkalinity (mg/L as CaCo3)		242	248	1	2	0 - 20	QC04190

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		8.2	8.2	1	0	0 - 20	QC04221

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		1278	1270	1	1	0 - 20	QC04172

Quality Control Report
Lab Control Spikes and Duplicate Spike

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE (mg/L)	<0.001	1	0.1	0.087	87		80 - 120	0 - 20	QC04148
LCS	Benzene (mg/L)	<0.001	1	0.1	0.097	97		80 - 120	0 - 20	QC04148
LCS	Toluene (mg/L)	<0.001	1	0.1	0.097	97		80 - 120	0 - 20	QC04148
LCS	Ethylbenzene (mg/L)	<0.001	1	0.1	0.096	96		80 - 120	0 - 20	QC04148
LCS	M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.286	95		80 - 120	0 - 20	QC04148

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCS	TFT (mg/L)	1	0.1	0.108	108	72 - 128	QC04148
LCS	4-BFB (mg/L)	1	0.1	0.109	109	72 - 128	QC04148

LCSD	MTBE (mg/L)	<0.001	1	0.1	0.109	109	22	80 - 120	0 - 20	QC04148
LCSD	Benzene (mg/L)	<0.001	1	0.1	0.114	114	16	80 - 120	0 - 20	QC04148
LCSD	Toluene (mg/L)	<0.001	1	0.1	0.114	114	16	80 - 120	0 - 20	QC04148
LCSD	Ethylbenzene (mg/L)	<0.001	1	0.1	0.115	115	18	80 - 120	0 - 20	QC04148
LCSD	M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.346	115	19	80 - 120	0 - 20	QC04148

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCSD	TFT (mg/L)	1	0.1	0.1	100	72 - 128	QC04148
LCSD	4-BFB (mg/L)	1	0.1	0.103	103	72 - 128	QC04148

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	220	0	80 - 120	11/23/99	QC04190
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2280	0	80 - 120	11/23/99	QC04190
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04190
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2500	104	80 - 120	11/23/99	QC04190
CCV 1	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04190
CCV 1	Carbonate Alkalinity (mg/L as CaCo3)		0	2180	0	80 - 120	11/23/99	QC04190
CCV 1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	180	0	80 - 120	11/23/99	QC04190
CCV 1	Total Alkalinity (mg/L as CaCo3)		2400	2260	94	80 - 120	11/23/99	QC04190

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Benzene (mg/L)		0.1	0.098	98	80 - 120	11/21/99	QC04148
ICV	Toluene (mg/L)		0.1	0.098	98	80 - 120	11/21/99	QC04148
ICV	Ethylbenzene (mg/L)		0.1	0.099	99	80 - 120	11/21/99	QC04148
ICV	M,P,O-Xylene (mg/L)		0.3	0.299	100	80 - 120	11/21/99	QC04148
CCV 1	Benzene (mg/L)		0.1	0.095	95	80 - 120	11/21/99	QC04148
CCV 1	Toluene (mg/L)		0.1	0.095	95	80 - 120	11/21/99	QC04148
CCV 1	Ethylbenzene (mg/L)		0.1	0.096	96	80 - 120	11/21/99	QC04148
CCV 1	M,P,O-Xylene (mg/L)		0.3	0.289	96	80 - 120	11/21/99	QC04148

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.57	93	80 - 120	11/19/99	QC04239
ICV	Fluoride (mg/L)		2.5	2.40	96	80 - 120	11/19/99	QC04239
ICV	Nitrate-N (mg/L)		5	4.61	92	80 - 120	11/19/99	QC04239
ICV	Sulfate (mg/L)		12.5	12.07	97	80 - 120	11/19/99	QC04239
CCV 1	CL (mg/L)		12.5	16.32	131	80 - 120	11/19/99	QC04239
CCV 1	Fluoride (mg/L)		2.5	2.38	95	80 - 120	11/19/99	QC04239
CCV 1	Nitrate-N (mg/L)		5	4.57	91	80 - 120	11/19/99	QC04239
CCV 1	Sulfate (mg/L)		12.5	13.26	106	80 - 120	11/19/99	QC04239

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	16.32	131	80 - 120	11/19/99	QC04240
ICV	Fluoride (mg/L)		2.5	2.38	95	80 - 120	11/19/99	QC04240
ICV	Nitrate-N (mg/L)		5	4.57	91	80 - 120	11/19/99	QC04240
ICV	Sulfate (mg/L)		12.5	13.26	106	80 - 120	11/19/99	QC04240
CCV 1	CL (mg/L)		12.5	11.59	93	80 - 120	11/19/99	QC04240

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Fluoride (mg/L)		2.5	2.42	97	80 - 120	11/19/99	QC04240
CCV 1	Nitrate-N (mg/L)		5	4.65	93	80 - 120	11/19/99	QC04240
CCV 1	Sulfate (mg/L)		12.5	12.18	97	80 - 120	11/19/99	QC04240

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.59	93	80 - 120	11/19/99	QC04241
ICV	Fluoride (mg/L)		2.5	2.42	97	80 - 120	11/19/99	QC04241
ICV	Nitrate-N (mg/L)		5	4.65	93	80 - 120	11/19/99	QC04241
ICV	Sulfate (mg/L)		12.5	12.18	97	80 - 120	11/19/99	QC04241
CCV 1	CL (mg/L)		12.5	11.53	92	80 - 120	11/19/99	QC04241
CCV 1	Fluoride (mg/L)		2.5	2.43	97	80 - 120	11/19/99	QC04241
CCV 1	Nitrate-N (mg/L)		5	4.64	93	80 - 120	11/19/99	QC04241
CCV 1	Sulfate (mg/L)		12.5	12.14	97	80 - 120	11/19/99	QC04241

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	11/19/99	QC04221
CCV 1	pH (s.u.)		7	7.0	100	80 - 120	11/19/99	QC04221

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	982	98	80 - 120	11/22/99	QC04172
CCV 1	Total Dissolved Solids (mg/L)		1000	900	90	80 - 120	11/22/99	QC04172

135887-

99111918

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Texaco

SITE MANAGER: Mark Larson

PROJECT NO.: 787

PROJECT NAME: Eunice #2 (North) Gas Plant

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Dissolved Ca	Cations/Anions
135887	11/17/99	9:37	W			MW-26	3	Y			X															X				X	X
88	11/17/99	13:22	W			MW-21	5	Y			X		X													X				X	X
89	11/17/99	14:14	W			MW-20	3	Y			X															X				X	X
90	11/17/99	15:00	W			MW-18	3	Y			X															X				X	X
91	11/17/99	1537	W			MW-15	3	Y			X															X				X	X
92	11/17/99	1654	W			MW-2	3	Y			X															X				X	X
93	11/17/99	1742	W			MW-1	5	Y			X		X													X				X	X
94	11/17/99		W			Dup.	3	Y			X															X				X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Lynn Ward — Date: 11/17/99 Time: 5:05pm

RECEIVED BY: (Signature) — Date: 11/17/99 Time: 5:05pm

SAMPLED BY: (Print & Sign) Lynn Ward — Date: 11/17/99 Time: 2008

RELINQUISHED BY: (Signature) Helen Shelton — Date: 11/18/99 Time: 5:30PM

RECEIVED BY: (Signature) — Date: Time:

SAMPLE SHIPPED BY: (Circle) Greyhound

FEDEX BUS UPS AIRBILL #

HAND DELIVERED OTHER:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace Analysis

ADDRESS:

CITY: Lubbock STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature) Otis Windham

DATE: 11-19-99 TIME: 9:30AM

HIGHLANDER CONTACT PERSON: Mark Larson

Results by:

RUSH Charges Authorized: Yes (No)

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W-Water) S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS:

12/10

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Enviromental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

12/16 re-fax

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

February 8, 2000
Receiving Date: 01/26/99
Sample Type: Water
Project No: 787
Project Name: Eunice #2 (North)

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

Prep Date: 01/23/99
Analysis Date: 02/01/99
Sampling Date: 01/20/99
Sample Condition: Intact & Cool
Sample Received by: VW
Client Name: Texaco

CORRECTED **DISSOLVED**

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T117314	MW-1 (Dup)	7.6	63	205	454	770
ICV		27	27	25	24	---
CCV		27	26	24	24	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		1*	1*	2*	1*	---
% Extraction Accuracy		112*	109*	101*	99*	---
% Instrument Accuracy		108	104	96	96	---

***Used LCS/LCSD for EARPD due to high concentration in sample.**

METHODS: EPA SW 846-6010B, 3015, SM 2340B.
CHEMIST: RR
DISSOLVED SPIKE: 100 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
DISSOLVED CV: 25 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

2-8-00

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco
Project Name: Eunice #2 North Plant

Prep Date: 11/23/99
Analysis Date: 11/30/99
Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW

CORRECTED

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T135993	MW-4	13	84	296	384	1,085
T135994	MW-9	13	110	347	353	1,319
T135995	MW-7	11	94	309	442	1,159
T135996	MW-10	17	192	528	484	2,109
T135997	MW-13	17	142	495	678	1,821
ICV		20.5	20.8	20.5	19.9	---
CCV		19.4	21.6	21.6	19.8	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		3	3	3	1	---
% Extraction Accuracy		97	102	102	101	---
% Instrument Accuracy		99	106	105	99	---

***Corrected sampling date from 11/08/99 to 11/18/99.**

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 1,000 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

2-8-00

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco
Project Name: Eunice #2 North Plant

Prep Date: 11/23/99
Analysis Date: 11/30/99
Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW

CORRECTED

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T136003	MW-11	22	159	689	678	2,375
T136004	MW-8	22	155	626	685	2,201
T136005	MW-27	8.8	44	147	106	548
T136006	MW-28	14	69	238	559	878
ICV		19.4	21.6	21.7	19.8	---
CCV		19.4	19.5	20.1	19.8	---
Reporting Limit		0.50	0.50	0.50	0.50	---

***Corrected sampling date from 11/08/99 to 11/18/99.**

RPD	1	1	0	1	---
% Extraction Accuracy	111	114	111	92	---
% Instrument Accuracy	97	103	104	99	---

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 1,000 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

BS

Director, Dr. Blair Leftwich

2-8-00

Date

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco
Project Name: Eunice #2 North Plant

Prep Date: 11/23/99
Analysis Date: 11/30/99
Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW

CORRECTED

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T135998	MW-14	32	98	321	1,179	1,205
T136000	MW-25	15	141	358	399	1,475
T136001	MW-12	34	134	496	518	1,790
T136002	Duplicate	15	142	364	412	1,494
ICV		20.5	20.8	20.5	19.9	---
CCV		19.4	21.6	21.6	19.8	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		3	3	3	1	---
% Extraction Accuracy		97	102	102	101	---
% Instrument Accuracy		99	106	105	99	---

***Corrected sampling date from 11/08/99 to 11/18/99.**

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 1,000 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dallas Division

1-8-00
Date

TRACEANALYSIS, INC.

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco
Project Name: Eunice #2 North Plant

Prep Date: 11/23/99
Analysis Date: 11/30/99
Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW

CORRECTED

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T135999	MW-23	18	168	435	693	1,778
ICV		20.5	20.8	20.5	19.8	---
CCV		19.4	21.6	21.6	19.8	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		3	3	3	1	---
% Extraction Accuracy		97	102	102	101	---
% Instrument Accuracy		99	106	105	99	---

***Corrected sampling date from 11/08/99 to 11/18/99.**

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 1,000 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

2-8-00
Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Client Name: Texaco
Project Name: Eunice #2 North Plant

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

CORRECTED

Prep Date: 11/23/99
Analysis Date: 11/30/99
Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	HARDNESS (mg/L CaC03)
T136007	MW-29	7.9	49	159	158	599
ICV		19.4	21.6	21.7	19.8	---
CCV		19.4	19.5	20.1	19.8	---
Reporting Limit		0.50	0.50	0.50	0.50	---
RPD		1	1	0	1	---
% Extraction Accuracy		111	114	111	92	---
% Instrument Accuracy		97	103	104	99	---

***Corrected sampling date from 11/08/99 to 11/18/99.**

METHODS: EPA SW 846-6010B, 3005A, SM 2340B.
CHEMIST: RR
TOTAL SPIKE: 1,000 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.
TOTAL CV: 20 mg/L POTASSIUM, MAGNESIUM, CALCIUM, SODIUM.

Director, Dr. Blair Leftwich

2-8-00
Date

TRACE ANALYSIS, INC.

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Project Name: Eunice #2 North Plant

CORRECTED

Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW
Client Name: Texaco

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T135999	MW-23	2.56
ICV		0.92
CCV		0.98
REPORTING LIMIT		0.05
RPD		9
% Extraction Accuracy		102
% Instrument Accuracy		95

***Corrected sampling date from 11/08/99 to 11/18/99.**

PREP DATE	01/11/00
ANALYSIS DATE	01/11/00

METHODS: EPA 200.7
CHEMIST: JM
DISSOLVED Cr SPIKE : 1.0 mg/L
DISSOLVED Cr CV : 1.0 mg/L

Director, Dr. Blair Leftwich

2-8-00
Date

TRACE ANALYSIS, INC.

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ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL CORP.
Attention: Mark Larson
1910 N. Big Spring Street
Midland, Texas 79705

February 8, 2000
Receiving Date: 11/20/99
Sample Type: Water
Project No: 787
Project Name: Eunice #2 North Plant

CORRECTED

Sampling Date: 11/18/99
Sample Condition: I & C
Sample Received by: VW
Client Name: Texaco

TA#	FIELD CODE	DISSOLVED Cr (mg/L)
T136007	MW-29	<0.05
ICV		1.09
CCV		1.08
REPORTING LIMIT		0.05
RPD		1
% Extraction Accuracy		109
% Instrument Accuracy		108

***Corrected sampling date from 11/08/99 to 11/18/99 and result for sample MW-29.**

PREP DATE	11/23/99
ANALYSIS DATE	11/30/99

METHODS: EPA 200.7
CHEMIST: RR
DISSOLVED Cr SPIKE : 20 mg/L
DISSOLVED Cr CV : 1.0 mg/L

Director, Dr. Blair Leftwich

2-8-00
Date

Cation-Anion Balance Sheet

DATE: 12-14-97

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
135993	296	84	384	13	366	710	620	4.6	2.8		
135994	347	110	353	13	278	1200	490	6.8	3.2		
135995	309	94	442	11	240	1200	520	6.9	2.6		
135996	528	192	484	17	178	1200	1100	6.6	3		
135997	495	142	678	17	372	1400	1200	5.7	2.3		
135998	321	98	1179	32	452	760	2000	13	3.1		
135999	435	168	693	18	222	1400	1100	8.1	3.1		
136000	358	141	399	15	210	940	760	9.5	1.7		

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
135993	14.77	6.91	16.70	0.33	7.32	14.78	17.49	0.328394	0.147392	38.72	40.07	3.424112301
135994	17.32	9.05	15.36	0.33	5.56	24.98	13.82	0.485452	0.168448	42.06	45.02	6.811425967
135995	15.42	7.74	19.23	0.28	4.80	24.98	14.67	0.492591	0.136864	42.66	45.08	5.515765243
135996	26.35	15.80	21.05	0.43	3.56	24.98	31.03	0.471174	0.15792	63.64	60.20	5.542071382
135997	24.70	11.69	29.49	0.43	7.44	29.15	33.85	0.406923	0.121072	66.31	70.97	6.780890088
135998	16.02	8.06	51.29	0.82	9.04	15.82	56.42	0.92807	0.163184	76.19	82.37	7.803988947
135999	21.71	13.82	30.15	0.46	4.44	29.15	31.03	0.578259	0.163184	66.14	65.36	1.181340165
136000	17.86	11.60	17.36	0.38	4.20	19.57	21.44	0.678205	0.089488	47.21	45.98	2.63817556

	EC/Cation	EC/Anion				
135993	3871.93	4006.8186	range	0	to	0
135994	4205.524	4502.08	range	0	to	0
135995	4266.274	4508.2655	range	0	to	0
135996	6363.574	6020.4094	range	0	to	0
135997	6631.354	7096.7995	range	0	to	0
135998	7618.738	8237.4454	range	0	to	0
135999	6613.716	6536.0443	range	0	to	0
136000	4720.729	4597.8093	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.78
#DIV/0!	0.00	0.00	needs to be 0.55-0.79
#DIV/0!	0.00	0.00	needs to be 0.55-0.80
#DIV/0!	0.00	0.00	needs to be 0.55-0.81
#DIV/0!	0.00	0.00	needs to be 0.55-0.82

Cation-Anion Balance Sheet

DATE:

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
136001	496	134	518	34	122	1400	820	8.1	4.7		
136002	364	142	412	15	164	970	760	9.6	1.6		
136003	689	159	678	22	150	1600	1200	10	5.4		
136004	626	155	685	22	164	1600	1100	10	4		
136005	147	44	106	8.8	180	220	240	3.6	2		
136006	238	69	559	14	188	230	1200	3.6	2.1		
136007	159	49	158	7.9	182	340	250	7.2	2.4		

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
136001	24.75	11.03	22.53	0.87	2.44	29.15	23.13	0.578259	0.247408	59.18	55.55	6.33529949
136002	18.16	11.69	17.92	0.38	3.28	20.20	21.44	0.685344	0.084224	48.15	45.68	5.264145476
136003	34.38	13.08	29.49	0.56	3.00	33.31	33.85	0.7139	0.284256	77.52	71.16	8.553511311
136004	31.24	12.75	29.80	0.56	3.28	33.31	31.03	0.7139	0.21056	74.35	68.55	8.124768588
136005	7.34	3.62	4.61	0.23	3.60	4.58	6.77	0.257004	0.10528	15.79	15.31	3.08038052
136006	11.88	5.68	24.32	0.36	3.76	4.79	33.85	0.257004	0.110544	42.23	42.77	1.269028647
136007	7.93	4.03	6.87	0.20	3.64	7.08	7.05	0.514008	0.126336	19.04	18.41	3.362867566

	EC/Cation	EC/Anion
136001	5917.998	5554.5867
136002	4815.448	4568.4568
136003	7752.097	7116.2156
136004	7435.261	6854.746
136005	1579.2164	1531.3084
136006	4222.883	4276.8148
136007	1904.1392	1841.1644

range	0	to	0	
range	0	to	0	
range	0	to	0	
range	0	to	0	
range	0	to	0	
range	0	to	0	
range	0	to	0	

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.77
#DIV/0!	0.00	0.00	needs to be 0.55-0.78
#DIV/0!	0.00	0.00	needs to be 0.55-0.79
#DIV/0!	0.00	0.00	needs to be 0.55-0.80
#DIV/0!	0.00	0.00	needs to be 0.55-0.81

135993 - 6007

9911200

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 2

CLIENT NAME: Texaco

SITE MANAGER: Mark Larson

PROJECT NO.: 787

PROJECT NAME: Eunice #2 North PLANT

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
135993	11/18/99	0840	W			MW-4	5	Y			X	
94	11/18/99	0944	W			MW-9	3	Y			X	
95	11/18/99	1023	W			MW-7	3	Y			X	
96	11/18/99	1057	W			MW-10	3	Y			X	
97	11/18/99	1133	W			MW-13	3	Y			X	
98	11/18/99	1235	W			MW-14	3	Y			X	
99	11/18/99	1258	W			MW-23	3	Y			X	
136000	11/18/99	1500	W			MW-25	3	Y			X	
01	11/18/99	1550	W			MW-12	3	Y			X	
02	11/18/99		W			DUP.	3	Y			X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, (TDS) Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	DISCHARGE CL	MANIONS/CATIONS
X													X				X	X
													X				X	X
													X				X	X
													X				X	X
													X				X	X
													X				X	X
													X				X	X
													X				X	X
													X				X	X
													X				X	X

RELINQUISHED BY: (Signature) John C. Ward — Date: 11/18/99 Time: 5:21 pm

RECEIVED BY: (Signature) Helen Shelton — Date: 11/18/99 Time: 8:21 PM

RELINQUISHED BY: (Signature) Helen Shelton — Date: 11/19/99 Time: 6:00 PM

RECEIVED BY: (Signature) Jason Montgomery — Date: 11-20-99 Time: 7:15 am

RELINQUISHED BY: (Signature) — Date: — Time:

RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Sign) Lisa Ward Lisa Ward — Date: 11/5/99 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED — AIRBILL #: — OTHER:

RECEIVING LABORATORY: TRACE ANALYSIS
ADDRESS:
CITY: Lubbock STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Vicki Windham
DATE: 11-20-99 TIME: 10:00 AM

HIGHLANDER CONTACT PERSON: MARK LARSON

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W-Water) S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS: Bus Bill #: 159-384-650-7

12/7 12/8

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

21 Midland HS

99/12001

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: TEXACO

SITE MANAGER: MARK LARSON

PROJECT NO.: 787

PROJECT NAME: Eunice #2 North PLANT

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, (TDS) Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	DISSOLVED Cr	ANIONS / CATIONS
136003	11/19/99	1643	W			MW-11	3	Y			X															X				X	X
04	11/18/99	1740	W			MW-8	3	Y			X															X				X	X
05	11/18/99	1540	W			MW-27	3	Y			X															X				X	X
06	11/18/99	1510	W			MW-28	3	Y			X															X				X	X
07	11/18/99	1641	W			MW-29	3	Y			X															X				X	X

RELINQUISHED BY: (Signature) Date: 11/18/99 Time: 8:21 pm

RECEIVED BY: (Signature) Helen Shelton Date: 11/18/99 Time: 8:21 PM

SAMPLED BY: (Print & Sign) Date: 11/18/99 Time:

RELINQUISHED BY: (Signature) Helen Shelton Date: 11/19/99 Time: 6:10 PM

RECEIVED BY: (Signature) Jason Montgomery 5° Date: 11-20-99 Time: 9:15 am

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

HAND DELIVERED

RECEIVING LABORATORY: TRACE ANALYSIS

ADDRESS:

CITY: Lubbock STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature) Vicki Wardha

DATE: 11-20-99 TIME: 10:00 AM

HIGHLANDER CONTACT PERSON: MARK LARSON

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W-Water) S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS: Bus Bill #: 59-384-650-7

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

IC anmAles - HC

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: 12/15/99

Project Number: 787
Project Name: Texaco
Project Location: Texaco North Eunice Gas Plant, NM

Order ID Number: 99112001

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
135993	MW-4	Water	11/18/99	8:40	11/20/99
135994	MW-9	Water	11/18/99	9:44	11/20/99
135995	MW-7	Water	11/18/99	10:23	11/20/99
135996	MW-10	Water	11/18/99	10:57	11/20/99
135997	MW-13	Water	11/18/99	11:33	11/20/99
135998	MW-14	Water	11/18/99	12:35	11/20/99
135999	MW-23	Water	11/18/99	12:58	11/20/99
136000	MW-25	Water	11/18/99	15:00	11/20/99
136001	MW-12	Water	11/18/99	15:50	11/20/99
136002	Dup	Water	11/18/99	-	11/20/99
136003	MW-11	Water	11/18/99	16:43	11/20/99
136004	MW-8	Water	11/18/99	17:40	11/20/99
136005	MW-27	Water	11/18/99	15:40	11/20/99
136006	MW-28	Water	11/18/99	15:10	11/20/99
136007	MW-29	Water	11/18/99	16:41	11/20/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 135993
Description: MW-4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Bicarbonate Alkalinity		366	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity		366	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
BTEX (mg/L)										
Benzene		<0.001	1	S 8021B	11/26/99	11/26/99	ML	PB03280	QC04282	0.001
Toluene		<0.001	1	S 8021B	11/26/99	11/26/99	ML	PB03280	QC04282	0.001
Ethylbenzene		<0.001	1	S 8021B	11/26/99	11/26/99	ML	PB03280	QC04282	0.001
M,P,O-Xylene		<0.001	1	S 8021B	11/26/99	11/26/99	ML	PB03280	QC04282	0.001
Total BTEX		<0.001	1	S 8021B	11/26/99	11/26/99	ML	PB03280	QC04282	0.001
Ion Chromatography (IC) (mg/L)										
CL	*	620	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.5
Fluoride		2.8	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.1
Nitrate-N	*	4.6	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.2
Sulfate	*	710	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.5
pH (s.u.)										
pH	*	7.0	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1
TDS (mg/L)										
Total Dissolved Solids		2600	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

* CL - Chloride re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 104; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 102.

* Nitrate-N - Sample came in already out of holding time for NO3.

* Sulfate - Sulfate re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 102; CCV %IA = 96; matrix spikes RPD = 0; matrix spikes %EA = 105.

* pH - Out of holding time.

Sample Number: 135994
Description: MW-9

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1

Bicarbonate Alkalinity		278	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Total Alkalinity		278	1	E 310.1	11/23/99	11/23/99	MD	PB03215	QC04190	1
Ion Chromatography (IC) (mg/L)										
CL		490	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.5
Fluoride		3.2	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.1
Nitrate-N	*	6.8	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.2
Sulfate		1200	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04244	0.5
pH (s.u.)										
pH	*	7.3	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1
TDS (mg/L)										
Total Dissolved Solids		2700	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

* Nitrate-N - Sample came in already out of holding time for NO3.

* pH - Out of holding time.

Sample Number: 135995
Description: MW-7

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		240	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		240	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		520	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.5
Fluoride		2.6	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.1
Nitrate-N	*	6.9	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.2
Sulfate		1200	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.5
pH (s.u.)										
pH	*	7.4	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1
TDS (mg/L)										
Total Dissolved Solids		2700	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

* Nitrate-N - Sample came in already out of holding time for NO3.

* pH - Out of holding time.

Sample Number: 135996
Description: MW-10

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		178	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		178	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		1100	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.5
Fluoride		3.0	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.1
Nitrate-N	*	6.6	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.2
Sulfate		1200	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.5
pH (s.u.)										
pH	*	7.3	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1
TDS (mg/L)										
Total Dissolved Solids		3800	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

* Nitrate-N - Sample came in already out of holding time for NO3.

* pH - Out of holding time.

Sample Number: 135997
Description: MW-13

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		372	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		372	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL	*	1200	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.5
Fluoride		2.3	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.1
Nitrate-N	*	5.7	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.2
Sulfate	*	1400	1	E 300.0	11/22/99	11/22/99	JS	PB03252	QC04245	0.5

* CL - Chloride re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 104; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 102.
* Nitrate-N - Sample came in already out of holding time for NO3.
* Sulfate - Sulfate re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 102; CCV %IA = 96; matrix spikes RPD = 0; matrix spikes %EA = 105.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)										
pH	*	7.3	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1

* pH - Out of holding time.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)										
Total Dissolved Solids		4500	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

Sample Number: 135998
Description: MW-14

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		452	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		452	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		2000	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.5
Fluoride		3.1	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.1
Nitrate-N	*	13	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.2
Sulfate		760	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.5

* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)										
pH	*	7.3	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1

* pH - Out of holding time.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)										
Total Dissolved Solids		4600	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

Sample Number: 135999
Description: MW-23

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		222	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		222	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		1100	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.5
Fluoride		3.1	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.1
Nitrate-N	*	8.1	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.2
Sulfate		1400	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.5
pH (s.u.)										
pH	*	7.5	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1
TDS (mg/L)										
Total Dissolved Solids		4100	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

* Nitrate-N - Sample came in already out of holding time for NO3.

* pH - Out of holding time.

Sample Number: 136000
Description: MW-25

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		210	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		210	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		760	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.5
Fluoride		1.7	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.1
Nitrate-N	*	9.5	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.2
Sulfate		940	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04237	0.5
pH (s.u.)										
pH	*	7.4	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1

* Nitrate-N - Sample came in already out of holding time for NO3.

* pH - Out of holding time.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)										
Total Dissolved Solids		2800	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

Sample Number: 136001
Description: MW-12

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		122	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		122	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		820	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.5
Fluoride		4.7	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.1
Nitrate-N	*	8.1	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.2
Sulfate		1400	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.5
pH (s.u.)										
pH	*	7.9	1	E 150.1	11/22/99	11/22/99	RS	PB03239	QC04220	1
TDS (mg/L)										
Total Dissolved Solids		4300	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

* Nitrate-N - Sample came in already out of holding time for NO3.

* pH - Out of holding time.

Sample Number: 136002
Description: Dup

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		164	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		164	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography (IC) (mg/L)										
CL	*	760	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.5
Fluoride		1.6	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.1
Nitrate-N	*	9.6	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.2
Sulfate	*	970	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.5

* CL - Chloride re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 104; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 102.

* Nitrate-N - Sample came in already out of holding time for NO3.

* Sulfate - Sulfate re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 102; CCV %IA = 96; matrix spikes RPD = 0; matrix spikes %EA = 105.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)										
pH		7.5	1	E 150.1	11/22/99	11/22/99	RS	PB03240	QC04219	1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)										
Total Dissolved Solids		2900	1	E 160.1	11/23/99	11/23/99	MD	PB03219	QC04194	10

Sample Number: 136003
Description: MW-11

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		150	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		150	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography (IC) (mg/L)										
CL		1200	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.5
Fluoride		5.4	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.1
Nitrate-N	*	10	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.2
Sulfate		1600	1	E 300.0	11/23/99	11/23/99	JS	PB03250	QC04238	0.5

* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
pH (s.u.)										
pH		7.5	1	E 150.1	11/22/99	11/22/99	RS	PB03240	QC04219	1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)										
Total Dissolved Solids		4600	1	E 160.1	11/23/99	11/24/99	MD	PB03219	QC04195	10

Sample Number: 136004
Description: MW-8

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Bicarbonate Alkalinity		164	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Total Alkalinity		164	1	E 310.1	11/23/99	11/23/99	MD	PB03216	QC04191	1
Ion Chromatography (IC) (mg/L)										
CL		1100	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.5
Fluoride		4.0	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.1
Nitrate-N	*	10	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.2
Sulfate		1600	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.5
pH (s.u.)										
pH		7.5	1	E 150.1	11/22/99	11/22/99	RS	PB03240	QC04219	1
TDS (mg/L)										
Total Dissolved Solids		4500	1	E 160.1	11/23/99	11/24/99	MD	PB03219	QC04195	10

* Nitrate-N - Sample came in already out of holding time for NO3.

Sample Number: 136005
Description: MW-27

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Bicarbonate Alkalinity		180	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Total Alkalinity		180	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Ion Chromatography (IC) (mg/L)										
CL		240	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.5
Fluoride		2.0	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.1
Nitrate-N	*	3.6	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.2
Sulfate		220	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.5
pH (s.u.)										
pH		7.8	1	E 150.1	11/22/99	11/22/99	RS	PB03240	QC04219	1

* Nitrate-N - Sample came in already out of holding time for NO3.

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TDS (mg/L)										
Total Dissolved Solids		960	1	E 160.1	11/23/99	11/24/99	MD	PB03219	QC04195	10

Sample Number: 136006
Description: MW-28

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Bicarbonate Alkalinity		188	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Total Alkalinity		188	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Ion Chromatography (IC) (mg/L)										
CL	*	1200	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.5
Fluoride		2.1	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.1
Nitrate-N	*	3.6	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.2
Sulfate	*	230	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04274	0.5
pH (s.u.)										
pH		7.7	1	E 150.1	11/22/99	11/22/99	RS	PB03240	QC04219	1
TDS (mg/L)										
Total Dissolved Solids		2400	1	E 160.1	11/23/99	11/24/99	MD	PB03219	QC04195	10

* CL - Chloride re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 104; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 102.

* Nitrate-N - Sample came in already out of holding time for NO3.

* Sulfate - Sulfate re-ran on IC120799.sch (PB03383; QC04380). ICV %IA = 102; CCV %IA = 96; matrix spikes RPD = 0; matrix spikes %EA = 105.

Sample Number: 136007
Description: MW-29

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Carbonate Alkalinity		<1.0	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Bicarbonate Alkalinity		182	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1
Total Alkalinity		182	1	E 310.1	11/23/99	11/23/99	MD	PB03217	QC04192	1

Ion Chromatography (IC) (mg/L)									
CL		250	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04275	0.5
Fluoride		2.4	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04275	0.1
Nitrate-N	*	7.2	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04275	0.2
Sulfate		340	1	E 300.0	11/24/99	11/24/99	JS	PB03274	QC04275	0.5
pH (s.u.)									
pH		7.7	1	E 150.1	11/22/99	11/22/99	RS	PB03240	QC04219	1
TDS (mg/L)									
Total Dissolved Solids		1200	1	E 160.1	11/23/99	11/24/99	MD	PB03219	QC04195	10

* Nitrate-N - Sample came in already out of holding time for NO3.

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Bicarbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Total Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03215	QC04190
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03216	QC04191
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03216	QC04191
Bicarbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03216	QC04191
Total Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03216	QC04191
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03217	QC04192
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03217	QC04192
Bicarbonate Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03217	QC04192
Total Alkalinity (mg/L as CaCo3)		<1.0	1	11/23/99	PB03217	QC04192

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Benzene (mg/L)		<0.001	0.001	11/26/99	PB03280	QC04282
Toluene (mg/L)		<0.001	0.001	11/26/99	PB03280	QC04282
Ethylbenzene (mg/L)		<0.001	0.001	11/26/99	PB03280	QC04282
M,P,O-Xylene (mg/L)		<0.001	0.001	11/26/99	PB03280	QC04282
Total BTEX (mg/L)		<0.001	0.001	11/26/99	PB03280	QC04282

Surrogate	Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
TFT (mg/L)	0.104	0.1	104	72 - 128	QC04282
4-BFB (mg/L)	0.09	0.1	90	72 - 128	QC04282

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	11/23/99	PB03250	QC04237
Fluoride (mg/L)		<0.1	0.1	11/23/99	PB03250	QC04237
Nitrate-N (mg/L)		<0.2	0.2	11/23/99	PB03250	QC04237
Sulfate (mg/L)		<0.5	0.5	11/23/99	PB03250	QC04237
CL (mg/L)		<0.5	0.5	11/23/99	PB03250	QC04238
Fluoride (mg/L)		<0.1	0.1	11/23/99	PB03250	QC04238
Nitrate-N (mg/L)		<0.2	0.2	11/23/99	PB03250	QC04238
Sulfate (mg/L)		<0.5	0.5	11/23/99	PB03250	QC04238
CL (mg/L)		<0.5	0.5	11/22/99	PB03252	QC04244
Fluoride (mg/L)		<0.1	0.1	11/22/99	PB03252	QC04244
Nitrate-N (mg/L)		<0.2	0.2	11/22/99	PB03252	QC04244
Sulfate (mg/L)		<0.5	0.5	11/22/99	PB03252	QC04244
CL (mg/L)		<0.5	0.5	11/22/99	PB03252	QC04245

Fluoride (mg/L)	<0.1	0.1	11/22/99	PB03252	QC04245
Nitrate-N (mg/L)	<0.2	0.2	11/22/99	PB03252	QC04245
Sulfate (mg/L)	<0.5	0.5	11/22/99	PB03252	QC04245
CL (mg/L)	<0.5	0.5	11/24/99	PB03274	QC04274
Fluoride (mg/L)	<0.1	0.1	11/24/99	PB03274	QC04274
Nitrate-N (mg/L)	<0.2	0.2	11/24/99	PB03274	QC04274
Sulfate (mg/L)	<0.5	0.5	11/24/99	PB03274	QC04274
CL (mg/L)	<0.5	0.5	11/24/99	PB03274	QC04275
Fluoride (mg/L)	<0.1	0.1	11/24/99	PB03274	QC04275
Nitrate-N (mg/L)	<0.2	0.2	11/24/99	PB03274	QC04275
Sulfate (mg/L)	<0.5	0.5	11/24/99	PB03274	QC04275

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Dissolved Solids (mg/L)		<10	10	11/23/99	PB03219	QC04194
Total Dissolved Solids (mg/L)		<10	10	11/24/99	PB03219	QC04195

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	760	1	625	1351.20	95		80 - 120	0 - 20	QC04237
MS	Fluoride (mg/L)	1.7	1	125	130.88	103		80 - 120	0 - 20	QC04237
MS	Nitrate-N (mg/L)	9.5	1	250	250.01	96		80 - 120	0 - 20	QC04237
MS	Sulfate (mg/L)	940	1	625	1523.95	93		80 - 120	0 - 20	QC04237
MSD	CL (mg/L)	760	1	625	1342.83	93	1	80 - 120	0 - 20	QC04237
MSD	Fluoride (mg/L)	1.7	1	125	131.19	104	0	80 - 120	0 - 20	QC04237
MSD	Nitrate-N (mg/L)	9.5	1	250	253.69	98	2	80 - 120	0 - 20	QC04237
MSD	Sulfate (mg/L)	940	1	625	1521.71	93	0	80 - 120	0 - 20	QC04237

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	760	1	625	1272.65	95		80 - 120	0 - 20	QC04238
MS	Fluoride (mg/L)	1.6	1	125	120.69	95		80 - 120	0 - 20	QC04238
MS	Nitrate-N (mg/L)	9.6	1	250	251.89	97		80 - 120	0 - 20	QC04238
MS	Sulfate (mg/L)	970	1	625	1494.96	94		80 - 120	0 - 20	QC04238
MSD	CL (mg/L)	760	1	625	1276.77	95	1	80 - 120	0 - 20	QC04238
MSD	Fluoride (mg/L)	1.6	1	125	132.79	105	10	80 - 120	0 - 20	QC04238
MSD	Nitrate-N (mg/L)	9.6	1	250	253.86	98	1	80 - 120	0 - 20	QC04238
MSD	Sulfate (mg/L)	970	1	625	1498.19	94	1	80 - 120	0 - 20	QC04238

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	1200	1	625	1769.35	91		80 - 120	0 - 20	QC04244
MS	Fluoride (mg/L)	<5	1	125	117.87	94		80 - 120	0 - 20	QC04244
MS	Nitrate-N (mg/L)	<10	1	250	247.75	99		80 - 120	0 - 20	QC04244
MS	Sulfate (mg/L)	880	1	625	1472.21	95		80 - 120	0 - 20	QC04244
MSD	CL (mg/L)	1200	1	625	1766.30	91	1	80 - 120	0 - 20	QC04244
MSD	Fluoride (mg/L)	<5	1	125	118.57	95	1	80 - 120	0 - 20	QC04244
MSD	Nitrate-N (mg/L)	<10	1	250	248.68	99	0	80 - 120	0 - 20	QC04244
MSD	Sulfate (mg/L)	880	1	625	1468.56	94	1	80 - 120	0 - 20	QC04244

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	1.2	1	12.5	12.83	93		80 - 120	0 - 20	QC04245
MS	Fluoride (mg/L)	<0.1	1	2.5	2.36	94		80 - 120	0 - 20	QC04245
MS	Nitrate-N (mg/L)	<0.2	1	5	4.99	100		80 - 120	0 - 20	QC04245

MS	Sulfate (mg/L)	1.0	1	12.5	13.02	96	80 - 120	0 - 20	QC04245
MSD	CL (mg/L)	1.2	1	12.5	12.83	93	0	80 - 120	0 - 20	QC04245
MSD	Fluoride (mg/L)	<0.1	1	2.5	2.36	94	0	80 - 120	0 - 20	QC04245
MSD	Nitrate-N (mg/L)	<0.2	1	5	5.03	101	1	80 - 120	0 - 20	QC04245
MSD	Sulfate (mg/L)	1.0	1	12.5	12.92	95	1	80 - 120	0 - 20	QC04245

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	1200	1	625	1625.02	100		80 - 120	0 - 20	QC04274
MS	Fluoride (mg/L)	2.1	1	125	114.78	90		80 - 120	0 - 20	QC04274
MS	Nitrate-N (mg/L)	3.6	1	250	235.10	93		80 - 120	0 - 20	QC04274
MS	Sulfate (mg/L)	230	1	625	798.41	91		80 - 120	0 - 20	QC04274
MSD	CL (mg/L)	1200	1	625	1616.42	99	1	80 - 120	0 - 20	QC04274
MSD	Fluoride (mg/L)	2.1	1	125	127.46	100	11	80 - 120	0 - 20	QC04274
MSD	Nitrate-N (mg/L)	3.6	1	250	237.40	94	1	80 - 120	0 - 20	QC04274
MSD	Sulfate (mg/L)	230	1	625	792.27	90	1	80 - 120	0 - 20	QC04274

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	250	1	625	830.46	93		80 - 120	0 - 20	QC04275
MS	Fluoride (mg/L)	2.4	1	125	128.40	101		80 - 120	0 - 20	QC04275
MS	Nitrate-N (mg/L)	7.2	1	250	243.78	95		80 - 120	0 - 20	QC04275
MS	Sulfate (mg/L)	340	1	625	914.55	92		80 - 120	0 - 20	QC04275
MSD	CL (mg/L)	250	1	625	825.48	92	1	80 - 120	0 - 20	QC04275
MSD	Fluoride (mg/L)	2.4	1	125	128.06	101	0	80 - 120	0 - 20	QC04275
MSD	Nitrate-N (mg/L)	7.2	1	250	243.28	94	0	80 - 120	0 - 20	QC04275
MSD	Sulfate (mg/L)	340	1	625	910.69	91	1	80 - 120	0 - 20	QC04275

Quality Control Report
Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04190
Duplicate	Carbonate Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04190
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		242	248	1	2	0 - 20	QC04190
Duplicate	Total Alkalinity (mg/L as CaCo3)		242	248	1	2	0 - 20	QC04190

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04191
Duplicate	Carbonate Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04191
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		178	178	1	0	0 - 20	QC04191
Duplicate	Total Alkalinity (mg/L as CaCo3)		178	178	1	0	0 - 20	QC04191

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04192
Duplicate	Carbonate Alkalinity (mg/L as CaCo		< 1	<1.0	1	0	0 - 20	QC04192
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		182	182	1	0	0 - 20	QC04192
Duplicate	Total Alkalinity (mg/L as CaCo3)		182	182	1	0	0 - 20	QC04192

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		9.0	9.0	1	0	0 - 20	QC04219

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		7.9	7.9	1	0	0 - 20	QC04220

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		2848	2900	1	2	0 - 20	QC04194

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		877	880	1	0	0 - 20	QC04195

Quality Control Report
Lab Control Spikes and Duplicate Spike

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE (mg/L)	<0.001	1	0.1	0.098	98		80 - 120	0 - 20	QC04282
LCS	Benzene (mg/L)	<0.001	1	0.1	0.109	109		80 - 120	0 - 20	QC04282
LCS	Toluene (mg/L)	<0.001	1	0.1	0.108	108		80 - 120	0 - 20	QC04282
LCS	Ethylbenzene (mg/L)	<0.001	1	0.1	0.107	107		80 - 120	0 - 20	QC04282
LCS	M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.323	108		80 - 120	0 - 20	QC04282

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCS	TFT (mg/L)	1	0.1	0.085	85	72 - 128	QC04282
LCS	4-BFB (mg/L)	1	0.1	0.082	82	72 - 128	QC04282

LCSD	MTBE (mg/L)	<0.001	1	0.1	0.097	97	1	80 - 120	0 - 20	QC04282
LCSD	Benzene (mg/L)	<0.001	1	0.1	0.095	95	14	80 - 120	0 - 20	QC04282
LCSD	Toluene (mg/L)	<0.001	1	0.1	0.094	94	14	80 - 120	0 - 20	QC04282
LCSD	Ethylbenzene (mg/L)	<0.001	1	0.1	0.093	93	14	80 - 120	0 - 20	QC04282
LCSD	M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.28	93	14	80 - 120	0 - 20	QC04282

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCSD	TFT (mg/L)	1	0.1	0.09	90	72 - 128	QC04282
LCSD	4-BFB (mg/L)	1	0.1	0.086	86	72 - 128	QC04282

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	220	0	80 - 120	11/23/99	QC04190
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2280	0	80 - 120	11/23/99	QC04190
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04190
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2500	104	80 - 120	11/23/99	QC04190
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04190
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	2180	0	80 - 120	11/23/99	QC04190
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	180	0	80 - 120	11/23/99	QC04190
CCV (1	Total Alkalinity (mg/L as CaCo3)		2400	2260	94	80 - 120	11/23/99	QC04190

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04191
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2040	0	80 - 120	11/23/99	QC04191
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	100	0	80 - 120	11/23/99	QC04191
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2140	89	80 - 120	11/23/99	QC04191
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04191
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	1920	0	80 - 120	11/23/99	QC04191
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	300	0	80 - 120	11/23/99	QC04191
CCV (1	Total Alkalinity (mg/L as CaCo3)		2400	2220	93	80 - 120	11/23/99	QC04191

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04192
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2040	0	80 - 120	11/23/99	QC04192
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	140	0	80 - 120	11/23/99	QC04192
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2180	91	80 - 120	11/23/99	QC04192
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	0	0	80 - 120	11/23/99	QC04192
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	1960	0	80 - 120	11/23/99	QC04192
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	280	0	80 - 120	11/23/99	QC04192
CCV (1	Total Alkalinity (mg/L as CaCo3)		2400	2240	93	80 - 120	11/23/99	QC04192

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Benzene (mg/L)		0.1	0.1	100	80 - 120	11/26/99	QC04282
ICV	Toluene (mg/L)		0.1	0.099	99	80 - 120	11/26/99	QC04282
ICV	Ethylbenzene (mg/L)		0.1	0.098	98	80 - 120	11/26/99	QC04282
ICV	M,P,O-Xylene (mg/L)		0.3	0.297	99	80 - 120	11/26/99	QC04282
CCV (1	Benzene (mg/L)		0.1	0.099	99	80 - 120	11/26/99	QC04282

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV (1	Toluene (mg/L)		0.1	0.098	98	80 - 120	11/26/99	QC04282
CCV (1	Ethylbenzene (mg/L)		0.1	0.097	97	80 - 120	11/26/99	QC04282
CCV (1	M,P,O-Xylene (mg/L)		0.3	0.288	96	80 - 120	11/26/99	QC04282
CCV (2	Benzene (mg/L)		0.1	0.099	99	80 - 120	11/26/99	QC04282
CCV (2	Toluene (mg/L)		0.1	0.097	97	80 - 120	11/26/99	QC04282
CCV (2	Ethylbenzene (mg/L)		0.1	0.096	96	80 - 120	11/26/99	QC04282
CCV (2	M,P,O-Xylene (mg/L)		0.3	0.287	96	80 - 120	11/26/99	QC04282
CCV (3	Benzene (mg/L)		0.1	0.092	92	80 - 120	11/26/99	QC04282
CCV (3	Toluene (mg/L)		0.1	0.093	93	80 - 120	11/26/99	QC04282
CCV (3	Ethylbenzene (mg/L)		0.1	0.092	92	80 - 120	11/26/99	QC04282
CCV (3	M,P,O-Xylene (mg/L)		0.3	0.271	90	80 - 120	11/26/99	QC04282

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.89	95	80 - 120	11/23/99	QC04237
ICV	Fluoride (mg/L)		2.5	2.49	100	80 - 120	11/23/99	QC04237
ICV	Nitrate-N (mg/L)		5	4.63	93	80 - 120	11/23/99	QC04237
ICV	Sulfate (mg/L)		12.5	11.83	95	80 - 120	11/23/99	QC04237
CCV (1	CL (mg/L)		12.5	11.82	95	80 - 120	11/23/99	QC04237
CCV (1	Fluoride (mg/L)		2.5	2.50	100	80 - 120	11/23/99	QC04237
CCV (1	Nitrate-N (mg/L)		5	4.62	92	80 - 120	11/23/99	QC04237
CCV (1	Sulfate (mg/L)		12.5	11.80	94	80 - 120	11/23/99	QC04237

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.82	95	80 - 120	11/23/99	QC04238
ICV	Fluoride (mg/L)		2.5	2.50	100	80 - 120	11/23/99	QC04238
ICV	Nitrate-N (mg/L)		5	4.62	92	80 - 120	11/23/99	QC04238
ICV	Sulfate (mg/L)		12.5	11.80	94	80 - 120	11/23/99	QC04238
CCV (1	CL (mg/L)		12.5	11.83	95	80 - 120	11/23/99	QC04238
CCV (1	Fluoride (mg/L)		2.5	2.48	99	80 - 120	11/23/99	QC04238
CCV (1	Nitrate-N (mg/L)		5	4.64	93	80 - 120	11/23/99	QC04238
CCV (1	Sulfate (mg/L)		12.5	11.81	94	80 - 120	11/23/99	QC04238

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	12.11	97	80 - 120	11/22/99	QC04244
ICV	Fluoride (mg/L)		2.5	2.38	95	80 - 120	11/22/99	QC04244
ICV	Nitrate-N (mg/L)		5	4.64	93	80 - 120	11/22/99	QC04244

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Sulfate (mg/L)		12.5	12.12	97	80 - 120	11/22/99	QC04244
CCV (1	CL (mg/L)		12.5	12.08	97	80 - 120	11/22/99	QC04244
CCV (1	Fluoride (mg/L)		2.5	2.42	97	80 - 120	11/22/99	QC04244
CCV (1	Nitrate-N (mg/L)		5	4.64	93	80 - 120	11/22/99	QC04244
CCV (1	Sulfate (mg/L)		12.5	12.05	96	80 - 120	11/22/99	QC04244

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	12.08	97	80 - 120	11/22/99	QC04245
ICV	Fluoride (mg/L)		2.5	2.42	97	80 - 120	11/22/99	QC04245
ICV	Nitrate-N (mg/L)		5	4.64	93	80 - 120	11/22/99	QC04245
ICV	Sulfate (mg/L)		12.5	12.05	96	80 - 120	11/22/99	QC04245
CCV (1	CL (mg/L)		12.5	12.11	97	80 - 120	11/22/99	QC04245
CCV (1	Fluoride (mg/L)		2.5	2.40	96	80 - 120	11/22/99	QC04245
CCV (1	Nitrate-N (mg/L)		5	4.63	93	80 - 120	11/22/99	QC04245
CCV (1	Sulfate (mg/L)		12.5	12.05	96	80 - 120	11/22/99	QC04245

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.80	94	80 - 120	11/24/99	QC04274
ICV	Fluoride (mg/L)		2.5	2.44	98	80 - 120	11/24/99	QC04274
ICV	Nitrate-N (mg/L)		5	4.54	91	80 - 120	11/24/99	QC04274
ICV	Sulfate (mg/L)		12.5	11.58	93	80 - 120	11/24/99	QC04274
CCV (1	CL (mg/L)		12.5	11.72	94	80 - 120	11/24/99	QC04274
CCV (1	Fluoride (mg/L)		2.5	2.45	98	80 - 120	11/24/99	QC04274
CCV (1	Nitrate-N (mg/L)		5	4.53	91	80 - 120	11/24/99	QC04274
CCV (1	Sulfate (mg/L)		12.5	11.57	93	80 - 120	11/24/99	QC04274

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.72	94	80 - 120	11/24/99	QC04275
ICV	Fluoride (mg/L)		2.5	2.45	98	80 - 120	11/24/99	QC04275
ICV	Nitrate-N (mg/L)		5	4.53	91	80 - 120	11/24/99	QC04275
ICV	Sulfate (mg/L)		12.5	11.57	93	80 - 120	11/24/99	QC04275
CCV (1	CL (mg/L)		12.5	11.61	93	80 - 120	11/24/99	QC04275
CCV (1	Fluoride (mg/L)		2.5	2.45	98	80 - 120	11/24/99	QC04275
CCV (1	Nitrate-N (mg/L)		5	4.51	90	80 - 120	11/24/99	QC04275
CCV (1	Sulfate (mg/L)		12.5	11.49	92	80 - 120	11/24/99	QC04275

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	11/22/99	QC04219
CCV (1	pH (s.u.)		7	7.1	101	80 - 120	11/22/99	QC04219
Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	11/22/99	QC04220
CCV (1	pH (s.u.)		7	7.1	101	80 - 120	11/22/99	QC04220
Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	1036	104	80 - 120	11/23/99	QC04194
CCV (1	Total Dissolved Solids (mg/L)		1000	990	99	80 - 120	11/23/99	QC04194
Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	1046	105	80 - 120	11/24/99	QC04195
CCV (1	Total Dissolved Solids (mg/L)		1000	996	100	80 - 120	11/24/99	QC04195

Cation-Anion Balance Sheet

DATE: 2/4/99

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
117159	165	70	243	11	230.00	270	570	4.5	2.7	1680	
117160	106	55	122	11	150.00	260	250	5.1	3.1	1000	
117161	156	86	236	12	200.00	340	520	4.9	3	1500	
117162	165	89	217	12	210.00	330	500	5	3	1500	
117163	140	76	196	12	170.00	450	390	6	2.9	1400	
117164	243	97	392	14	240.00	460	920	10	3.7	2300	
117165	490	167	460	17	170.00	1000	1100	7.1	2.6	3100	
117166	390	162	502	18	200.00	1300	800	8.9	2.7	3100	
117167	265	81	695	52	180.00	410	1400	6.5	2.4	3000	
117168	46	26	140	14	210.00	97	140	4.6	3.8	630	
117169	513	146	739	20	290.00	1400	1100	6.5	2.7	4000	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Total Cations in meq/L	Total Anions in meq/L	Percentage Error
117159	8.23	5.76	10.57	0.28	4.60	5.62	16.08	0.321255	0.142128	24.85	26.76	7.435756403
117160	5.29	4.53	5.31	0.28	3.00	5.41	7.05	0.364089	0.163184	15.40	15.99	3.753534248
117161	7.78	7.08	10.27	0.31	4.00	7.08	14.67	0.349811	0.15792	25.43	26.26	3.178295637
117162	8.23	7.32	9.44	0.31	4.20	6.87	14.11	0.35695	0.15792	25.30	25.69	1.51664188
117163	6.99	6.25	8.53	0.31	3.40	9.37	11.00	0.42834	0.152656	22.07	24.35	9.817559957
117164	12.13	7.98	17.05	0.36	4.80	9.58	25.95	0.7139	0.194768	37.52	41.24	9.449616287
117165	24.45	13.74	20.01	0.43	3.40	20.82	31.03	0.506869	0.136864	58.64	55.89	4.790857568
117166	19.46	13.33	21.84	0.46	4.00	27.07	22.57	0.635371	0.142128	55.09	54.41	1.23820148
117167	13.22	6.67	30.23	1.33	3.60	8.54	39.49	0.464035	0.126336	51.45	52.22	1.483369397
117168	2.30	2.14	6.09	0.36	4.20	2.02	3.95	0.328394	0.200032	10.88	10.70	1.720948419
117169	25.60	12.01	32.15	0.51	5.80	29.15	31.03	0.464035	0.142128	70.27	66.59	5.386638276

	EC/Cation	EC/Anion					TDS/EC	TDS/Cat	TDS/Anion	
117159	2484.568	2676.4483	range	0	to	0	#DIV/0!	0.68	0.63	needs to be 0.55-0.77
117160	1540.373	1599.2973	range	0	to	0	#DIV/0!	0.65	0.63	needs to be 0.55-0.77
117161	2543.43	2625.5731	range	0	to	0	#DIV/0!	0.59	0.57	needs to be 0.55-0.77
117162	2530.377	2569.047	range	0	to	0	#DIV/0!	0.59	0.58	needs to be 0.55-0.77
117163	2207.3	2435.1896	range	0	to	0	#DIV/0!	0.63	0.57	needs to be 0.55-0.77
117164	3751.795	4123.9068	range	0	to	0	#DIV/0!	0.61	0.56	needs to be 0.55-0.77
117165	5863.829	5589.4733	range	0	to	0	#DIV/0!	0.53	0.55	needs to be 0.55-0.77
117166	5508.942	5441.1499	range	0	to	0	#DIV/0!	0.56	0.57	needs to be 0.55-0.77
117167	5145.165	5222.0571	range	0	to	0	#DIV/0!	0.58	0.57	needs to be 0.55-0.77
117168	1088.306	1069.7366	range	0	to	0	#DIV/0!	0.58	0.59	needs to be 0.55-0.77
117169	7027.114	6658.5163	range	0	to	0	#DIV/0!	0.57	0.60	needs to be 0.55-0.77

117159-69

277

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 2

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME: Texaco SITE MANAGER: M Larson

PROJECT NO.: 787 PROJECT NAME: Eunice #2 (North)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, (TDS), Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Anions	Cations
117159	1/19/99	07:30	W		✓	MW-26	2	Y		✓	✓						✓									✓				✓	✓
60	1/19/99	08:25	W		✓	MW-20A	2	Y		✓	✓						✓									✓				✓	✓
61	1/19/99	09:17	W		✓	MW-19A	2	Y		✓	✓						✓									✓				✓	✓
62	1/19/99	09:17	W		✓	MW-19A (Replicate)	2	Y		✓	✓						✓									✓				✓	✓
63	1/19/99	10:10	W		✓	MW-18A	2	Y		✓	✓						✓									✓				✓	✓
64	1/19/99	11:00	W		✓	Rowland Water Well	2	Y		✓	✓						✓									✓				✓	✓
65	1/19/99	12:43	W		✓	MW-10	2	Y		✓	✓						✓									✓				✓	✓
66	1/19/99	13:10	W		✓	Lord Water Well	2	Y		✓	✓						✓									✓				✓	✓
67	1/19/99	13:55	W	X	✓	MW-15	2	Y		✓	✓						✓									✓				✓	✓
68	1/19/99	14:45	W		✓	MW-15A	2	Y		✓	✓						✓									✓				✓	✓

RELINQUISHED BY: (Signature) [signature] Date: 1/20/99 Time: 08:00
RECEIVED BY: (Signature) Nellen Shelton Date: 1/20/99 Time: 11:30 AM

RELINQUISHED BY: (Signature) Nellen Shelton Date: 1/20/99 Time: 6:30 PM
RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP:
CONTACT: Neil PHONE: (800) 378-1296
RECEIVED BY: (Signature) Vicki Wood 4°
DATE: 1-21-99 TIME: 8:30 Am

SAMPLED BY: (Print & Sign) MJ Larson [signature] Date: 1/19/99 Time: 15:35

SAMPLE SHIPPED BY: (Circle) FEDEX (BUS) UPS HAND DELIVERED Greyhound
AIRBILL #
OTHER: 159 384 443

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: (W)-Water S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS: also - need result on chromium ASAP Dissolved Metals MS 2/…

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy 2/4

277

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559 Fax (915) 682-3946

PAGE: 2 OF: 2

CLIENT NAME: Texaco SITE MANAGER: M. Larson

PROJECT NO.: 787 PROJECT NAME: Eunice #2 (North)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
117169	1/19/99	15:15	W	✓		MW-13	2	Y		✓	✓	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602	MTBE 8020/602	TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	[illegible]	[illegible]
				✓									✓				✓	✓

RELINQUISHED BY: (Signature) [illegible] Date: 1/20/99 Time: [illegible]
RECEIVED BY: (Signature) Helen Shelton Date: 1/20/99 Time: 11:30 AM

RELINQUISHED BY: (Signature) Helen Shelton Date: 1/20/99 Time: 6:30 PM
RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP:
CONTACT: [illegible] PHONE: (806) 378-1296

RECEIVED BY: (Signature) Vicki Wendler
DATE: 1-21-99 TIME: 8:30 AM

SAMPLED BY: (Print & Sign) M Larson Date: 1/19/99 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED Greyhound AIRBILL # 15938 4439 OTHER: 4°

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS: Dissolved Metals
Need verbal on chromium ASAP [illegible]

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.