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SITE CONCEPTUAL MODEL QUARTERLY UPDATE, SECOND QUARTER 2005, G&M OIL COMPANY STATION NO. 16, 12559 LAMBERT ROAD, WHITTIER, LOS ANGELES COUNTY, CALIFORNIA FILE NO. R-10316

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LOS ANGELES REGION

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Prepared For:

G&M Oil Company
16868 A Street
Huntington Beach, California 92647

Project No. 600143002

June 16, 2005

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

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To: G&M Oil Company, Inc.
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Huntington Beach, California 92647

Attention: Ms. Jennifer L. Talbert

Subject: Site Conceptual Model Quarterly Update, Second Quarter 2005, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, California. File No. R-10316

Leighton Consulting, Inc. is pleased to present this Site Conceptual Model Quarterly Update, Second Quarter 2005 for the subject site.

Should you have any questions, please contact the undersigned at (949) 253-9836 ext. 216.

Respectfully submitted,

LEIGHTON CONSULTING, INC.

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1.0 INTRODUCTION

Leighton Consulting, Inc. (Leighton Consulting), on behalf of G&M Oil Company, Inc. (G&M), submits this Site Conceptual Model (SCM) Quarterly Update Report for the Second Quarter 2005 as required by the California Regional Water Quality Control Board, Los Angeles Region (4) (LARWQCB), letter dated January 14, 2002. This report is for the property located at 12599 Lambert Road, Whittier, California (Site). The SCM Report links potential sources of petroleum hydrocarbon contamination to potential receptors, provides a framework for the entire project and serves as a communication tool for regulators, responsible parties, and other stakeholders. This SCM Quarterly Update Report has been prepared in accordance with the State Water Resources Control Board (SWRCB) Guidelines (SWRCB, 2000). A list of references is provided in Appendix A.

1.1 Site Description

The Site is located north of the intersection of Lambert Road and Santa Fe Springs Road in the City of Whittier, California (Figure 1). The Site is generally rectangular in shape, and is comprised of approximately 0.4 acres.

1.1.1 Land Use

The Site has historically been used for retail gasoline sales. No change to this site use is anticipated in the near future. Two canopied fuel dispensing islands are located on the Site adjacent to Lambert Road. The service structure is situated towards the north end of the Site.

The existing underground storage tanks (USTs) are located east of the two dispenser islands and consist of two 8,000-gallon and two 10,000-gallon capacity single walled steel tanks. The approximate location of the USTs is shown on Figure 2.

The chronology of events at the Site is summarized in Table 1.
Copies of leak detection printout reports and tank tightness tests are included in Appendix B.

1.1.2 Water Use

Groundwater beneath the Site is designated as having present or potential beneficial use for municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply (LARWQCB, 1995).

The release at the Site was first discovered in 1991 during an investigation, which included drilling an exploratory boring to determine the feasibility of installing a vadose zone UST monitoring system. Since the release was first discovered, several investigations have been performed at the Site that included the installation of 16 groundwater monitoring wells, soil and groundwater sampling, and removal of the waste oil UST.

1.2 Chronology of Events

On February 24 and March 6, 1992, GeoRemediation, Inc. (GRI) advanced 11 soil borings designated B-1 through B-11 to depth of approximately 25 feet below ground surface (bgs). On March 31 and April 16, 1992, GRI installed two groundwater monitoring wells designated as W-1 and W-2. GRI reported that field readings indicated the presence of petroleum hydrocarbons at the groundwater table at approximately 50 feet bgs. Total petroleum hydrocarbons as gasoline (TPHg) were detected in the soil samples collected at concentrations up to 1,200 milligrams per kilogram (mg/kg). Groundwater in monitoring well W-1 contained petroleum hydrocarbons including elevated volatile organic compound's (VOCs). Copies of all available boring logs are included in Appendix C. Details of this investigation are included in GRI's "Summary of Preliminary Investigation and Proposed Additional Subsurface Investigation Report" dated May 12, 1992 (GRI, 1992).

In March 1996, G&M installed spill and overfill prevention devices for the USTs.

On March 21, 1996, Atlas Environmental Engineering, Inc. (Atlas) collected six soil samples from beneath the dispensers, six from beneath the product lines and one from a stockpile. Soil samples collected beneath the dispensers exhibited TPHg concentrations up to 1,100 mg/kg and total petroleum hydrocarbons as diesel (TPHd) concentrations up to 540 mg/kg. Details of the field work conducted are summarized in their "Transmittal of Laboratory Results-Dispensers, Pipelines and Spoils" report dated April 2, 1996 (Atlas, 1996).

On September 3, 1997, a single boring was drilled at the Site by Atlas to a depth of approximately 66 feet bgs and completed as groundwater monitoring well designated W-3. Additionally, well W-2 was re-drilled and replaced due to apparent pre-existing damage. A copy of the available boring log is included in Appendix C. Details of the fieldwork conducted are summarized in the Atlas "Additional Site Assessment and Workplan" dated October 14, 1997 (Atlas, 1997).

In October 1997, Atlas began the quarterly groundwater monitoring program at the Site.

On February 24, 1998, Atlas advanced four onsite borings to depths between 60 and 65 feet bgs. The borings were completed as groundwater monitoring wells designated W-4 through W-7. Soil samples analyzed for this investigation revealed TPHg, TPHd, benzene and methyl tertiary butyl ether (MTBE) concentrations of 160, 14, 1.24 and 2.65 mg/kg, respectively, in soil boring W-4 at 45 feet bgs (Appendix C). Details of the fieldwork conducted are summarized in Atlas report "Continued Site Investigation" dated March 31, 1998 (Atlas, 1998).

During April 1998, G&M upgraded the USTs at the Site to comply with the State and Federal Regulations for upgrading USTs by December 28, 1998. Upgrade activities included installation of interior epoxy liners, cathodic protection, and striker plates.

On January 18, 1999, Atlas advanced one offsite boring to a depth of approximately 60 feet bgs in the parking lot of the 7-11 store directly across Santa Fe Springs Road. The boring was completed as a groundwater monitoring well designated W-8. A copy of the boring log is included in Appendix C. Details of the fieldwork conducted are summarized in the Atlas "Groundwater Monitoring Report and Additional Well Installation" report dated April 15, 1999 (Atlas, 1999a).

On May 12, 1999, Diamond Point Construction, a general contractor for G&M, removed the 550-gallon waste oil UST. Atlas collected one soil sample from beneath the waste oil tank pit at approximately 7.5 feet bgs and one soil sample from the resulting stockpile. Sampling activities were observed and directed by the Los Angeles County Department of Public Works (LADPW) personnel. Analytical results for the tank pit soil sample revealed less than detectable concentrations of TPHg, benzene, and MTBE. Total recoverable petroleum hydrocarbon (TRPH) concentration of 30 mg/kg was detected in this sample. Details of the fieldwork conducted are summarized in Atlas "Transmittal of Laboratory Results Waste Oil Tank Removal" report dated June 7, 1999 (Atlas, 1999b).

On June 8, 2000, Atlas performed a vapor extraction test (VET) at the Site. The VET consisted of the extraction of soil vapor from two onsite monitoring wells (W-1 and W-3) at an average flow rate of 100 cubic feet per minute (cfm) under a vacuum of approximately 60 inches of water column. During the extraction from wells W-1 and W-3, non-pumping monitoring wells W-2, W-4, and W-7 were monitored for vacuum influence.

Gauge vacuum readings for the observation wells ranged from 0.07 to 4.0 inches of water column. At the end of the VET soil vapor samples were collected from monitoring wells W-1 and W-3 in Tedlar bags for laboratory analysis. Collected soil vapor samples were analyzed for TPHg, benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE. Soil vapor analysis exhibited TPHg concentrations up to 6,590 microliters per liter (μl/L) or parts per billion by volume, benzene concentrations up to 124 μl/L and MTBE up to 83.7 μl/L. Atlas concluded that based on the results of the VET, the wells were capable of handling flow rates of approximately 80 to 100 cubic feet per minute (cfm) at vacuums ranging from 50 to 60 inches of water column. The average radius of influence is approximately 50 feet. Details of the fieldwork conducted are summarized in Atlas "Pilot Studies and Treatment Feasibility Evaluation" report dated June 30, 2000 (Atlas, 2000a).

On December 6, 2000, Tanknology conducted a tank tightness test on all onsite USTs and product lines. Results of the test indicated that all USTs and product lines passed the pressure test. On September 6, 2001, ProTech Petroleum Services, Inc. conducted a tank tightness test on all onsite USTs. The supreme gasoline UST failed the test. All other USTs passed the test. A repair was conducted and when retested, the supreme gasoline UST passed the test. A copy of the tank test is included in Appendix B.

On March 13, 2000, Atlas advanced one offsite soil boring to an approximate depth of 60 feet bgs and completed the boring as a groundwater monitoring well designated W-9 (Figure 2). A total of nine soil samples were collected and analyzed for TPHg, BTEX, MTBE, ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butanol alcohol (TBA), and di-isopropyl ether (DIPE). The analytical results for all soil samples were below laboratory detection limits. A copy of the boring log is included in Appendix C. Details of the fieldwork conducted are summarized in the Atlas "Transmittal of Boring Log and Laboratory Results for Groundwater Monitoring Well W-9" report dated June 19, 2000 (Atlas, 2000b).

On August 14 and 15, 2001, Gradient Engineers, Inc. (Gradient) directed the installation of two offsite and one onsite groundwater monitoring wells to approximately 60 feet bgs,

designated W-10 through W-12. Detectable levels of extractable fuel hydrocarbons (EFH), TRPH, benzene and MTBE were identified in soil samples collected with maximum concentration of 15 mg/kg, 7.6 mg/kg, 7.0 micrograms per kilogram (μg/kg), and 35 μg/kg, respectively. Copies of all available boring logs are included in Appendix C. Details of the field work conducted are summarized in Gradient's "Phase II Environmental Site Assessment Report and Third Quarter 2001 Groundwater Monitoring Report" dated September 12, 2001 (Gradient, 2001).

On April 29 and 30, 2003, Gradient personnel directed the advancement of four exploratory soil borings to a depth of approximately 60 feet bg, which were subsequently converted in to four offsite groundwater monitoring wells, designated MW-13 through MW-16. Copies of detailed boring logs are included in Appendix C. Detectable levels of TPH-d (shown on laboratory results as EFH), benzene, ethylbenzene, DIPE and MTBE were identified in soil samples collected with maximum concentration of 47 mg/kg, 70 μg/kg, 4.5 μg/kg, 21 μg/kg, and 1,500 μg/kg, respectively. Details of the fieldwork conducted are summarized in Gradient's "Site Conceptual Model Quarterly Update and Additional Site Characterization Report, Second Quarter 2003" dated July 14, 2003 (Gradient, 2003b).

Currently 16 groundwater monitoring wells (shown on Figure 2) are being monitored on a quarterly basis. Eight wells, W-1, W-2, W-3, W-4, W-5, W-6, and W-11 are located on the property. Eight wells, W-8, W-9, W-10, W-12, MW-13 MW-14, MW-15, and MW-16, are located outside the property boundary.

The chronology of events at the Site is summarized in Table 1. Copies of leak detection printout reports and tank tightness tests are included in Appendix B.

1.3 File Review

A Leighton Consulting representative reviewed records at the LARWQCB on June 20, 2003 and Los Angeles County Department of Public Works (LADPW) on July 10, 2003 for the three adjacent sites which have documented releases of petroleum hydrocarbons. Each quarter the GeoTracker Website is reviewed for any new information about each of these sites. The website was visited June 13, 2005 for this quarter. The sites are:

1) 7-11 [Case # I-02566], 8438 Santa Fe Springs Road, is located approximately 100 feet southeast of the Site. Records were not found at the LARWQCB. According to

records reviewed at LADPW, three 10,000-gallon USTs were removed from the facility in 1992. Three quarters of groundwater monitoring were conducted and groundwater was analyzed for TPHg and BTEX by EPA Methods 8015/8020, respectively. TPHg concentrations ranged from non detect to 180 parts per billion (ppb). Benzene concentrations ranged from non-detect to 1.5 ppb in March 1993. The groundwater samples were never analyzed for MTBE (Groundwater Technology, 1993). Following the three quarters of groundwater monitoring, the Los Angles County Department of Public Works issued a case closure letter on January 12, 1995 (LADPW, 1995). New information about this facility was not found during the visit for this quarter (GeoTracker, 2005). This facility is up- to cross-gradient of the site with respect to groundwater flow.

2) Tune Tech [Case #I-11531], 12612 Lambert Road, is located approximately 150 feet south of the Site. According to a quarterly groundwater monitoring report prepared in September 1998 by PIC Environmental Services, groundwater flow on this facility is to the west-southwest with a gradient of 0.003 feet/foot. PIC also noted that MTBE has not been detected above 1 ppb in any well during any sampling event. PIC concludes that gasoline contaminants released historically at the Tune Tech facility did not contain MTBE. PIC recommended that the facility be issued closure by the LARWQCB (PIC, 1998). Recent reports were not found within the file. According to the LARWQCB's GeoTracker website, this facility has not been issued closure. In addition, the Geotracker website indicates that remediation in the form of soil excavation occurred in 2000. A report summarizing the remediation was not found in the LARWQCB records. Records reviewed at the LADPW included a closure letter from the LARWQCB dated December 23, 1998, which stated that closure was contingent on the receipt of title information. In addition, records were reviewed from the LARWQCB in relation to reimbursement under the UST Cleanup Fund in 1999 and 2000. This facility is cross-gradient to the subject Site with respect to groundwater flow.

3) American Medical Enterprises [Case#I-11530], 12508 Lambert Road, is located approximately 500 feet northwest of the Site. A work plan summarizing a proposed subsurface investigation at the facility in January 1992 was reviewed at the LARWQCB. The report referenced the removal of a former 10,000-gallon UST located at the facility. Benzene was detected beneath the former UST at concentrations of 31.1 mg/kg and 36.4 mg/kg. The consultant recommended a site assessment (Ami Adini & Associates, 1992). Reference to a Site Assessment and Groundwater Investigation in July 1992 was found in the file; however,

documentation of the work performed was not found. According to records reviewed at the LADPW, the LARWQCB directed the facility to prepare a preliminary site conceptual model and interim remedial action plan in January 2002. In addition, another letter from the LARWQCB referenced the review of a Comprehensive Site Evaluation Report prepared in June 2002 by Environmental Profiles, Inc. However, this report was not located within the files reviewed by Leighton Consulting at the LARWQCB or LADPW. On April 12, 2004, Leighton Consulting reviewed online GeoTracker data on this facility. According to the information reviewed, seven groundwater monitoring reports and two site conceptual models have been prepared for the Site since the file review (GeoTracker, 2005). The facility is listed in the pollution characterization phase, the released substance is listed as "waste oil, used oil" and has affected groundwater (GeoTracker, 2005). This facility is up- and cross-gradient to the Site with respect to groundwater flow. New information about this facility was not found during the website visit for this quarter (GeoTracker, 2005).

2.0 SITE STRATIGRAPHY AND HYDROGEOLOGY

2.1 Geology

The Whittier Area of the Central Basin extends from the Puente Hills south and southwest to the axis of the Santa Fe Springs-Coyote Hills Uplift. The western boundary is an arbitrary line separating the Whittier Area from the Montebello Forebay Area; the eastern boundary is the Orange County line. In the vicinity of the Site, the water-bearing sediments extend to a depth of approximately 1,000 feet bgs and include Recent Alluvium deposits of the Lakewood Formation which overlie the San Pedro Formation.

Recent alluvium in the Whittier area consists of a thin finger of sand, gravel, and clay, which extends into the western portion of the area from the Montebello Forebay Area. The sediments are 80 feet thick near the western boundary and thin out to the east. The Recent Alluvium contains a portion of the Bellflower aquiclude and the Gaspur aquifer.

The Lakewood Formation reportedly consists of continental deposits of late Pleistocene age and contains the Gage aquifer and the near surface Bellflower 'aquiclude'. The Bellflower 'aquiclude' consists of clay and sandy clay. The degree to which the groundwater can be transmitted through the Bellflower 'aquiclude' depends on the thickness and composition of this unit. The Gage aquifer is the major water-bearing member of the Lakewood Formation in this area and consists of sand and gravel with interbedded clay which separates the sands and gravel comprising the aquifers. The San Pedro Formation contains the Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside aquifers.

In the Site vicinity, the Gage aquifer is reported to be approximately 25 feet thick and contains fine-grained sand and gravel. Underlying the Gage aquifer in the Site vicinity is an unnamed, relatively impermeable unit that is approximately 70 feet thick. This unit is considered to be an aquiclude. Underlying this aquiclude in the Site vicinity is the Jefferson aquifer that is approximately 35 feet thick overlying another unnamed aquiclude that is approximately 80 feet thick (California Department of Water Resources, 1990).

2.2 Hydrogeology

The Site is located in the La Habra Hydrologic Subarea (a portion of the Anaheim Hydrologic Area) of the Los Angeles Hydrologic Unit (LARWQCB, 1995). The Los Angeles-San Gabriel Hydrologic Unit covers most of Los Angeles County and small

areas of southeastern Ventura County. This drainage area totals 1,608 square miles. With most of the population in the Region located in this hydrologic unit, land use is predominantly residential, commercial and industrial; and much of the area is covered with semi-permeable or non-permeable material. The Los Angeles River, San Gabriel River, and Ballona Creek, which are the major drainage systems to this area, drain the coastal watersheds of the Transverse Range. These surface waters also recharge large reserves of groundwater that exist in alluvial aquifers underlying the San Fernando and San Gabriel Valleys and Los Angeles Coastal Plain (LARWQCB, 1995).

Since Leighton Consulting (formerly Gradient Engineers, Inc.) began conducting groundwater monitoring in November 2001, depth to groundwater in the 16 monitoring wells ranged between 41.73 to 54.39 feet bgs. According to the latest groundwater monitoring event conducted at the Site on April 13 and 14 2005, depth of groundwater ranged from 48.28 to 52.87 feet bgs and the groundwater flow direction beneath the Site is to the west with a gradient of 0.017 feet per foot. Well construction and groundwater elevation data is summarized in Table 2. A groundwater contour map is included in Figure 3. Figure 4 is a plot of groundwater surface elevations at each well since November 2001.

2.3 Well and Conduit Study

2.3.1 Nearby Production Wells

The area encompassing a one-mile radius from the Site was reviewed for the locations of groundwater production wells. Available well information was obtained from the State of California Department of Water Resources Southern District (DWR), and the LARWQCB. Results of the well search from LARWQCB established the presence of two production wells within a one-mile radius of the Site. The nearest well to the Site, 02S11W29E05S, is located approximately 2,600 feet northwest of the Site (cross gradient with respect to groundwater flow). The nearest production well in the down gradient direction, 02S11W32J04S, is located approximately 4,000 feet south of the Site. Figure 5 depicts the location of the nearest production wells to the subject Site.

2.3.2 Conduit Study - Utilities

Underground utilities can occasionally act as a conduit for the transport of hydrocarbons in the subsurface. A map of known utility locations in the vicinity of the Site is shown on Figure 6.

No major utilities cross the station property, so there is a low probability that onsite releases have encountered major utility trenches. Since November 2001, the shallowest depth to groundwater measured in the eight onsite monitoring wells is 41.73 feet bgs. As a result, there is a low probability that hydrocarbon-affected groundwater has encountered any of the onsite or offsite utility trenches, which usually are located well above this depth.

3.0 INTERIM REMEDIAL ACTION

3.1 Objective

The general objective of the interim remedial action is to effectively mitigate hazards to, minimize threats to, and provide adequate protection of public health, welfare, and the environment. The specific objectives for this Site are to address the pathways through which exposure to contaminants could occur under the current and most probable future land use scenario (retail gasoline sales). Exposure pathways that may represent a health risk above acceptable levels under the current and most probable future land use scenario were used to identify the following objective for the Site:

- Prevent the migration of contaminants from soils and groundwater to the nearby production wells.

On February 13, 2003, Leighton Consulting suspended oxygen release compound (ORC®) filter socks in onsite monitoring wells W-1 and W-4, which have historically contained free product. Leighton Consulting periodically monitored the effect of the ORC® filter socks on reducing the liquid phase hydrocarbons in the wells and increasing natural attenuation. The ORC® filter socks were installed in accordance with the procedures established by Regenesis, the manufacturer of the ORC® socks. Leighton Consulting discontinued the quarterly installation of the ORC® socks during the First Quarter of 2004.

As required by the LARWQCB in their letter dated July 12, 2002, the natural attenuation parameters of groundwater are monitored to determine if natural attenuation of groundwater is occurring at the Site outside of the free product areas and areas where high concentrations of dissolved gasoline constituents persist and are considered to be toxic to indigenous populations of degrading microorganisms. The following parameters are measured during the quarterly groundwater sampling and analysis activities: pH, dissolved oxygen (DO) oxidation/reduction potential (ORP, also called redox potential), sulfate, nitrate, ferrous iron (Fe^{2+}) and dissolved methane inside and outside (background) of the plume.

3.2 Current Status of Interim Remedial Action Activities

During this monitoring event, hydrocarbon product was observed in onsite groundwater monitoring wells W-3 (0.31 feet) and W-5 (0.20 feet). The free product was removed prior to sampling.

Fourth Quarter 2003 marked the completion of the one-year Interim Remedial Action Plan, which included the quarterly installation of ORC® filter socks. The last set of filter socks was removed on March 9, 2004.

In June 2004, Leighton Consulting submitted a Feasibility Study (FS) describing future remedial activities (Leighton Consulting, 2004b). Leighton Consulting is preparing a Corrective Action Plan to be submitted in June 2005.

4.0 REPAIR OF MONITORING WELLS

4.1 Field Activities

4.1.1 Well Box Repair

On August 27, 2003, Leighton Consulting directed the removal and replacement of old surface seals on W-1 and W-4. In addition, the well box and concrete surrounding monitoring wells W-1 and W-4 were removed and transported offsite for disposal. A 12-inch Emco Wheaton well box was installed at each of these monitoring wells and concrete was replaced around the new well boxes. Both well boxes were placed slightly above grade to direct any water run-off away from the well. BC2 Environmental Corporation conducted both well box removals and installations using an air knife and vacuum rig.

4.1.2 Well Box Maintenance

On September 5, 2003, Leighton Consulting conducted the maintenance on monitoring wells W-3, W-5 through W-9, and W-12. The maintenance of the well boxes included cleaning, re-tapping bolt holes on well box rings, replacing bolts, cleaning outer edge of the well box, re-gluing seal rings into place, wire brushing the well box lid, painting the lids white, and cleaning out the bottom of the well box.

5.0 REMEDIATION ACTIVITIES

5.1 Source Removal Activities

On May 12, 1999, the 550-gallon waste oil UST was removed from the Site. The waste oil UST was not replaced at the Site. Based on the files reviewed by Leighton Consulting, it appears that no soil removal activities have taken place at the Site.

5.2 Other Remediation Activities

To date, remedial activities performed at the Site include the removal of the waste oil UST and associated piping system. During the waste oil UST removal activities, Atlas collected two soil samples; one from the bottom of the waste oil UST at approximately 7.5 feet bgs, and one from the resulting stockpile. Tank pit sample WT-7.5 exhibited concentrations for TPHg, BTEX, and MTBE of less than laboratory detection limits. Stockpile sample SP1 revealed a TRPH concentration of 30 mg/kg (Atlas, 1999b).

On June 8, 2000, a Vapor Extraction Test (VET) was conducted by Atlas. During the VET, soil vapor was extracted from monitoring wells W-1 and W-3, and vacuum influence was measured in the non-pumping monitoring wells W-2, W-4 and W-7. Based on the data obtained by Atlas during the VET a radius of vacuum influence was estimated to be between 48 and 78 feet for monitoring wells W-1 and W-3, respectively. Details of the work conducted by Atlas is presented in their "Pilot Studies and Feasibility Evaluation" report dated June 30, 2000 (Atlas, 2000a).

Free product removal was initiated at the Site by Atlas in approximately the 4th quarter 1997, initially on a weekly basis using hand bailing techniques. A vacuum truck was utilized from approximately April to September 2000 and subsequently the frequency of free product removal was decreased to bi-weekly hand bailing removal through November 2001. As of December 28, 2001, Atlas had removed approximately 6,834-gallons of free product and groundwater, of which approximately 69 gallons were free product. Details of the field data collected are included in the Atlas "Groundwater Monitoring Report 4th Quarter 2000" dated December 28, 2000 (Atlas, 2000c). Free product removal activities ended in the 4th quarter 2001.

6.0 EXTENT OF TPH IMPACTS

6.1 Soil

The mass of the release is not known. It is estimated that the release likely occurred over an extended period of time from some point prior to the discovery in 1991 until the piping and USTs were upgraded in 1996 and 1998.

A rough estimate of the mass of TPHg impacted soil was calculated using the laboratory data from soil samples collected from the installation of monitoring wells W-1 and W-2 advanced by GRI on April 1992, W-4, W-5 and W-6 advanced by Atlas during February 1998, and the soil data from W-11 advanced by Gradient in August 2001.

Based on laboratory data, the hydrocarbon affected soil extends from approximately 40 to 60 feet bgs in an area 85 feet long by 30 feet wide, extending from the tank cavity area to the south. The total volume of hydrocarbon affected soil is approximately 1,889 yd^3 of soil.

Volume = Length * Width * Height = (85 ft)* (30 ft)* (20 ft) = 51,000 ft^3 (1,889 yd^3)

The estimated mass of contamination was calculated by first estimating the mass of impacted soil using 116 lb/ft^3 for a typical weight of silty sand and multiplying the mass by the average concentration of TPHg detected in the soil, assumed to be 820 mg/kg:

Estimated mass of soil = Soil Volume * Unit Weight of Soil =
51,000 ft^3 * 116 lb/ft^3 * 0.454 kg/lb = 2,685,864 kg soil

Estimated mass of TPHg = 2,685,864 kg soil * 820 mg TPHg/kg soil * kg/10^6 mg = 2,202 kg TPHg (4,455 lb)

The estimated area of TPHg impacted soil is shown on Figure 7. Cross sections A-A' and B-B' showing the lithology, soil sampling results, and approximate vertical and lateral extent of the petroleum hydrocarbon impacted soil are included as Figures 8 and 9, respectively. Soil analytical data is summarized in Table 3.

6.2 Groundwater

This is the thirtieth groundwater monitoring event conducted at the Site since October 1997. Tables 4, 5, and 6 summarize the groundwater data collected to date. Plots of the concentrations of TPHg (VFH), benzene, and MTBE over time, since October 1997, for Wells W-1 through W-16 are presented in Figures 10 through 25. For graphing purposes, results reported as non-detect are graphed/tabulated using a pre-determined value noted on the figures. The groundwater surface elevation since November 2001 is also plotted for each well. Iso-concentration contours for VFHs, benzene, and MTBE detected in the groundwater samples collected during this monitoring event are shown on Figures 26 through 28. Figures 29 through 31 depict the lateral extent of these compounds at several points in time.

The highest concentration of VFHs reported in groundwater samples collected during the previous monitoring events is 70,300 micrograms per liter (μg/L) (Monitoring Well W-3, December 1998). During this event, the highest concentration of VFHs, 7,500,000 μg/L, was in the groundwater sample collected at W-5. This high value is probably attributed to free product present in the sample. The VFH plume extends from the tank area downgradient past offsite well W-9 approximately 80 feet west of the Site and past W-15 approximately 50 feet southeast (up- and crossgradient) of the Site. Previously, detectable concentrations have been reported in upgradient offsite wells W-8, W-10, and MW-15 and onsite wells W-6 and W-11.

The maximum concentration of EFHs previously detected in groundwater samples collected from onsite monitoring wells is 34 milligrams per liter (mg/L) (Monitoring Well W-5, February 2003). However, a maximum concentration of 530 μg/l EFHs was observed during this event in the sample collected from W-5, in which, as noted above, free product was observed during this event.

Benzene has been detected in the groundwater samples collected to date at a maximum concentration of 32,800 μg/L (Monitoring Well W-3, May 1998). During this event, the highest concentration of benzene, 3,600 μg/L, was in the groundwater sample collected from W-5. The benzene plume extends approximately 100 feet west (downgradient) from the tank area towards offsite well W-9 and approximately 50 feet towards W-11. Benzene was not detected in the samples collected from W-9 and W-11 during this monitoring event.

MTBE has been detected in at least one sample collected to date from each of the 16 monitoring wells. The maximum concentration reported is 39,000 μg/L (Monitoring Well W-1, November 2001). During this event, the highest concentration of MTBE, 2,100 μg/L, was in the groundwater sample collected from W-4. MTBE was not detected in the samples taken from wells W-6, W-8, W-11, and W-12 during this monitoring event. The MTBE plume encompasses W-10, MW-15, and MW-16 to the east and MW-13 and MW-14 to the west. The concentrations observed during this event at W-10 (400 μg/L) and MW-16 (970μg/L) are greater than the concentration reported at W-7 (170 μg/L).

The maximum reported concentrations of DIPE and TBA in the groundwater samples collected to date are 2,200 μg/L (Monitoring Well W-8, November 2004) and 7,200μg/L (Monitoring Well W-4, April 2005), respectively. During this event, DIPE was only detected in the sample collected from W-8 at a concentration of 6.4μg/L. TBA was detected in the samples collected from W-2, W-3, W-4, and MW-15 at concentrations ranging from 210 μg/L (W-3) to 7,200μg/L (W-4).

6.3 Estimated Plume Travel Time

Once each year, in the Second Quarter Conceptual Model Update, Leighton Consulting uses the Advection-Dispersion Non-Steady State Analytical Model spreadsheet developed by the LARWQCB to estimate the MTBE plume travel time. MTBE analytical data from well W-9 are used as input parameters to the model. This well exhibits increasing then decreasing MTBE concentrations. A conservative assumption of 2,600 feet (X) and 0 feet (Y) was used for the distance to the nearest drinking water well. The nearest drinking water well 02S11W29E05S is actually located cross-gradient to the Site. The nearest downgradient well is located 4,000 feet downgradient of the Site. For the purposes of the computer modeling the leak was assumed to originate at the location of W-1 and that W-9 and the drinking water well are directly down gradient from W-1. W-9 is 140 feet from W-1.

The parameters calibrated and the results of the non-steady state analytical model spreadsheet are shown below. Details of the input parameters, analytical data and model results are given in Appendix G.

Plume Parameters Calibrated from Non-Steady State Spreadsheet Analytical Model	2003	2004	2005
X Axis dispersivity, α_L (feet)	1.0	0.18	1.1
Groundwater velocity, μ (feet/day)	0.1	0.1	0.087
Mass discharged per Unit depth, C_0Qdt (grams/foot)	638	110	575
Elapsed time from initial release to first sampling, T_1 (days)	1,000	1,090	1124
Model Calculated Values	**2003**	**2004**	**2005**
Time when plume reaches its peak in drinking water well (days)	26,000	26,000	30,000
Time when plume first reaches 5 µg/L in drinking water well (days)	24,000	25,500	27,500
Maximum concentration in drinking water well (µg/L)	1,200.43	934.13	694.49
Time remaining for plume to reach 5 µg/L in drinking water well (years)	37.8	64.6	69.9

6.4 Statistical Analysis of the Plume

A review of the data shows that the plume appears to have reached its maximum areal extent in December 2001. At that time, wells W-1, W-2, W-3, W-4, W-5, W-6, W-9 and W-11 were impacted by benzene. According to the data, the benzene concentrations appear to decrease with time. The graphs of concentration versus time, Figures 10 through 26, also indicate a decrease with time. A seasonal variation cannot be discerned on the graphs.

A statistical analysis, the Mann-Kendall test, was used to determine if the observed decreases were significant. In this test, the data are arranged in chronological order. The later value is then compared to the earlier value. The comparison is assigned a value of -1 if the later value is less than the earlier value, 0 if the two are the same and +1 if the later value is the higher of the two. The results of the comparisons are added and the value of this sum is an indication of whether a trend exists.

Appendix H contains the calculations for the Mann-Kendall test for VFHs, benzene and MTBE. Due to the presence of free product noted in W-1 during recent monitoring events, that well was not included in these analyses. The results from the most recent 10 events were used whenever possible. In some instances, fewer than 10 events were used.

VFHs

The data from seven wells, W-2, W-3, W-4, W-5, W-7, W-8, and W-9, were tested to determine if a trend could be shown for VFHs. An analysis of the data from the other wells would not be meaningful due to the number of times that VFHs were not detected in the samples collected from these wells. The analysis showed that the VFHs concentrations are increasing at W-7 and decreasing at W-8 and W-9. No conclusion could be drawn for W-2, W-3, W-4 and W-5.

Benzene

The data from five wells (W-2, W-3, W-4, W-5, and W-9) were tested to determine if a trend could be shown for benzene. The other wells were not analyzed due to the frequency of non-detect results, except for W-1 mentioned above. Benzene concentrations are increasing at W-4 and W-5. Concentrations of benzene in W-9 are decreasing. No conclusion could be drawn for W-2, and W-3.

MTBE

The data from 11 wells, W-2, W-3, W-4, W-5, W-7, W-9, W-10, MW-13, MW-14, MW-15, AND MW-16 were tested to determine if a trend could be shown for MTBE. The other wells were not analyzed due to the frequency of non-detectable concentrations in the samples except for W-1 mentioned above. At this time, no conclusions could be drawn for W-4, W-7, W-9, MW-13 and W-16. Concentrations of MTBE are increasing at W-2, W-3, W-5, and W-10. Concentrations are decreasing at MW-14 and MW-15.

Figures 32 through 34 are plots of the logarithm of the concentration of benzene, MTBE, and VFHs detected in the groundwater samples collected from W-1, W-2, and W-9 versus time starting with November 2001. W-1 was selected because it is the well thought to be closest to the contamination. W-2 was selected because it is close to W-1. W-9 was selected because it is almost directly down-gradient of the Site and the record extends back to 2001. Benzene was selected because it is the compound of highest concentrations in the VFHs, and MTBE was selected because it is the oxygenate occurring in the highest concentration. The straight-line approximation of each curve and the equation of this line are also shown on the figures.

As depicted on Figure 32, benzene concentrations are decreasing at W-2 and W-9 and increasing at W-1. As shown on Figure 33, there appears to be a downward trend in

MTBE concentrations at W-1 and W-9 and an upward trend in W-2. As shown on Figure 34, there appears to be a downward trend in VFH concentrations at these three wells.

6.5 Potential Receptors

The current and most probable future land use for the Site is as a commercial gas station. The potential receptors of contamination from impacted groundwater at the Site include groundwater production wells 02S11W29E05S located approximately 2,600 feet northwest of the Site (cross gradient) and 02S11W32J04S located approximately 4,000 feet south of the Site (downgradient). The potential receptors of contamination from impacted soil include potential future Site construction/utility workers who might encounter soil during excavation and/or trenching activities.

7.0 CURRENT GROUNDWATER MONITORING EVENT RESULTS

7.1 Monitoring and Sampling Field Activities

On April 13 and 14, 2005, a Leighton Consulting environmental technician measured the depth to groundwater and, if present, depth to product and product thickness in each of the 16 groundwater monitoring wells, prior to purging and collecting groundwater samples. Hydrocarbon product was not observed in groundwater monitoring wells W-1 and W-4 this quarter; however hydrocarbon product was observed in W-3 and W-5 at a at a thickness of 0.31 feet and 0.20 feet, respectively.

Pre-purge and post-purge groundwater samples were collected from all 16 wells in the monitoring program, with the exception of W-3 and W-5, which had a hydrocarbon product thickness of 0.31 feet and 0.20, respectively. Prior to collecting the post-purge groundwater sample, the wells were purged of three well volumes of groundwater by using a vacuum truck operated by Island Environmental Services (Island) of Pomona, California. Field instruments were used to measure the temperature, pH, DO, ORP, and specific conductivity of the purged well water to verify that stabilization had occurred. The data was recorded on the groundwater sampling/purge logs (Appendix D).

Groundwater samples were collected using separate disposable polypropylene bailers. The samples were placed in laboratory-supplied 40 milliliter (ml) vials with appropriate preservative, 1-liter amber bottles, and 500 ml plastic bottles, and placed in an ice-cooled chest prior to delivery under completed chain-of-custody to Del Mar Analytical (Del Mar) in Irvine, California for chemical analysis. Del Mar is a State of California certified laboratory.

A groundwater elevation contour map from the water level measurements recorded during this monitoring event is presented on Figure 3. The groundwater surface contours depicted on Figure 3 show the groundwater flowing west with a gradient of 0.017 feet per foot. Groundwater elevation measurements since November, 2001 for wells W-1 through W-12 are given in Table 2. The data for wells MW-13 through MW-16, starting with the date they were installed, May 12, 2003, are also in Table 2. The data in Table 2 are presented as a graph on Figure 4.

7.2 Laboratory Analysis

Post-purge groundwater samples were analyzed for VFHs and EFHs by EPA Method 8015, BTEX, DIPE, ETBE, TAME, MTBE, and TBA by EPA Method 8260B. In addition, pre-purge groundwater were analyzed for sulfate, nitrate, ferrous iron, and dissolved methane, by EPA Methods 300.0, 6010B, and GC-FID.

7.3 Laboratory Results

Based on the laboratory analysis for the groundwater samples collected during this round of groundwater sampling, groundwater is impacted with VFHs, EFHs, benzene, MTBE, DIPE, and TBA with maximum concentrations as follows:

Contaminant	Maximum Concentration	Sample ID
VFHs	7,500,000 μg/l	W-5
EFHs	530 mg/l	W-5
Benzene	3,600 μg/l	W-5
Ethylbenzene	3,300 μg/l	W-5
Toluene	4,200 μg/l	W-5
Xylenes	7,900 μg/l	W-5
MTBE	2,100 μg/l	W-4
DIPE	6.4 μg/l	W-8
TBA	7,200μg/l	W-4

A copy of the laboratory reports and chain of custody records for this monitoring event are included in Appendix E. Iso concentration contours for VFHs, benzene and MTBE detected in the groundwater samples collected during this groundwater monitoring event are presented as Figures 26 through 28. Groundwater analytical data is summarized in Table 4. Groundwater physical parameters and chemical properties are summarized in Table 5. Historical analytical results for groundwater are summarized in Table 6.

7.4 Natural Attenuation Parameters

Microorganisms indigenous to the subsurface environment can degrade the components of gasoline, kerosene, diesel and jet fuel. During biodegradation, microorganisms metabolize available nutrients into energy and cell reproduction by facilitating the transfer of electrons from donors to acceptors. The electron donor is oxidized and the electron acceptor is reduced. Electron acceptors are elements or compounds in oxidized states. Typically, these are dissolved oxygen (DO), nitrate, iron (Fe^{+3}), sulfate and carbon dioxide.

When biodegradation occurs, changes in groundwater chemistry can be observed. In an aerobic process, oxygen, the electron acceptor is reduced to water and DO concentrations decrease. Although the denitrification process yields slightly more energy than aerobic respiration, DO concentrations greater than approximately 0.5 mg/l are toxic to the obligate anaerobic bacteria. After oxygen has been removed, the other electron acceptors are utilized in order of preference: nitrate, Fe^{+3}, sulfate and carbon dioxide, assuming the acceptor is present. The order of preference is dictated by the amount of energy available to the microorganisms from the reaction.

Beginning with the First Quarter of 2003 monitoring event, natural attenuation parameters have been monitored at eight wells, W-1, W-2, W-3, W-4, W-5, W-8, W-9 and W-12. Beginning with the First Quarter of 2005, natural attenuation parameters were monitored in every monitoring well, with the exception of W-3. The results of this monitoring are presented in Table 5, which also includes the field measurements of pH, DO, ORP, and specific conductivity. W-8 is located up-gradient from the Site and W-12 is cross-gradient from the Site. The other six wells are considered to be within the hydrocarbon plume. Since the First Quarter of 2002, free product has been observed intermittently in W-1, W-4 and W-5. Free product was observed in W-1 during the first three monitoring events of 2004 and in W-4 during the third quarter monitoring event. Free product was observed in monitoring wells W-3 and W-5 this quarter at a thickness of 0.31 feet and 0.20 feet, respectively.

7.4.1 Oxidation/Reduction Potential

ORP provides a rough indication of which reaction may be occurring at a particular site. The ORPs in milli-volts (mv) for several electron acceptors at a pH of 7 and a temperature of 25° C are:

Oxygen	+ 820 mv
Nitrate	+ 740 mv
Iron (Fe^{+3})	- 50 mv
Sulfate	- 220 mv
Carbon Dioxide	- 240 mv

While each of these electron acceptors are relatively common constituents of groundwater, they may not all be present in significant concentrations in the groundwater at a particular site.

During this monitoring event, ORP ranged from –134 mv at W-1 to +176 mv at W-11 and MW-14. Figure 35 is a plot of the ORP values observed during the event.

Within the observed range of the ORP, dissolved oxygen and nitrates are probably not serving as elector acceptors, leaving Fe^{+3}, sulfates, and carbon dioxide as the probable acceptors.

7.4.2 Dissolved Oxygen

The solubility of oxygen in water is affected by several factors, such as temperature of the water, altitude and dissolved solids. Within the context of this investigation, temperature is perhaps the factor having the most impact. The solubility decreases with rising temperature. Dissolved solids and altitude also affect the solubility of oxygen. At sea level and a temperature of 68°F, the solubility of oxygen in water is 9.2 milligrams per liter (mg/L). A DO concentration of 0.5 mg/L is generally thought to be the minimum that will sustain aerobic activity. For the April 2005 sampling event, DO concentrations ranged from 0.00 mg/L in W-1, W-2, W-6, W-8, and MW-16 to 3.42 mg/L in W-15. Figure 36 is a plot of the DO concentrations observed during this monitoring event.

7.4.3 Nitrates

After oxygen has been depleted, nitrates are usually the next electron acceptor utilized in biological activity. Nitrates were detected in wells W-2, W-6 through W-9 and W-11 through MW-16 at concentrations ranging from 0.67 mg/L in MW-2 to 11 mg/L in W-8. The nitrate concentrations and the ORP values at these

wells indicate that nitrates are not serving as electron acceptors. Figure 37 is a plot of the nitrate concentrations observed during this monitoring event.

7.4.4 Ferrous Iron

If Fe^{+3} is serving as an electron acceptor, the concentration of Fe^{+2} can be expected to increase as Fe^{+3} is reduced to Fe^{+2}. During this monitoring event, Fe^{+2} was not detected at wells W-6, W-8, W-9, W-10 through W-14 and MW-16. The highest Fe^{+2} concentration detected was 0.47 mg/L at W-4. Figure 38 is a plot of the Fe^{+2} concentrations observed during this monitoring event.

7.4.5 Sulfates

During this monitoring event, sulfate concentrations ranged from 260 mg/l in W-16 to 1,700 mg/l in W-10. Well W-8 has historically had the highest concentration of sulfates since monitoring of this parameter began in First Quarter 2003. This quarter W-8 concentration of 1,200 mg/l. Well W-10 had a sulfate concentration of 1,700 mg/L, which is consistent with the 1st quarter 2005. These wells up- and cross-gradient of the site, may represent the background concentration of sulfates. At that concentration, the sulfates would serve as a significant electron acceptor. The lower concentrations of sulfates are to be found at the interior of the plume with concentrations increasing outward towards the edge of the plume. Figure 39 is a plot of the sulfate concentrations observed during this monitoring event.

7.4.6 Methane

During this monitoring event, dissolved methane concentrations ranged from non-detect in W-6, W-8 through MW-16 to 0.25 mg/L in W-1. Figure 40 is a plot of the dissolved methane isoconcentrations observed during this monitoring event. The presence of dissolved methane at W-1, W-2, W-4, and W-7 may indicate that carbon dioxide is serving as an electron acceptor at the interior of the plume.

7.5 Disposal Activities

On April 13 and 14, 2005, approximately 171 gallons of purged groundwater was transported offsite by Island for treatment/disposal. A copy of the non-hazardous waste manifest is included in Appendix F.

8.0 WORK PLAN FOR FUTURE ASSESSMENT

On January 14, 2002, the LARWQCB sent correspondence which required a SCM and an Interim Remedial Action Plan for the Site. In response to this directive, Leighton Consulting (Gradient) submitted a Preliminary SCM dated May 15, 2002 which included a Proposed Interim Remedial Action Plan and Proposed Additional Offsite Assessment Activities. On July 12, 2002 the LARWQCB sent correspondence summarizing and approving the work proposed within Leighton Consulting's Preliminary SCM, with conditions. The assessment outlined in the Preliminary SCM was completed second quarter 2002. Fourth Quarter 2003 marked the completion of the one-year duration of the Interim Remedial Action, which included the quarterly installation of ORC® socks.

Leighton Consulting has submitted a Feasibility Study of the remediation options available for this Site. The LARWQCB has requested that a Corrective Action Plan (CAP) be submitted. The CAP will be submitted in the June 2005.

9.0 SUMMARY

A release of gasoline has impacted soil and groundwater at the Site. Chemicals of concern include benzene and MTBE. Hydrocarbon affected soil extends to approximately 40 to 60 feet bgs in an area 85 feet long by 30 feet wide, extending from the tank cavity area to the south. The total volume of hydrocarbon affected soil is approximately 1,889 yd^3 of soil.

The lateral extent of groundwater contamination is not clearly defined. MTBE has been detected in groundwater samples collected from offsite wells W-10, MW-13, MW-14, MW-15, and MW-16. Wells W-10, MW-15 and MW-16 are located upgradient of the Site at the approximate distances of 40 feet, 50 feet and 110 feet, respectively. Wells MW-13 and MW-14 are located downgradient of the Site at the approximate distances of 40 feet and 220 feet, respectively. The vertical migration of contaminants in groundwater has not been assessed. Additional assessment may be recommended to obtain design data to implement the recommendations of the Feasibility Study.

TABLE 1: CHRONOLOGY OF EVENTS
G&M Oil Company Station #16

Date	Event
1965	
January 01	**Installation of five USTs:** 1- 8,000-gallon regular gasoline, 1- 10,000-gallon regular gasoline, 1- 8,000-gallon premium gasoline, 1- 10,000-gallon diesel and 1-550-gallon waste oil. All gasoline, diesel, and waste oil USTs were reported to be single walled steel.
1991	
June 19	**FIELD WORK:** GeoRemediation, Inc. (GRI) advanced one hand auger boring immediately west of the USTs to a depth of 6 feet below ground surface (bgs) for the purpose of determining the feasibility of installing a vadose monitoring system near the existing underground storage tanks (USTs). Strong petroleum hydrocarbon odors were detected in the soil cuttings generated. GRI reported field organic vapor readings exceeding 500 ppmv.
1992	
February 21	GRI submitted a proposal to G&M Oil to conduct a preliminary site assessment to define the horizontal limits of the contamination zone discovered during the June 19, 1991 soil investigation.
February 24 & 25 and March 5 & 6	**FIELD WORK:** GRI advanced 11 soil borings at the site to maximum depths of 25 feet bgs.
March 31 & April 16	**FIELD WORK:** GRI installed two groundwater monitoring wells designated as W-1 and W-2.
May 12	**REPORT:** GRI submits a report summarizing results of soil and groundwater investigation conducted on March 31 and April 16, 1992. GRI reported that field readings indicated the presence of petroleum hydrocarbons in the groundwater table about 50 feet bgs. Total petroleum hydrocarbons (TPH) were detected in soil at concentrations up to 1,200 milligrams per kilogram (mg/kg). Groundwater in W-1 contained petroleum hydrocarbons including elevated volatile organic compounds. GRI indicated that no groundwater sample was collected in W-2 as further investigation would be required in the future.
1995	
March 27	**REPORT:** Atlas Environmental Engineering, Inc. (ATLAS) Prepared and submitted a site investigation report to the DPW. Based on the findings of the site assessment significant soil and groundwater contamination was encountered at the site.
April 24	**AGENCY CORRESPONDENCE:** The County of Los Angeles Department of Public Works (DPW) submitted a letter to G&M Oil regarding their Hazardous Materials UST Permit (HMUSP) and requested that G&M Oil prepared and submit a proposal for a Tank Monitoring Program (TMP) by May 29, 1995.
May 2	**AGENCY CORRESPONDENCE:** G&M Oil submitted a letter to the DPW indicating that their TMP is daily inventory reconciliation and annual tank testing and line testing.
June 26	**Review of DPW UST Permit:** Permits show that five USTs were permitted: 1- 8,000-gallon regular gasoline, 1- 10,000-gallon regular gasoline, 1- 8,000-gallon premium gasoline, 1- 10,000-gallon diesel and 1-550-gallon waste oil. All gasoline and the diesel USTs were reported to be single walled fiberglass. The waste oil UST was reported as a single walled steel tank.
December 20	**AGENCY CORRESPONDENCE:** The DPW submitted a letter to G&M Oil indicating they had reviewed the site investigation report dated March 27, 1995 and that they were referring the case to the RWQCB since there was an indication in the report of significant soil and/or groundwater contamination at the site.
1996	
March	**USTs Upgrade:** Installation of spill and overfill prevention devices.

TABLE 1: CHRONOLOGY OF EVENTS
G&M Oil Company Station #16

1996	
March 21	**FIELD WORK:** Six product line and six dispenser island soil samples were collected by ATLAS.
April 2	**REPORT:** Closure application number MOD #158119 prepared by ATLAS submitted to the DPW. A Closure Report summarizing the results for the field work performed on March 21, 1996 was submitted to the LA County DPW.
May 28	**AGENCY CORRESPONDENCE:** The DPW submitted a letter to G&M Oil indicating they had reviewed the closure application number MOD #158119 dated April 2, 1996 and that they had met the requirements of the DPW; however they were referring the case to the RWQCB for consideration of further site assessment/remedial action.
1997	
June 4	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil approving GRI's Summary of Preliminary Investigation and Proposed Workplan for Additional Subsurface Investigation dated May 12, 1992 with conditions.
September 3	**FIELD WORK:** A single boring was drilled at the site by ATLAS to a depth of about 66 feet bgs and completed as a groundwater monitoring well designated W-3. Additionally, well W-2 was re-drilled and replaced due to apparent pre-existing damage.
October 14	**REPORT:** ATLAS submitted a report titled, *"Additional Site Investigation and Workplan G&M Oil Station #16* which summarized results of the September 3, 1997 site investigation activities and proposed a workplan for additional investigative activities.
October 29	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil approving ATLAS *"Additional Site Investigation and Workplan* dated October 14, 1997, with conditions.
1998	
February 24	**FIELD WORK:** ATLAS advanced four on-site borings, designated W-4 through W-7, to depths between 60 and 65 feet bgs and completed them as groundwater monitoring wells.
March 31	**REPORT:** ATLAS submitted a report titled: *"Continued Site Investigation for G&M Oil #16"* which summarized results of the February investigative activities.
April	**USTs Upgraded:** During the month of April G&M Oil had the USTs at the site upgraded to comply with the State and Federal Regulation of December 28, 1998. Upgrades included: interior epoxy liners, cathodic protection and striker plates.
November 23	**AGENCY CORRESPONDENCE:** The LA County DPW received from G&M Oil a "Underground Storage Tank Mandatory Compliance Questionnaire". The purpose of the questionnaire was to verify and update USTs records on file by the DPW. Along with the questionnaire G&M Oil submitted all pertinent documentation and certifications for the USTs upgrade.
1999	
January 18	**FIELD WORK:** ATLAS advanced one boring offsite at the Southland's 7-11 convenience store to a depth of 60 feet bgs. The boring was completed as a groundwater monitoring well designated W-8.
April 15	**REPORT:** ATLAS advanced one boring designated W-8 to a depth of 60 feet bgs. A description of the work accomplished was presented in the report titled: *"Groundwater Monitoring Report and Additional Well Installation, G&M Oil Station #16"*.
May 12	**WASTE OIL UST REMOVAL:** ATLAS removed the 550-gallon waste oil UST and collected one soil sample from beneath the UST and one soil sample from the stockpile of soil generated during the UST removal.
June 7	**REPORT:** ATLAS submitted the laboratory results to DPW from the analysis of soil samples collected during the removal of the 550-gallon waste oil tank. TPH-g, MTBE and BTEX were not detected in the soil samples. TRPH was detected at a concentration of 30 mg/kg beneath the UST and 31 mg/kg in the stockpile.

TABLE 1: CHRONOLOGY OF EVENTS
G&M Oil Company Station #16

2000	
February 8	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil commenting on ATLAS's Groundwater Monitoring Report for the Fourth Quarter 1999. The RWQCB required G&M Oil to performed weekly free-product removal and the submittal of a Workplan for remediation of petroleum hydrocarbon and MTBE impacted groundwater.
April 14	**REPORT:** ATLAS prepared and submitted a report titled: *"Groundwater Monitoring Report 1st Quarter 2000"*
May 16	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil commenting on ATLAS's "Corrective Action Plan" dated March 15, 2000. The Plan was approved with conditions.
June 30	**REPORT:** ATLAS prepared a summary report titled: *"Pilot Studies and Treatment Feasibility Evaluation"* which included results of a soil vapor extraction pilot test that had been performed. The results of the vapor extraction pilot test suggested an average 50-foot effective radius of influence. Due to the affected soil in the capillary fringe, the recommendation was made to consider a liquid ring blower in the event dual phase extraction became warranted in the future.
July 10	**REPORT:** ATLAS prepared and submitted a report titled: *"Groundwater Monitoring Report 2nd Quarter 2000"*
September 28	**REPORT:** ATLAS prepared and submitted a report titled: *"Groundwater Monitoring Report 3rd Quarter 2000"*
September 29	**REPORT:** ATLAS prepared and submitted a report titled: *"Revised Corrective Action Plan"* as a result of the pilot study and treatment feasibility evaluation.
December 6	**FIELD WORK:** Tanknology conducted tank tightness test on two 8,000-gallon and two 10,000-gallon USTs and product lines. Results of the tests indicated that all USTs and product line passed the pressure tests.
December 28	**REPORT:** ATLAS prepared and submitted a report titled: *"Groundwater Monitoring Report 4th Quarter 2000"*
2001	
February 21	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil commenting on ATLAS's Revised Corrective Action Plan and their Groundwater Monitoring Report for the Fourth Quarter 2000.
March 13	**FIELD WORK:** ATLAS advanced one soil boring designated W-9 offsite (downgradient across Lambert Road in vacant lot adjacent to grocery store) and completed the borehole as a 2-inch diameter groundwater monitoring well. A total of nine soil samples were collected and analyzed for TPH-g, BTEX and oxygenates including MTBE. The analytical results for all soil samples were non-detect. A groundwater sample was not collected.
March 20	**REPORT:** ATLAS prepared and submitted a report titled: *"Workplan for Additional Site Assessment"* proposing to drill and sample four soil borings and install four groundwater monitoring wells (W-9, W-10, W-11 and W-12) to further assess the lateral and vertical extent of TPH affected soil and groundwater.
April 5	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil approving the June 19th Workplan for Additional Site Assessment with conditions.
June 19	**REPORT:** ATLAS prepared and submitted a letter report to G&M Oil summarizing the results of the March 13 field work.
August 14 and 15	**FIELD WORK:** Gradient installed two offsite (W-10 and W-12) and one on-site (W-11) groundwater monitoring wells
August 23 and 24	**FIELD WORK:** Gradient conducted 3rd quarter 2001 groundwater monitoring activities.
September 6	**FIELD WORK:** ProTech Petroleum Services, Inc. conducted a leak detection test of the product lines. One product line from the supreme gasoline UST failed the test. A repair was conducted and when retested, the UST line passed the test. All other product lines passed the initial test.
September 14	**REPORT:** Gradient prepared and submitted a report titled: *"Phase II Environmental Site*

TABLE 1: CHRONOLOGY OF EVENTS
G&M Oil Company Station #16

	Assessment Report and 3rd Quarter 2001 Groundwater Monitoring Report" detailing the results of the site investigation activities conducted in August.
November 13 and 14	**FIELD WORK: Gradient** conducted 4th quarter 2001 groundwater monitoring activities.
December 27	**REPORT:** Gradient prepared and submitted a report titled: *"Quarterly Groundwater Monitoring Report, Fourth Quarter, 2001"*
2002	
January 14	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil directing G&M to prepare a Preliminary Site Conceptual Model, Interim Remedial Action Report, Site Characterization Report, Final Remedial Action Plan and Periodic Progress, Updates and Monitoring Reports.
February 14 and 15	**FIELD WORK:** Gradient conducted 1st quarter 2002 groundwater monitoring activities.
May 15	**REPORT:** Gradient prepared and submitted a report titled: *"Preliminary Site Conceptual Model Report"*
July 12	**AGENCY CORRESPONDENCE:** The RWQCB submitted a letter to G&M Oil summarizing comments on the *"Preliminary Site Conceptual Model Report"*, approving proposed Interim Remedial Action Plan, and approving the installation of additional offsite groundwater monitoring wells.
July 15	**REPORT:** Gradient prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update, Second Quarter 2002"*
October 8	**REPORT:** Gradient prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update, Third Quarter 2002"*
December 16	**REPORT:** Gradient prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update, Fourth Quarter 2002"*
2003	
April 28	**REPORT:** Gradient prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update, First Quarter 2003"*. This summarized the installation of the interim remedial action.
April 29 and 30	**FIELD WORK:** Gradient installed the four offsite groundwater monitoring wells.
May 12 and 13	**FIELD WORK:** Gradient conducted 2nd quarter 2003 groundwater monitoring activities.
July 9	**FIELD WORK:** Precision Tank Tightness conducted a UST tightness test on all the USTs onsite. All USTs passed the test.
July 14	**REPORT:** Gradient prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Second Quarter 2003"*. This summarized the installation of the interim remedial action.
August 14 and 15	**FIELD WORK:** Leighton Consulting conducted 3rd quarter 2003 groundwater monitoring activities.
August 27	**FIELD WORK:** Leighton Consulting replaced the well box on W-4 and W-1.
September 5	**FIELD WORK:** Leighton Consulting cleaned and repaired well boxes on W-3, W-5 through W-9, and W-12.
October 6, 2003	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Third Quarter 2003"*. This summarized the installation of the interim remedial action.
December 9 and 10	**FIELD WORK:** Leighton Consulting conducted 4th quarter 2003 groundwater monitoring activities.

TABLE 1: CHRONOLOGY OF EVENTS
G&M Oil Company Station #16

2004	
February 4, 2004	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Fourth Quarter 2003"*. This summarized the installation of the interim remedial action.
March 15 and 16	**FIELD WORK:** Leighton Consulting conducted 1st quarter 2004 groundwater monitoring activities.
April 15, 2004	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Report, First Quarter 2004"*. This summarized the installation of the interim remedial action.
May 20 and 21	**FIELD WORK:** Leighton Consulting conducted 2nd quarter 2004 groundwater monitoring activities.
June 28, 2004	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Feasibility Study for Petroleum Hydrocarbon Remediation"*.
July 15, 2004	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Report, Second Quarter 2004"*.
July 27 and 28	**FIELD WORK:** Leighton Consulting conducted 3rd quarter 2004 groundwater monitoring activities.
October 15, 2004	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Report, Third Quarter 2004"*.
November 11 and 12	**FIELD WORK:** Leighton Consulting conducted 4th quarter 2004 groundwater monitoring activities.
January 15, 2004	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Report, Fourth Quarter 2004"*.
2005	
January 19 and 20	**FIELD WORK:** Leighton Consulting conducted 1st quarter 2005 groundwater monitoring activities.
March 11	**REPORT:** Leighton Consulting prepared and submitted a report titled: *"Site Conceptual Model Report Quarterly Report, First Quarter 2005"*.
April 13 and 14	**FIELD WORK:** Leighton Consulting conducted 2nd quarter 2005 groundwater monitoring activities.

TABLE 2: SUMMARY OF WELL DATA
G&M Oil Company Station No. 16, Whittier, CA

				Z	A	B	-(A-B)		
Well Number	GW Measure Date	Depth to Product DTP (feet)	Depth to Water DTW (feet)	Static Water Elev SWE (feet) MSL	ELEV Top of Well Box (feet) MSL	ELEV Top of Casing (feet) MSL	Riser Height (feet)	Total Depth (feet)	GW Measure Description
W-1	11/13/2001	N/A	43.65	130.06	173.81	173.71	-0.10	66.00	
	2/14/2002	N/A	44.11	129.60	173.81	173.71	-0.10	66.00	
	5/21/2002	44.67	44.70	129.01	173.81	173.71	-0.10	66.00	water level unknown with gauging point
	8/14/2002	45.37	45.40	128.31	173.81	173.71	-0.10	66.00	Interface Probe
	11/12/2002	46.60	46.81	126.90	173.81	173.71	-0.10	66.00	Interface Probe
	2/13/2003	47.29	47.31	126.40	173.81	173.71	-0.10	66.00	Interface Probe
	5/13/2003	N/A	46.65	127.06	173.81	173.71	-0.10	66.00	water level unknown with gauging point
	8/15/2003	N/A	46.57	127.14	173.81	173.71	-0.10	66.00	
	12/9/2003	48.29	48.31	125.40	173.81	173.71	-0.10	66.00	water level unknown with gauging point
	3/9/2004	49.46	49.50	124.21	173.81	173.71	-0.10	66.00	Interface Probe
	5/20/2004	50.03	50.06	123.65	173.81	173.71	-0.10	66.00	Interface Probe
	7/28/2004	50.38	50.40	123.31	173.81	173.71	-0.10	66.00	Interface Probe
	11/12/2004	N/A	51.46	122.25	173.81	173.71	-0.10	66.00	Interface Probe with gauging point
	1/20/2005	N/A	52.10	121.61	173.81	173.71	-0.10	66.00	Interface Probe with gauging point
	4/13/2005	N/A	51.76	121.95	173.81	173.71	-0.10	66.00	Interface Probe with gauging point
W-2	11/13/2001	N/A	43.85	130.25	174.50	174.10	-0.40	63.80	
	2/14/2002	N/A	44.31	129.79	174.50	174.10	-0.40	64.70	
	5/21/2002	N/A	45.20	128.90	174.50	174.10	-0.40	64.70	
	8/14/2002	N/A	45.72	128.38	174.50	174.10	-0.40	64.90	
	11/12/2002	N/A	47.06	127.04	174.50	174.10	-0.40	64.70	
	2/13/2003	N/A	47.68	126.42	174.50	174.10	-0.40	64.70	
	5/12/2003	N/A	46.98	127.12	174.50	174.10	-0.40	64.70	
	8/15/2003	N/A	46.91	127.19	174.50	174.10	-0.40	64.70	
	12/9/2003	N/A	48.48	125.62	174.50	174.10	-0.40	64.70	
	3/9/2004	N/A	49.80	124.30	174.50	174.10	-0.40	64.70	
	5/20/2004	N/A	50.03	124.07	174.50	174.10	-0.40	64.70	
	7/28/2004	N/A	50.68	123.42	174.50	174.10	-0.40	64.70	
	11/12/2004	N/A	51.95	122.15	174.50	174.10	-0.40	64.70	
	1/20/2005	N/A	52.50	121.60	174.50	174.10	-0.40	69.60	
	4/13/2005	N/A	49.90	124.20	174.50	174.10	-0.40	69.60	
W-3	11/14/2001	N/A	44.39	129.97	175.01	174.36	-0.65	64.25	
	2/14/2002	N/A	44.88	129.48	175.01	174.36	-0.65	64.20	
	5/21/2002	N/A	47.40	126.96	175.01	174.36	-0.65	64.20	
	8/14/2002	N/A	45.96	128.40	175.01	174.36	-0.65	64.10	
	11/12/2002	N/A	47.28	127.08	175.01	174.36	-0.65	64.20	
	2/13/2003	N/A	47.94	126.42	175.01	174.36	-0.65	64.20	
	5/13/2003	N/A	47.17	127.19	175.01	174.36	-0.65	64.20	
	8/15/2003	N/A	47.33	127.03	175.01	174.36	-0.65	64.20	
	12/9/2003	N/A	48.86	125.50	175.01	174.36	-0.65	64.20	
	3/9/2004	N/A	50.02	124.34	175.01	174.36	-0.65	64.20	
	5/20/2004	N/A	50.54	123.82	175.01	174.36	-0.65	64.20	
	7/28/2004	N/A	50.75	123.61	175.01	174.36	-0.65	64.20	
	11/12/2004	N/A	52.20	122.16	175.01	174.36	-0.65	64.20	
	1/20/2005	52.70	53.00	121.36	175.01	174.36	-0.65	64.30	Interface Probe
	4/13/2005	51.23	51.54	122.82	175.01	174.36	-0.65	64.30	Interface Probe

TABLE 2: SUMMARY OF WELL DATA
G&M Oil Company Station No. 16, Whittier, CA

				Z	A	B	-(A-B)		
Well Number	GW Measure Date	Depth to Product DTP (feet)	Depth to Water DTW (feet)	Static Water Elev SWE (feet) MSL	ELEV Top of Well Box (feet) MSL	ELEV Top of Casing (feet) MSL	Riser Height (feet)	Total Depth (feet)	GW Measure Description
W-4	11/14/2001	N/A	43.35	129.93	173.45	173.28	-0.17	59.60	
	2/14/2002	43.90	43.88	129.40	173.45	173.28	-0.17	61.35	
	5/21/2002	44.21	44.46	128.82	173.45	173.28	-0.17	61.35	water level indicator with gauging paste
	8/14/2002	44.95	45.50	127.78	173.45	173.28	-0.17	61.35	Interface Probe
	11/12/2002	46.15	46.65	126.63	173.45	173.28	-0.17	61.35	Interface Probe
	2/13/2003	46.83	47.25	126.03	173.45	173.28	-0.17	61.32	Interface Probe
	5/13/2003	46.20	46.23	127.05	173.45	173.28	-0.17	61.45	water level indicator with gauging paste
	8/15/2003	N/A	46.30	126.98	173.45	173.28	-0.17	61.45	
	12/9/2003	47.90	47.92	125.36	173.45	173.28	-0.17	61.45	water level indicator with gauging paste
	3/9/2004	N/A	49.25	124.03	173.45	173.28	-0.17	61.40	Interface Probe with gauging paste
	5/20/2004	N/A	49.68	123.60	173.45	173.28	-0.17	61.40	Interface Probe with gauging paste
	7/28/2004	49.99	50.00	123.28	173.45	173.28	-0.17	61.40	Interface Probe
	11/12/2004	N/A	51.14	122.14	173.45	173.28	-0.17	61.40	Interface Probe with gauging paste
	1/20/2005	N/A	51.75	121.53	173.45	173.28	-0.17	61.70	Interface Probe with gauging paste
	4/13/2005	N/A	50.22	123.06	173.45	173.28	-0.17	61.70	Interface Probe with gauging paste
W-5	11/14/2001	N/A	44.35	129.96	175.76	174.31	-1.45	61.95	
	2/14/2002	N/A	44.83	129.48	175.76	174.31	-1.45	61.80	
	5/21/2002	N/A	45.30	129.01	175.76	174.31	-1.45	61.80	
	8/14/2002	46.05	46.10	128.21	175.76	174.31	-1.45	61.80	Interface Probe
	11/12/2002	47.25	47.28	127.03	175.76	174.31	-1.45	61.80	Interface Probe
	2/13/2003	47.93	47.96	126.35	175.76	174.31	-1.45	61.80	Interface Probe
	5/12/2003	47.22	47.96	126.35	175.76	174.31	-1.45	61.80	water level indicator with gauging paste
	8/14/2003	N/A	47.31	127.00	175.76	174.31	-1.45	61.80	
	12/9/2003	N/A	48.86	125.45	175.76	174.31	-1.45	61.80	
	3/9/2004	N/A	50.00	124.31	175.76	174.31	-1.45	61.80	
	5/20/2004	N/A	50.60	123.71	175.76	174.31	-1.45	61.80	
	7/28/2004	N/A	50.86	123.45	175.76	174.31	-1.45	61.80	
	11/12/2004	N/A	51.43	122.88	175.76	174.31	-1.45	61.80	
	1/20/2005	N/A	52.62	121.69	175.76	174.31	-1.45	59.90	
	4/13/2005	51.24	51.44	122.87	175.76	174.31	-1.45	59.90	Interface Probe with gauging paste
W-6	11/14/2001	N/A	43.57	129.95	173.71	173.52	-0.19	62.20	
	2/14/2002	N/A	44.10	129.42	173.71	173.52	-0.19	62.50	
	5/21/2002	N/A	44.60	128.92	173.71	173.52	-0.19	62.50	
	8/14/2002	N/A	45.12	128.40	173.71	173.52	-0.19	62.60	
	11/12/2002	N/A	46.54	126.98	173.71	173.52	-0.19	62.50	
	2/13/2003	N/A	47.08	126.44	173.71	173.52	-0.19	62.50	
	5/13/2003	N/A	46.35	127.17	173.71	173.52	-0.19	62.50	
	8/14/2003	N/A	46.05	127.47	173.71	173.52	-0.19	62.50	
	12/9/2003	N/A	48.08	125.44	173.71	173.52	-0.19	62.50	
	3/9/2004	N/A	49.25	124.27	173.71	173.52	-0.19	62.50	
	5/20/2004	N/A	49.76	123.76	173.71	173.52	-0.19	62.50	
	7/28/2004	N/A	50.04	123.48	173.71	173.52	-0.19	62.50	
	11/12/2004	N/A	51.93	121.59	173.71	173.52	-0.19	62.50	
	1/20/2005	N/A	51.90	121.62	173.71	173.52	-0.19	62.80	
	4/13/2005	N/A	50.41	123.11	173.71	173.52	-0.19	62.80	

TABLE 2: SUMMARY OF WELL DATA
G&M Oil Company Station No. 16, Whittier, CA

				Z	A	B	(A-B)		
Well Number	GW Measure Date	Depth to Product DTP (feet)	Depth to Water DTW (feet)	Static Water Elev SWE (feet) MSL	ELEV Top of Well Box (feet) MSL	ELEV Top of Casing (feet) MSL	Riser Height (feet)	Total Depth (feet)	GW Measure Description
W-7	11/13/2001	N/A	45.00	129.88	175.30	174.88	-0.42	63.35	
	2/14/2002	N/A	45.40	129.48	175.30	174.88	-0.42	63.67	
	5/21/2002	N/A	45.90	128.98	175.30	174.88	-0.42	63.67	
	8/14/2002	N/A	46.59	128.29	175.30	174.88	-0.42	64.00	
	11/12/2002	N/A	47.86	127.02	175.30	174.88	-0.42	63.67	
	2/13/2002	N/A	48.40	126.48	175.30	174.88	-0.42	63.70	
	5/13/2003	N/A	47.63	127.25	175.30	174.88	-0.42	63.67	
	8/15/2003	N/A	47.80	127.08	175.30	174.88	-0.42	63.67	
	12/9/2003	N/A	49.39	125.49	175.30	174.88	-0.42	63.67	
	3/9/2004	N/A	50.50	124.38	175.30	174.88	-0.42	63.70	
	5/20/2004	N/A	51.04	123.84	175.30	174.88	-0.42	63.70	
	7/28/2004	N/A	50.72	124.16	175.30	174.88	-0.42	63.70	
	11/12/2004	N/A	52.72	122.16	175.30	174.88	-0.42	63.70	
	1/20/2005	N/A	53.15	121.73	175.30	174.88	-0.42	63.95	
	4/13/2005	N/A	50.70	124.18	175.30	174.88	-0.42	63.95	
W-8	11/13/2001	N/A	43.84	129.89	174.04	173.73	-0.31	58.30	
	2/14/2002	N/A	44.25	129.48	174.04	173.73	-0.31	58.90	
	5/21/2002	N/A	44.80	128.93	174.04	173.73	-0.31	58.90	
	8/14/2002	N/A	45.30	128.43	174.04	173.73	-0.31	59.20	
	11/12/2002	N/A	46.61	127.12	174.04	173.73	-0.31	58.90	
	2/13/2003	N/A	47.21	127.12	174.04	173.73	-0.31	58.90	
	5/12/2003	N/A	46.66	127.07	174.04	173.73	-0.31	58.90	
	8/14/2003	N/A	46.68	127.05	174.04	173.73	-0.31	58.90	
	12/9/2003	N/A	48.17	125.56	174.04	173.73	-0.31	58.90	
	3/10/2004	N/A	49.35	124.38	174.04	173.73	-0.31	58.90	
	5/21/2004	N/A	49.90	123.83	174.04	173.73	-0.31	58.90	
	7/27/2004	N/A	50.16	123.57	174.04	173.73	-0.31	58.90	
	11/12/2004	N/A	51.52	122.21	174.04	173.73	-0.31	58.90	
	1/20/2005	N/A	51.90	121.83	174.04	173.73	-0.31	59.00	
	4/14/2005	N/A	50.40	123.33	174.04	173.73	-0.31	59.00	
W-9	11/14/2001	N/A	42.31	129.57	172.51	171.88	-0.63	58.25	
	2/14/2002	N/A	42.71	129.17	172.51	171.88	-0.63	58.90	
	5/21/2002	N/A	43.20	128.68	172.51	171.88	-0.63	58.90	
	8/14/2002	N/A	43.84	128.04	172.51	171.88	-0.63	58.80	
	11/12/2002	N/A	45.16	126.72	172.51	171.88	-0.63	58.90	
	2/13/2003	N/A	45.70	126.18	172.51	171.88	-0.63	58.90	
	5/12/2003	N/A	45.06	126.82	172.51	171.88	-0.63	58.90	
	8/14/2003	N/A	45.15	126.73	172.51	171.88	-0.63	58.90	
	12/9/2003	N/A	46.79	125.09	172.51	171.88	-0.63	58.90	
	3/9/2004	N/A	47.96	123.92	172.51	171.88	-0.63	58.90	
	5/21/2004	N/A	48.53	123.35	172.51	171.88	-0.63	58.90	
	7/27/2004	N/A	48.78	123.10	172.51	171.88	-0.63	58.90	
	11/11/2004	N/A	50.20	121.68	172.51	171.88	-0.63	58.90	
	1/19/2005	N/A	50.60	121.28	172.51	171.88	-0.63	58.95	
	4/13/2005	N/A	49.12	122.76	172.51	171.88	-0.63	58.95	

TABLE 2: SUMMARY OF WELL DATA
G&M Oil Company Station No. 16, Whittier, CA

Well Number	GW Measure Date	Depth to Product DTP (feet)	Depth to Water DTW (feet)	Z Static Water Elev SWE (feet) MSL	A ELEV Top of Well Box (feet) MSL	B ELEV Top of Casing (feet) MSL	-(A-B) Riser Height (feet)	Total Depth (feet)	GW Measure Description
W-10	11/13/2001	N/A	45.00	129.91	175.59	174.91	-0.68	60.00	
	2/14/2002	N/A	45.36	129.55	175.59	174.91	-0.68	60.00	
	5/21/2002	N/A	46.30	128.61	175.59	174.91	-0.68	60.00	
	8/14/2002	N/A	46.43	128.48	175.59	174.91	-0.68	59.80	
	11/12/2002	N/A	47.80	127.11	175.59	174.91	-0.68	60.00	
	2/13/2003	N/A	48.58	126.33	175.59	174.91	-0.68	60.00	
	5/12/2003	N/A	47.62	127.29	175.59	174.91	-0.68	60.00	
	8/14/2003	N/A	47.80	127.11	175.59	174.91	-0.68	60.00	
	12/9/2003	N/A	49.36	125.55	175.59	174.91	-0.68	60.00	
	3/10/2004	N/A	50.50	124.41	175.59	174.91	-0.68	60.00	
	5/21/2004	N/A	50.51	124.40	175.59	174.91	-0.68	60.00	
	7/27/2004	N/A	51.34	123.57	175.59	174.91	-0.68	60.00	
	11/11/2004	N/A	52.56	122.35	175.59	174.91	-0.68	60.00	
	1/19/2005	N/A	53.10	121.81	175.59	174.91	-0.68	56.85	
	4/14/2005	N/A	51.51	123.40	175.59	174.91	-0.68	56.85	
W-11	11/14/2001	N/A	44.90	129.99	175.53	174.89	-0.64	60.00	
	2/14/2002	N/A	45.40	129.49	175.53	174.89	-0.64	60.00	
	5/21/2002	N/A	45.90	128.99	175.53	174.89	-0.64	60.00	
	8/14/2002	N/A	46.52	128.37	175.53	174.89	-0.64	60.00	
	11/12/2002	N/A	47.83	127.06	175.53	174.89	-0.64	60.00	
	2/13/2003	N/A	48.46	126.43	175.53	174.89	-0.64	60.00	
	5/12/2003	N/A	47.64	127.25	175.53	174.89	-0.64	60.00	
	8/14/2003	N/A	47.81	127.08	175.53	174.89	-0.64	60.00	
	12/9/2003	N/A	49.40	125.49	175.53	174.89	-0.64	60.00	
	3/9/2004	N/A	50.60	124.29	175.53	174.89	-0.64	60.00	
	5/20/2004	N/A	51.11	123.78	175.53	174.89	-0.64	60.00	
	7/28/2004	N/A	51.30	123.59	175.53	174.89	-0.64	60.00	
	11/12/2004	N/A	52.65	122.24	175.53	174.89	-0.64	60.00	
	1/20/2005	N/A	53.20	121.69	175.53	174.89	-0.64	60.15	
	4/13/2005	N/A	51.70	123.19	175.53	174.89	-0.64	60.15	
W-12	11/13/2001	N/A	41.73	129.63	171.99	171.36	-0.63	60.00	
	2/14/2002	N/A	42.10	129.26	171.99	171.36	-0.63	60.20	
	5/21/2002	N/A	42.60	128.76	171.99	171.36	-0.63	60.20	
	8/14/2002	N/A	43.15	128.21	171.99	171.36	-0.63	59.65	
	11/12/2002	N/A	44.54	126.82	171.99	171.36	-0.63	60.20	
	2/13/2003	N/A	45.12	126.24	171.99	171.36	-0.63	60.20	
	05/12/2003	N/A	44.30	127.06	171.99	171.36	-0.63	60.20	
	08/14/2003	N/A	44.46	126.90	171.99	171.36	-0.63	60.20	
	12/09/2003	N/A	46.06	125.30	171.99	171.36	-0.63	60.20	
	03/10/2004	N/A	47.23	124.13	171.99	171.36	-0.63	60.20	
	05/21/2004	N/A	47.73	123.63	171.99	171.36	-0.63	60.20	
	07/27/2004	N/A	48.21	123.15	171.99	171.36	-0.63	60.20	
	11/11/2004	N/A	49.11	122.25	171.99	171.36	-0.63	60.20	
	01/19/2005	N/A	49.64	121.72	171.99	171.36	-0.63	59.80	
	4/14/2005	N/A	48.28	123.08	171.99	171.36	-0.63	59.80	

TABLE 2: SUMMARY OF WELL DATA
G&M Oil Company Station No. 16, Whittier, CA

Well Number	GW Measure Date	Depth to Product DTP (feet)	Depth to Water DTW (feet)	Z Static Water Elev SWE (feet) MSL	A ELEV Top of Well Box (feet) MSL	B ELEV Top of Casing (feet) MSL	-(A-B) Riser Height (feet)	Total Depth (feet)	GW Measure Description
MW-13	05/12/2003	N/A	45.51	127.03	172.85	172.54	-0.31	58.38	
	08/14/2003	N/A	45.75	126.79	172.85	172.54	-0.31	58.38	
	12/09/2003	N/A	47.37	125.17	172.85	172.54	-0.31	58.38	
	03/10/2004	N/A	48.55	123.99	172.85	172.54	-0.31	58.40	
	05/21/2004	N/A	49.04	123.50	172.85	172.54	-0.31	58.40	
	07/27/2004	N/A	49.20	123.34	172.85	172.54	-0.31	58.40	
	11/11/2004	N/A	50.70	121.84	172.85	172.54	-0.31	58.40	
	01/19/2005	N/A	51.20	121.34	172.85	172.54	-0.31	59.00	
	4/14/2005	N/A	49.66	122.88	172.85	172.54	-0.31	59.00	
MW-14	05/12/2003	N/A	46.34	126.90	173.85	173.24	-0.61	60.45	
	08/14/2003	N/A	46.59	126.65	173.85	173.24	-0.61	60.45	
	12/09/2003	N/A	48.31	124.93	173.85	173.24	-0.61	60.45	
	03/09/2004	N/A	49.49	123.75	173.85	173.24	-0.61	60.45	
	05/20/2004	N/A	50.02	123.22	173.85	173.24	-0.61	60.45	
	07/27/2004	N/A	53.50	119.74	173.85	173.24	-0.61	60.45	
	11/11/2004	N/A	51.70	121.54	173.85	173.24	-0.61	60.45	
	01/19/2005	N/A	52.11	121.13	173.85	173.24	-0.61	60.35	
	4/13/2005	N/A	50.62	122.62	173.85	173.24	-0.61	60.35	
MW-15	05/12/2003	N/A	46.42	127.25	174.00	173.67	-0.33	58.55	
	08/14/2003	N/A	46.51	127.16	174.00	173.67	-0.33	58.55	
	12/09/2003	N/A	48.12	125.55	174.00	173.67	-0.33	58.55	
	03/10/2004	N/A	49.32	124.35	174.00	173.67	-0.33	58.55	
	05/21/2004	N/A	49.79	123.88	174.00	173.67	-0.33	58.55	
	07/27/2004	N/A	50.09	123.58	174.00	173.67	-0.33	58.55	
	11/11/2004	N/A	51.44	122.23	174.00	173.67	-0.33	58.55	
	01/19/2005	N/A	51.49	122.18	174.00	173.67	-0.33	59.55	
	4/14/2005	N/A	50.42	123.25	174.00	173.67	-0.33	59.55	
MW-16	05/12/2003	N/A	48.86	127.34	176.60	176.20	-0.40	58.50	
	08/14/2003	N/A	48.8	127.40	176.60	176.20	-0.40	58.50	
	12/09/2003	N/A	50.59	125.61	176.60	176.20	-0.40	58.50	
	03/10/2004	N/A	51.75	124.45	176.60	176.20	-0.40	58.50	
	05/21/2004	N/A	52.28	123.92	176.60	176.20	-0.40	58.50	
	07/27/2004	N/A	52.55	123.65	176.60	176.20	-0.40	58.50	
	11/11/2004	N/A	53.91	122.29	176.60	176.20	-0.40	58.50	
	01/19/2005	N/A	54.39	121.81	176.60	176.20	-0.40	58.85	
	4/14/2005	N/A	52.87	123.33	176.60	176.20	-0.40	58.85	

Notes:

DTW = Depth to Water Surface

SWE = Static Water Elevation

N/A = Not Available

TABLE 3: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
G&M Oil Company Station No. 16, Whittier, CA

Sample Identification	Sample Date			Volatile Organic Compounds				Oxygenates					
		EPHs (mg/kg)	VPHs (mg/kg)	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	TAME (ug/kg)	MTBE (ug/kg)	TBA (ug/kg)	TRPH (mg/kg)
SOIL													
W-1-35'	03/31/92	--	6.0	81	<5.0	130	320	--	--	--	--	--	--
W-1-55'	03/31/92	--	1,100	8700	44,000	10,000	41,000	--	--	--	--	--	--
B-12 / W-2-15'	04/16/92	--	<1.0	<5	<5	<5	<5	--	--	--	--	--	--
B-12 / W-2-30'	04/16/92	--	<1.0	<5	<5	<5	<5	--	--	--	--	--	--
B-12 / W-2-45'	04/16/92	--	1,200	8000	30,000	14,000	74,000	--	--	--	--	--	--
W-3-5'	09/03/97	--	ND	ND	ND	ND	ND	--	--	--	ND	--	--
W-3-10'	09/03/97	--	ND	ND	ND	ND	ND	--	--	--	ND	--	--
W-3-15'	09/03/97	--	ND	ND	ND	ND	ND	--	--	--	32	--	--
W-3-20'	09/03/97	--	ND	ND	ND	ND	ND	--	--	--	530	--	--
W-3-25'	09/03/97	--	2.5	ND	ND	ND	ND	--	--	--	1,700	--	--
W-3-30'	09/03/97	--	ND	5	ND	ND	ND	--	--	--	280	--	--
W-3-35'	09/03/97	--	ND	10	ND	18	ND	--	--	--	25	--	--
W-3-40'	09/03/97	--	1,780	4,300	52,000	27,000	164,000	--	--	--	5,400	--	--
W-3-45'	09/03/97	--	284	810	17,000	4,000	26,000	--	--	--	1,200	--	--
W-3-50'	09/03/97	--	3,610	9,300	163,000	48,000	256,000	--	--	--	9,600	--	--
W-4-10'	02/24/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-4-20'	02/24/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-4-30'	02/24/98	<10	<1.0	<5	<5	<5	<15	--	--	--	13*	--	--
W-4-40'	02/24/98	<10	2.5	31	<5	11	<15	--	--	--	2,000*	--	--
W-4-45'	02/24/98	14	160	1,240	1,640	2,600	13,400	--	--	--	2,650*	--	--
W-5-10'	02/19/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-5-20'	02/19/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-5-30'	02/19/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-5-35'	02/19/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-5-40'	02/19/98	<10	<1.0	<5	<5	<5	<15	--	--	--	57*	--	--

TABLE 3: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
G&M Oil Company Station No. 16, Whittier, CA

Sample Identification	Sample Date			Volatile Organic Compounds				Oxygenates					
		ERHs (mg/kg)	VFHs (mg/kg)	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	TAME (ug/kg)	MTBE (ug/kg)	TBA (ug/kg)	TRPH (mg/kg)
W-6-10'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-6-20'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-6-30'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-6-35'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-6-40'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-7-10'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-7-20'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-7-30'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	10.4*	--	--
W-7-35'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	<10	--	--
W-7-40'	02/20/98	<10	<1.0	<5	<5	<5	<15	--	--	--	15*	--	--
W-8-5'	01/18/99	13	912	2,080	32,900	25,400	137,000	--	--	--	3,340	--	--
W-8-10'	01/18/99	<10	31	<25	72	177	1,300	--	--	--	110	--	--
W-8-15'	01/18/99	<10	--	--	--	--	--	--	--	--	--	--	--
W-8-20'	01/18/99	<10	<1.0	<5	<5	<5	<15	--	--	--	400	--	--
W-8-30'	01/18/99	<10	<1.0	<5	9	<5	<15	--	--	--	93	--	--
W-8-40'	01/18/99	<10	<1.0	<5	<5	<5	<15	--	--	--	13	--	--
W-9-5'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-10'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-15'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-20'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-25'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-30'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-35'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-40'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--
W-9-45'	03/13/01	--	<0.5	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<200	--

TABLE 3: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
G&M Oil Company Station No. 16, Whittier, CA

Sample Identification	Sample Date			Volatile Organic Compounds				Oxygenates					
		EFHs (mg/kg)	VFHs (mg/kg)	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	TAME (ug/kg)	MTBE (ug/kg)	TBA (ug/kg)	TRPH (mg/kg)
W-10-5'	08/15/01	<5.0	<0.50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<5.0
W-10-10'	08/15/01	<5.0	<1.0	--	--	--	--	--	--	--	--	--	--
W-10-15'	08/15/01	<5.0	<1.0	--	--	--	--	--	--	--	--	--	--
W-10-20'	08/15/01	<5.0	<1.0	--	--	--	--	--	--	--	--	--	--
W-10-25'	08/15/01	<5.0	<0.50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	6.4
W-10-30'	08/15/01	<5.0	<1.0	--	--	--	--	--	--	--	--	--	--
W-10-35'	08/15/01	<5.0	<0.42	<1.7	<1.7	<1.7	2.0	<4.2	<4.2	<4.2	35	<42	5.2
W-10-40'	08/15/01	<5.0	<0.40	<1.6	<1.6	<1.6	<3.2	<4.0	<4.0	<4.0	24	<40	7.6
W-10-45'	08/15/01	<5.0	<0.86	--	--	--	--	--	--	--		--	--
W-10-50'	08/15/01	<5.0	<0.39	<1.6	<1.6	<1.6	<3.2	<3.9	<3.9	<3.9	<3.9	<39	<5.0
W-11-5'	08/14/01	<5.0	<0.90	--	--	--	--	--	--	--	--	--	--
W-11-10'	08/14/01	<5.0	*<0.45	<1.8	<1.8	<1.8	<3.6	<4.5	<4.5	<4.5	<4.5	<45	--
W-11-15'	08/14/01	<5.0	*<0.43	<1.7	<1.7	<1.7	<3.5	<4.3	<4.3	<4.3	<4.3	<43	--
W-11-20'	08/14/01	<5.0	*<0.41	<1.6	<1.6	<1.6	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
W-11-25'	08/14/01	<5.0	<0.83	--	--	--	--	--	--	--	--	--	--
W-11-30'	08/14/01	<5.0	<1.0	--	--	--	--	--	--	--	--	--	--
W-11-35'	08/14/01	<5.0	<0.87	--	--	--	--	--	--	--	--	--	--
W-11-40'	08/14/01	<5.0	*<0.40	7.0	<1.6	<1.6	<3.2	<4.0	<4.0	<4.0	<4.0	<40	--
W-11-45'	08/14/01	<5.0	*<0.50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	--
W-11-50'	08/14/01	<5.0	--	--	--	--	--	--	--	--	--	--	--
W-12-5'	08/14/01	15	*<0.44	<1.8	<1.8	<1.8	<3.6	<4.4	<4.4	<4.4	<4.4	<44	--
W-12-10'	08/14/01	<5.0	*<0.50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	--
W-12-15'	08/14/01	<5.0	*<0.43	<1.7	<1.7	<1.7	<3.4	<4.3	<4.3	<4.3	<4.3	<43	--
W-12-20'	08/14/01	<5.0	<0.89	--	--	--	--	--	--	--	--	--	--
W-12-25'	08/14/01	<5.0	*<0.43	<1.7	<1.7	<1.7	<3.4	<4.3	<4.3	<4.3	<4.3	<43	--
W-12-30'	08/14/01	<5.0	<0.78	--	--	--	--	--	--	--	--	--	--
W-12-35'	08/14/01	<5.0	*<0.40	<1.6	<1.6	<1.6	<3.2	<4.0	<4.0	<4.0	14	<40	--
W-12-40'	08/14/01	<5.0	--	--	--	--	--	--	--	--	--	--	--

TABLE 3: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
G&M Oil Company Station No. 16, Whittier, CA

Sample Identification	Sample Date			Volatile Organic Compounds				Oxygenates					
		ERHs (mg/kg)	VRHs (mg/kg)	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	TAME (ug/kg)	MTBE (ug/kg)	TBA (ug/kg)	TRPH (mg/kg)
MW-13-5'	04/29/03	47	<1.0	<1.7	<1.7	<1.7	<3.5	<4.3	<4.3	<4.3	<4.3	<43	--
MW-13-10'	04/29/03	34	<1.0	<2.4	<2.4	<2.4	<4.7	<5.9	<5.9	<5.9	<5.9	<59	--
MW-13-15'	04/29/03	<5.0	<1.0	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	--
MW-13-20'	04/29/03	<5.0	<1.0	<1.6	<1.6	<1.6	<3.2	<4.1	<4.1	<4.1	<4.1	<41	--
MW-13-25'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	<4.2	<42	--
MW-13-30'	04/29/03	5.5	<1.0	<1.7	<1.7	<1.7	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
MW-13-35'	04/29/03	9.8	<1.0	<1.6	<1.6	<1.6	<3.2	<4.0	<4.0	<4.0	<4.0	<40	--
MW-13-40'	04/29/03	<5.0	<1.0	<1.6	<1.6	<1.6	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
MW-13-45'	04/29/03	12	<1.0	<1.6	<1.6	<1.6	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
MW-13-50'	04/29/03	<5.0	<1.0	70	4.5	<1.7	<3.4	<4.2	<4.2	<4.2	11	<42	--
MW-13-55'	04/29/03	13	<1.0	<1.7	<1.7	<1.7	<3.3	<4.1	<4.1	<4.1	5.4	<41	--
MW-13-60'	04/29/03	<5.0	<1.0	<2.3	<2.3	<2.3	<4.5	<5.7	<5.7	<5.7	<5.7	<57	--
MW-14-5'	04/29/03	<5.0	<1.0	<1.8	<1.8	<1.8	<3.6	<4.5	<4.5	<4.5	<4.5	<45	--
MW-14-10'	04/29/03	<5.0	<1.0	<1.8	<1.8	<1.8	<3.6	<4.4	<4.4	<4.4	<4.4	<44	--
MW-14-15'	04/29/03	6.8	<1.0	<1.7	<1.7	<1.7	<3.5	<4.3	<4.3	<4.3	<4.3	<43	--
MW-13-20'	04/29/03	8.3	<1.0	<1.8	<1.8	<1.8	<3.5	<4.4	<4.4	<4.4	<4.4	<44	--
MW-14-25'	04/29/03	<5.0	<1.0	<1.8	<1.8	<1.8	<3.5	<4.4	<4.4	<4.4	<4.4	<44	--
MW-14-30'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	<4.2	<42	--
MW-14-35'	04/29/03	<5.0	<1.0	<1.6	<1.6	<1.6	<3.2	<4.0	<4.0	<4.0	<4.0	<40	--
MW-14-40'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.3	<4.2	<4.2	<4.2	<4.2	<42	--
MW-14-45'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	<4.2	<42	--
MW-14-50'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	130	<42	--
MW-14-55'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	59	<42	--
MW-14-60'	04/29/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	33	<42	--

TABLE 3: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
G&M Oil Company Station No. 16, Whittier, CA

Sample Identification	Sample Date			Volatile Organic Compounds				Oxygenates					
		EFHs (mg/kg)	VFHs (mg/kg)	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	TAME (ug/kg)	MTBE (ug/kg)	TBA (ug/kg)	TRPH (mg/kg)
MW-15-5'	04/30/03	10	<1.0	<1.7	<1.7	<1.7	<3.5	<4.4	<4.4	<4.4	<4.4	<44	--
MW-15-10'	04/30/03	<5.0	<1.0	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	--
MW-15-15'	04/30/03	5.9	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	<4.2	<42	--
MW-15-20'	04/30/03	<5.0	<1.0	<1.6	<1.6	<1.6	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
MW-15-25'	04/30/03	<5.0	<1.0	<1.6	<1.6	<1.6	<3.2	<4.1	<4.1	<4.1	<4.1	<41	--
MW-15-30'	04/30/03	5.7	<1.0	<1.6	<1.6	<1.6	<3.2	<4.0	<4.0	<4.0	34	<40	--
MW-15-35'	04/30/03	5.7	<1.0	<1.6	<1.6	<1.6	<3.1	<3.9	<3.9	<3.9	34	<39	--
MW-15-40'	04/30/03	<5.0	<1.0	<88	<88	<88	<180	<220	<220	<220	530	<4,400	--
MW-15-45'	04/30/03	5.1	<1.0	<79	<79	<79	<160	<200	<200	<200	450	<4,000	--
MW-15-50'	04/30/03	<5.0	<1.0	<1.8	<1.8	<1.8	<3.5	21	<4.4	<4.4	200	<44	--
MW-15-55'	04/30/03	<5.0	<1.0	2.6	<1.6	<1.6	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
MW-15-60'	04/30/03	7.7	<1.0	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	--
MW-16-5'	04/30/03	29	<1.0	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	--
MW-16-10'	04/30/03	6.1	<1.0	<1.8	<1.8	<1.8	<3.5	<4.4	<4.4	<4.4	<4.4	<44	--
MW-16-15'	04/30/03	6.2	<1.0	<1.7	<1.7	<1.7	<3.5	<4.3	<4.3	<4.3	<4.3	<43	--
MW-16-20'	04/30/03	5.6	<1.0	<1.6	<1.6	<1.6	<3.3	<4.1	<4.1	<4.1	<4.1	<41	--
MW-16-25'	04/30/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.5	<4.3	<4.3	<4.3	<4.3	<43	--
MW-16-30'	04/30/03	6.4	<1.0	<1.8	<1.8	<1.8	<3.5	<4.4	<4.4	<4.4	<4.4	<44	--
MW-16-35'	04/30/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	<4.2	<42	--
MW-16-40'	04/30/03	6.2	<1.0	<1.8	<1.8	<1.8	<3.5	<4.4	<4.4	<4.4	130	<44	--
MW-16-45'	04/30/03	7.2	<1.0	<80	<80	<80	<160	<200	<200	<200	1,500	<4,000	--
MW-16-50'	04/30/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.4	<4.2	<4.2	<4.2	110	<42	--
MW-16-55'	04/30/03	<5.0	<1.0	<1.7	<1.7	<1.7	<3.5	<4.3	<4.3	<4.3	<4.3	<43	--
MW-16-60'	04/30/03	12	<1.0	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	23	<50	--

NOTES:

Soil samples collected from W-1 and W-2, W-4 through W-7 (EPA Methods 8015/8020)

Soil samples collected from W-3 and W-8, methods unknown

* (EPA Method 8260A)

Soil samples collected from W-9 through W-16 (EPA Methods 8015/8260B)

EFHs = Extractable Fuel Hydrocarbons

VFHs = Volatile Fuel Hydrocarbons

TRPH = Total Recoverable Petroleum Hydrocarbons

mg/kg=milligrams per kilograms or parts per million

ug/kg=micrograms per kilograms or parts per billion

<0.40=less than laboratory detection limit

-- soil sample not analyzed

TABLE 4:
SUMMARY OF
GROUNDWATER ANALYTICAL RESULTS,
G&M Oil Company Station No. 16

	Sample ID	Sample Date	EFHs (mg/l)	VFHs (µg/l)	Volatile Organic Compounds: Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	Oxygenates: DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	MTBE (µg/l)	TBA (µg/l)
ON-SITE WELLS	W-1	11/13/01	12	44,000	21,000	11,000	2,000	4,700	<2,500	<2,500	<2,500	39,000	<12,000
		02/14/02	<0.50	42,000	9,200	9,200	1,200	3,900	<500	<500	<500	7,200	<2500
		05/21/02	Well W-1 not sampled on this date, product observed in well.										
		08/14/02	Well W-1 not sampled on this date, product observed in well.										
		11/13/02	Well W-1 not sampled on this date, product observed in well.										
		02/13/03	Well W-1 not sampled on this date, product observed in well.										
		05/13/03	2.5	5,000	140	67	44	830	<5.0	<5.0	<5.0	36	<25
		08/15/03	2.1	3,900	69	26	37	450	<5.0	<5.0	<5.0	84	<10
		12/09/03	6.5	13,000	2,300	1,000	190	1,500	16	<5.0	<5.0	5,100	1,100
		03/09/04	Well W-1 not sampled on this date, product observed in well.										
		05/20/04	Well W-1 not sampled on this date, product observed in well.										
		07/28/04	2.3	6,800	1,100	100	160	130	<200	<200	<200	3,300	<400
		11/12/04	4.6	6,500	1,600 H	120 H	220 H	150 H	<250 H	<250 H	<250 H	4,900 H	<500 H
		01/20/05	0.77	10,000	1,300	350	160	270	<250	<250	<250	3,500	<500
		04/13/05	36	11,000	1,900	1,200	360	1,000	<250	<250	<250	870	<500
	W-2	11/13/01	<10	14,000	1,900	1,400	1,100	1,700	<250	<250	<250	5,100	<1,200
		02/14/02	5.3	10,000	170	140	360	410	<5.0	<5.0	<5.0	70	52
		05/21/02	<5.0	8,700	490	190	500	430	<50	<50	<50	860	<250
		08/14/02	4.5	8,900	1,400	190	860	1,200	<500	<500	<500	6,000	<2,500
		11/13/02	4.0	28,000	3,900	620	980	1,600	<250	<250	<250	9,300	<1,200
		02/14/03	1.6	3,600	660	72	210	160	<250	<250	<250	2,200	<500
		05/12/03	<0.50	64	<5.0	<5.0	<5.0	<15	<50	<50	<50	990	<250
		08/15/03	<0.50	100	26	<5.0	<5.0	<10	<50	<50	<50	840	<100
		12/10/03	1.7	10,000	3,300	980	460	830	<200	<200	<200	2,800	640
		03/09/04	3.2	17,000	4,700	2,500	730	1,400	<500	<500	<500	7,400	<1000
		05/20/04	1.2	7,200	2,500	360	330	410	<500	<500	<500	6,000	<1,000
		07/28/04	1.2	18,000	4,900	220	610	940	<500	<500	<500	11,000	<1,000
		11/12/04	1.8	3,300	1,400 H	230 H	150 H	340 H	<250 H	<250 H	<250 H	4,000 H	<500 H
		01/20/05	1.4	8,900	3,100	390	340	710	<500	<500	<500	12,000	3,000
		04/13/05	0.50	2,900	550	380	120	450	<100	<100	<100	1,400	560
	W-3	11/14/01	<5.0	14,000	1,600	1,100	990	2,600	<100	<100	<100	1,100	<500
		02/14/02	<5.0	7,700	780	650	510	1,400	<50	<50	<50	440	<250
		05/21/02	17	34,000	3,700	2,600	2,500	6,400	<100	<100	<100	3,000	<500
		08/14/02	19	40,000	2,200	1,800	1,800	5,400	<200	<200	<200	2,000	<1,000
		11/13/02	12	49,000	2,700	2,400	2,300	7,400	<200	<200	<200	2,200	<1,000
		02/14/03	2.6	7,500	330	450	370	1,300	<50	<50	<50	300	<100
		05/13/03	2.3	5,300	190	280	260	870	<100	<100	<100	230	<500
		08/15/03	1.9	4,800	200	200	320	800	<25	<25	<25	260	<50
		12/10/03	1.4	6,200	400	860	300	1,100	<25	<25	<25	640	200
		03/09/04	1.4	4,800	440	660	230	760	<50	<50	<50	870	<100
		05/20/04	0.70	3,100	320	260	160	420	<5.0	<5.0	<5.0	730	76
		07/28/04	<0.50	1,600	180	50	94	160	<50	<50	<50	680	<100
		11/12/04	0.91	4,300	520 H	160 H	230 H	520 H	<50 H	<50 H	<50 H	1,900 H	120 H
		01/20/05	12	7,600	330	600	260	1,100	<50	<50	<50	1,200	230
		04/13/05	2.4	12,000	220	1,500	380	2,500	<100	<100	<100	400	210

TABLE 4:
SUMMARY OF
GROUNDWATER ANALYTICAL RESULTS,
G&M Oil Company Station No. 16

	Sample ID	Sample Date	EFHs (mg/l)	VFHs (µg/l)	Volatile Organic Compounds				Oxygenates				
					Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	TTBE (µg/l)	TBA (µg/l)
ON-SITE WELLS	W-4	11/14/01	3.5	7,300	3,400	330	480	710	<500	<500	<500	8,000	<2,500
		02/14/02	Well W-4 not sampled on this date, product observed in well.										
		05/21/02	Well W-4 not sampled on this date, product observed in well.										
		08/14/02	Well W-4 not sampled on this date, product observed in well.										
		11/13/02	Well W-4 not sampled on this date, product observed in well.										
		02/13/03	Well W-4 not sampled on this date, product observed in well.										
		05/13/03	Well W-4 not sampled on this date, product observed in well.										
		08/15/03	0.77	1,300	7.6	<5.0	<5.0	21	<50	<50	<50	850	<100
		12/09/03	2.4	5,500	150	31	10	43	<50	<50	<50	1,800	530
		03/09/04	<0.50	290	85	<20	<20	<40	<200	<200	<200	4,400	<400
		05/20/04	<0.50	880	220	10	<10	<20	<100	<100	<100	3,300	400
		07/28/04	<0.50	400	130	<20	<20	<40	<200	<200	<200	2,100	690
		11/12/04	<0.50	1,700	900 H	19 H	10 H	29 H	<100 H	<100 H	<100 H	3,200 H	1,400 H
		01/20/05	<0.50	1,400	410	5.6	8.6	21	<25	<25	<25	1500	1,400
		04/13/05	0.74	2,200	1,300	20	20	22	<100	<100	<100	2,100	7,200
	W-5	11/14/01	<0.50	1,100	120	100	74	140	<5.0	<5.0	<5.0	110	26
		02/15/02	<0.50	530	56	68	44	52	<5.0	<5.0	<5.0	190	110
		05/21/02	4.5	16,000	180	630	470	1,800	<50	<50	<50	150	<250
		08/14/02	Well W-5 not sampled on this date, product observed in well.										
		11/13/02	Well W-5 not sampled on this date, product observed in well.										
		02/13/03	Well W-5 not sampled on this date, product observed in well.										
		05/12/03	34	12,000	290	200	450	640	<1000	<1000	<1000	870	<5000
		08/14/03	12	5,400	120	67	280	460	<20	<20	<20	150	46
		12/10/03	6.1	5,000	290	35	250	180	<20	<20	<20	630	210
		03/09/04	0.68	1,600	230	14	100	37	<100	<100	<100	910	<200
		05/20/04	1.1	2,700	450	9.6	250	37	<50	<50	<50	1,100	210
		07/28/04	0.78	2,100	340	<10	230	21	<100	<100	<100	860	210
		11/12/04	0.73	2,200	370 H	22 H	130 H	34 H	<50 H	<50 H	<50 H	1,200 H	180 H
		01/20/05	0.57	3,200	500	15	190	28	<100	<100	<100	1,900	380
		04/13/05	530	7,500,000	3,600	4,200	3,300	7,900	<500	<500	<500	580	<1000
	W-6	11/14/01	<0.50	820	140	100	72	150	<5.0	<5.0	<5.0	13	<25
		02/15/02	<0.50	420	100	93	21	55	<5.0	<5.0	<5.0	10	<25
		05/21/02	<0.50	<50	2.4	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		08/14/02	<0.50	<50	4.6	3.4	0.50	2.8	<5.0	<5.0	<5.0	<5.0	<25
		11/13/02	<0.50	<50	2.3	3.0	<0.50	1.9	<5.0	<5.0	<5.0	<5.0	<25
		2/2/13/03	<0.50	94	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		05/13/03	<0.50	<50	<0.50	<0.50	<0.50	<1.5	<5.0	<5.0	<5.0	<1.0	<25
		08/14/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		12/09/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		03/09/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	90	<10
		05/20/04	<0.50	<50	<5.0	<5.0	<5.0	<10	<50	<50	<50	1,300	<100
		07/28/04	<0.50	<50	<10	<10	<10	<20	<100	<100	<100	1,000	<200
		11/12/04	<0.50	<50	<5.0 H	<5.0 H	<5.0 H	<10 H	<50 H	<50 H	<50 H	1,200 H	<100 H
		01/20/05	<0.50	83	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	510	17
		04/13/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10

TABLE 4:
SUMMARY OF
GROUNDWATER ANALYTICAL RESULTS,
G&M Oil Company Station No. 16

	Sample ID	Sample Date	EFHs (mg/l)	VFHs (u g/l)	Volatile Organic Compounds				Oxygenates			MTBE (u g/l)	TBA (u g/l)
					Benzene (u g/l)	Toluene (u g/l)	Ethylbenzene (u g/l)	Xylenes (u g/l)	DIPE (u g/l)	ETBE (u g/l)	TAME (u g/l)		
ON-SITE WELLS	W-7	11/13/01	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	280	64
		02/14/02	<0.50	470	21	46	43	110	<5.0	<5.0	<5.0	180	74
		05/21/02	<0.50	170	<5.0	12	6.0	25	<50	<50	<50	850	290
		08/14/02	<0.50	120	5.7	<5.0	<5.0	<10	<50	<50	<50	1,000	<250
		11/13/02	<0.50	160	<5.0	<5.0	<5.0	<10	<50	<50	<50	800	<250
		02/14/03	<0.50	<50	<5.0	<5.0	<5.0	<10	<50	<50	<50	470	<100
		05/13/03	<0.50	<50	<0.50	<0.50	<0.50	<1.5	<5.0	<5.0	5.2	200	75
		08/15/03	0.71	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	160	20
		12/10/03	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	310	<40
		03/09/04	<0.50	75	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	400	<40
		05/20/04	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	310	66
		07/28/04	NA	77	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	170	<40
		11/12/04	<0.50	80	<2.0 H	<2.0 H	<2.0 H	<4.0 H	<20 H	<20 H	<20 H	250 H	<40 H
		01/20/05	<0.50	57	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	150	<10
		04/13/05	<0.50	59	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	170	<10
	W-11	11/14/01	<0.50	730	100	89	53	110	<5.0	<5.0	<5.0	6.5	<25
		02/14/02	<2.5	2,500	370	660	86	340	<5.0	<5.0	<5.0	9.2	<25
		05/21/02	<0.50	50	0.88	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		08/14/02	<0.50	<50	2.4	1.5	<0.50	1.3	<5.0	<5.0	<5.0	<5.0	<25
		11/13/02	<0.50	<50	0.60	0.65	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		02/13/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		05/12/03	<0.50	<50	<0.50	<0.50	<0.50	<1.5	<5.0	<5.0	<5.0	<1.0	<25
		08/14/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		12/09/03	1.1	<50	<0.50	0.56	<0.50	2.6	<5.0	<5.0	<5.0	<5.0	<10
		03/09/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		05/20/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		07/28/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		11/12/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		01/20/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		04/13/05	<0.56	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
OFF-SITE WELL	W-8	11/13/01	<0.50	300	<2.0	<2.0	<2.0	<4.0	270	<20	<20	21	<100
		02/15/02	<0.50	630	45	100	25	68	190	<20	<20	<20	<100
		05/21/02	<0.50	490	10	<0.50	<0.50	<1.0	180	<5.0	<5.0	16	110
		08/14/02	<0.50	290	3.6	2.6	<2.0	6.9	280	<20	<20	<20	110
		11/12/02	<0.50	210	<1.0	<1.0	<1.0	<2.0	210	<10	<10	<10	100
		02/13/03	<0.50	110	<1.0	<1.0	<1.0	<2.0	200	<10	<10	17	78
		05/12/03	<0.50	<50	<0.50	<0.50	<0.50	<1.5	9.2	<5.0	<5.0	4.3	<25
		08/14/03	0.59	210	<0.50	<0.50	<0.50	<1.0	160	<5.0	<5.0	<5.0	51
		12/09/03	<0.50	120	0.67	<0.50	<0.50	<1.0	130	<5.0	<5.0	20	54
		03/10/04	<0.50	270	<0.50	<0.50	<0.50	<1.0	150	<5.0	<5.0	7.3	64
		05/21/04	<0.50	60	<1.0	<1.0	<1.0	<2.0	190	<10	<10	<10	52
		07/27/04	<0.50	120	<1.0	<1.0	<1.0	<2.0	120	<10	<10	<10	<20
		11/12/04	<0.50	76	<25 H	<25 H	<25 H	<50 H	2,200 H	<250 H	<250 H	<250 H	<500 H
		01/20/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	17	<5.0	<5.0	<5.0	<10
		04/14/05	0.63	<50	<0.50	<0.50	<0.50	<1.0	6.4	<5.0	<5.0	<5.0	<10

TABLE 4:
SUMMARY OF
GROUNDWATER ANALYTICAL RESULTS,
G&M Oil Company Station No. 16

	Sample ID	Sample Date	EFHs (mg/l)	VFHs (µg/l)	Volatile Organic Compounds				Oxygenates				
					Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	MTBE (µg/l)	TBA (µg/l)
OFF-SITE WELLS	W-9	11/14/01	<0.50	1,900	1,400	130	68	72	27	<5.0	<5.0	6,400	740
		02/15/02	<0.50	1,600	600	180	48	100	<200	<200	<200	3,900	<1000
		05/21/02	0.52	4,000	2,700	<50	61	<100	<500	<500	<500	14,000	<2,500
		08/14/02	0.79	5,200	3,900	<100	<100	<200	<1,000	<1,000	<1,000	18,000	<5,000
		11/12/02	<0.50	700	360	<10	29	<20	<100	<100	<100	2,600	<500
		02/13/03	<0.50	470	140	<10	33	<20	<100	<100	<100	1,800	710
		05/12/03	<0.50	210	110	<10	<10	<30	<100	<100	<100	2,400	500
		08/14/03	<0.50	390	260	<25	<25	<50	<250	<250	<250	3,300	<500
		12/10/03	<0.50	350	120	<25	33	<50	<250	<250	<250	2,900	570
		03/09/04	<0.50	230	30	<25	<25	<50	<250	<250	<250	4,500	<500
		05/21/04	<0.50	190	<50	<50	<50	<100	<500	<500	<500	3,100	<1,000
		07/27/04	<0.50	410	54	<50	<50	<100	<500	<500	<500	5,300	<1,000
		11/11/04	<0.50	300	<50	<50	<50	<100	<500	<500	<500	4,700	<1,000
		01/19/05	<0.50	120	<25	<25	<25	<50	<250	<250	<250	1,900	<500
		04/13/05	<0.50	91	<10	<10	<10	<20	<100	<100	<100	940	<200
	W-10	11/13/01	<0.50	97	17	<0.50	<0.50	1.4	12	<5.0	<5.0	80	61
		02/14/02	<0.50	74	2.3	0.66	<0.50	<1.0	9	<5.0	<5.0	150	80
		05/21/02	<0.50	59	2.3	<2.0	<2.0	<4.0	<20	<20	<20	270	120
		08/14/02	<0.50	54	3.0	<2.0	<2.0	<4.0	<20	<20	<20	310	<100
		11/12/02	<0.50	73	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	320	<100
		02/13/03	<0.50	68	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	390	94
		05/12/03	<0.50	<50	<2.5	<2.5	<2.5	<7.5	<25	<25	<25	390	190
		08/14/03	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	510	<40
		12/09/03	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	610	210
		03/10/04	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	710	<40
		05/21/04	<0.50	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	680	<50
		07/27/04	<0.50	<50	<10	<10	<10	<20	<100	<100	<100	1,200	<200
		11/11/04	<0.50	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	390	<50
		01/19/05	<0.71	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	670	130
		04/14/05	<0.50	<50	<5.0	<5.0	<5.0	<10	<50	<50	<50	400	<100
	W-12	11/13/01	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		02/14/02	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		05/21/02	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		08/14/02	<0.50	<50	7.2	0.97	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		11/12/02	<0.50	<50	0.52	0.57	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<25
		02/13/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		05/12/03	<0.50	<50	<0.50	<0.50	<0.50	<1.5	<5.0	<5.0	<5.0	4.8	<25
		08/14/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		12/09/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	9.4	<10
		03/10/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		05/21/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		07/27/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		11/11/04	<0.50	<50	<0.50	<0.50	<0.50	1.4	<5.0	<5.0	<5.0	28	<10
		01/19/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		04/14/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10

TABLE 4:
SUMMARY OF
GROUNDWATER ANALYTICAL RESULTS,
G&M Oil Company Station No. 16

	Sample ID	Sample Date			Volatile Organic Compounds				Oxygenates				
			EFHs (mg/l)	VFHs (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	MTBE (µg/l)	TBA (µg/l)
OFF-SITE WELLS	MW-13	05/12/03	<0.50	<50	1.0	<0.50	<0.50	<1.5	<5.0	<5.0	<5.0	9.8	<25
		08/14/03	1.0	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	<5.0	<10
		12/09/03	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	7.6	<10
		03/10/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	6.1	<10
		05/21/04	<0.50	<50	<5.0	<5.0	<5.0	<10	<50	<50	<50	680	<100
		07/27/04	<0.50	<50	<12	<12	<12	<25	<120	<120	<120	1,400	<250
		11/11/04	<0.50	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	970	<50
		01/19/05	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	490	78
		04/14/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	6.4	<10
	MW-14	05/12/03	<0.50	<50	<10	<10	<10	<30	<100	<100	<100	1,700	<500
		08/14/03	<0.50	<50	<5.0	<5.0	<5.0	<10	<50	<50	<50	1,300	<100
		12/10/03	<0.50	<50	<5.0	5.1	<5.0	15	<50	<50	<50	1,500	180
		03/09/04	<0.50	<50	<10	<10	<10	<20	<100	<100	<100	1,700	<200
		05/20/04	<0.50	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	790	<50
		07/27/04	<0.50	<50	<5.0	<5.0	<5.0	<10	<50	<50	<50	1,100	<100
		11/11/04	<0.50	<50	<10	<10	<10	<20	<100	<100	<100	1,300	<200
		01/19/05	<0.50	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	620	84
		04/13/005	<0.50	<50	0.57	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	79	<10
	MW-15	05/12/03	<0.50	<50	2.6	<0.50	<0.50	<1.5	<5.0	<5.0	<5.0	96	27
		08/14/03	<0.50	74	<10	<10	<10	<20	<100	<100	<100	1,200	230
		12/09/03	<0.50	97	<10	<10	<10	<20	<100	<100	<100	2,200	780
		03/10/04	<0.50	59	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	510	110
		05/21/04	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	290	69
		07/27/04	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	190	<40
		11/11/04	<0.50	<50	1.1	<1.0	<1.0	<2.0	11	<10	<10	190	26
		01/19/05	<0.50	<50	0.5	<0.50	<0.50	<1.0	8.6	<5.0	<5.0	130	<10
		04/14/05	<0.50	180	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	480	50
	MW-16	05/12/03	<0.50	<50	<0.50	<0.50	<0.50	<1.5	<5.0	<5.0	<5.0	50	<25
		08/14/03	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	410	<40
		12/09/03	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	490	74
		03/10/04	<0.50	<50	<2.0	<2.0	<2.0	<4.0	<20	<20	<20	380	<40
		05/21/04	<0.50	<50	<2.5	<2.5	<2.5	<5.0	<25	<25	<25	330	<50
		07/27/04	<0.50	<50	<5.0	<5.0	<5.0	11	<50	<50	<50	590	<100
		11/11/04	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	87	<10
		01/19/05	<0.50	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<5.0	<5.0	50	<10
		04/14/05	<0.50	<50	<5.0	15	<5.0	12	<50	<50	<50	970	<100

Notes:
EFH = Extractable Fuel Hydrocarbons, analyzed by EPA 3510C/8015 CADHS Modified
VFH = Volatile Fuel Hydrocarbons, analyzed by EPA 5030/8015 CADHS Modified
BTEX and Oxygenates analyzed by EPA Method 8260B
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
NA = Sample Not Analyzed
H = Sample analyzed outside of laboratory hold times
DIPE = Di-isopropyl Ether

µg/l = micrograms per liter or parts per billion
mg/l = milligrams per liter or parts per million
ETBE = Ethyl tert-Butyl Ether
TAME = tert-Amyl Methyl Ether
MTBE = Methyl tert-Butyl Ehter
TBA = tert-Butanol

TABLE 5: SUMMARY OF PHYSICAL CHARACTERISTICS AND CHEMICAL PROPERTIES
G&M Oil Company Station No. 16, Whittier, CA

Sample ID	Sample Date	pH	DO	ORP	Specific Conductivity	Sulfate	Nitrate	Ferrous Iron	Dissolved Methane*
			(mg/l)	(mV)	(uS/cm)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
W-1	2/13/2003	7.46	14.2**	<-99	--	39	<0.11	3.6	47
	5/13/2003	--	54.0**	<-99	--	840	<0.55	2.8	<0.50
	8/15/2003	--	--	--	--	940	2.3	0.080	<0.50
	12/9/2003	7.78	4.05	-126	--	5	<0.11	0.770	0.71
	3/9/2004	7.60	1.20	-98	--	9.6	<0.11	1.1	0.66
	5/20/2004	6.91	3.00	-205	1800	16	<0.11	0.28	0.99
	7/28/2004	6.88	0.31	-101	2510	6.1	<0.11	0.71	0.99
	11/12/2004	7.76	0.00	-187	2490	11	<0.11	0.44	0.48
	1/20/2005	7.27	0.54	-185	2500	4	<0.11	0.60	0.39
	4/13/2005	7.16	0.00	-134	248	850	<0.30	0.29	0.25
W-2	2/14/2003	6.77	17.9**	96	--	570	<0.22	2.8	150
	5/12/2003	7.28	48.23**	<-99	--	920	8.0	0.045	<0.50
	8/14/2003	--	--	--	--	860	3.5	<0.040	<0.50
	12/10/2003	7.47	2.87	42	--	880	3.1	<0.040	<0.050
	3/9/2004	7.13	0.57	-98	--	200	<0.11	7.9	0.82
	5/20/2004	6.86	4.84	-129	2000	150	<0.11	6.0	1.1
	7/28/2004	6.90	0.99	-86	2290	190	<0.11	5.8	0.61
	11/12/2004	7.55	0.00	-145	2560	200	<0.11	1.9	0.27
	1/20/2005	7.18	0.12	-47	2600	290	<0.11	2.4	0.22
	4/13/2005	7.00	0.00	-61	231	830	0.67	0.18	0.092
W-3	2/14/2003	6.58	22.1**	67	--	<0.50	<0.11	4.3	--
	5/12/2003	--	46.3**	-60.7	--	0.64	<0.11	0.77	<0.50
	8/14/2003	--	--	--	--	<0.50	<0.11	2.8	0.52
	12/10/2003	7.06	2.80	-82	--	1.2	<0.11	0.41	0.46
	3/9/2004	6.89	0.97	<-99	--	<0.50	<0.11	8.8	0.51
	5/20/2004	6.64	3.19	-96	1500	<0.50	<0.11	9.7	0.28
	7/28/2004	6.81	1.95	-30	2430	0.82	<0.11	9.1	0.34
	11/12/2004	7.83	2.03	-24	2530	1.4	<0.11	3.2	0.28
	1/20/2005	--	--	--	--	--	--	--	--
	4/13/2005	7.17	1.81	-25	228	--	--	--	--
W-4	2/14/2003	7.42	44.4*	<-99	--	89	<0.11	4.3	56
	5/13/2003	--	--	--	--	650	<0.55	2.3	<0.50
	8/15/2003	--	--	--	--	690	0.50	<0.040	<0.50
	12/9/2003	8.63	2.69	16	--	160	<0.11	<0.040	0.057
	3/9/2004	7.98	5.20	21	--	190	<0.11	<0.040	0.051
	5/20/2004	7.00	8.37	-205	1800	30	<0.11	0.77	0.14
	7/28/2004	6.80	1.00	-39	2440	6.1	<0.11	4.4	0.088
	11/12/2004	7.82	1.17	-84	2230	86	<0.11	0.7	0.055
	1/20/2005	7.22	0.87	-48	2530	64	<0.11	1.3	0.083
	4/13/2005	7.00	0.36	-22	230	560	<0.15	0.47	0.10

TABLE 5: SUMMARY OF PHYSICAL CHARACTERISTICS AND CHEMICAL PROPERTIES
G&M Oil Company Station No. 16, Whittier, CA

Sample ID	Sample Date	pH	DO	ORP	Specific Conductivity	Sulfate	Nitrate	Ferrous Iron	Dissolved Methane
			(mg/l)	(mV)	(uS/cm)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
W-5	2/13/2003	6.76	14.5**	<-99	--	310	<0.22	0.13	30
	5/12/2003	7.96	52.3**	<-99	--	380	<0.22	0.085	<0.50
	8/14/2003	--	--	--	--	480	<0.22	0.16	<0.50
	12/10/2003	7.30	3.07	-168	--	360	<0.22	<0.040	<0.050
	3/9/2004	7.35	0.81	<-99	--	300	<0.11	0.046	<0.050
	5/20/2004	7.47	2.30	-135	2400	350	<0.11	<0.040	<0.050
	7/28/2004	6.93	0.17	-95	2950	310	<0.22	0.11	<0.050
	11/12/2004	7.78	2.15	-68	2890	51	<0.11	<0.040	<0.050
	1/20/2005	7.19	2.60	-76	2730	33	<0.11	0.09	0
	4/13/2005	7.63	1.54	-112	207	--	--	--	--
W-6	2/13/2003	--	--	--	--	--	--	--	--
	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/10/2003	--	--	--	--	--	--	--	--
	3/9/2004	--	--	--	--	--	--	--	--
	5/20/2004	7.87	1.81	140	2400	--	--	--	--
	7/28/2004	6.28	1.88	206	2450	--	--	--	--
	11/12/2004	7.10	3.49	243	2450	--	--	--	--
	1/20/2005	7.16	2.38	77	2550	900	2.9	<0.040	<0.050
	4/13/2005	6.94	0.00	101	220	970	5.5	<0.040	<0.050
W-7	2/13/2003	--	--	--	--	--	--	--	--
	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/10/2003	--	--	--	--	--	--	--	--
	3/9/2004	--	--	--	--	--	--	--	--
	5/20/2004	8.24	6.15	-11	3200	--	--	--	--
	7/28/2004	6.58	0.91	41	2610	--	--	--	--
	11/12/2004	7.59	0.80	63	2610	--	--	--	--
	1/20/2005	7.19	1.51	89	2480	1,300	1.8	<0.040	0.11
	4/13/2005	7.03	0.17	56	224	1,300	3.0	0.11	0.11
W-8	2/13/2003	6.63	13.7**	-3.2	--	1,500	<2.2	2.9	11
	5/12/2003	7.85	56.7**	80.3	--	980	12	<0.040	<0.50
	8/14/2003	--	--	--	--	920	12	<0.040	<0.50
	12/9/2003	8.23	5.53	102	--	1,600	<0.55	1.3	<0.050
	3/10/2004	7.12	1.10	35	--	1,900	0.37	<0.040	<0.050
	5/21/2004	6.97	4.71	25	3500	1,900	0.45	0.042	<0.050
	7/27/2004	6.38	2.81	153	3180	1,800	1.2	<0.040	<0.050
	11/12/2004	7.61	4.07	183	3450	1,800	4.6	<0.040	<0.050
	1/20/2005	7.16	2.32	189	3010	1,800	6.1	<0.040	<0.050
	4/14/2005	7.10	0.00	105	242	1,200	11	<0.040	<0.050

TABLE 5: SUMMARY OF PHYSICAL CHARACTERISTICS AND CHEMICAL PROPERTIES
G&M Oil Company Station No. 16, Whittier, CA

Sample ID	Sample Date	pH	DO	ORP	Specific Conductivity	Sulfate	Nitrate	Ferrous Iron	Dissolved Methane*
			(mg/l)	(mV)	(uS/cm)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
W-9	2/13/2003	7.03	13.5**	-5.8	--	340	<0.11	<0.040	23
	5/12/2003	--	56.1**	14.3	--	670	2.1	<0.040	<0.50
	8/14/2003	7.93	2.47	220	--	220	<0.11	<0.040	<0.50
	12/10/2003	7.49	2.20	65	--	120	<0.11	<0.040	0.058
	3/9/2004	7.31	1.31	-33	--	90	<0.11	0.17	0.098
	5/21/2004	7.15	6.13	-55	2500	59	<0.11	<0.040	0.054
	7/27/2004	6.48	0.22	97	2530	56	<0.11	<0.040	0.063
	11/11/2004	7.55	0.25	9	2510	35	<0.11	0.052	0.11
	1/19/2005	7.23	0.00	44	2600	250	1.2	0.330	<0.050
	4/13/2005	7.08	2.18	160	224	940	5.6	<0.040	<0.050
W-10	2/13/2003	--	--	--	--	--	--	--	--
	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/10/2003	--	--	--	--	--	--	--	--
	3/9/2004	--	--	--	--	--	--	--	--
	5/21/2004	7.81	4.61	123	3000	--	--	--	--
	7/27/2004	6.18	2.69	198	3630	--	--	--	--
	11/11/2004	7.70	1.05	180	3530	--	--	--	--
	1/19/2005	7.25	2.99	208	3780	1,700	<0.22	<0.040	<0.050
	4/14/2005	7.01	2.38	111	307	1,700	<0.30	<0.040	<0.050
W-11	2/13/2003	--	--	--	--	--	--	--	--
	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/9/2003	--	--	--	--	--	--	--	--
	3/10/2004	--	--	--	--	--	--	--	--
	5/21/2004	7.88	5.21	9	2400	--	--	--	--
	7/27/2004	6.27	2.13	193	2630	--	--	--	--
	11/12/2004	7.88	1.70	241	2050	--	--	--	--
	1/20/2005	7.03	0.50	47	2840	1,100	1.2	<0.040	<0.050
	4/13/2005	6.88	0.20	176	200	720	10	<0.040	<0.050
W-12	2/13/2003	6.83	45**	123	--	980	11	<0.040	5.8
	5/12/2003	7.81	47.7**	37	--	940	8.1	<0.040	<0.50
	8/14/2003	7.70	2.45	256	--	920	3.8	<0.040	<0.50
	12/9/2003	7.57	2.81	102	--	940	7.8	<0.040	<0.050
	3/10/2004	7.12	1.78	140	--	970	9.8	<0.040	<0.050
	5/21/2004	6.87	3.69	100	2400	890	7.3	<0.040	<0.050
	7/27/2004	6.15	1.75	220	2580	870	6.7	<0.040	<0.050
	11/11/2004	7.84	1.75	168	2560	900	8.4	<0.040	<0.050
	1/19/2005	7.23	1.35	198	2750	1,000	9.9	<0.040	<0.050
	4/14/2005	7.06	1.33	105	237	1,200	9.0	<0.040	<0.050

TABLE 5: SUMMARY OF PHYSICAL CHARACTERISTICS AND CHEMICAL PROPERTIES
G&M Oil Company Station No. 16, Whittier, CA

Sample ID	Sample Date	pH	DO (mg/l)	ORP (mV)	Specific Conductivity (uS/cm)	Sulfate (mg/l)	Nitrate (mg/l)	Ferrous Iron (mg/l)	Dissolved Methane (mg/l)
MW-13	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/9/2003	--	--	--	--	--	--	--	--
	3/10/2004	--	--	--	--	--	--	--	--
	5/21/2004	7.64	4.67	144	2500	--	--	--	--
	7/27/2004	6.23	0.63	211	2470	--	--	--	--
	11/11/2004	7.81	0.97	156	2000	--	--	--	--
	1/19/2005	7.28	0.48	199	2520	580	1.1	<0.040	<0.050
	4/14/2005	7.07	0.94	125	216	630	2.1	<0.040	<0.050
MW-14	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/9/2003	--	--	--	--	--	--	--	--
	3/10/2004	--	--	--	--	--	--	--	--
	5/21/2004	8.00	7.25	24	1700	--	--	--	--
	7/27/2004	6.33	3.91	214	1980	--	--	--	--
	11/11/2004	7.91	2.11	189	1830	--	--	--	--
	1/19/2005	7.31	0.62	221	2050	360	2.6	<0.040	<0.050
	4/13/2005	6.97	1.90	176	219	480	4.6	<0.040	<0.050
MW-15	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/9/2003	--	--	--	--	--	--	--	--
	3/10/2004	--	--	--	--	--	--	--	--
	5/21/2004	7.94	5.45	98	2700	--	--	--	--
	7/27/2004	6.30	2.82	171	2760	--	--	--	--
	11/11/2004	7.82	2.86	148	2680	--	--	--	--
	1/19/2005	7.41	1.91	175	2260	140	4.5	<0.040	<0.050
	4/14/2005	7.14	3.42	102	198	990	2.5	0.084	<0.050
MW-16	5/12/2003	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--
	12/9/2003	--	--	--	--	--	--	--	--
	3/10/2004	--	--	--	--	--	--	--	--
	5/21/2004	7.72	3.39	92	1400	--	--	--	--
	7/27/2004	6.58	1.37	175	--	--	--	--	--
	11/11/2004	7.56	1.09	198	1020	--	--	--	--
	1/19/2005	7.35	0.47	220	1410	1100	6.8	<0.040	<0.050
	4/14/2005	6.93	0.00	104	135	260	1.3	<0.040	<0.050

Notes:

* Results reported in Methane By Headspace in ug/l units.

** Values are suspect. Meter malfunction is probable cause.

-- = not tested

DO = Dissolved Oxygen

ORP = Oxidation Reduction Potential

<0.050 = Less than the indicated laboratory detection limit

uS/cm = microsiemens per centimeter

Values of pH, DO, ORP, and Specific Conductivity from July 27 and 28, 2004 to present were collected using the post-purge sample.

TABLE 6
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS
G&M Oil Company Station No. 16
Whittier, CA
(Concentration, ug/L)

Well ID	Date Sampled	TPHg (VFH)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	MTBE (8260B)	ETBE	DIPE	TAME	TBA
W-1	10/09/97	LPH	–	–	–	–	–	–	–	–	–	–
	03/20/98	LPH	–	–	–	–	–	–	–	–	–	–
	05/29/98	LPH	–	–	–	–	–	–	–	–	–	–
	09/11/98	LPH	–	–	–	–	–	–	–	–	–	–
	12/14/98	LPH	–	–	–	–	–	–	–	–	–	–
	03/12/99	LPH	–	–	–	–	–	–	–	–	–	–
	06/29/99	LPH	–	–	–	–	–	–	–	–	–	–
	09/27/99	LPH	–	–	–	–	–	–	–	–	–	–
	12/17/99	LPH	–	–	–	–	–	–	–	–	–	–
	02/17/00	LPH	–	–	–	–	–	–	–	–	–	–
	05/16/00	–	–	–	–	–	–	–	–	–	–	–
	08/08/00	LPH	–	–	–	–	–	–	–	–	–	–
	11/30/00	LPH	–	–	–	–	–	–	–	–	–	–
	02/08/01	LPH	–	–	–	–	–	–	–	–	–	–
	08/23/01	–	–	–	–	–	–	–	–	–	–	–
	11/13/01	44000	21000	11000	2000	4700	–	39000	<2500	<2500	<2500	<12000
	02/14/02	42000	9200	9200	1200	3900	–	7200	<500	<500	<500	<2500
W-2	10/09/97	51300	4480	3600	970	6410	12300	15300	–	–	–	–
	03/20/98	1700	713	310	53	550	12000	8820	–	–	–	–
	05/29/98	8920	117	23	29	46	6800	7080	–	–	–	–
	09/11/98	3600	7.4	<1.5	1.5	7.8	3000	3600	–	–	–	–
	12/14/98	3740	26.2	3.6	4.3	5.9	2640	2160	–	–	–	–
	03/12/99	44400	7730	34.7	2200	48	26600	27500	–	–	–	–
	06/29/99	20500	3870	<0.3	17	<0.6	14000	13700	–	–	–	–
	09/27/99	3970	102	40.7	<15	62.7	1130	980	–	–	–	–
	12/17/99	1120	99.4	1.3	3.4	2.5	883	884	–	–	–	–
	02/17/00	822	22.7	1.6	2.9	5.3	712	785	–	–	–	–
	05/16/00	6260	588	8.6	109	121	5210	6190	–	–	–	–
	08/08/00	1230	22.4	<3.0	4.0	<6.0	1160	1270	–	–	–	–
	11/30/00	12600	1450	102	406	388	–	9710	<40	<40	<40	250
	02/08/01	19600	2350	100	885	665	–	10400	<100	<100	<100	500
	08/23/01	9500	1800	<100	1000	200	–	8900	<1000	<1000	<1000	<5000
	11/13/01	14000	1900	1400	1100	1700	–	5100	<250	<250	<250	<1200
	02/14/02	10000	170	140	360	410	–	<5.0	<5.0	<5.0	<5.0	<25
W-3	10/09/97	64300	3540	18400	1700	12800	1400	1200	–	–	–	–
	03/20/98	51500	2600	12000	1200	13000	1800	1400	–	–	–	–
	05/29/98	62000	32800	16200	2400	13300	1440	1340	–	–	–	–
	09/11/98	58600	2500	14000	2570	13500	1300	1550	–	–	–	–
	12/14/98	70300	2240	12100	3220	14800	925	908	–	–	–	–
	03/12/99	43000	1740	8430	2960	13000	959	735	–	–	–	–
	06/29/99	45500	1730	4480	2860	9870	1010	1010	–	–	–	–
	09/27/99	43200	2050	3730	2730	8510	1530	846	–	–	–	–
	12/17/99	LPH	–	–	–	–	–	–	–	–	–	–
	02/17/00	LPH	–	–	–	–	–	–	–	–	–	–
	05/16/00	–	–	–	–	–	–	–	–	–	–	–
	08/08/00	LPH	–	–	–	–	–	–	–	–	–	–
	11/30/00	LPH	–	–	–	–	–	–	–	–	–	–
	02/08/01	LPH	–	–	–	–	–	–	–	–	–	–
	08/24/01	4300	270	90	320	610	–	390	<12	<12	<12	<62
	11/14/01	14000	1600	1100	990	2600	–	1099	<100	<100	<100	<500
	02/14/02	7700	780	650	510	1400	–	440	<50	<50	<50	<500

TABLE 6
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS
G&M Oil Company Station No. 16
Whittier, CA
(Concentration, ug/L)

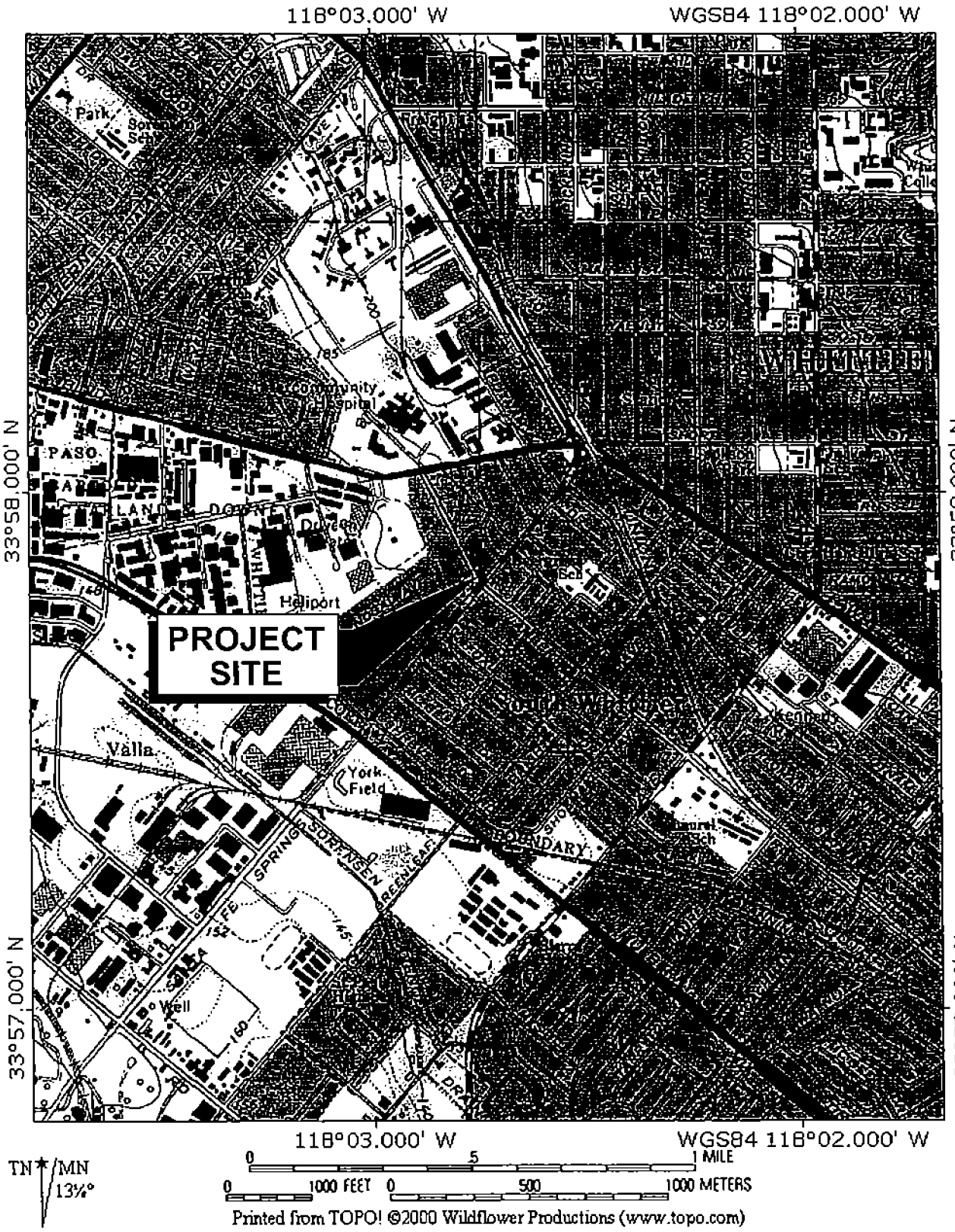
Well ID	Date Sampled	TPHg (VFH)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	MTBE (8260B)	ETBE	DIPE	TAME	TBA
W-4	03/20/98	68000	5000	10600	1230	12000	25000	19000	–	–	–	–
	05/29/98	LPH	–	–	–	–	–	–	–	–	–	–
	09/11/98	LPH	–	–	–	–	–	–	–	–	–	–
	12/14/98	LPH	–	–	–	–	–	–	–	–	–	–
	03/12/99	LPH	–	–	–	–	–	–	–	–	–	–
	06/29/99	LPH	–	–	–	–	–	–	–	–	–	–
	09/27/99	LPH	–	–	–	–	–	–	–	–	–	–
	12/17/99	LPH	–	–	–	–	–	–	–	–	–	–
	02/17/00	LPH	–	–	–	–	–	–	–	–	–	–
	05/16/00	–	–	–	–	–	–	–	–	–	–	–
	08/08/00	LPH	–	–	–	–	–	–	–	–	–	–
	11/30/00	LPH	–	–	–	–	–	–	–	–	–	–
	02/08/01	LPH	–	–	–	–	–	–	–	–	–	–
	08/24/01	–	–	–	–	–	–	–	–	–	–	–
	11/14/01	7300	3400	330	480	710	–	8000	<500	<500	<500	<2500
	02/14/02	Well W-4 not sampled on this date, product observed in well.										
W-5	03/20/98	24700	1450	2140	3	4730	530	375	–	–	–	–
	05/29/98	LPH	–	–	–	–	–	–	–	–	–	–
	09/11/98	LPH	–	–	–	–	–	–	–	–	–	–
	12/14/98	LPH	–	–	–	–	–	–	–	–	–	–
	03/12/99	LPH	–	–	–	–	–	–	–	–	–	–
	06/29/99	LPH	–	–	–	–	–	–	–	–	–	–
	09/27/99	LPH	–	–	–	–	–	–	–	–	–	–
	12/17/99	LPH	–	–	–	–	–	–	–	–	–	–
	02/17/00	LPH	–	–	–	–	–	–	–	–	–	–
	05/16/00	LPH	–	–	–	–	–	–	–	–	–	–
	08/08/00	LPH	–	–	–	–	–	–	–	–	–	–
	11/30/00	LPH	–	–	–	–	–	–	–	–	–	–
	02/08/01	1270	420	6.5	39.3	31.3	–	35.8	<5.0	<5.0	<5.0	<25
	08/23/01	–	–	–	–	–	–	–	–	–	–	–
	11/14/01	1100	120	100	74	140	–	110	<5.0	<5.0	<5.0	26
	02/15/02	530	56	68	44	52	–	190	<5.0	<5.0	<5.0	110
W-6	03/20/98	51	<0.3	<0.3	<0.6	1.2	6.1	5.7	–	–	–	–
	05/29/98	130	3.3	21	3.5	26	7.8	6.0	–	–	–	–
	09/11/98	<50	<0.3	<0.3	<0.6	<0.6	<1.0	–	–	–	–	–
	12/14/98	<50	<0.3	<0.3	<0.6	<0.6	<1.0	–	–	–	–	–
	03/12/99	<50	<0.3	<0.3	<0.3	<0.6	<1.0	–	–	–	–	–
	06/29/99	<50	<0.3	<0.3	<0.3	<0.6	<1.0	–	–	–	–	–
	09/27/99	<50	<0.3	1.1	<0.3	1.3	3.2	1.02	–	–	–	–
	12/17/99	<50	<0.3	<0.3	<0.3	<0.6	<1.0	–	–	–	–	–
	02/17/00	<50	<0.3	0.6	<0.3	<0.6	1.5	2.5	–	–	–	–
	05/16/00	100	1.9	4.2	3.4	22.8	29	27	–	–	–	–
	08/08/00	<50	<0.3	<0.3	<0.3	<0.6	<1.0	–	–	–	–	–
	11/30/00	331	60	63.5	50.4	115	–	4.3	<2.0	<2.0	<2.0	<10
	02/08/01	<50	3.8	7.9	4.2	10.3	–	<2.0	<2.0	<2.0	<2.0	<10
	08/23/01	<50	<0.50	<0.50	<0.50	<1.0	–	<5.0	<5.0	<5.0	<5.0	<25
	11/14/01	820	140	100	72	150	–	13	<5.0	<5.0	<5.0	<25
	02/15/02	420	100	93	21	55	–	10	<5.0	<5.0	<5.0	<25

TABLE 6
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS
G&M Oil Company Station No. 16
Whittier, CA
(Concentration, ug/L)

Well ID	Date Sampled	TPHg (VFH)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	MTBE (8260B)	ETBE	DIPE	TAME	TBA
W-7	03/20/98	2000	9.8	2.9	2.8	40	855	770	–	–	–	–
	05/29/98	1800	10	25	6.2	23	612	625	–	–	–	–
	09/11/98	630	0.6	0.6	1.4	<0.6	290	360	–	–	–	–
	12/14/98	640	1.1	1.3	1.1	1.0	196	170	–	–	–	–
	03/12/99	367	0.4	1.3	1.4	2.3	166	158	–	–	–	–
	06/29/99	414	0.3	<0.3	<0.3	<0.6	204	200	–	–	–	–
	09/27/99	393	2.7	1.1	0.5	1.7	191	205	–	–	–	–
	12/17/99	458	4.1	<0.3	1.5	<0.6	250	260	–	–	–	–
	02/17/00	653	6.4	0.4	1.3	<0.6	353	364	–	–	–	–
	05/16/00	236	1.4	3.4	3.1	19.7	156	174	–	–	–	–
	08/08/00	113	<0.3	<0.3	<0.3	<0.6	95.1	95.3	–	–	–	–
	11/30/00	501	78.1	59.5	60.6	124	–	14	<2.0	<2.0	<2.0	<10
	02/08/01	482	4.0	8.4	5.1	12.7	–	280	<2.0	<2.0	<2.0	<10
	08/23/01	<50	<0.50	<0.50	<0.50	<1.0	–	90	<5.0	<5.0	<5.0	44
	11/13/01	<50	<0.50	<0.50	<0.50	<1.0	–	280	<5.0	<5.0	<5.0	64
	02/14/02	470	21	46	43	110	–	180	<5.0	<5.0	<5.0	64
W-8	03/18/99	228	1.1	0.4	3.0	8.0	72	66	–	–	–	–
	06/29/99	390	<0.3	0.5	0.4	0.6	40	38	–	–	–	–
	09/27/99	522	5.7	1.1	1.4	2.1	11.2	6.6	–	–	–	–
	12/17/99	345	4.3	<0.3	4.1	2.3	39.3	41	–	–	–	–
	02/17/00	496	1.1	2.3	3.2	4.4	80.7	74.5	–	–	–	–
	05/16/00	447	25.1	5.7	8.4	29.2	52.5	51	–	–	–	–
	08/08/00	284	<0.3	0.4	<0.3	<0.6	24	20.6	–	–	–	–
	11/30/00	507	59.1	73.2	31.4	99.9	–	27.4	<2.0	191	<2.0	31.5
	02/08/01	359	20.3	9.5	15.2	21	–	43.6	<2.0	101	<2.0	16
	08/24/01	120	<0.50	<0.50	<0.50	<1.0	–	76	<5.0	120	<5.0	59
	11/13/01	300	<2.0	<2.0	<2.0	<4.0	–	21	<20	270	<20	<100
	02/15/02	630	45	100	25	68	–	<20	<20	190	<20	<100
W-9	11/14/01	1900	1400	130	68	72	–	6400	<5.0	27	<5.0	740
	02/15/02	1600	600	180	48	100	–	3900	<200	<200	<200	<1000
W-10	11/13/01	97	17	<0.50	<0.50	1.4	–	80	<5.0	12	<5.0	61
	02/14/02	74	2.3	0.66	<0.50	<1.0	–	150	<5.0	9.0	<5.0	80
W-11	11/14/01	730	100	89	53	110	–	6.5	<5.0	273	<5.0	<25
	02/14/02	2500	370	660	86	340	–	9.2	<5.0	<5.0	<5.0	<25
W12	11/13/01	<50	<0.50	<0.50	<2.0	<1.0	–	<5.0	<5.0	<5.0	<5.0	<25
	02/14/02	<50	<0.50	<0.50	<0.50	<1.0	–	<5.0	<5.0	<5.0	<5.0	<25

– - Not analyzed.
ug/L - micrograms per liter
TPHg - Total Petroleum Hydrocarbons as gasoline, EPA 8015M
VFH - Volatile Fuel Hydrocarbons, EPA 8015 CADHS Modified
EFH - Extractable Fuel Hydrocarbons, EPA 8015 CADHS Modified
< - Less than laboratory detection limits

MTBE - Methyl-tert-Butyl Ether
ETBE - Ethyl tert-Butyl Ether
DIPE - Di-isopropyl Ether
TAME - Tert-Amyl-Methyl Ether
TBA - tert-butanol
LPH - Liquid Phase Hydrocarbons



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SITE LOCATION MAP

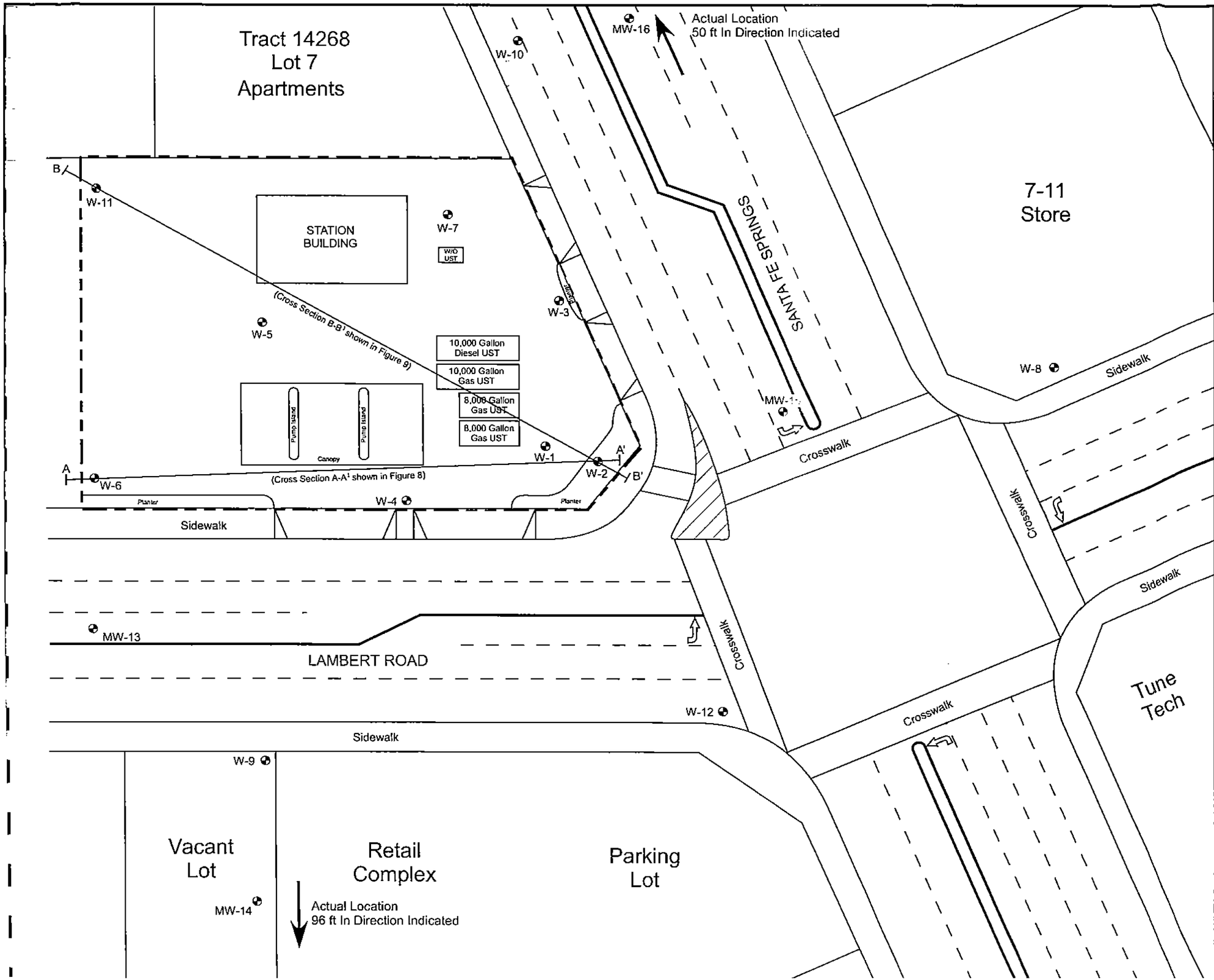
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

PROJECT NO.
600143002

DATE
June 2005

Figure 1



LEGEND

◐	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

0 15 30 60
Scale in Feet

NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	RJP
Date	June 2005

SITE PLAN
with Cross Section Locations
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California
Figure No. 2

Tract 14268
Lot 7
Apartments

W-10 (123.40)
MW-16* (123.33)
Actual Location
50 ft In Direction Indicated

123.40
123.60
123.80
124.00
123.20
123.00
122.90
122.80

W-11 (123.19)
STATION BUILDING
W-7 (124.18)
W/O UST
W-3* (0.31' FP)
W-5* (0.20' FP)
10,000 Gallon Diesel UST
10,000 Gallon Gas UST
8,000 Gallon Gas UST
8,000 Gallon Gas UST
Pump Island
Pump Island
Canopy
(0.017)
W-1* (121.95)
W-2 (124.20)
W-6 (123.11)
W-4 (123.06)
Planter
Planter
Sidewalk
MW-13 (122.88)
LAMBERT ROAD
Sidewalk
W-9 (122.76)
W-12 (123.08)
SANTA FE SPRINGS
MW-15 (123.25)
7-11 Store
W-8 (123.33)
Sidewalk
Crosswalk
Crosswalk
Crosswalk
Crosswalk
Sidewalk
Tune Tech
Vacant Lot
MW-14* (122.62)
Retail Complex
Actual Location
96 ft In Direction Indicated
Parking Lot

LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
(0.017)	Groundwater Contour and Gradient in Feet per Foot
(124.20)	Groundwater Elevation
124.00	Groundwater Contour Elevation
W-3*	Groundwater Elevation Not Used in Contour Map
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

0 15 30 60
Scale in Feet

NORTH

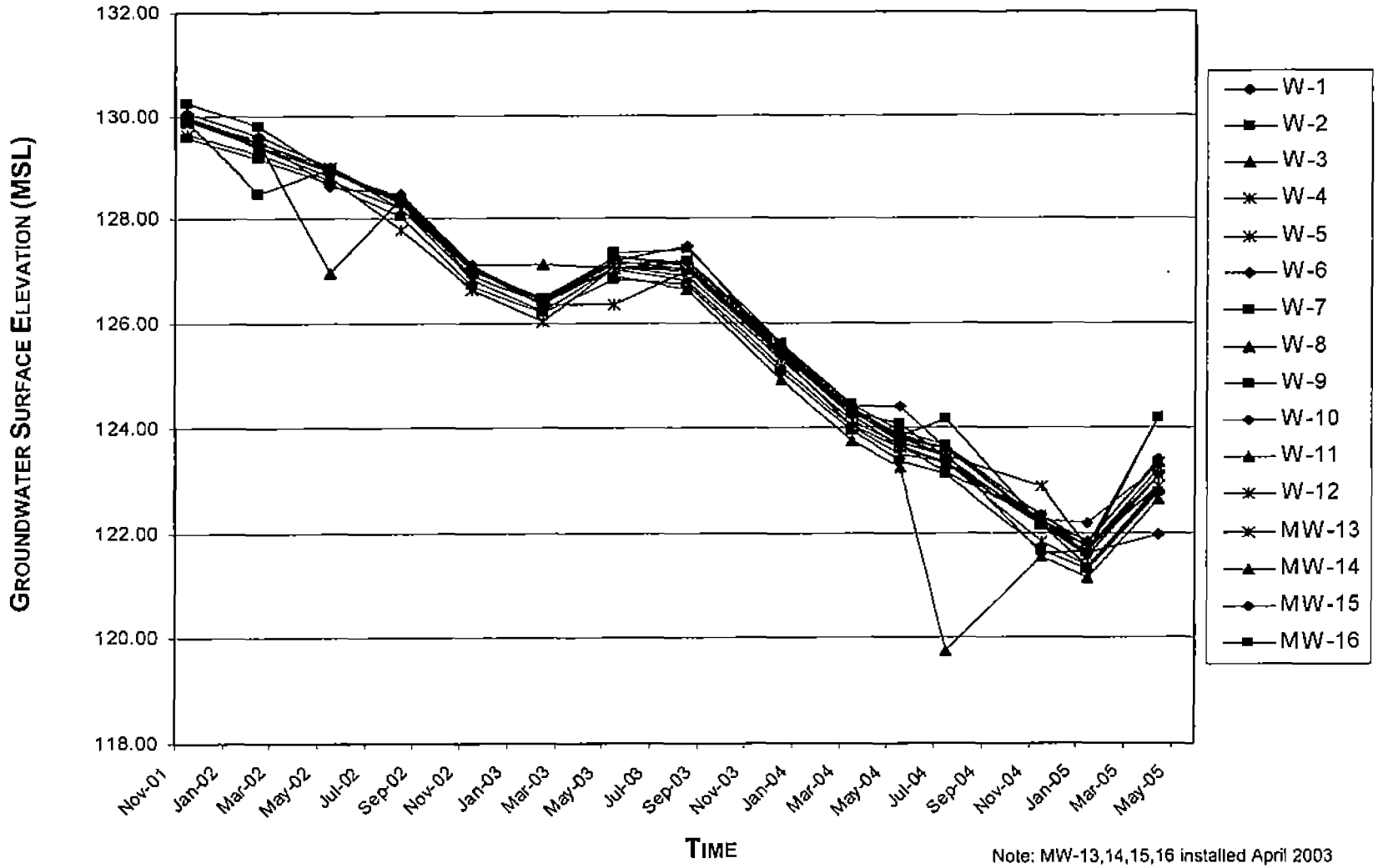
Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

GROUNDWATER CONTOUR MAP
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Figure No. 3

GROUNDWATER SURFACE ELEVATIONS OVER TIME



Note: MW-13,14,15,16 installed April 2003

GROUNDWATER SURFACE ELEVATIONS OVER TIME

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 4

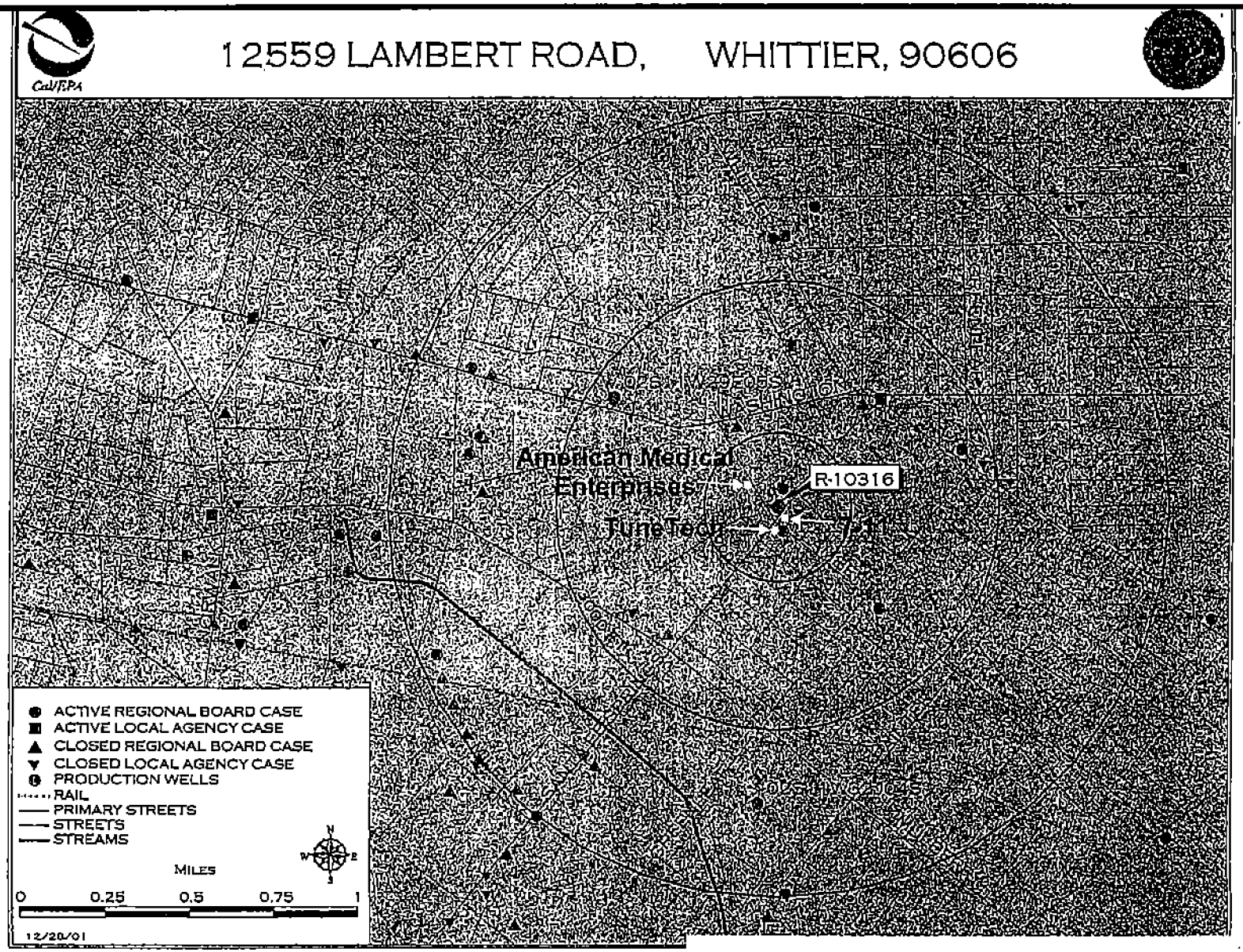


FIGURE 4 – SITE VICINITY MAP WITH RECEPTOR WELLS

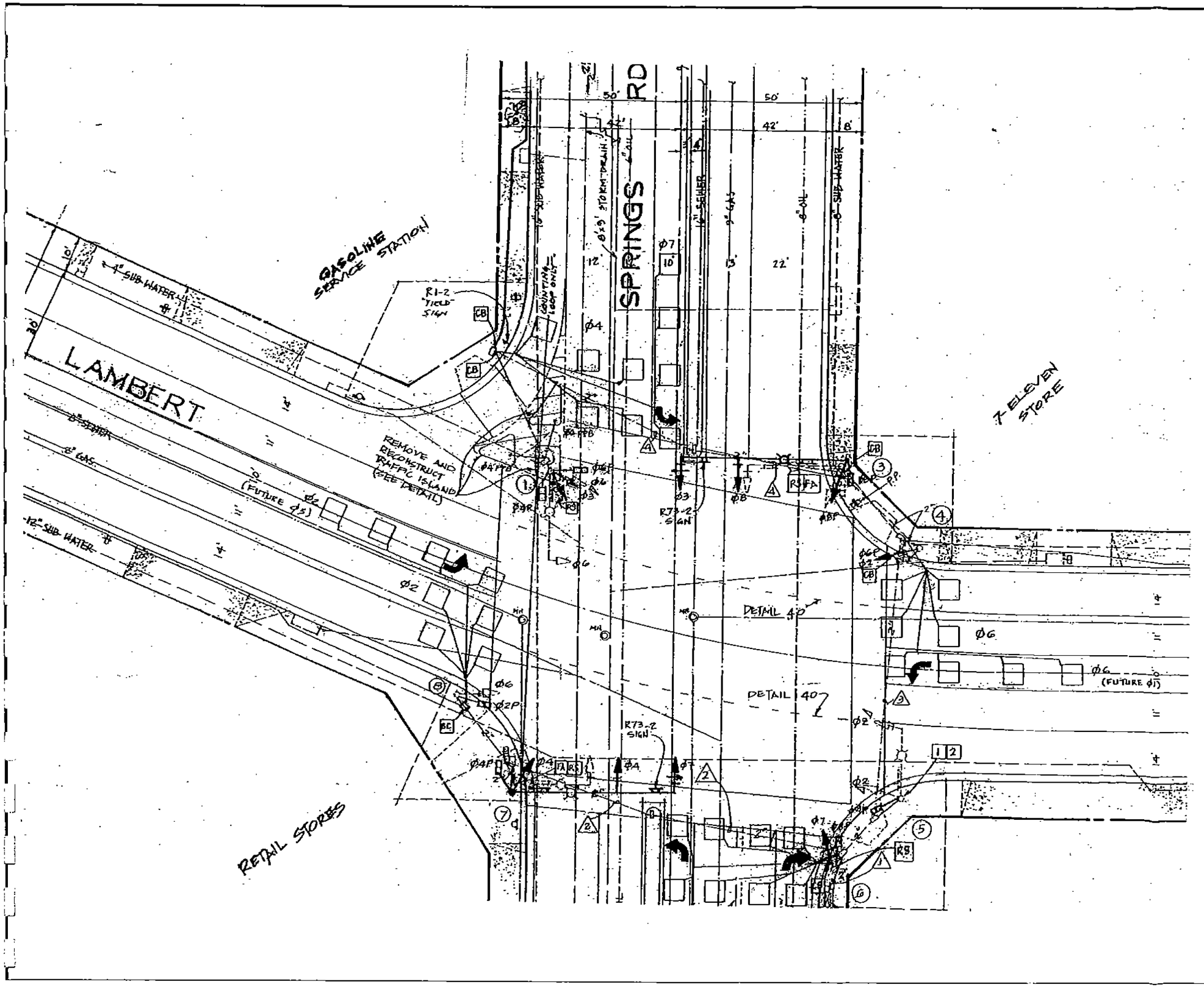
SITE VICINITY MAP WITH RECEPTOR WELLS

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 5



Map adapted from City of Whittier Engineering Department Traffic Signal Plan, Drawing No. T-30D

0 15 30 60
Scale in Feet

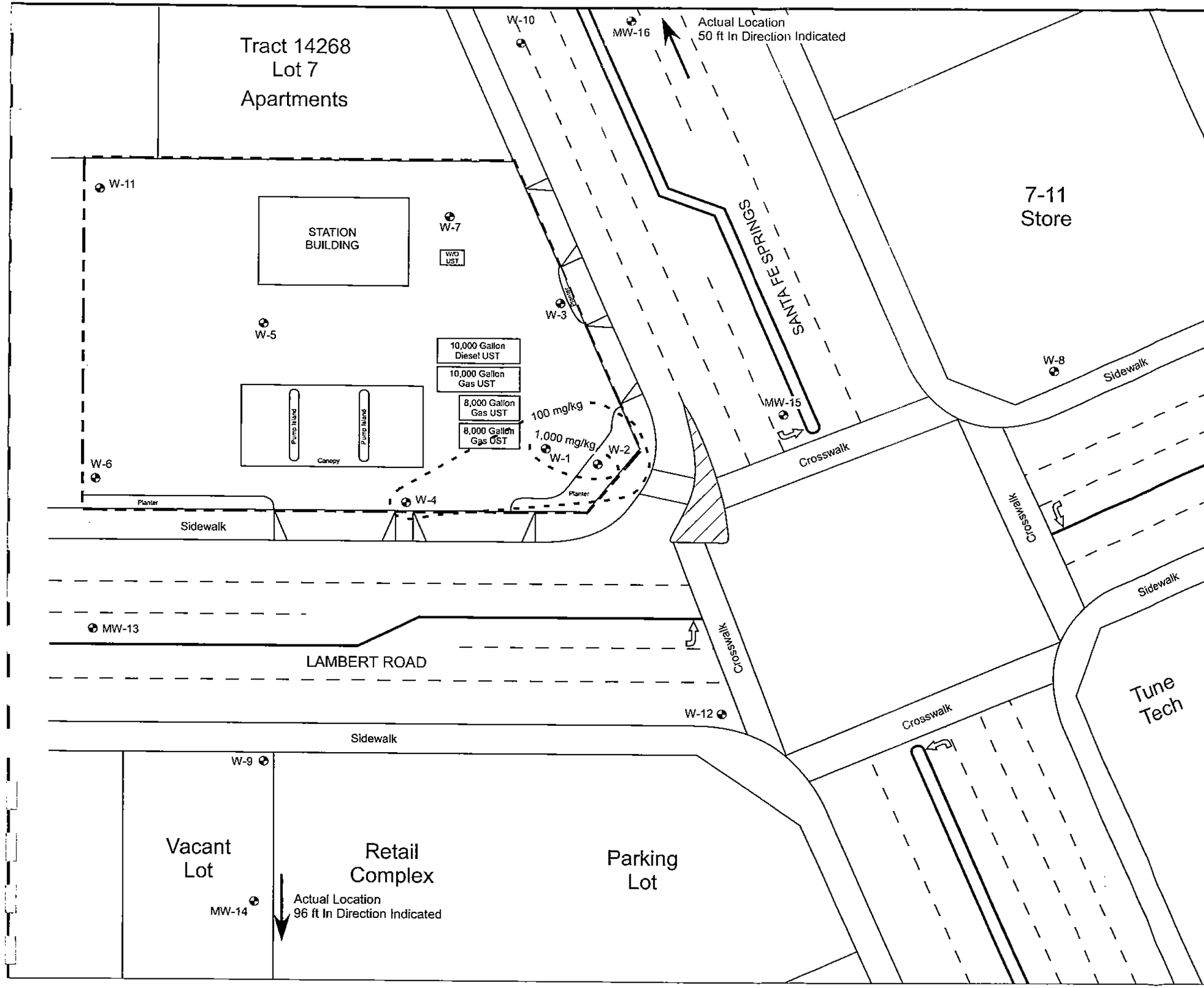
NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	RJP
Date	June 2005

SITE VICINITY MAP WITH UTILITY LOCATIONS
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Figure No. 6



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
- - -	Extent of Total Petroleum Hydrocarbons as Gasoline (TPHg) in Soil
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

0 15 30 60
Scale in Feet

NORTH

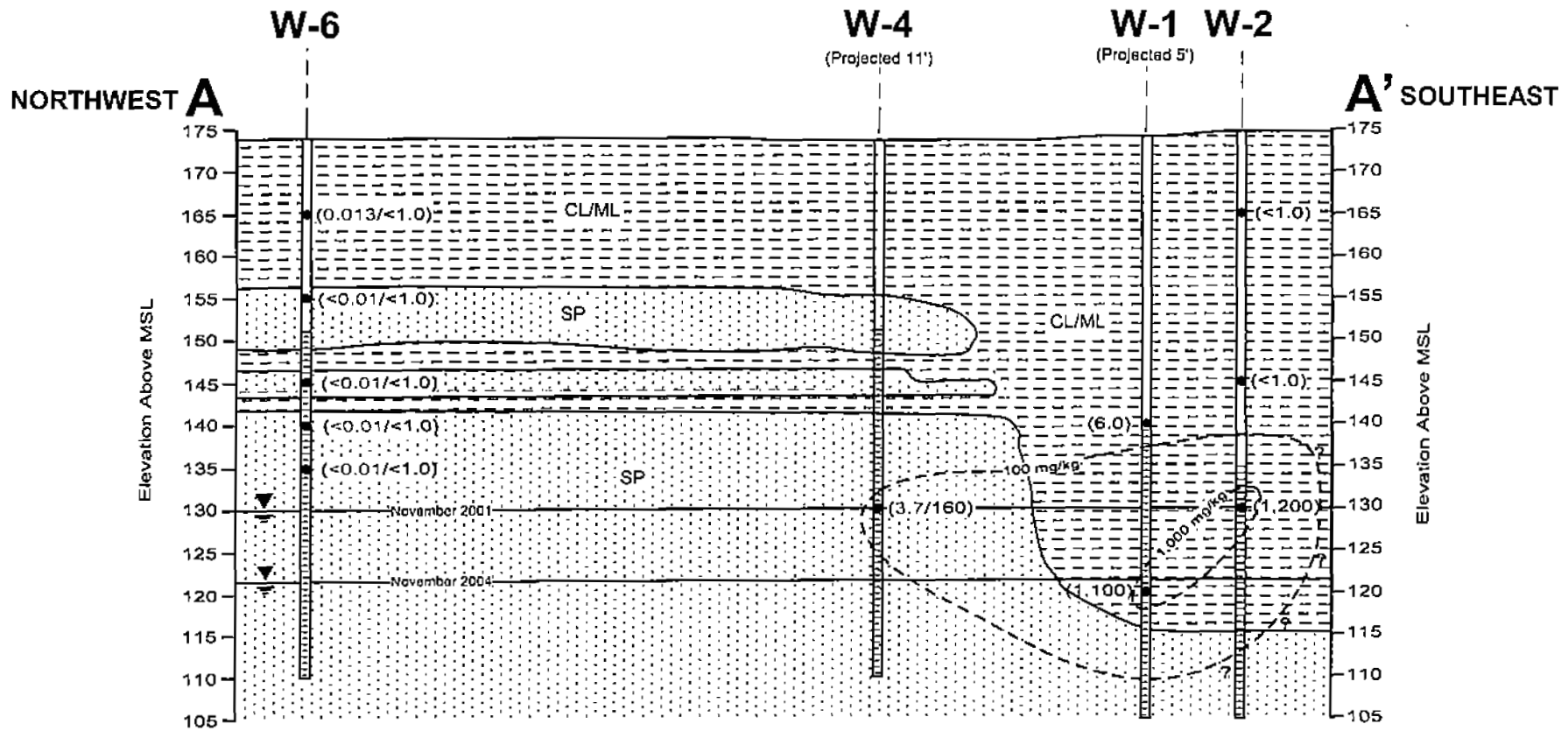
Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	HCB
Date	June 2005

EXTENT OF TPHg IN SOIL

G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Figure No. 7



LEGEND

- ● Soil Sample Location
- (MTBE/TPHg) Methyl tertiary Butyl Ether/Total Petroleum Hydrocarbons as Gasoline Concentrations in mg/kg
- Silty Clay (ML/CL)
- Sand (SP)
- Approximate Extent of TPHg Impacted Soil

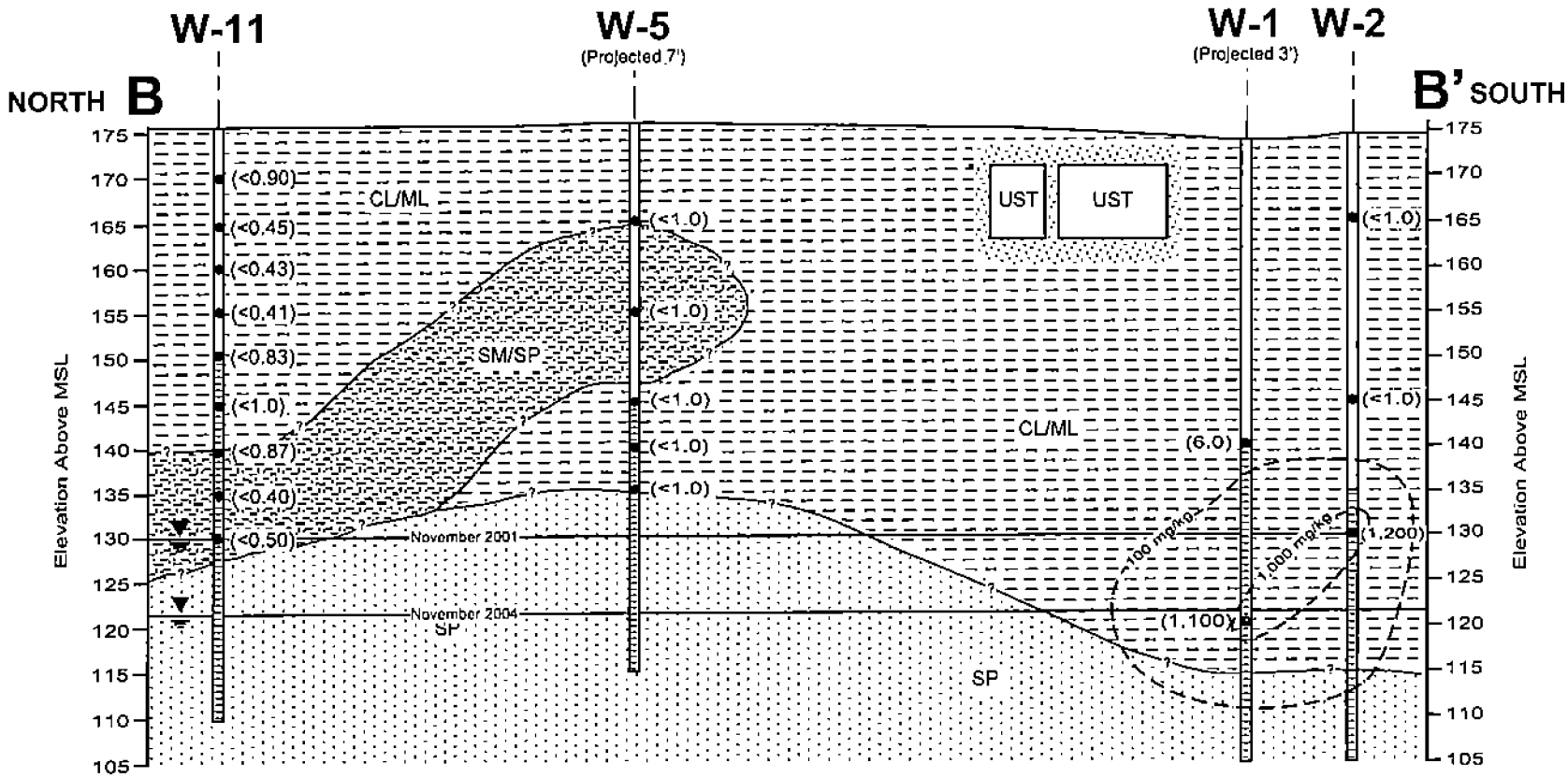
CROSS-SECTION A-A'

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Horizontal Scale	1"=30'
Engr./Geol.	CM
Drafted By	HCB
Date	June 2005

Figure No. 8



LEGEND

- ● Soil Sample Location
- (TPHg) Total Petroleum Hydrocarbons as Gasoline Concentrations in mg/kg
- Silty Clay (ML/CL)
- Sand (SP)
- Approximate Extent of TPHg Impacted Soil

CROSS-SECTION B-B'

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
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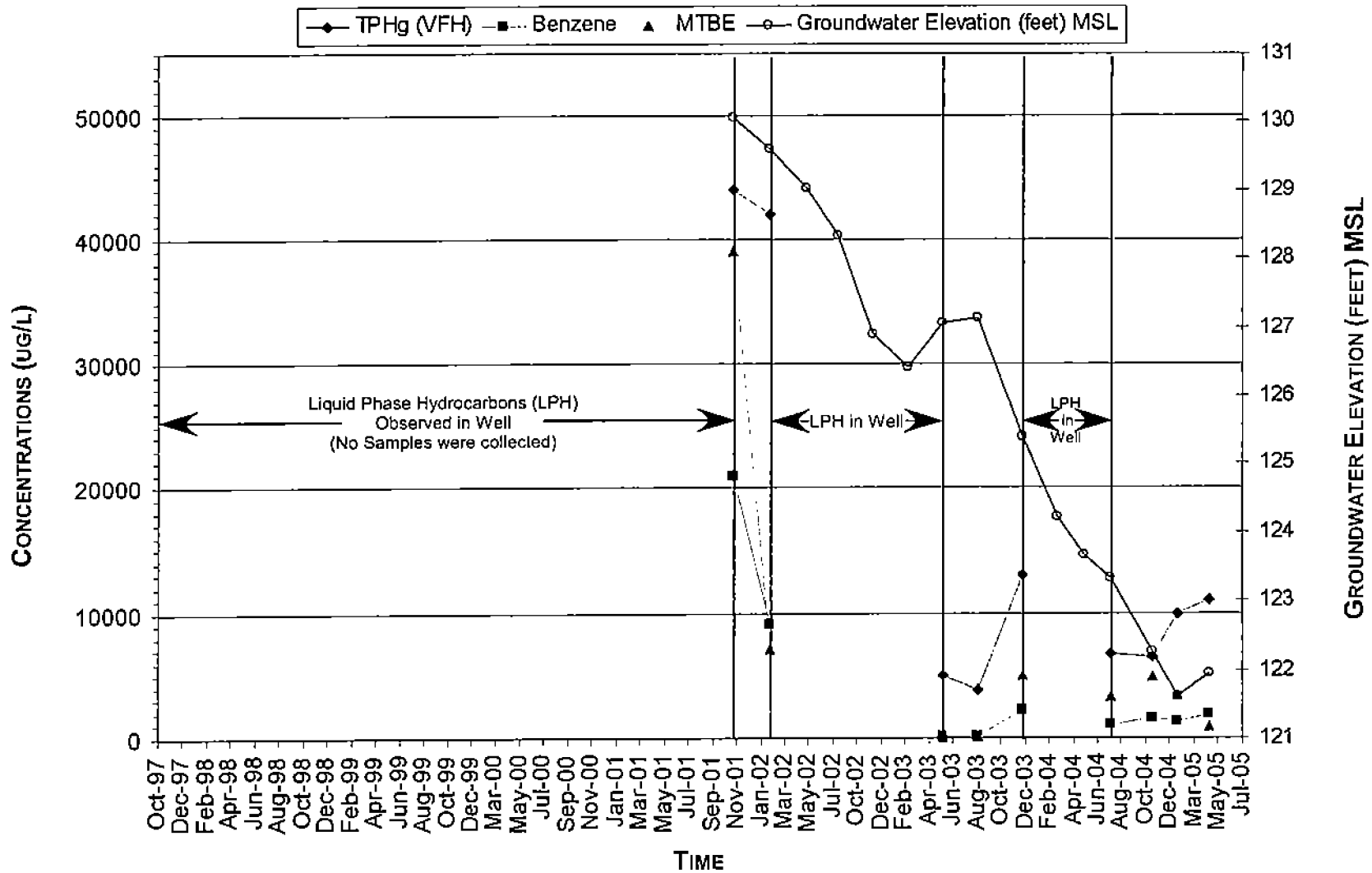
Project No.	600143002
Horizontal Scale	1"=30'
Engr./Geol.	CM
Drafted By	HCB
Date	June 2005

Figure No. 9

MONITORING WELL W-1



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

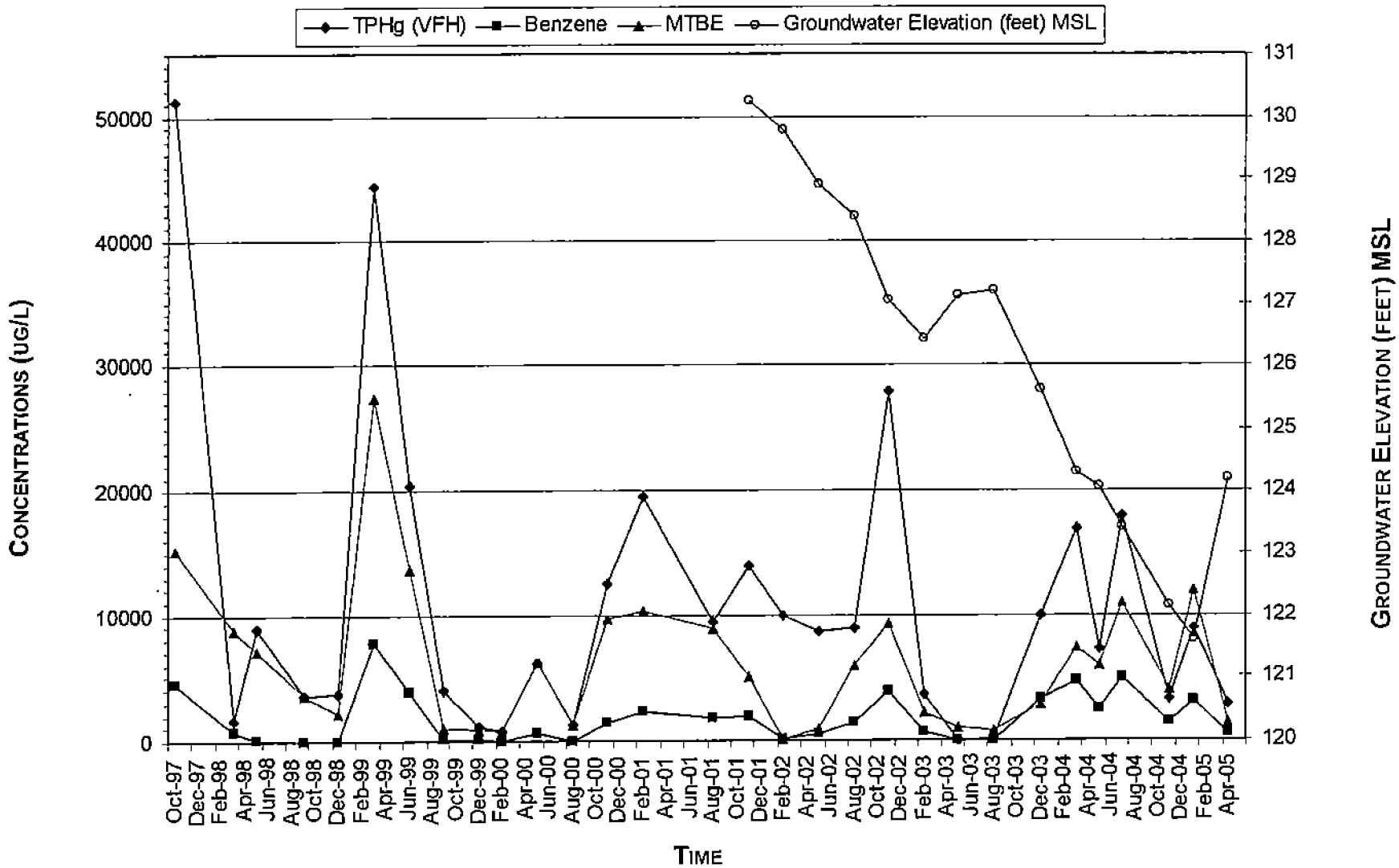
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 10

MONITORING WELL W-2



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
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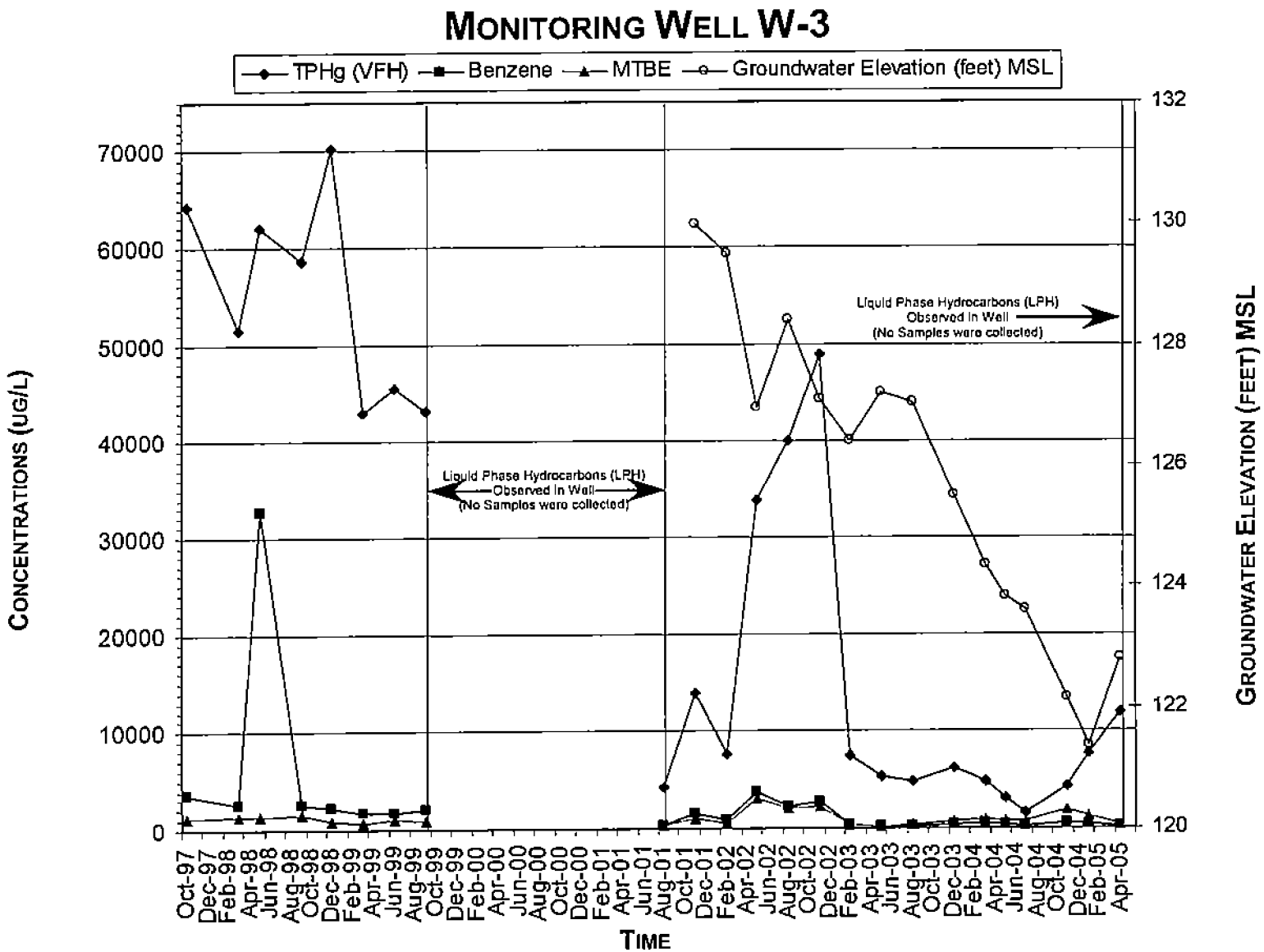
Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 11



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L.

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
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Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
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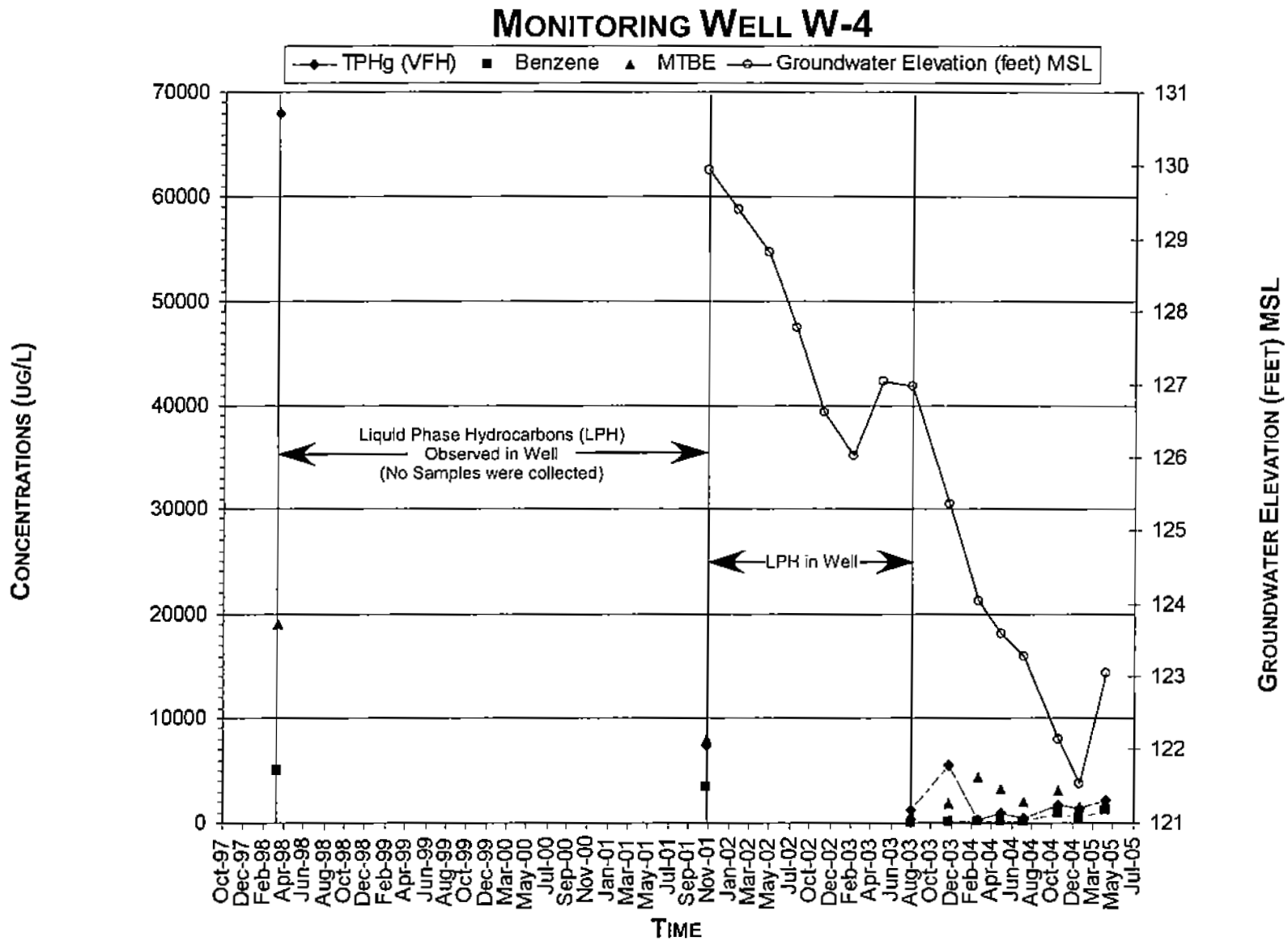
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 12



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

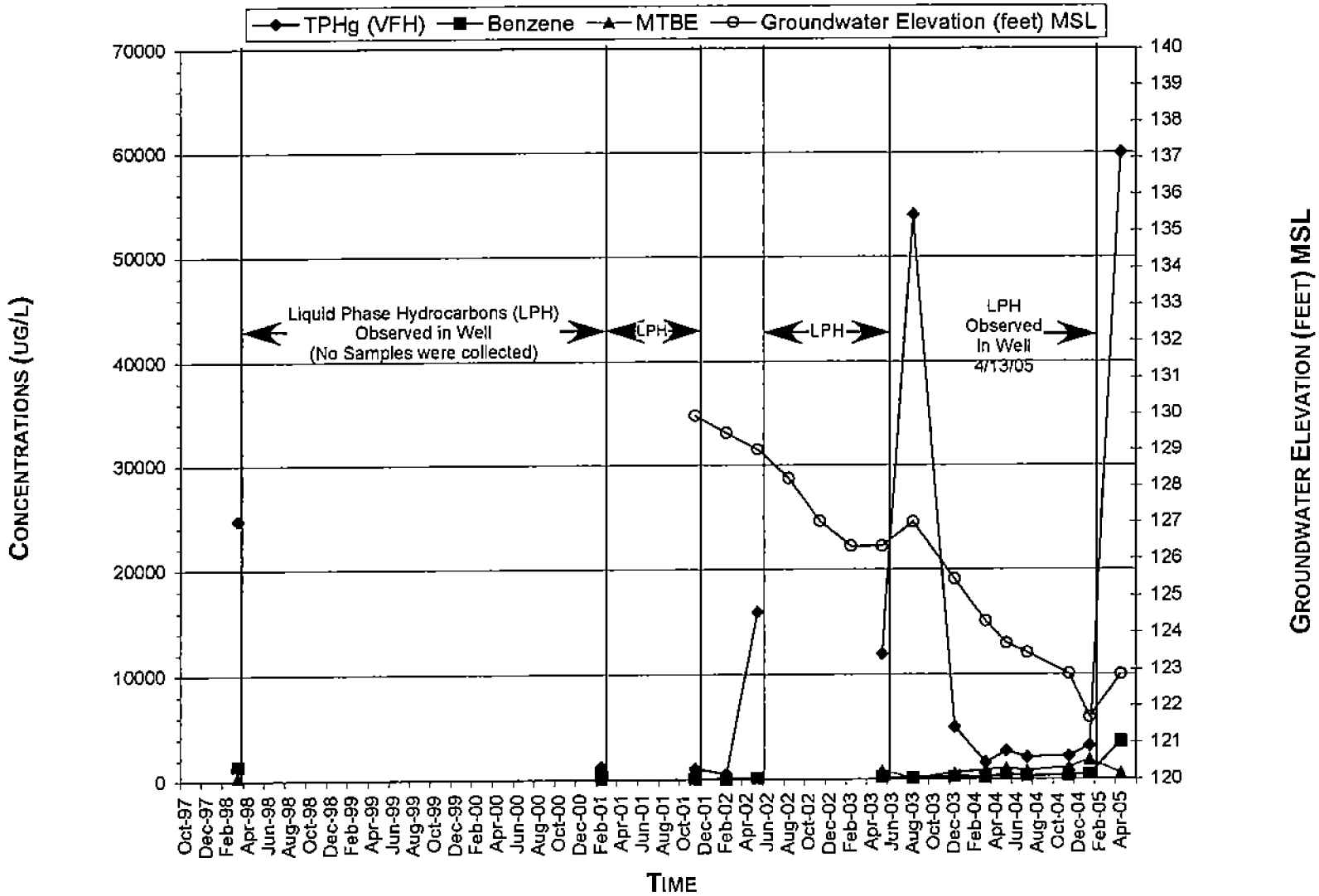
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 13

MONITORING WELL W-5



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L Note: Actual value is 7,500,000 ug/L but 60,000 ug/L used for graphing purposes

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
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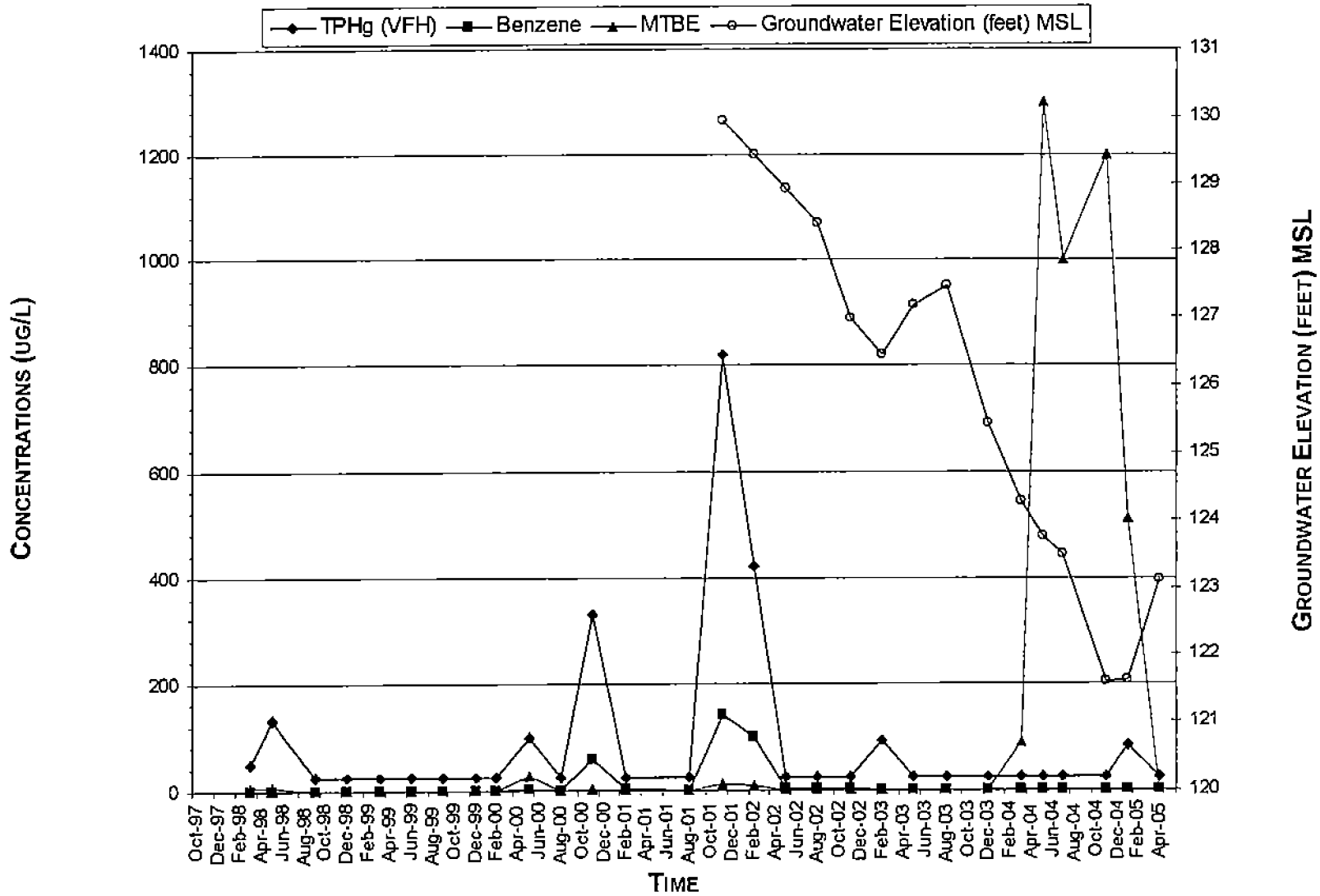
Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 14

MONITORING WELL W-6



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

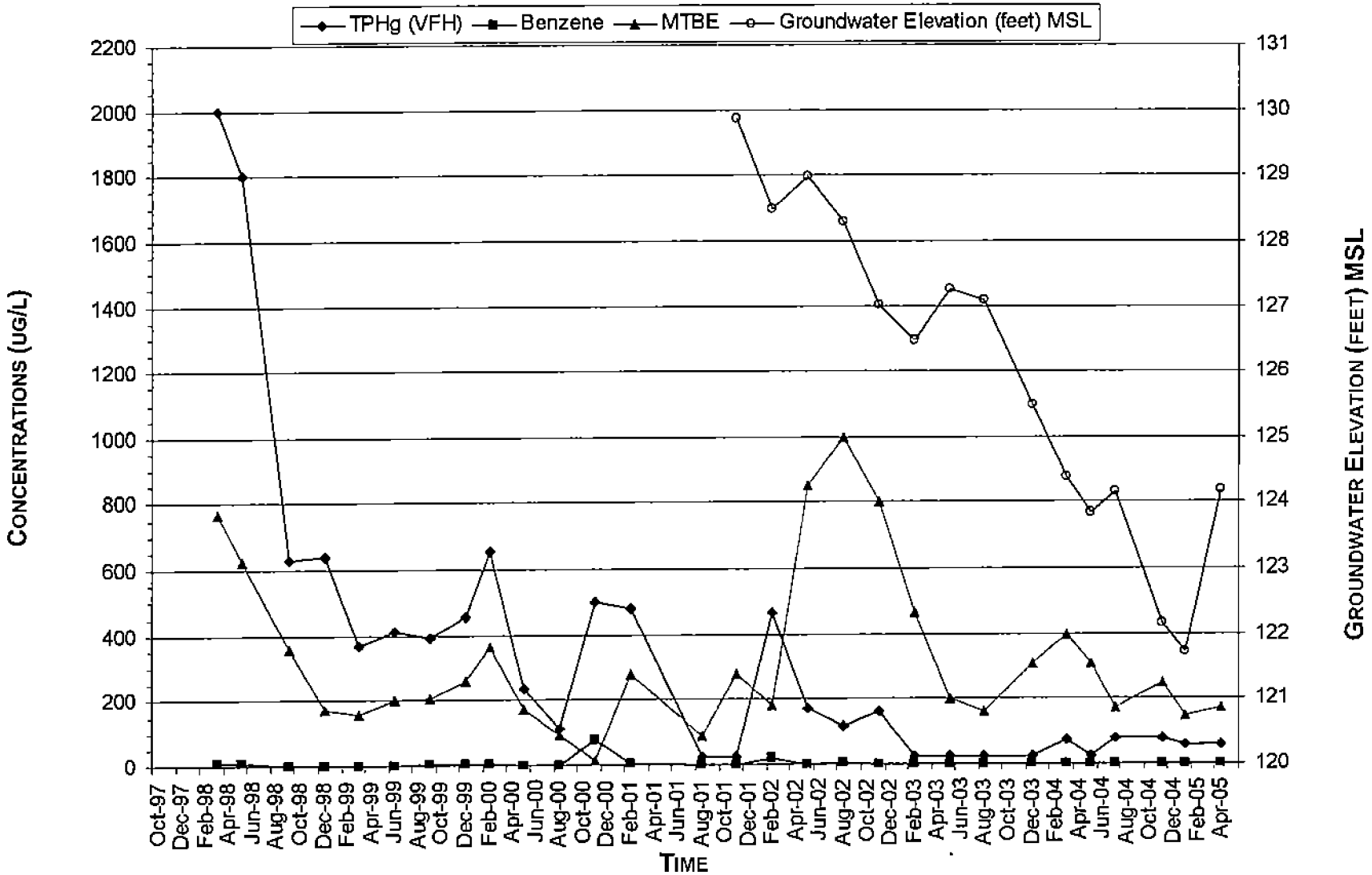
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 15

MONITORING WELL W-7



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
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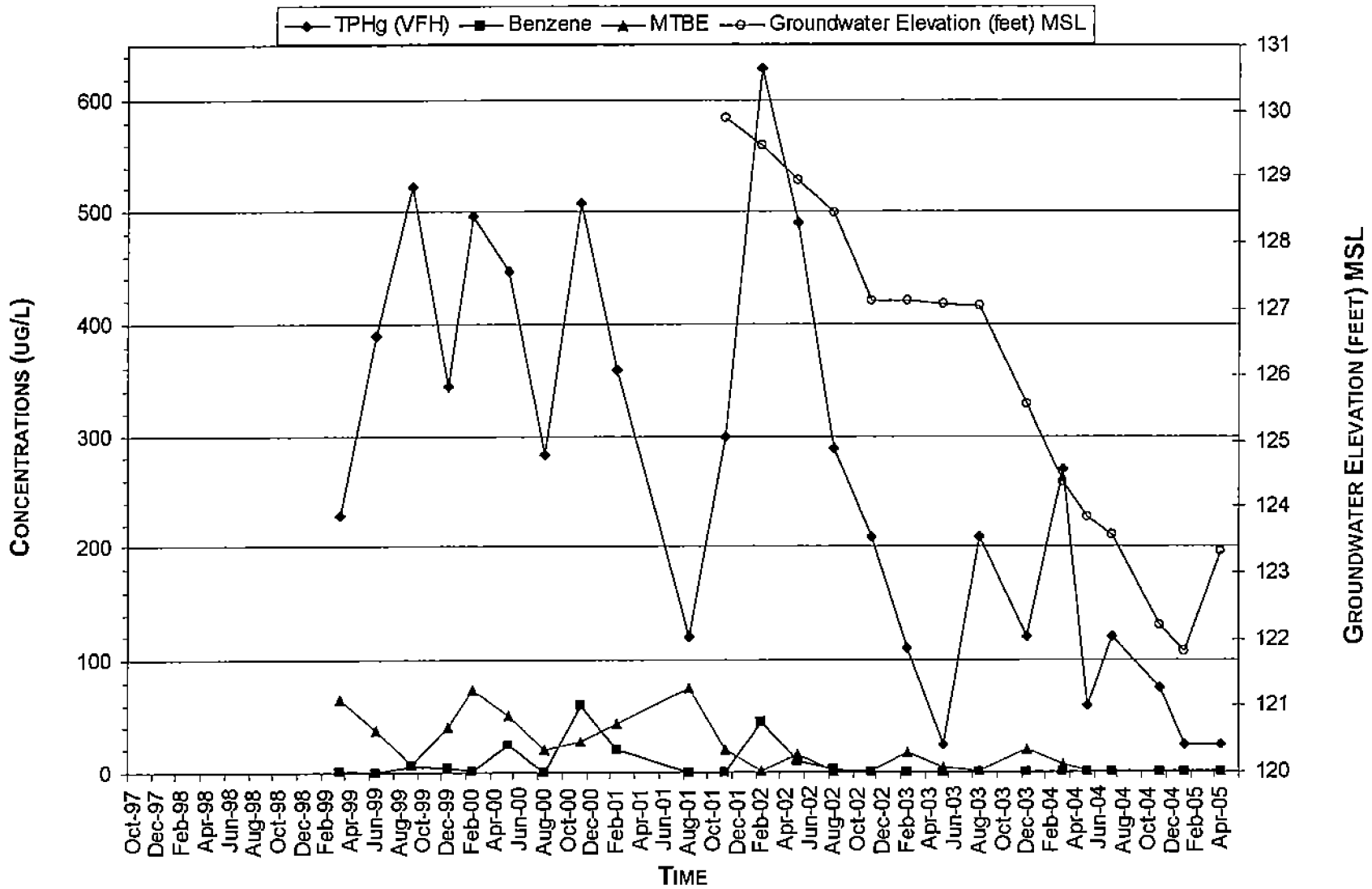
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 16

MONITORING WELL W-8



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
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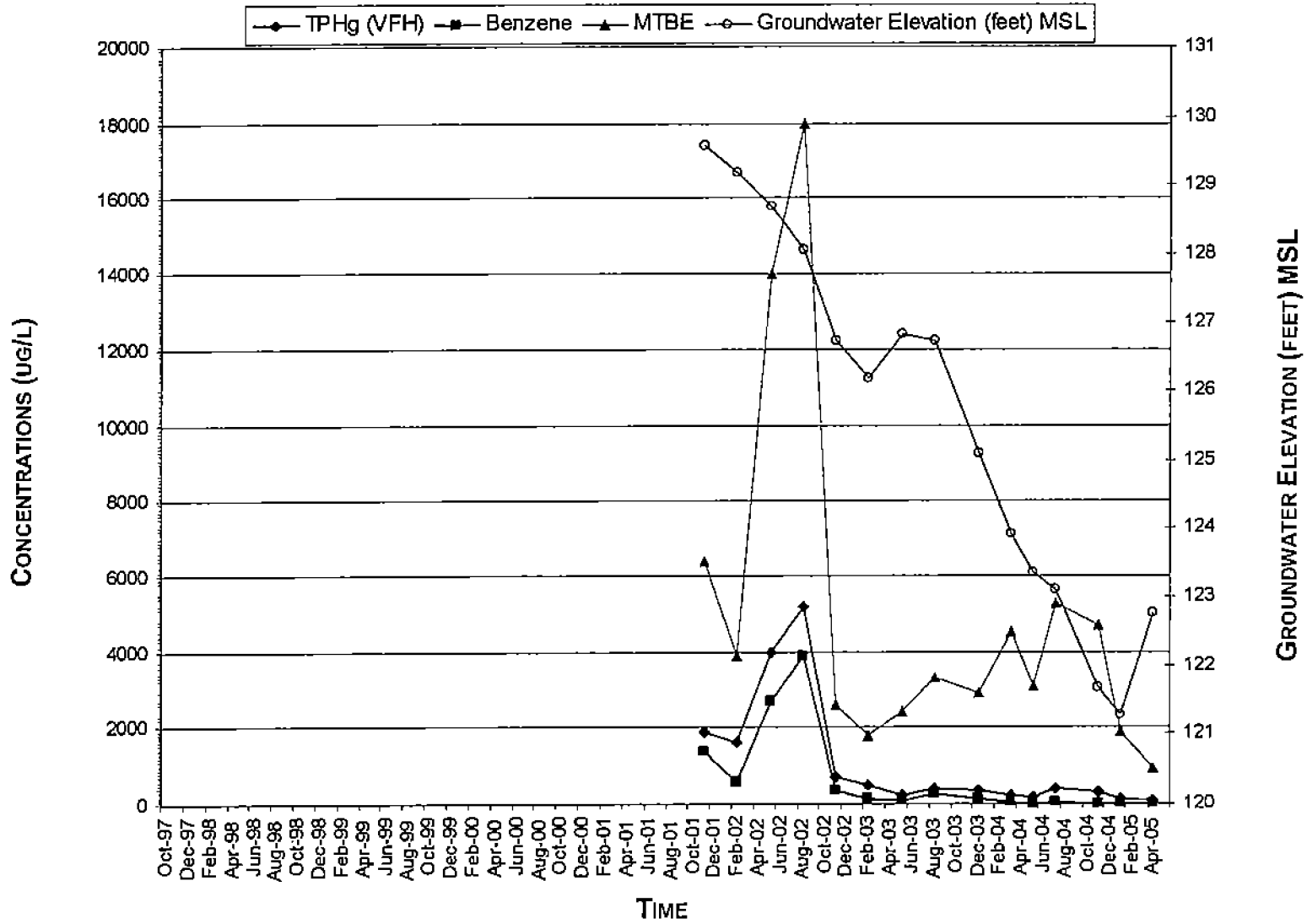
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 17

MONITORING WELL W-9



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
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Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
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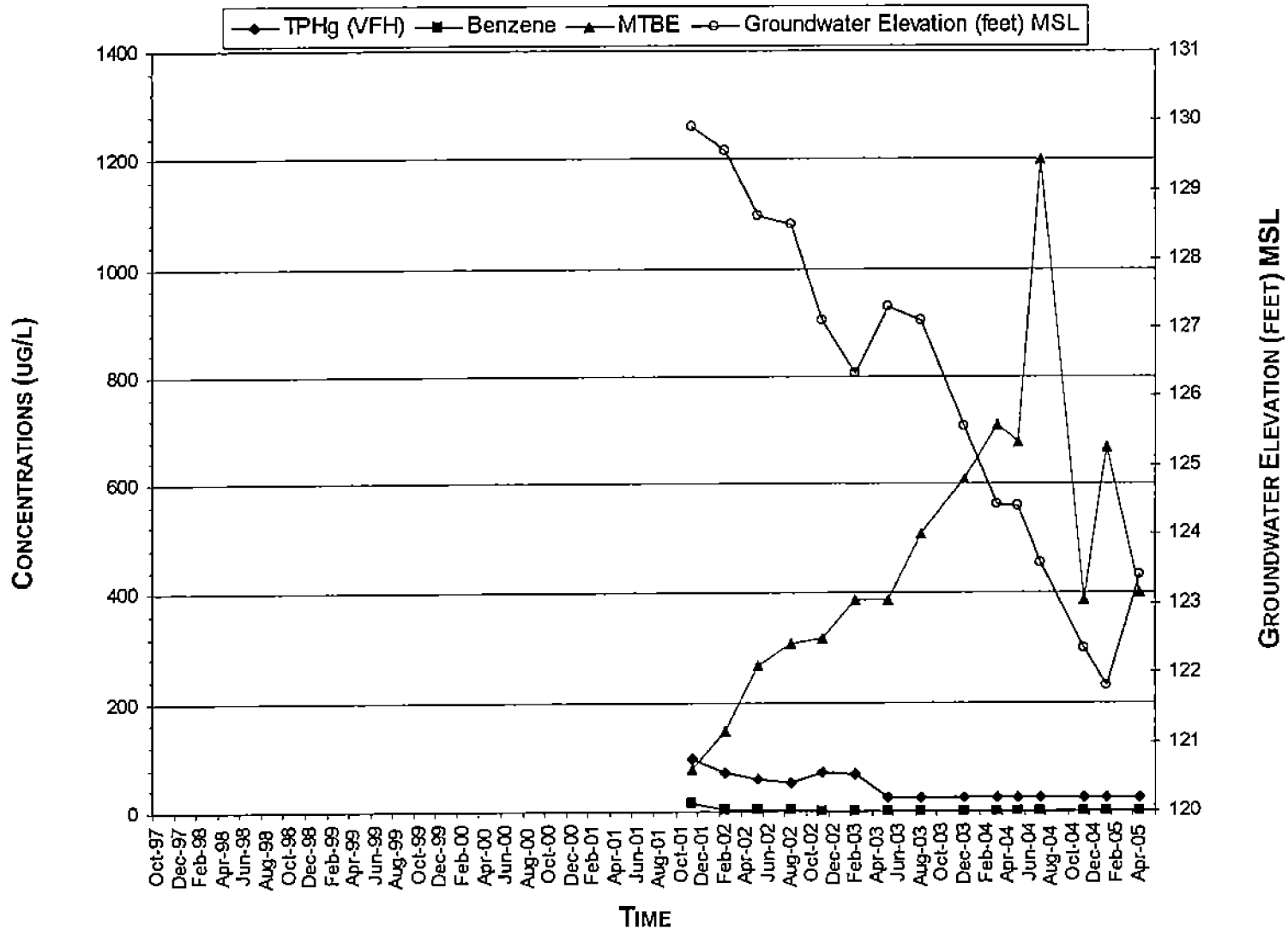
Date	June 2005

Figure No. 18

MONITORING WELL W-10



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
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Project No.	600143002
Scale	N/A
Engr./Geol.	CM
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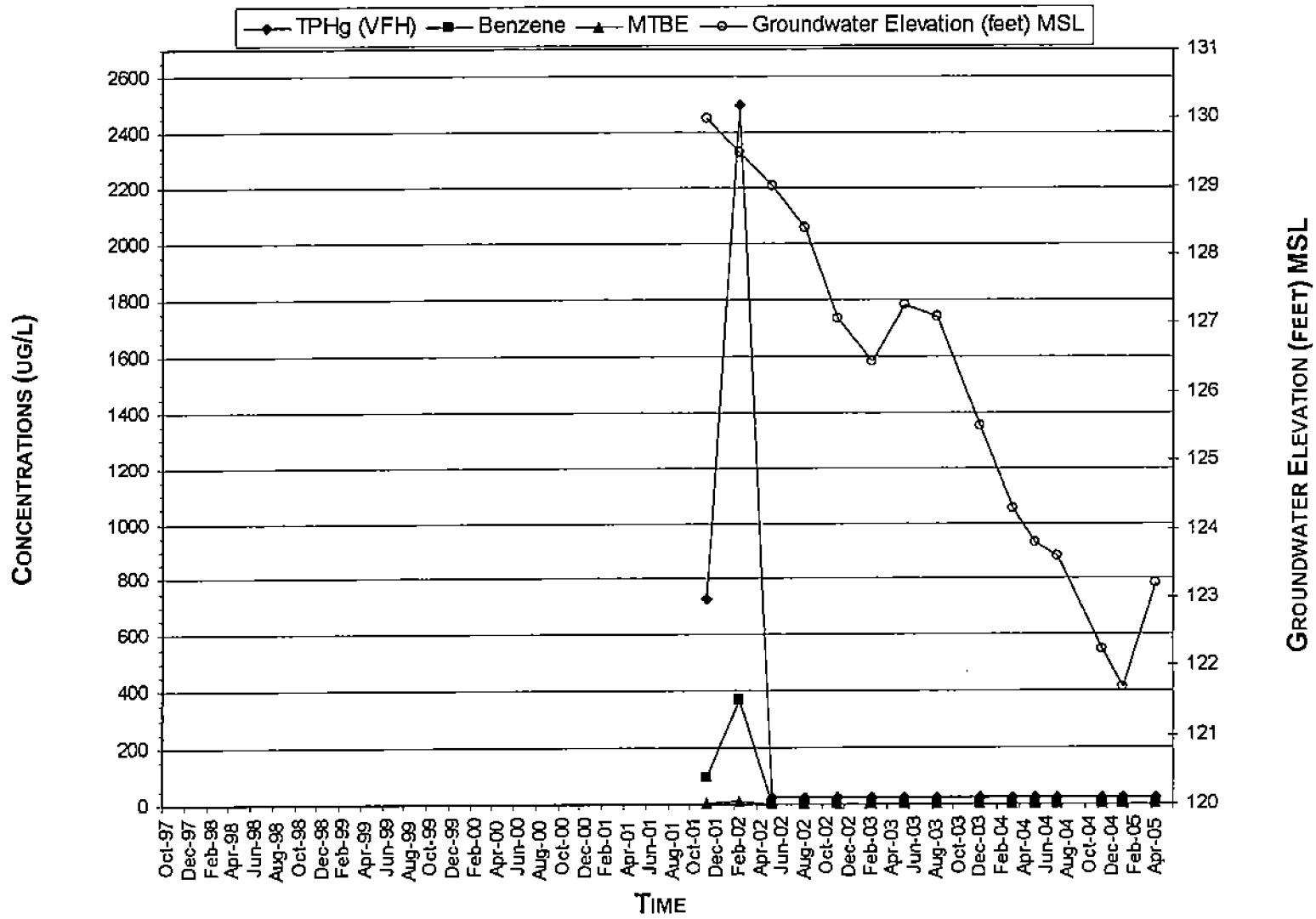
Date	June 2005

Figure No. 19

MONITORING WELL W-11



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

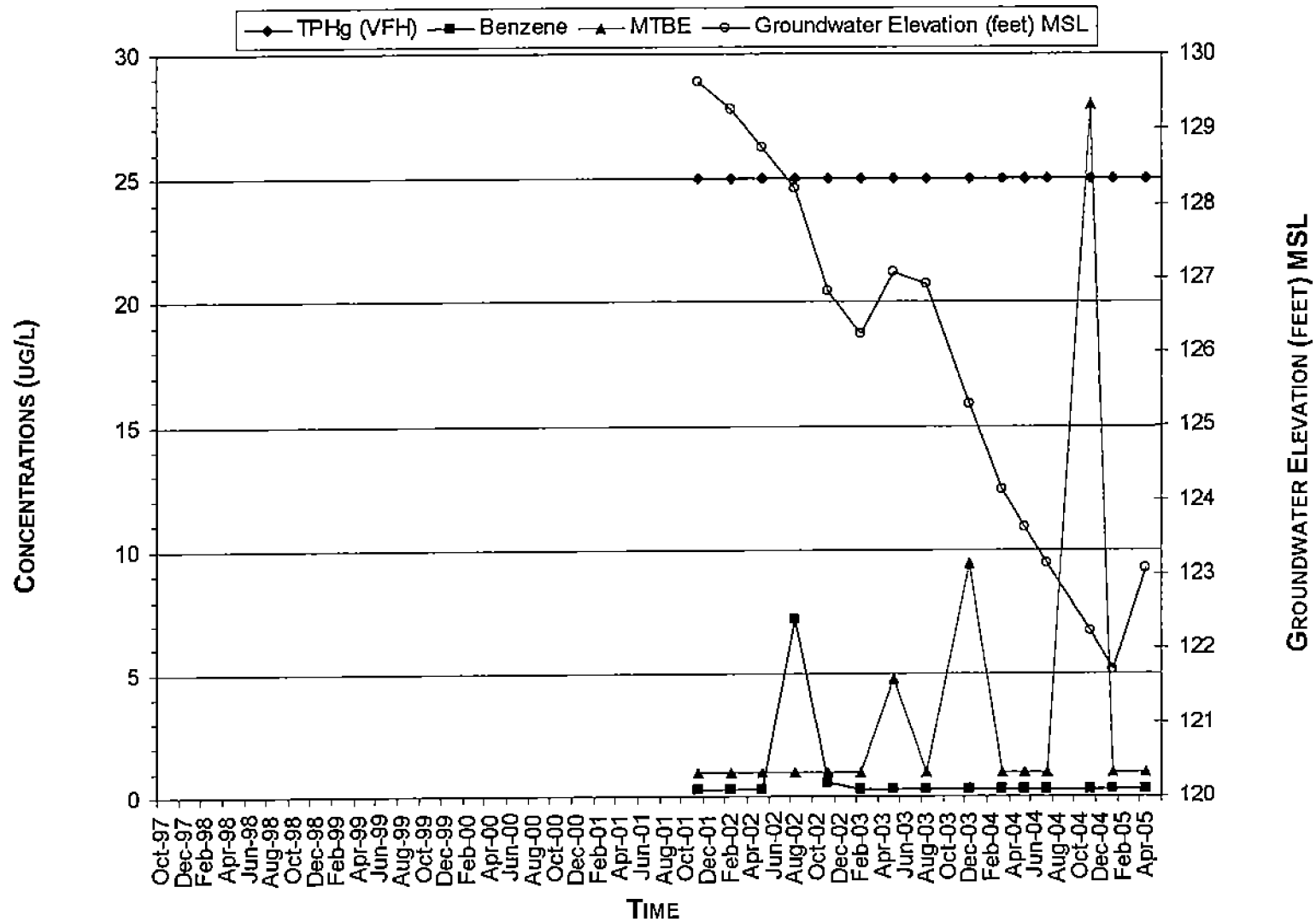
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 20

MONITORING WELL W-12



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

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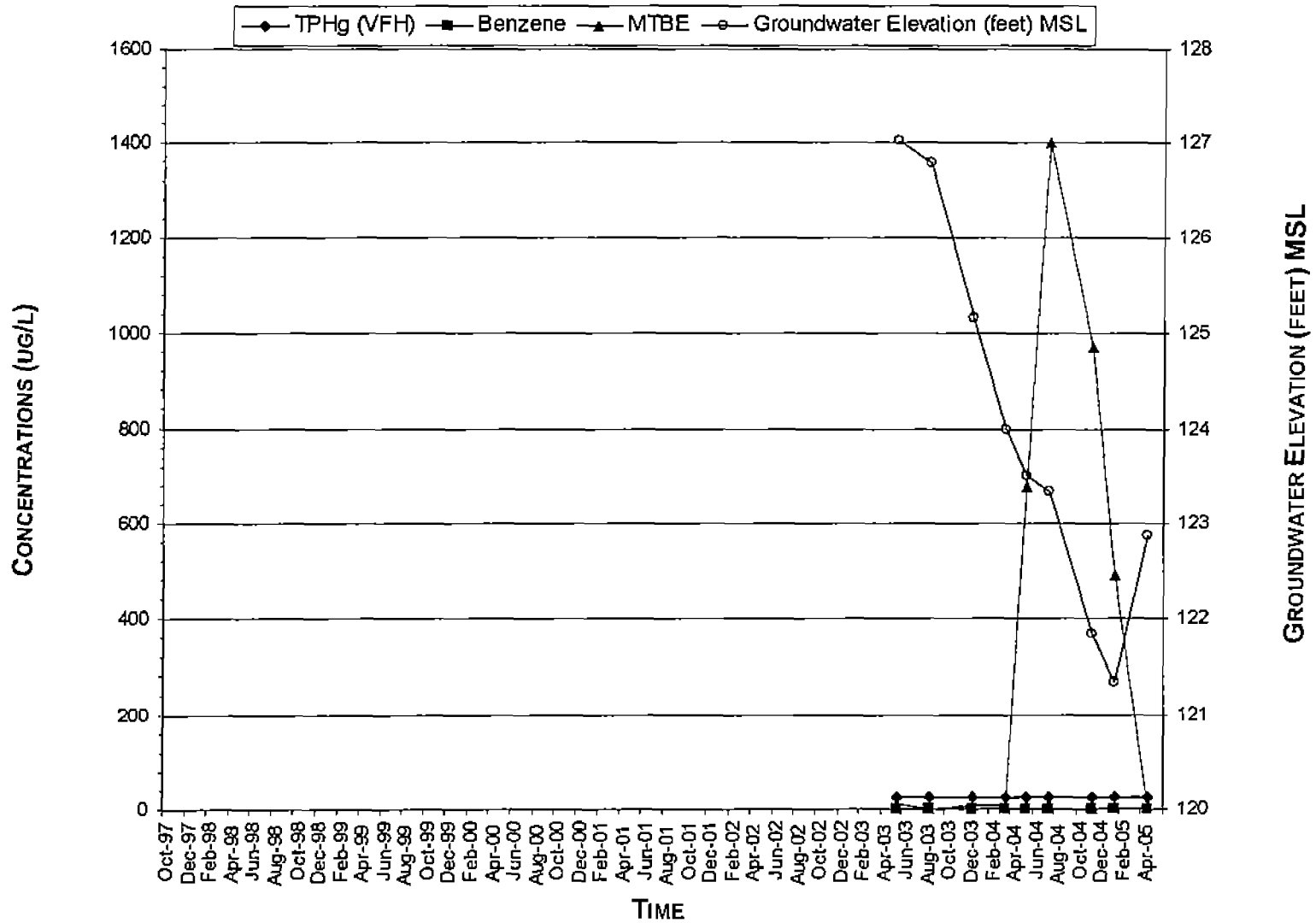
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 21

MONITORING WELL MW-13



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

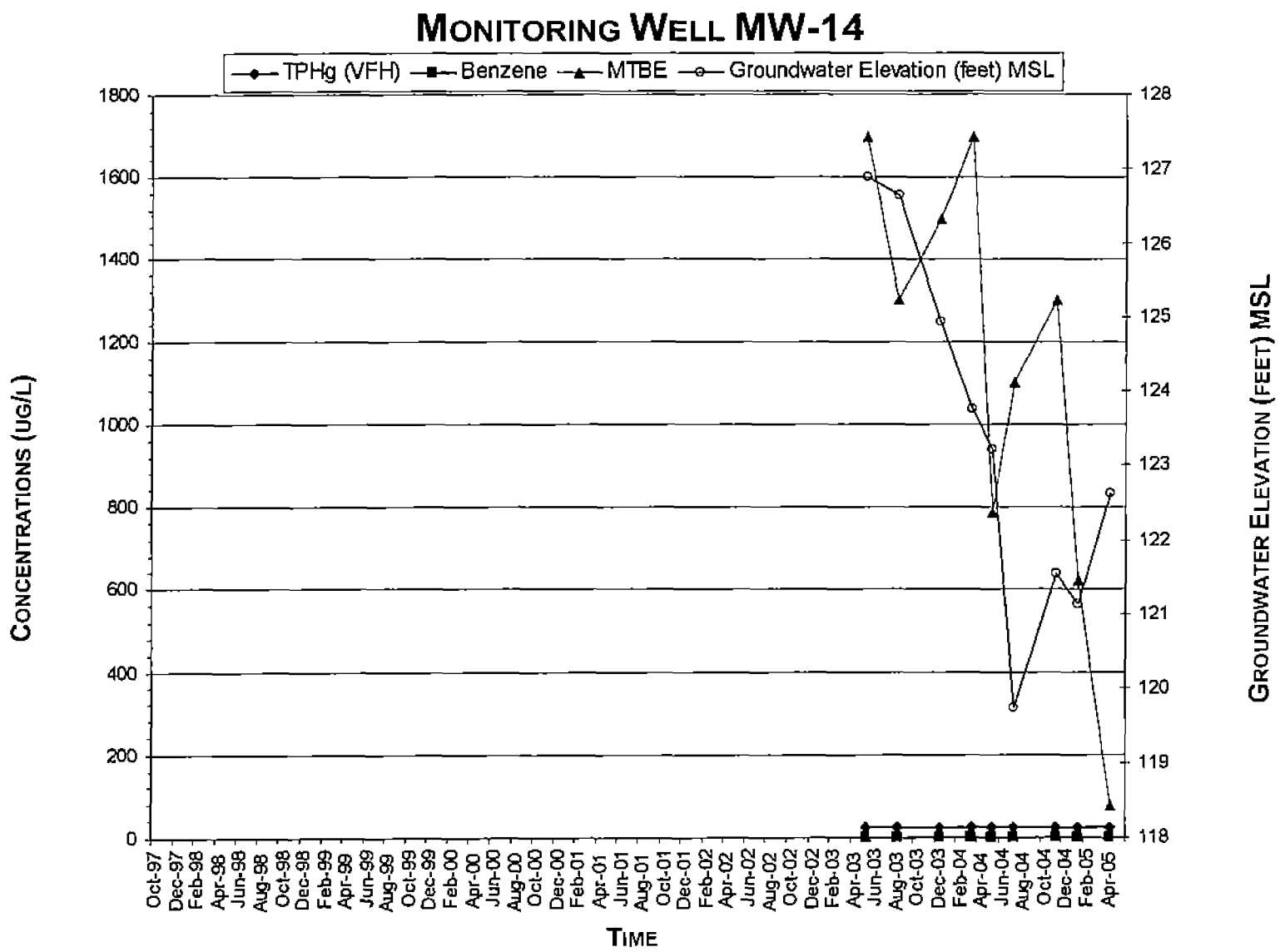
HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 22



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
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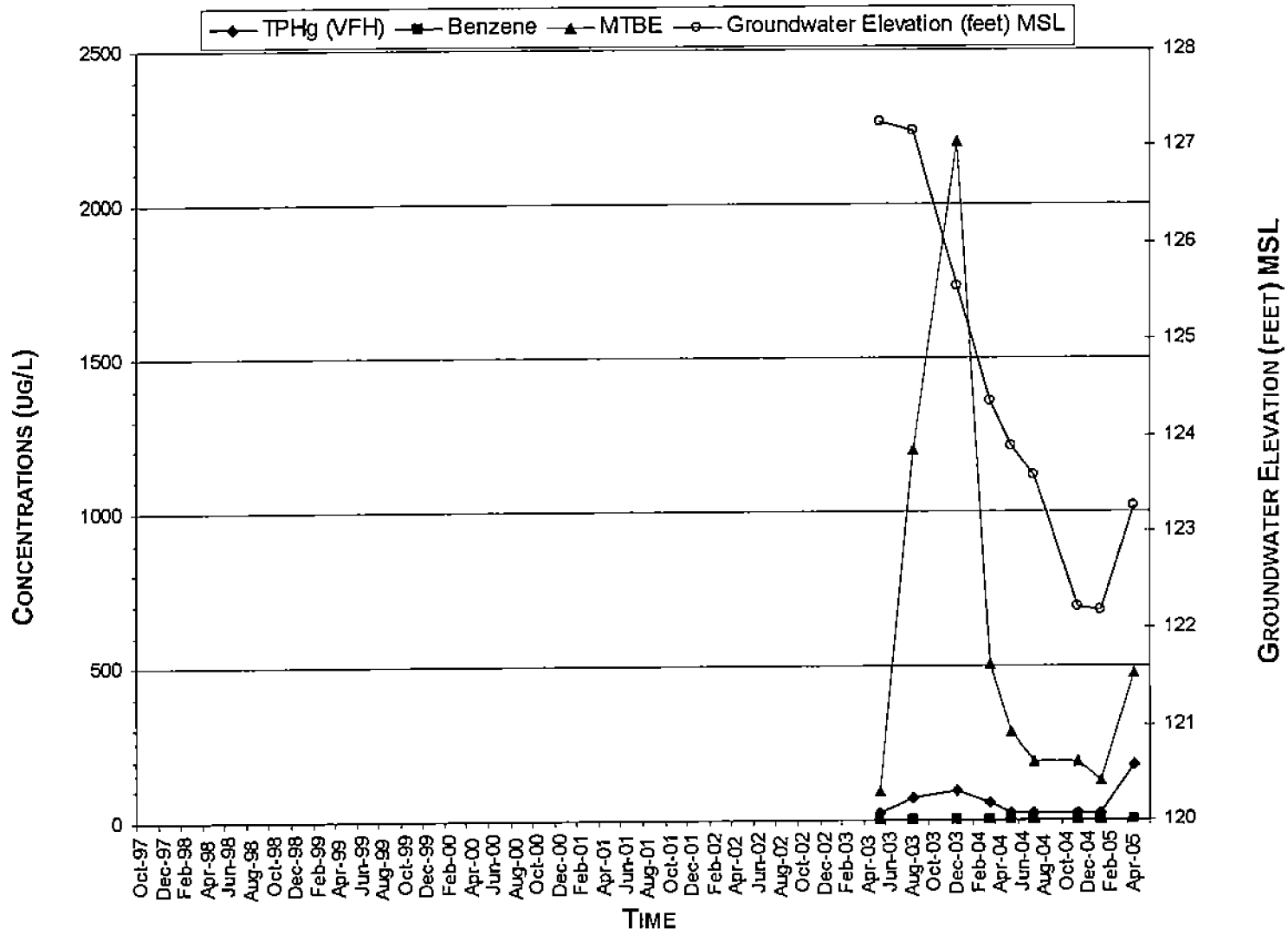
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 23

MONITORING WELL MW-15



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

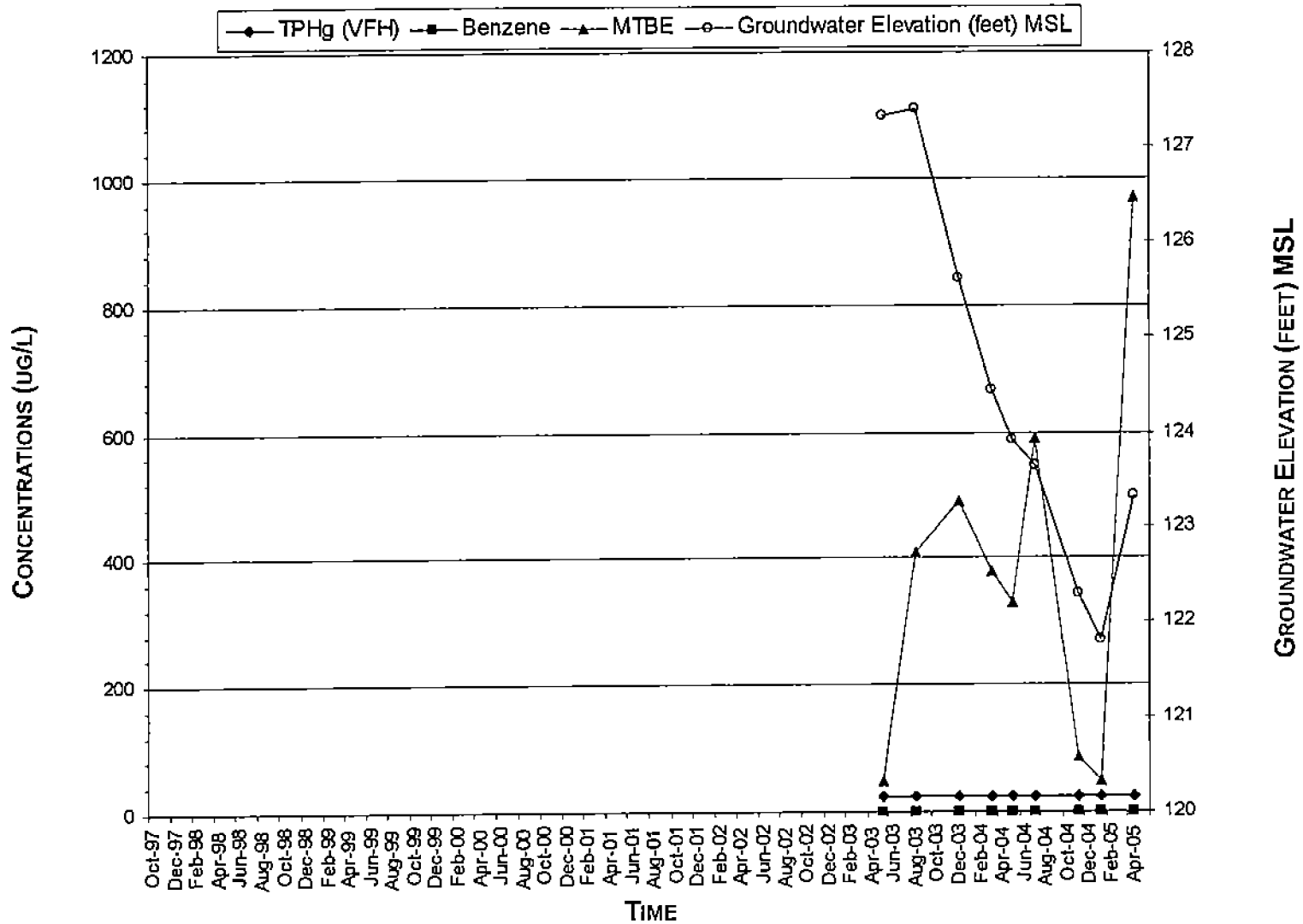
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 24

MONITORING WELL MW-16



Non-detect constituents are plotted at the following values TPHg = 25 ug/L, Benzene = 0.25 ug/L, MTBE = 1.0 ug/L

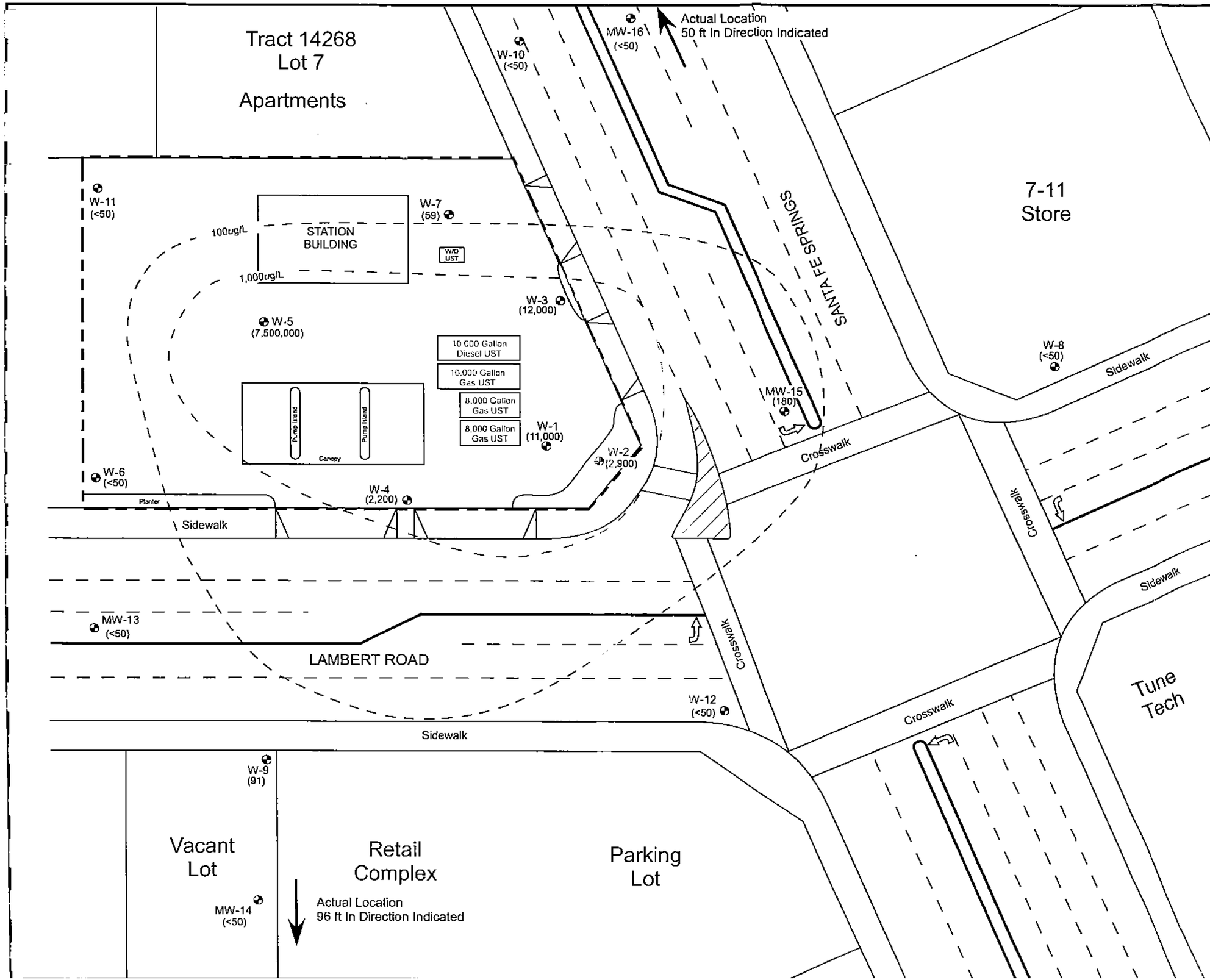
HYDROCARBON CONCENTRATIONS IN GROUNDWATER VS TIME

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 25



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
(7,500,000)	Total Petroleum Hydrocarbon as gasoline (TPHg), concentrations in ug/L. Laboratories refers to TPHs as VFHs.
- - -	TPHg Iso-Concentration Contour
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

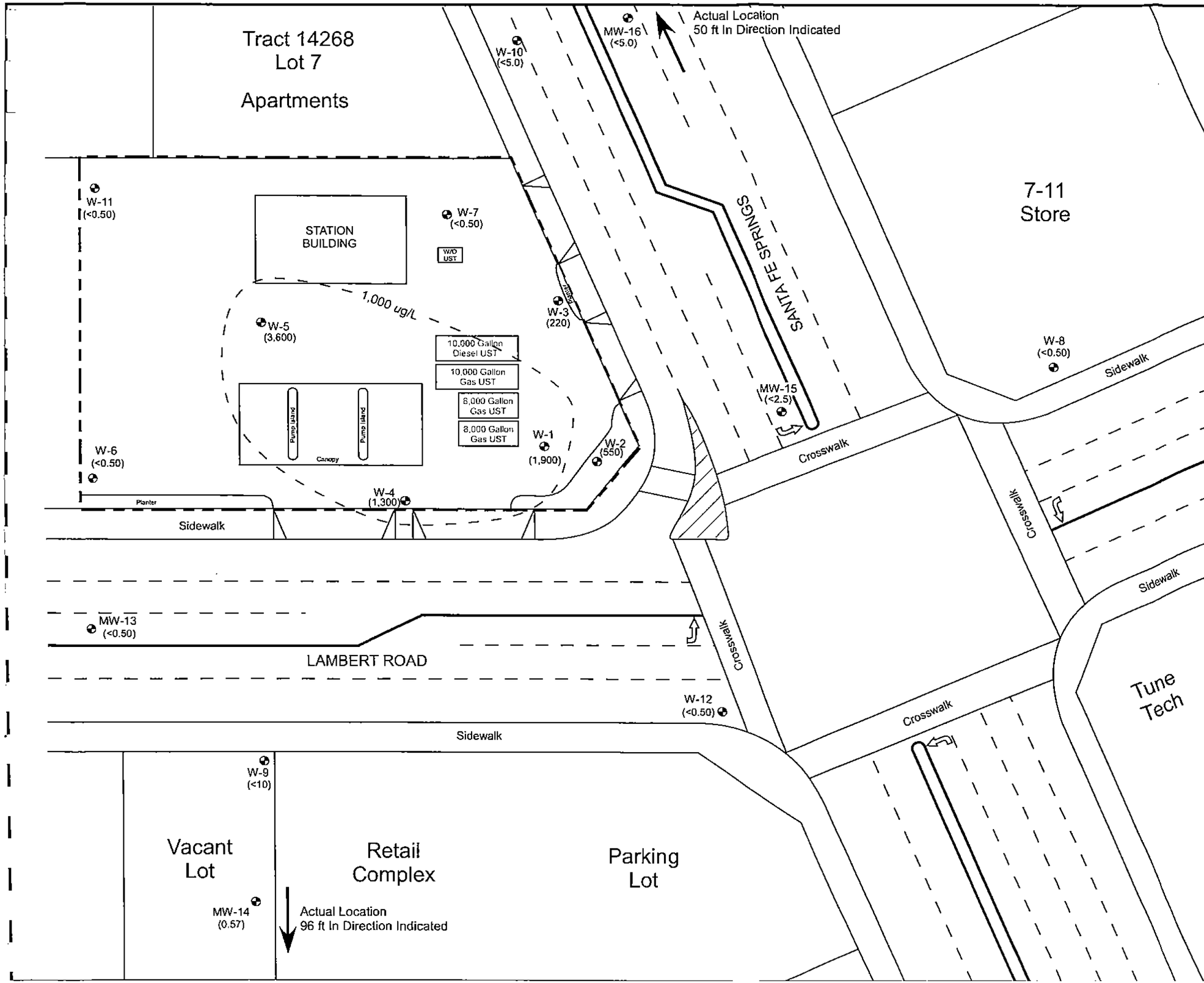
0 15 30 60
Scale in Feet

NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

VFH IN GROUNDWATER ISO-CONCENTRATION CONTOURS
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California
Figure No. 26



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
- - -	Benzene Iso-Concentration Contour
(3,600)	Benzene, concentrations in ug/L
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

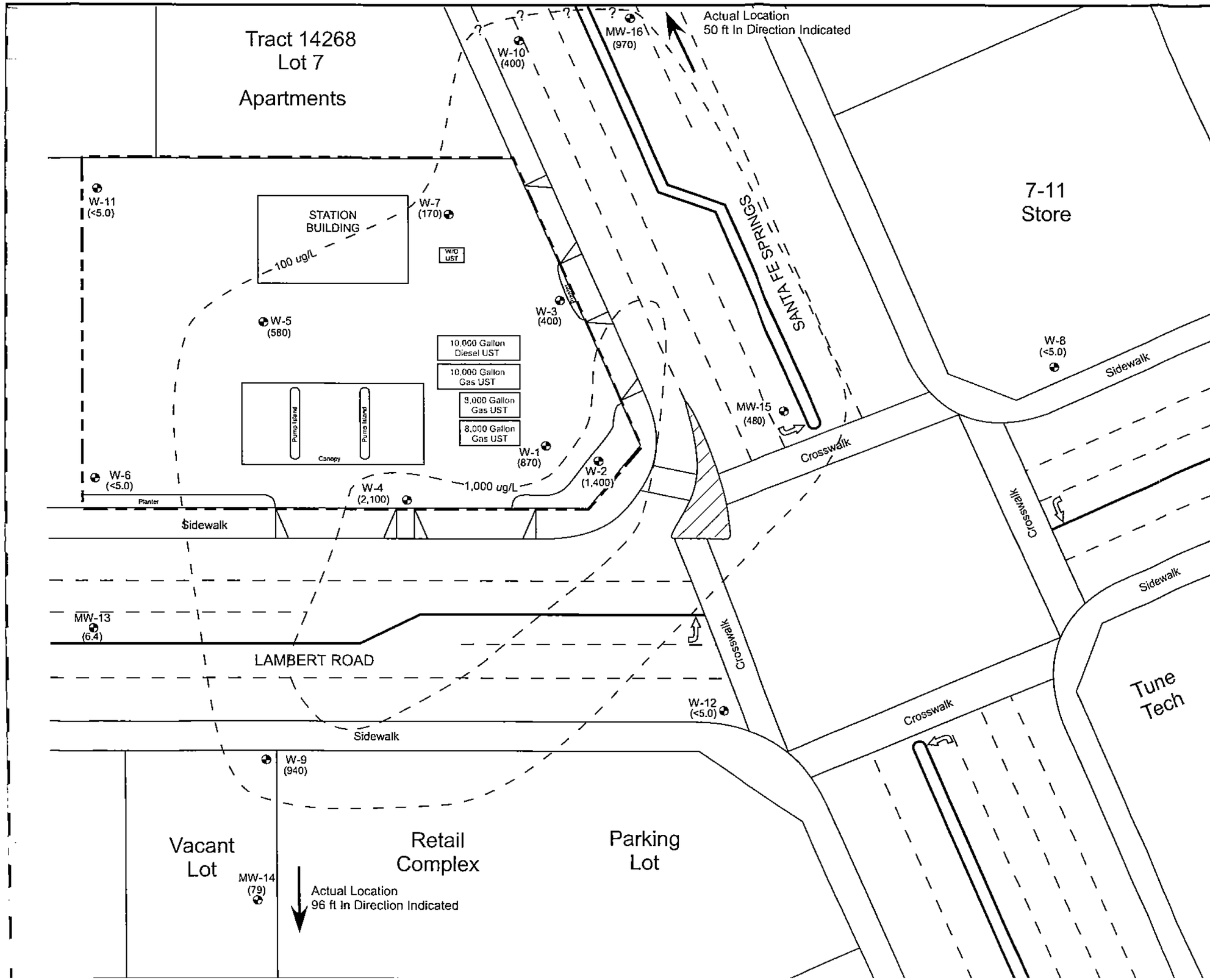
0 15 30 60
Scale in Feet

NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

BENZENE IN GROUNDWATER
ISO-CONCENTRATION CONTOURS
G&M Oil COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California
Figure No. 27



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
- - -	MTBE Iso-Concentration Contour
(2,100)	Methyl Tertiary Butyl Ether, concentrations in ug/L
- - ?	Inferred MTBE Iso-Concentration Contour
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

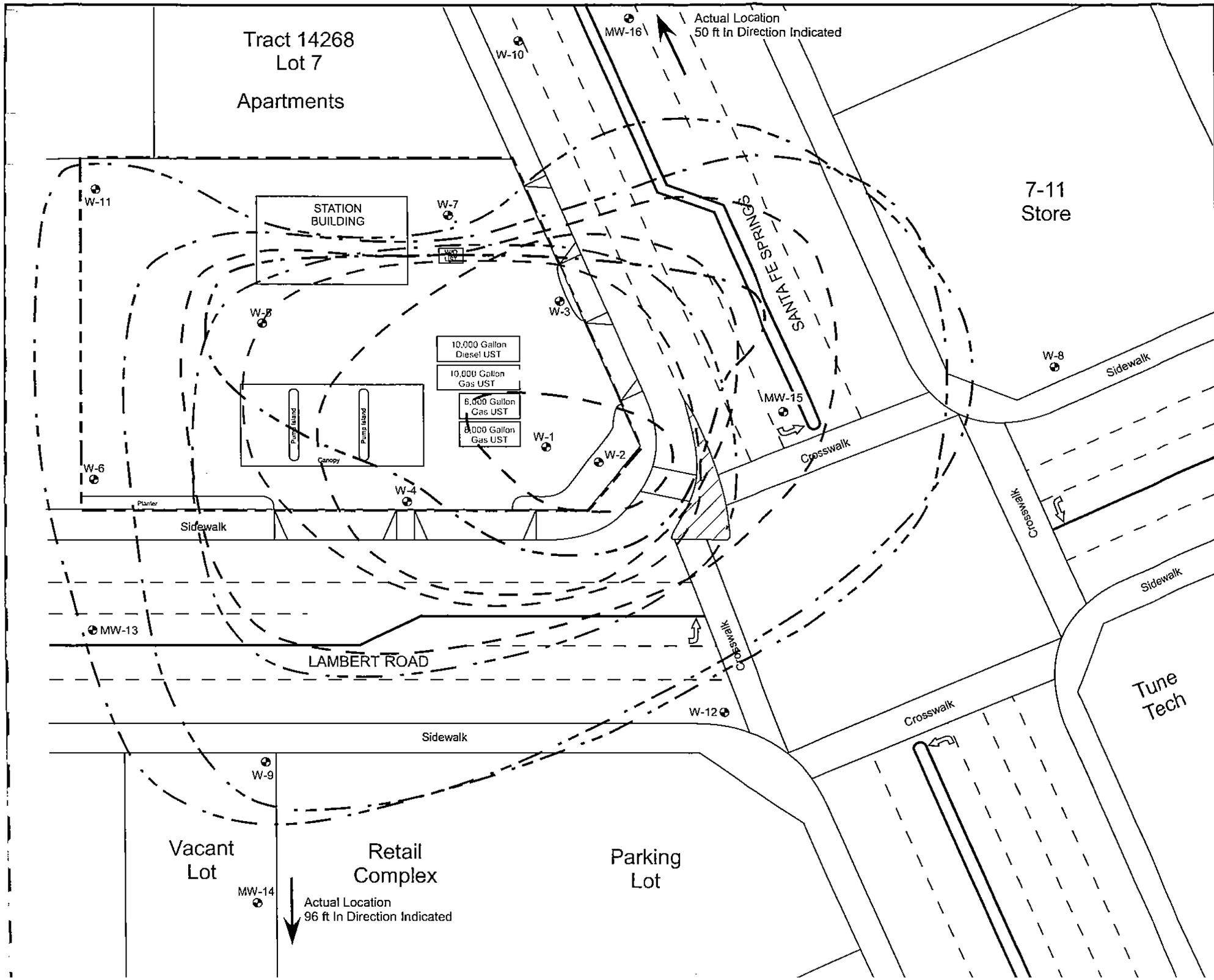
0 15 30 60
Scale in Feet

NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

MTBE IN GROUNDWATER
ISO-CONCENTRATION CONTOURS
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California
Figure No. 28



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
	VFH Iso-Concentration Contour, 5,000 ug/L
	VFH Iso-Concentration Contour, 500 ug/L
	Sampling Event of December 2001
	Sampling Event of December 2002
	Sampling Event of January 2004
	Sampling Event of July 2004
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

All contours are approximate

0 15 30 60
Scale in Feet

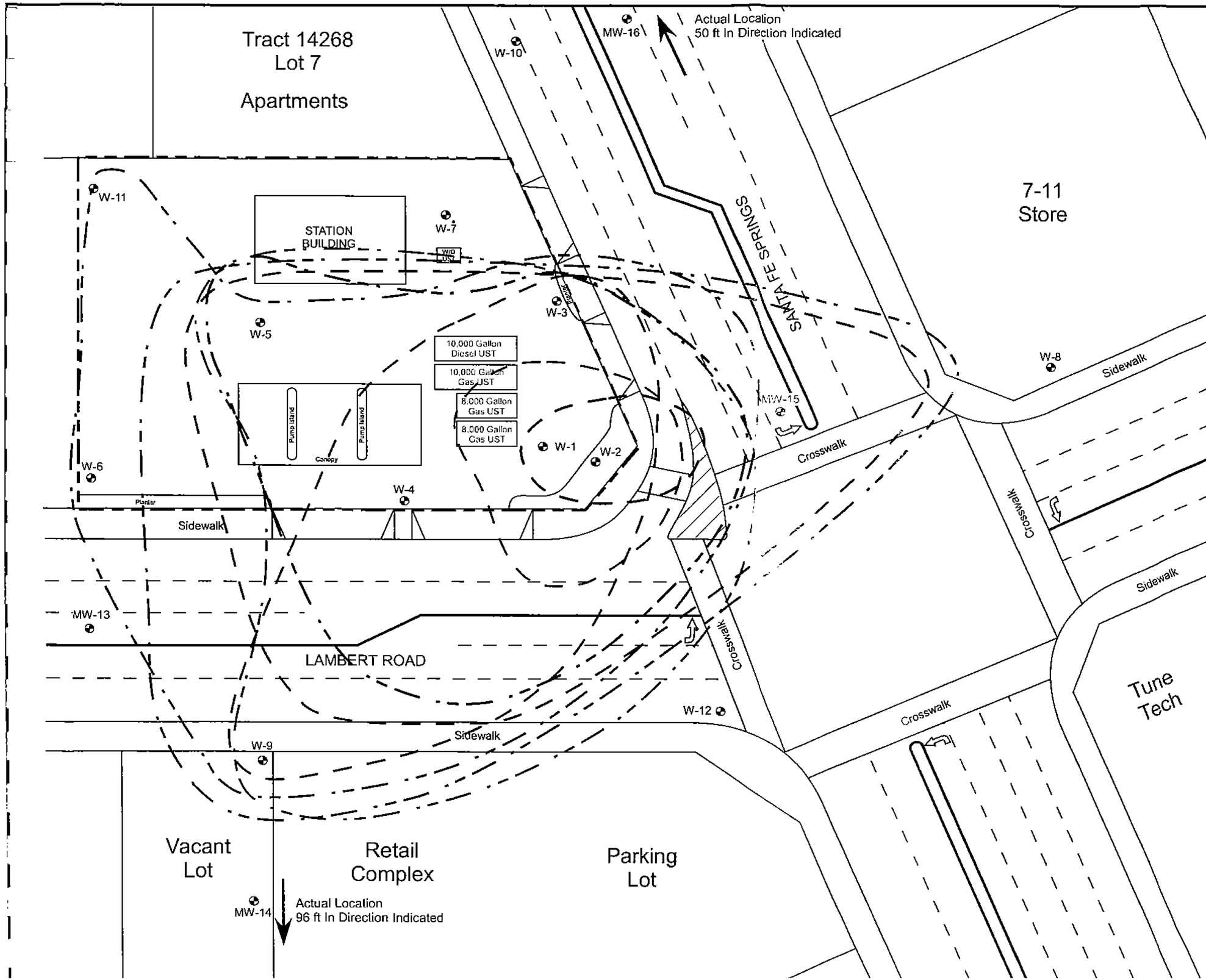
NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	KAS
Drafted By	BFM
Date	June 2005

VFH ISO-CONCENTRATION MAP
2001-2004
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Figure No. 29



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
	Benzene Iso-Concentration Contour, 1,000 ug/L
	Benzene Iso-Concentration Contour, 100 ug/L
	Sampling Event of December 2001
	Sampling Event of December 2002
	Sampling Event of January 2004
	Sampling Event of July 2004
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

All contours are approximate

0 15 30 60
Scale in Feet

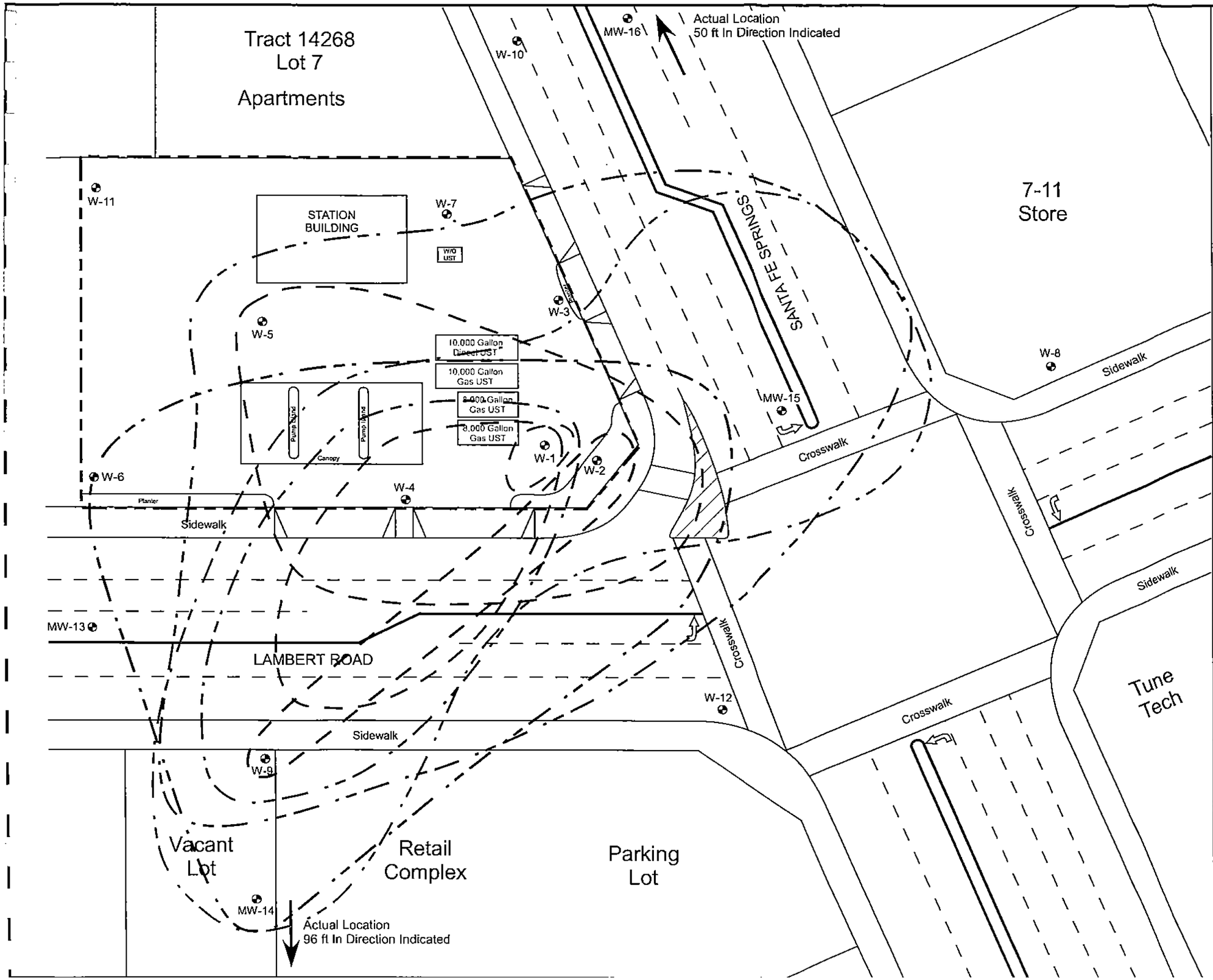
NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	KAS
Drafted By	BFM
Date	June 2005

BENZENE ISO-CONCENTRATION MAP
2001-2004
G&M Oil COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Figure No. 30



LEGEND

◉	Groundwater Monitoring Well
UST	Underground Storage Tank
W/O	Former Waste Oil UST
	MTBE Iso-Concentration Contour, 5,000 ug/L
	MTBE Iso-Concentration Contour, 1,000 ug/L
	Sampling Event of April 2002
	Sampling Event of December 2002
	Sampling Event of January 2004
	Sampling Event of July 2004
MW-14/ MW-16	Location shown is only used to depict the data. Actual location is located off of map.

All contours are approximate

0 15 30 60
Scale in Feet

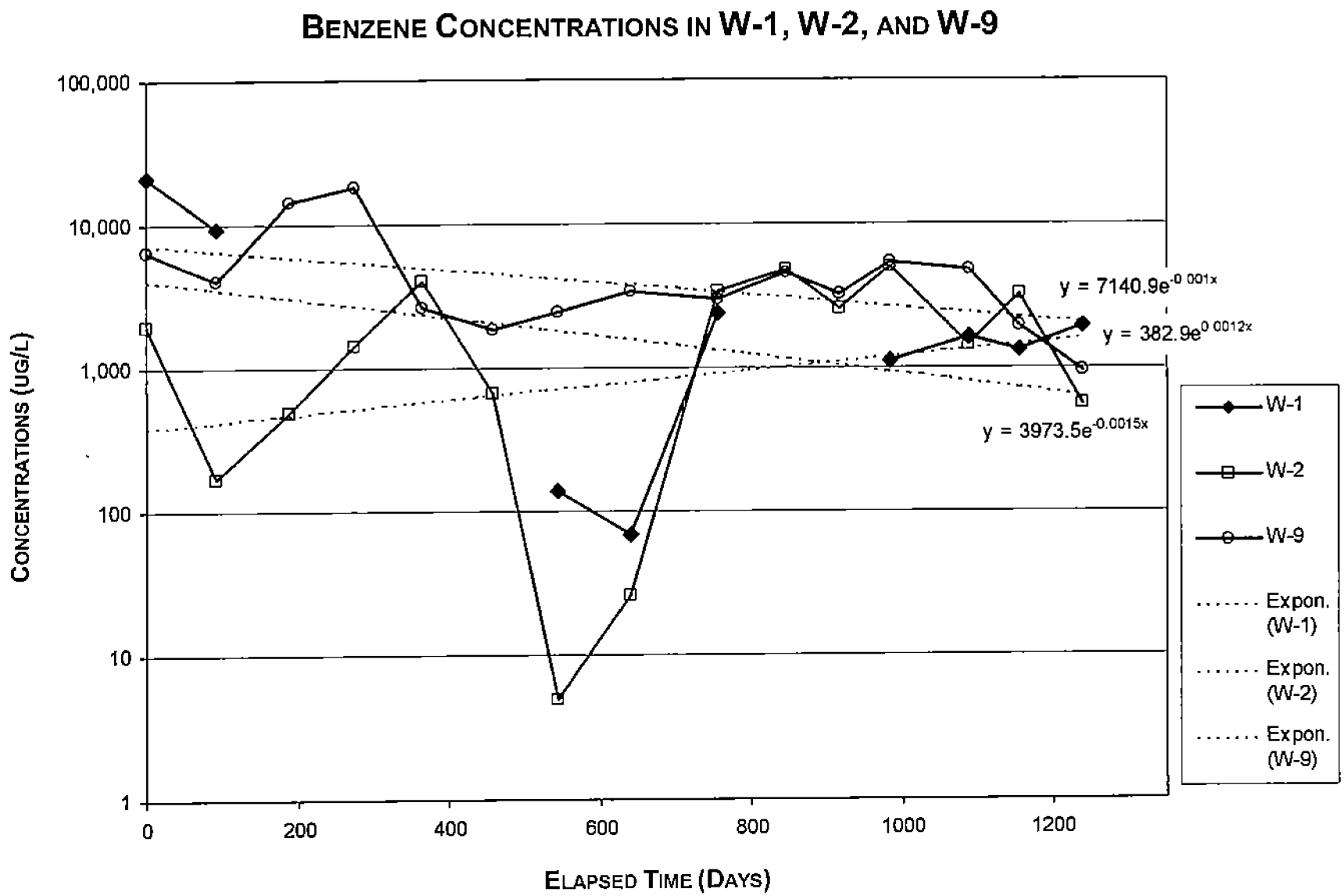
NORTH

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Approx. Scale	1" = 30'
Engr./Geol.	KAS
Drafted By	BFM
Date	June 2005

MTBE ISO-CONCENTRATION MAP
2002-2004
G&M OIL COMPANY, INC.
SERVICE STATION #16
12559 Lambert Road
Whittier, California

Figure No. 31



BENZENE CONCENTRATIONS IN W-1, W-2, AND W-9

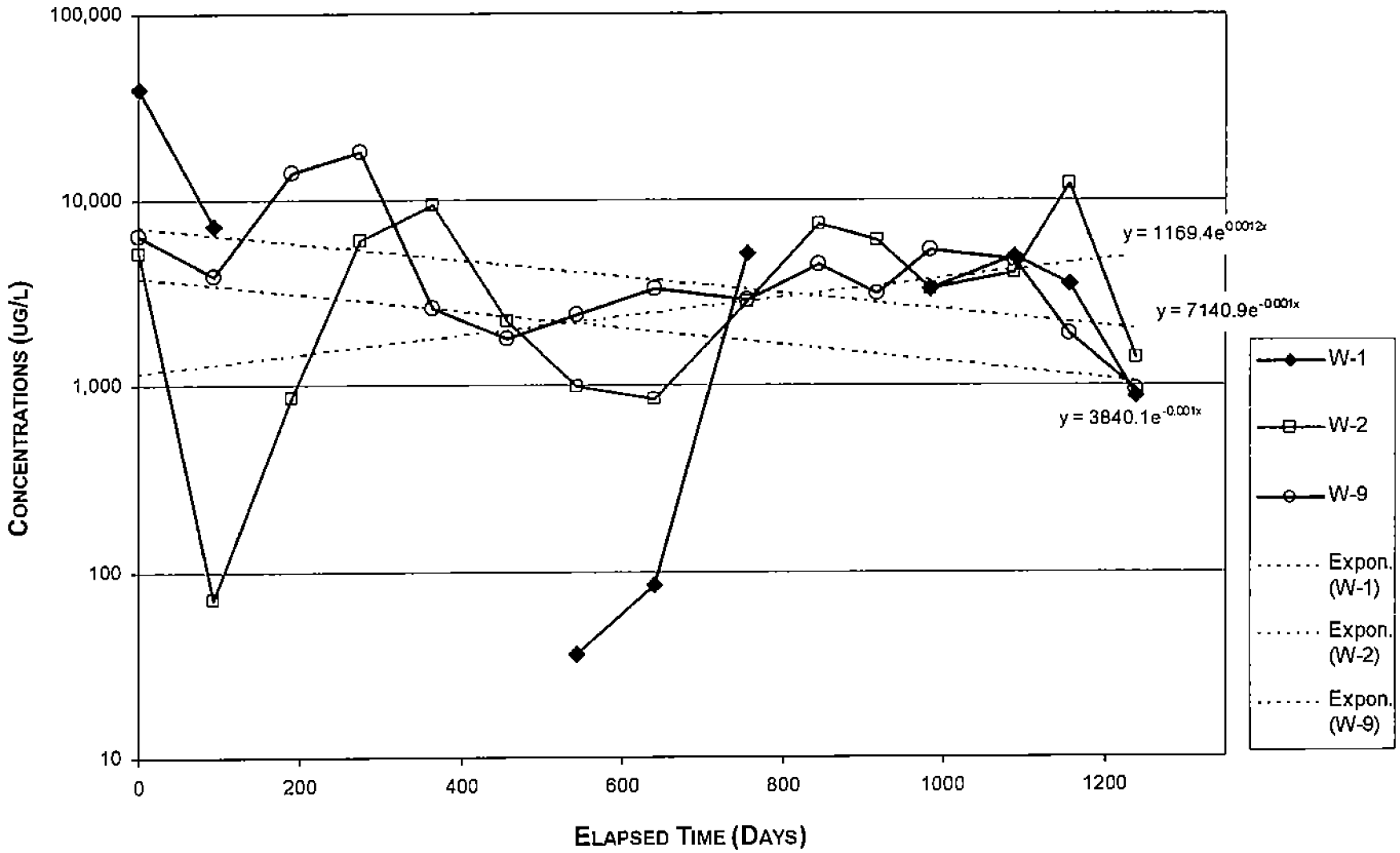
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	N/A
Engr./Geol.	KAS
Drafted By	BFM
Date	June 2005

Figure No. 32

MTBE Concentrations in W-1, W-2, and W-9



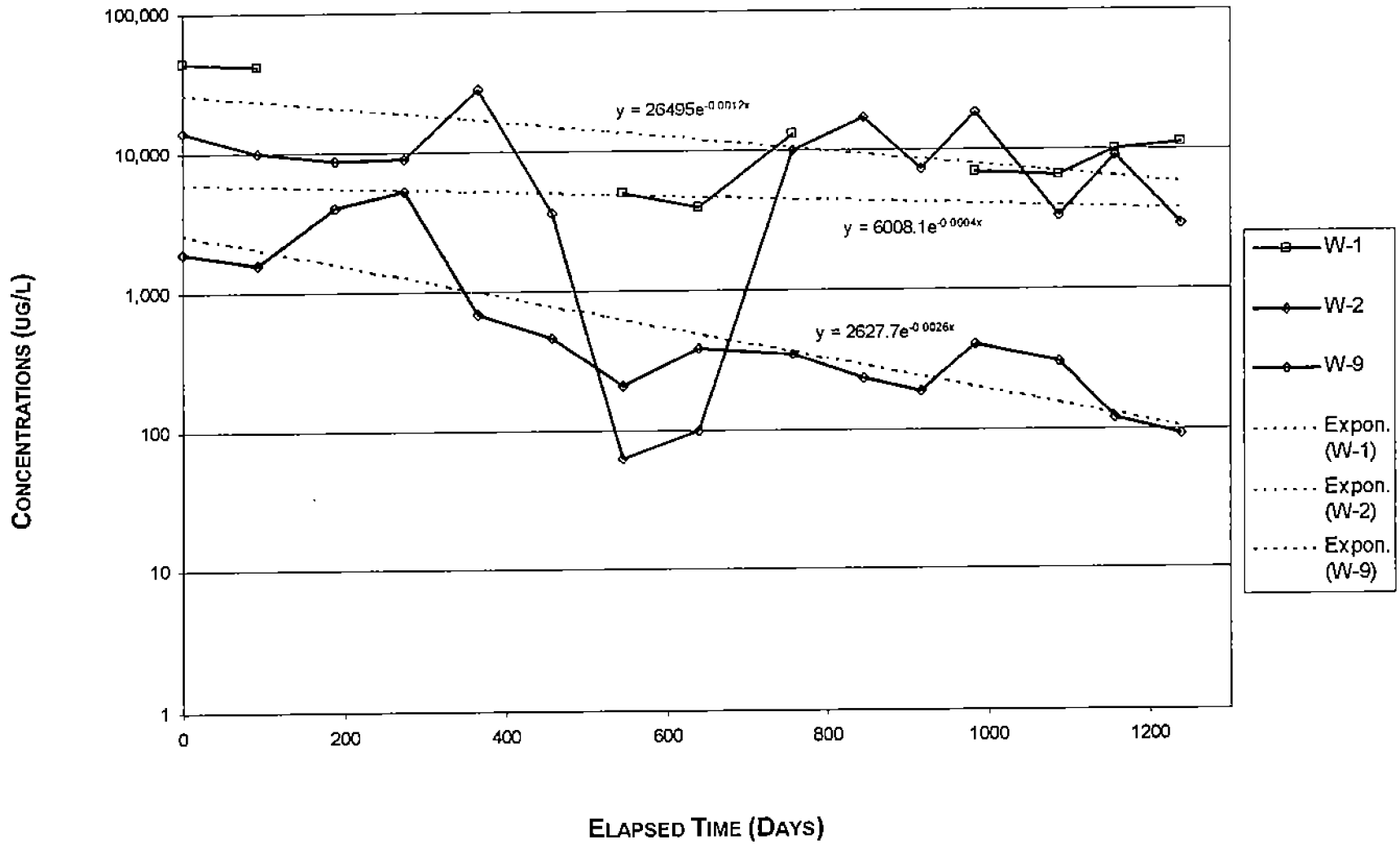
MTBE Concentrations in W-1, W-2, and W-9
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A Leighton Group Company

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 33

VFH Concentrations in W-1, W-2, and W-9

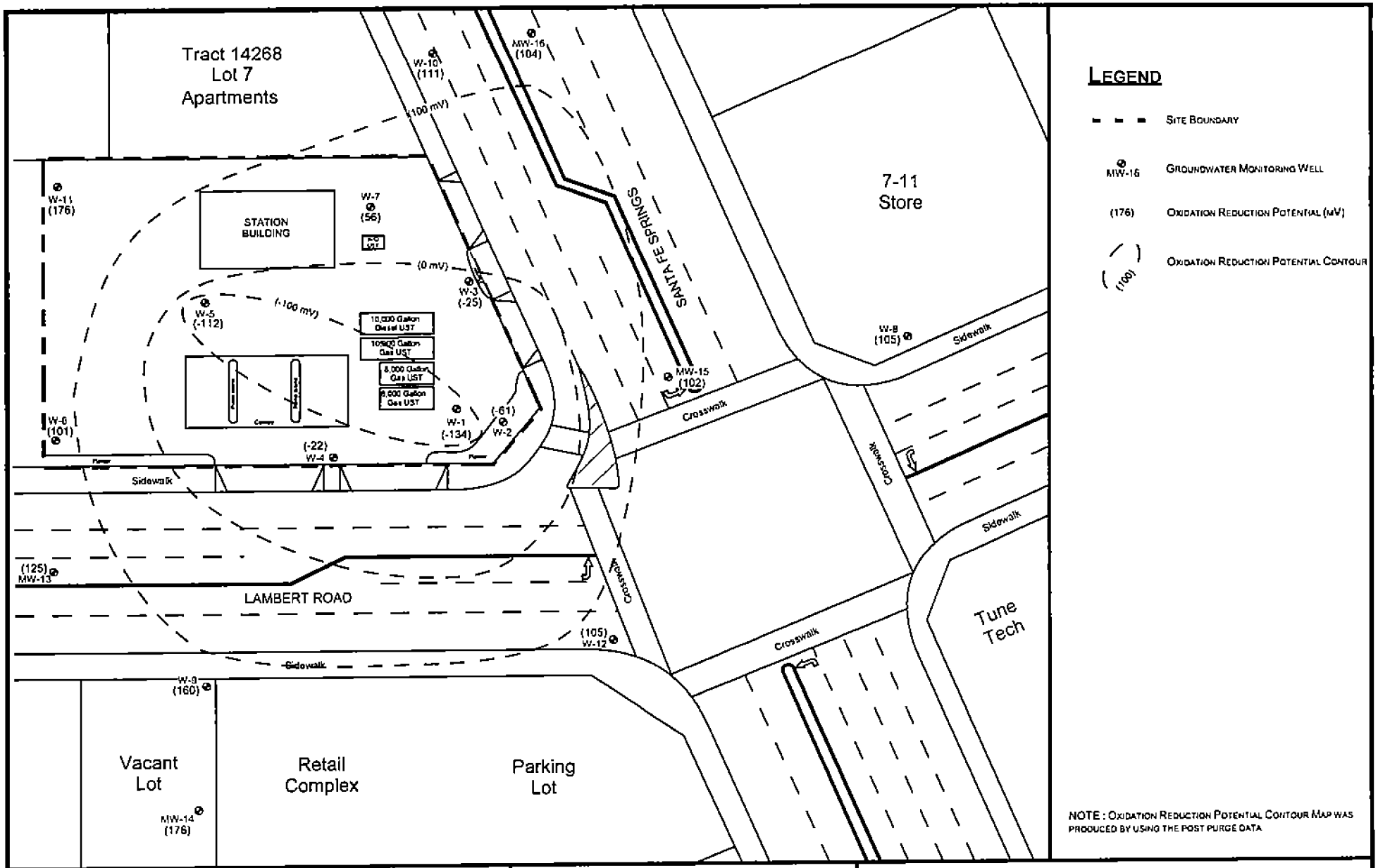


VFH Concentrations in W-1, W-2, and W-9
G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A Leighton Group Company

Project No.	600143002
Scale	N/A
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 34



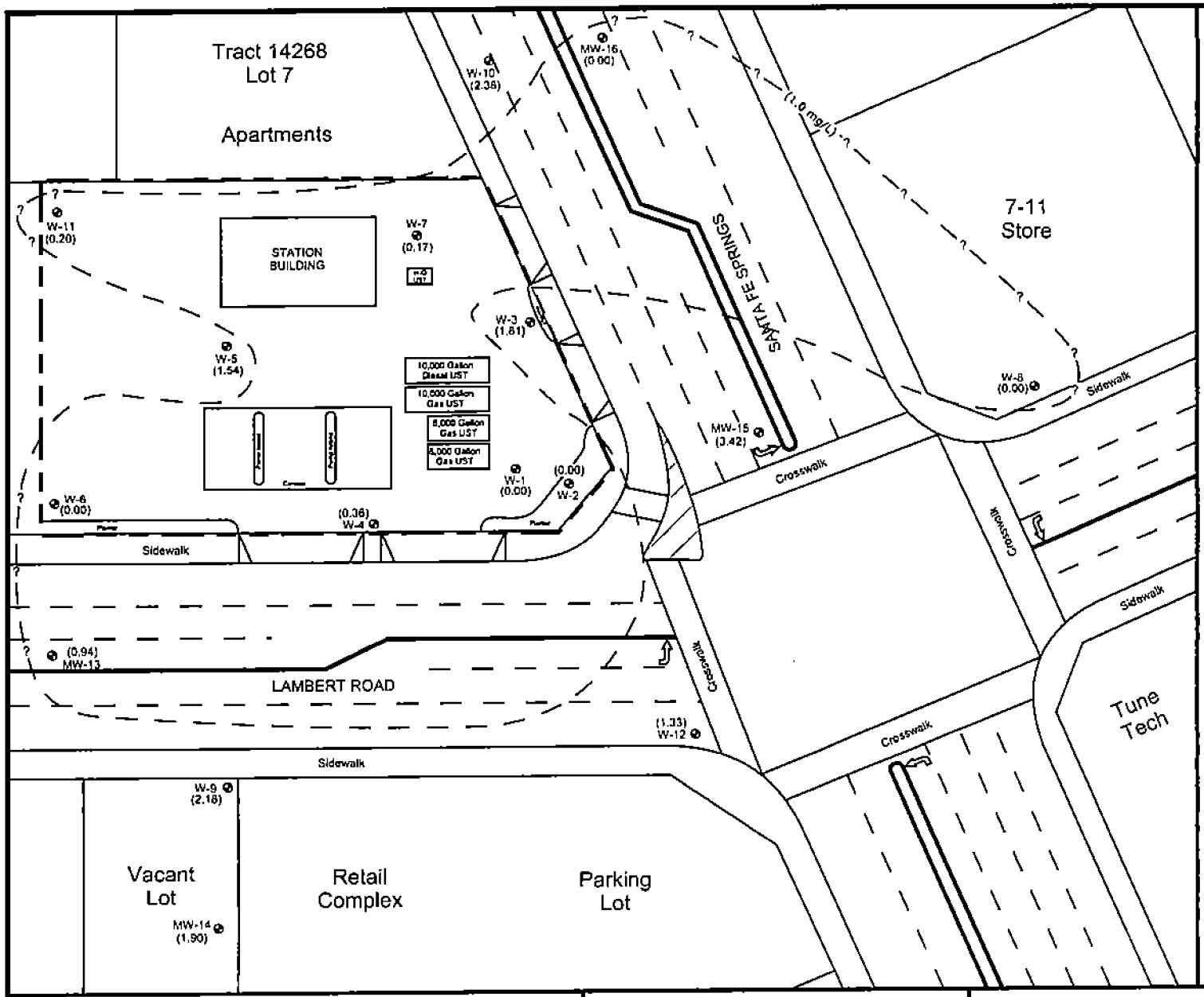
OXIDATION REDUCTION POTENTIAL IN GROUNDWATER

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	1" = 50'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 35



LEGEND

- SITE BOUNDARY
- MW-16 GROUNDWATER MONITORING WELL
- (3.42) DISSOLVED OXYGEN CONCENTRATION (MG/L)
- (1.0) DISSOLVED OXYGEN ISO-CONCENTRATION CONTOUR
- (?) INFERRED DISSOLVED OXYGEN ISO-CONCENTRATION CONTOUR

NOTE: DISSOLVED OXYGEN ISO-CONCENTRATION CONTOUR MAP WAS PRODUCED BY USING THE POST PURGE DATA

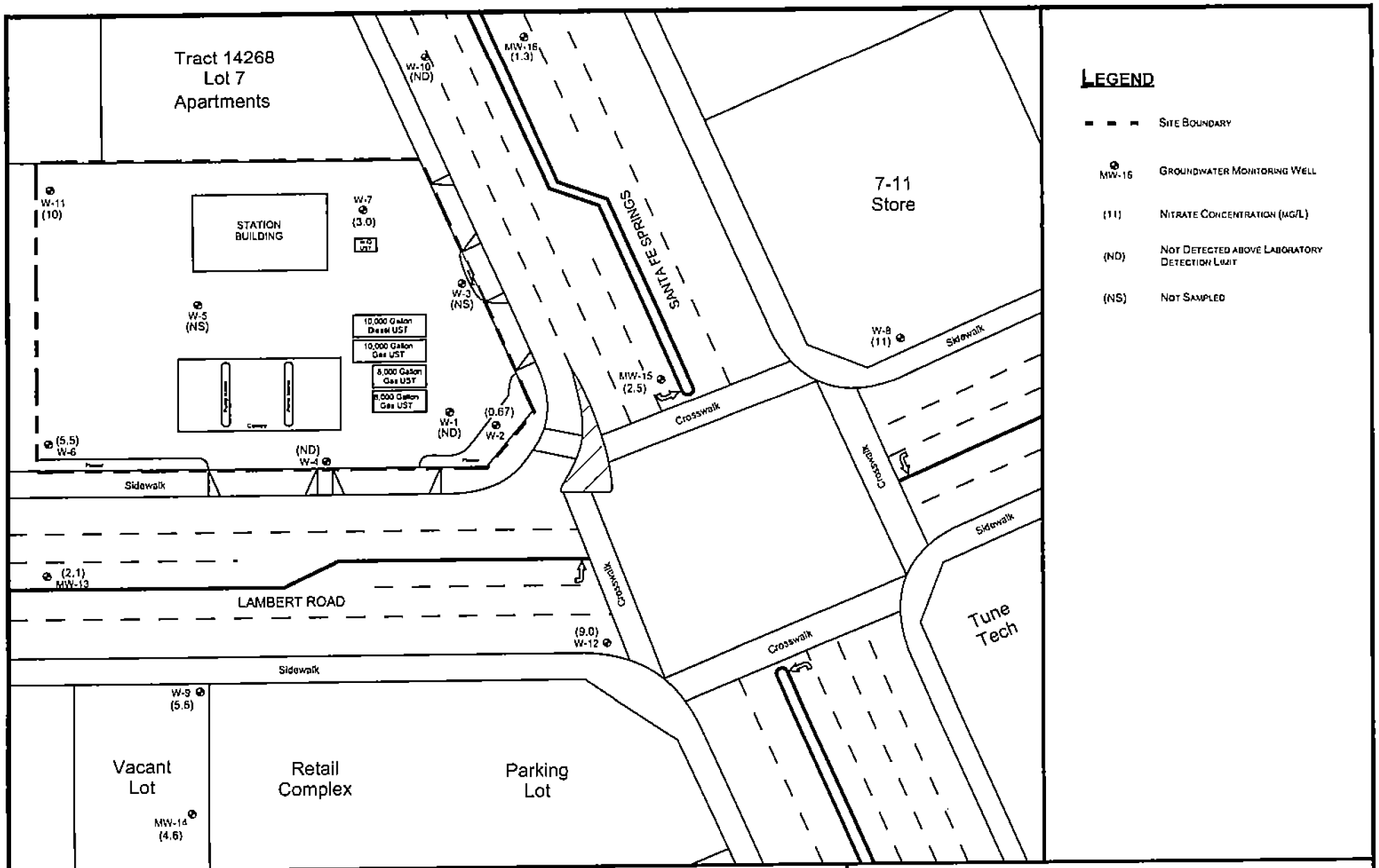
DISSOLVED OXYGEN CONCENTRATIONS IN GROUNDWATER

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	1" = 50'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 36



LEGEND

- - -	SITE BOUNDARY
MW-16	GROUNDWATER MONITORING WELL
(11)	NITRATE CONCENTRATION (MG/L)
(ND)	NOT DETECTED ABOVE LABORATORY DETECTION LIMIT
(NS)	NOT SAMPLED

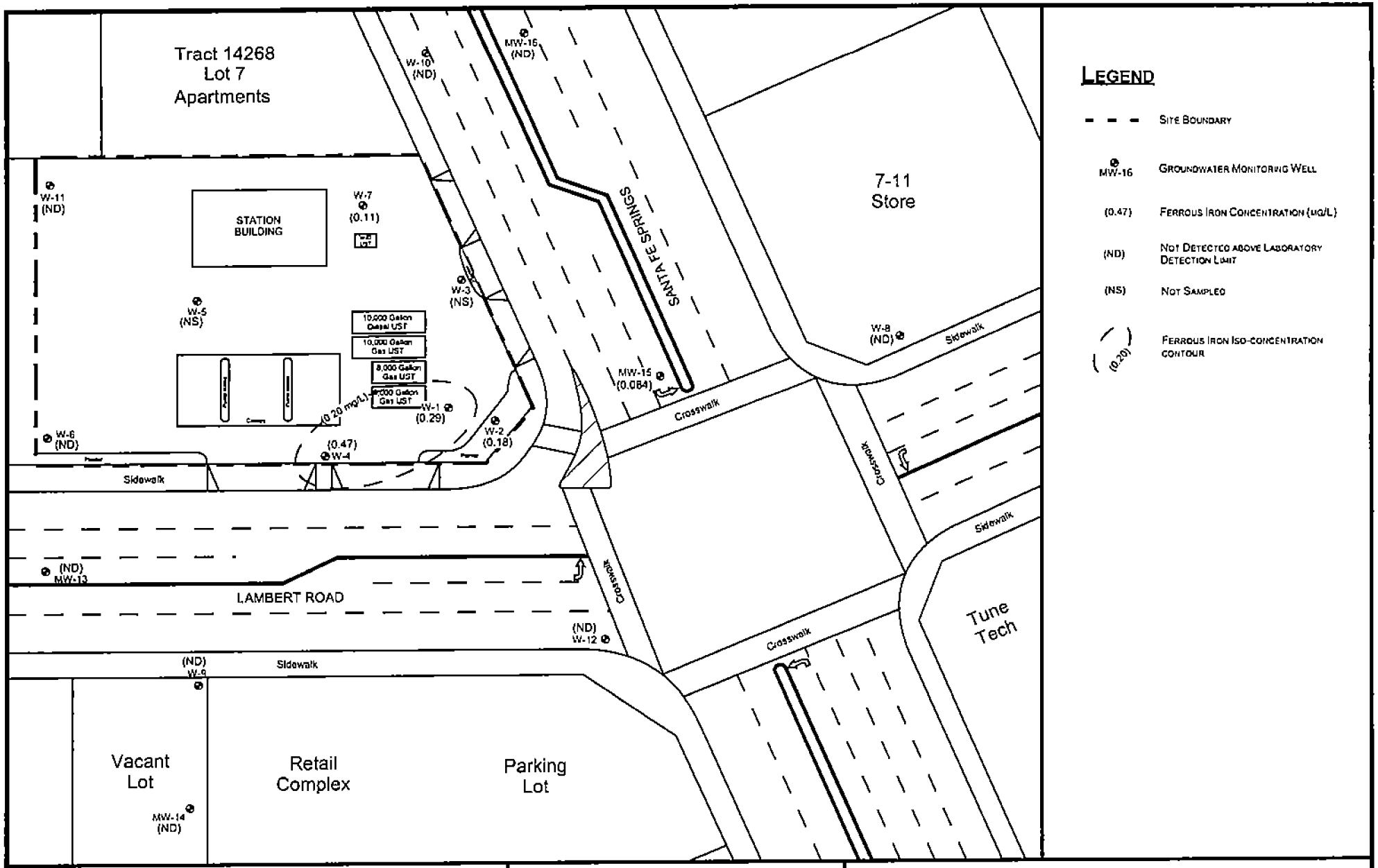
NITRATE CONCENTRATIONS IN GROUNDWATER

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	1" = 50'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 37



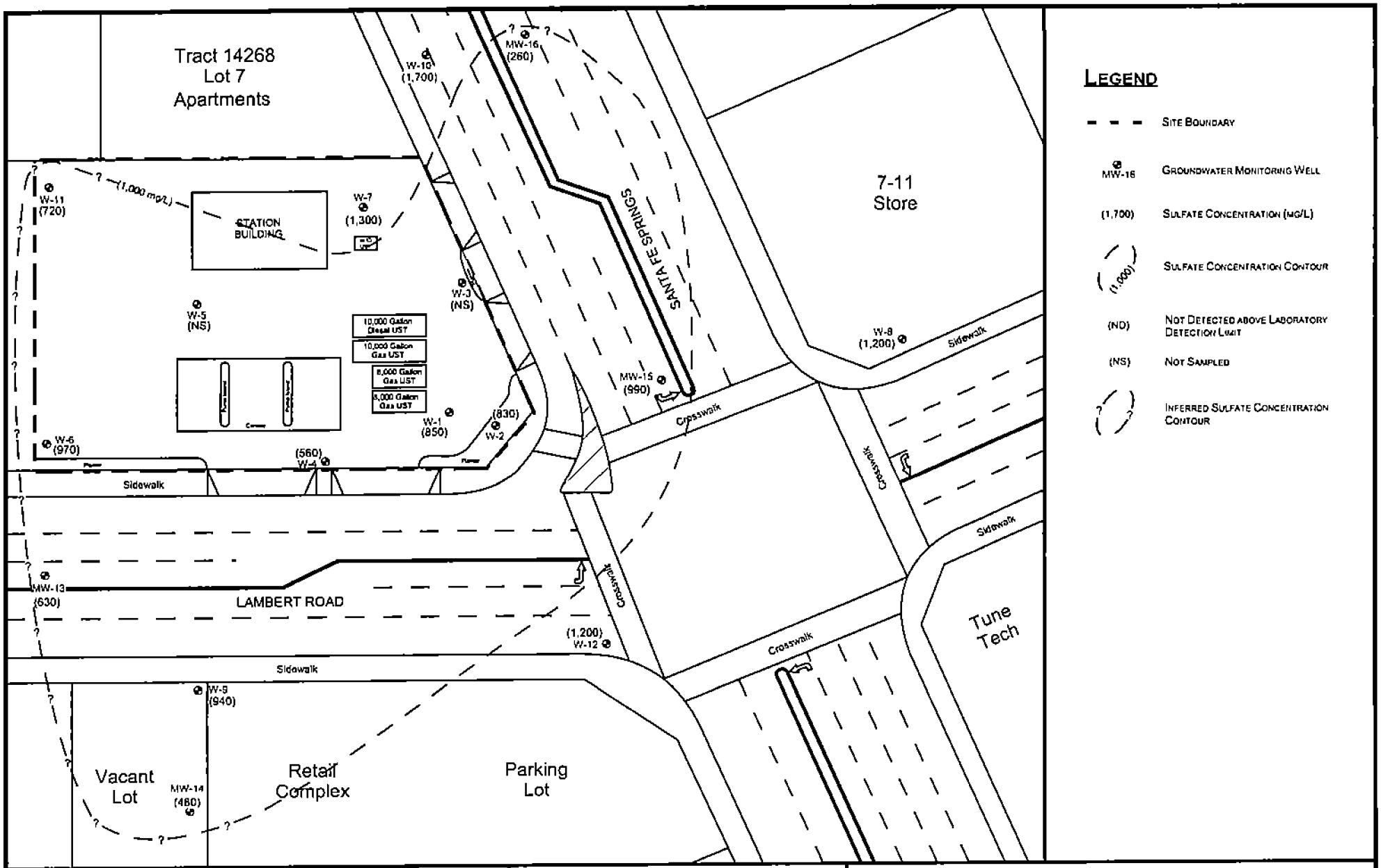
FERROUS IRON CONCENTRATION MAP

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	1" = 50'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 38



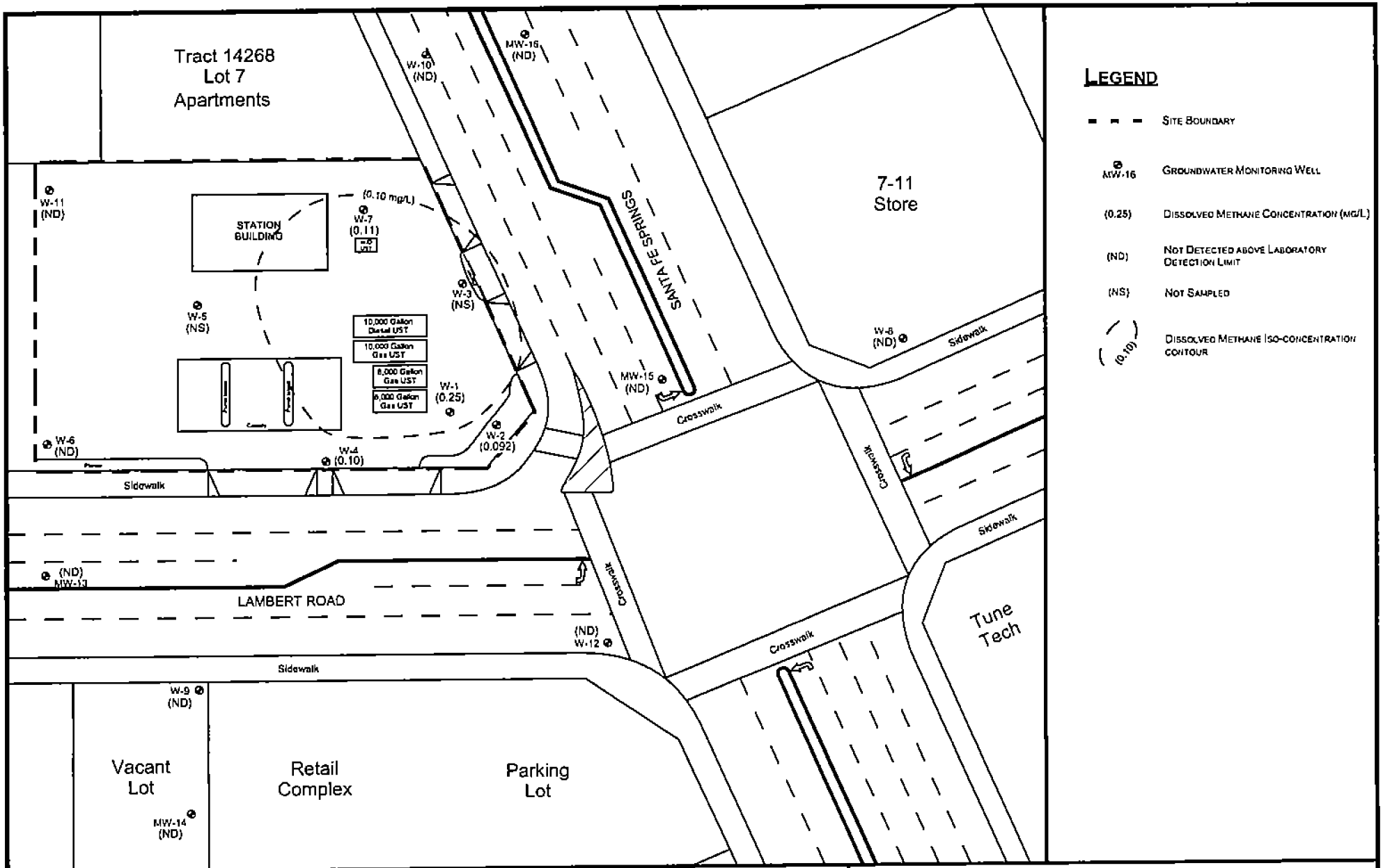
SULFATE CONCENTRATIONS IN GROUNDWATER

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	1" = 50'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 39



DISSOLVED METHANE CONCENTRATIONS IN GROUNDWATER

G&M Oil Company, Inc.
Service Station No. 16
12559 Lambert Road
Whittier, California

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

Project No.	600143002
Scale	1" = 50'
Engr./Geol.	CM
Drafted By	BFM
Date	June 2005

Figure No. 40

A

APPENDIX A

References

Ami Adini & Associates, Inc., 1992. "Site Contamination Assessment Work Plan, American Medical Enterprises, Inc., 12505 East Lambert Road, Whittier, California". January 31.

Atlas Environmental Engineering, Inc., 1996. "G&M Oil Company Station #16 12559 Lambert Road, Whittier, California, Transmittal of Laboratory Results Dispensers, Pipelines and Spoil". April 2.

Atlas Environmental Engineering, Inc., 1997. "G&M Oil Company Station #16 12559 Lambert Road, Whittier, California, Additional Site Assessment and Workplan". October 14.

Atlas Environmental Engineering, Inc., 1998. "Continued Site Investigation for G&M Oil Station #16 12559 Lambert Road, Whittier, California". March 31.

Atlas Environmental Engineering, Inc., 1999a. "G&M Oil Company Station #16 12559 Lambert Road, Whittier, California, Groundwater Monitoring Report and Additional Well Installation". April 15.

Atlas Environmental Engineering, Inc., 1999b. "G&M Oil Company Station #16 12559 Lambert Road, Whittier, California, Transmittal of Laboratory Results Waste Oil Tank Removal". June 7.

Atlas Environmental Engineering, Inc., 2000a. "Pilot Studies and Treatment Feasibility Evaluation G&M Oil Station # 16, 12559 Lambert Road, Whittier, California. June 30.

Atlas Environmental Engineering, Inc., 2000b. "Revised Corrective Action Plan, G&M Oil Station #16 12559 Lambert Road, Whittier, California". September 29.

Atlas Environmental Engineering, Inc., 2000c. "G&M Oil Company Station #16 12559 Lambert Road, Whittier, California, Groundwater Monitoring Report 4th Quarter 2000". December 28.

Atlas Environmental Engineering, Inc., 2001a. "Workplan for Additional Site Investigation, G&M Oil Company Station #16 12559 Lambert Road, Whittier, California". March 20.

APPENDIX A

References (continued)

Atlas Environmental Engineering, Inc., 2001b. "G&M Oil Company Service Station #16, 12559 Lambert Road, Whittier, California, Transmittal of Boring Log and Laboratory Results for Groundwater Monitoring Well W-9". June 19.

California Department of Water Resources Southern District, 1990. "Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County", Appendix A Ground Water Geology, Bulletin No. 014. Reprinted May.

California Regional Water Quality Control Board, Los Angeles Region (4), 1995. "Water Quality Control Plan Los Angeles Region", Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. February 23.

California Regional Water Quality Control Board, Los Angeles Region (4), 2002a. "Implementation of Final Draft Guidelines for Investigation and Cleanup of MTBE and Other Oxygenates: 1. Development of Preliminary Site Conceptual Model; 2. Interim Remedial Action Report; 3. Site Characterization Report; 4. Final Remedial Action Plan; and 5. Periodic Progress, Update, and Monitoring Reports. G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier (File No. R-10316) (Cleanup Fund No. 4225)". January 14.

California Regional Water Quality Control Board, Los Angeles Region (4), 2002b. "Underground Tank Program – Implementation of Final Draft Guidelines for Investigation and Cleanup of MTBE and Other Oxygenates (B1): 1. Preliminary Site Conceptual Model; 2. Site Characterization Report; 3. Interim Remedial Action Report; 4. First Quarter 2002 Groundwater Monitoring Report, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier (File No. R-10316) (Cleanup Fund No. 4225)". July 12.

GeoRemediation, Inc., 1992. "Summary of Preliminary Investigation and Proposed Additional Subsurface Investigation for a G&M Oil Company Service Station, 12559 Lambert Road, Whittier, California, File # I-10316-1A". May 12.

GeoTracker. "Geographic Environmental Information Management System". December 15, 2004.

APPENDIX A

References (continued)

Gradient Engineers, Inc., 2001. "Phase II Environmental Site Assessment Report and 3rd Quarter 2001 Groundwater Monitoring Report, 12559 Lambert Road, Whittier, California". September 12.

Gradient Engineers, Inc., 2002a. "First Quarter 2002 Groundwater Monitoring Report, 12559 Lambert Road, Whittier, California". April 4.

Gradient Engineers, Inc., 2002b. "Preliminary Site Conceptual Model Report, 12559 Lambert Road, Whittier, California". May 15.

Gradient Engineers, Inc., 2002c. "Site Conceptual Model Report Quarterly Update, Second Quarter 2002, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, California". July 15.

Gradient Engineers, Inc., 2002d. "Site Conceptual Model Report Quarterly Update, Third Quarter 2002, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, California". October 8.

Gradient Engineers, Inc., 2002e. "Site Conceptual Model Report Quarterly Update, Fourth Quarter 2002, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, California". December 16.

Gradient Engineers, Inc., 2003a. "Site Conceptual Model Report Quarterly Update, First Quarter 2003, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, California". April 28.

Gradient Engineers, Inc., 2003b. "Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Second Quarter 2003, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, Los Angeles County, California". July 14.

Groundwater Technology, 1993. "Fourth Quarter, 1993, Groundwater Sampling Results, Southland Site #18470, 8438 Santa Fe Springs Road, Whittier, California". December 28.

APPENDIX A

References (continued)

Leighton Consulting, Inc., 2003. "Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Third Quarter 2003, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, Los Angeles County, California". October 6, 2003.

Leighton Consulting, Inc., 2004a. "Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Fourth Quarter 2003, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, Los Angeles County, California". February 3, 2004.

Leighton Consulting, Inc., 2004b. "Feasibility Study for Petroleum Hydrocarbon Remediation, G&M Oil Company Station No. 16, 122559 Lambert Road, Whittier, Los Angeles County, California". June 28.

Leighton Consulting, Inc., 2004c. "Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Third Quarter 2004, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, Los Angeles County, California". October 15, 2004.

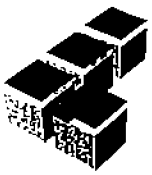
Leighton Consulting, Inc., 2004d. "Site Conceptual Model Report Quarterly Update and Additional Site Characterization Report, Fourth Quarter 2004, G&M Oil Company Station No. 16, 12559 Lambert Road, Whittier, Los Angeles County, California". January 15, 2005.

Los Angeles County Department of Public Works, 1995. Letter "Underground Storage Tank (UST) Case Closure, Closure Permit No. 8844B, Location: 8438 Santa Fe Springs Road, Whittier". January 12.

PIC Environmental Services, 1998. "Final Quarterly Groundwater Sampling Report, Tune Tech Inc., 12612 East Lambert Road, Whittier, California". September 8.

State Water Resources Control Board, 2000. "Final Draft Guidelines for Investigation and cleanup of MTBE and Other Oxygentates". March 27.

B



RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

OAK OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

31JAN01 10:00:04

FROM 31JAN01 04:21:09
TO 31JAN01 04:21:09

LEAK TEST 31JAN01 04:21:09
TANK 3 UNLEADED PREM -0.026 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 38.34 INCHES
PRODUCT VOLUME 3025.0 GALLONS
LEAK DET START TIME 30JAN01 20:00:04
LEAK DET END TIME 31JAN01 04:21:09
LEAK DET PERIOD 08 HRS 21 MINS
LEAK DET START WATER 0.28 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 30JAN01 09:59:30
LEAK TEST NO 2490

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

OAK OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

31JAN01 10:02:15

FROM 30JAN01 22:59:40
TO 30JAN01 22:59:40

LEAK TEST 30JAN01 22:59:40
TANK 4 DIESEL #2 0.000 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 39.59 INCHES
PRODUCT VOLUME 3400.0 GALLONS
LEAK DET START TIME 30JAN01 20:04:04
LEAK DET END TIME 30JAN01 22:59:40
LEAK DET PERIOD 02 HRS 55 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 30JAN01 10:03:30
LEAK TEST NO 2491

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

RAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

21APR01 02:40:20

FROM 21APR01 03:34:55
TO 21APR01 03:34:55

LEAK TEST 21APR01 03:34:55
TANK 1 UNLEADED REG 0.024 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 36.38 INCHES
PRODUCT VOLUME 3502.5 GALLONS
LEAK DET START TIME 21APR01 [illegible]
LEAK DET END TIME 21APR01 03:34:55
LEAK DET PERIOD 03 HRS 39 MINS
LEAK DET START WATER 1.44 INCHES
LEAK DET END WATER 1.44 INCHES
LAST DELIVERY 19APR01 08:26:18
LEAK TEST NO. 3322

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

RAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

21APR01 02:41:55

FROM 20APR01 04:34:52
TO 20APR01 04:34:52

LEAK TEST 20APR01 04:34:52
TANK 2 UNLEADED PLUS 0.025 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 37.05 INCHES
PRODUCT VOLUME 2937.8 GALLONS
LEAK DET START TIME 20APR01 01:55:04
LEAK DET END TIME 20APR01 04:34:52
LEAK DET PERIOD 02 HRS 39 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 19APR01 08:22:39
LEAK TEST NO. 3311

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

A&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21APR01 07:44:08

FROM 03APR01 23:59:30
TO 03APR01 23:59:30

LEAK TEST 03APR01 23:59:30
TANK 3 UNLEADED PREM -0.031 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	42.86 INCHES
PRODUCT VOLUME	3563.1 GALLONS
LEAK DET START TIME	03APR01 08:12:11
LEAK DET END TIME	03APR01 23:59:30
LEAK DET PERIOD	15 HRS 46 MINS
LEAK DET START WATER	0.80 INCHES
LEAK DET END WATER	0.77 INCHES
LAST DELIVERY	02APR01 01:43:20
LEAK TEST NO. 3124	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

A&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21APR01 07:44:37

FROM 21APR01 01:55:18
TO 21APR01 01:55:18

LEAK TEST 21APR01 01:55:18
TANK 4 DIESEL #2 0.033 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	30.35 INCHES
PRODUCT VOLUME	2799.3 GALLONS
LEAK DET START TIME	20APR01 [illegible]
LEAK DET END TIME	21APR01 01:55:18
LEAK DET PERIOD	02 HRS 37 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	17APR01 15:46:32
LEAK TEST NO. 3321	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

[illegible] OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21MAY01 07:23:04

FROM 21MAY01 03:29:24
TO 21MAY01 03:29:24

LEAK TEST 21MAY01 03:29:24

TANK 1 UNLEADED REG 0.058 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	59.07 INCHES
PRODUCT VOLUME	6495.6 GALLONS
LEAK DET START TIME	21MAY01 00:34:00
LEAK DET END TIME	21MAY01 03:29:24
LEAK DET PERIOD	02 HRS 55 MINS
LEAK DET START WATER	1.63 INCHES
LEAK DET END WATER	1.63 INCHES
LAST DELIVERY	20MAY01 16:48:58
LEAK TEST NO. 3661	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

[illegible] OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21MAY01 07:26:23

FROM 20MAY01 04:31:02
TO 20MAY01 04:31:02

LEAK TEST 20MAY01 04:31:02

TANK 2 UNLEADED PLUS -0.041 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	42.75 INCHES
PRODUCT VOLUME	3539.7 GALLONS
LEAK DET START TIME	20MAY01 01:57:11
LEAK DET END TIME	20MAY01 04:31:02
LEAK DET PERIOD	02 HRS 38 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	15MAY01 22:49:56
LEAK TEST NO. 3648	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

S&N OIL #16
1259 LAMBERT RD
WHITTIER CA 90606
2 562 696 9132
CHEVRON #208758

DATA HISTORY

27APR00 08:18:27

FROM 27APR00 04:23:16
TO 27APR00 04:23:16

LEAK TEST 27APR00 04:23:16
TANK 1 1ST FAILED RED -0.030 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 60.86 INCHES
PRODUCT VOLUME 6725.6 GALLONS
LEAK DET START TIME 26APR00 23:26:08
LEAK DET END TIME 27APR00 04:23:16
LEAK DET PERIOD 04 HRS 57 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 26APR00 13:25:33
LEAK TEST NO. 5152

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

S&N OIL #16
1259 LAMBERT RD
WHITTIER CA 90606
2 562 696 9132
CHEVRON #208758

DATA HISTORY

26APR00 08:19:24

FROM 27APR00 05:55:56
TO 27APR00 05:55:56

LEAK TEST 27APR00 05:55:56
TANK 2 1ST FAILED PLUS 0.030 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 45.85 INCHES
PRODUCT VOLUME 3887.9 GALLONS
LEAK DET START TIME 27APR00 02:25:40
LEAK DET END TIME 27APR00 05:55:56
LEAK DET PERIOD 03 HRS 30 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 26APR00 13:36:54
LEAK TEST NO. 5160

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION PJE-ST 14.1

[illegible] OIL #16
1259 LAMBERT RD
WHITTIER CA 90604
2 562 694 9132
CHEVRON #208758

DATA HISTORY

28MAR00 07:51:07

FROM 27MAR00 15:44:15
TO 27MAR00 15:44:15

LEAK TEST 27MAR00 15:44:15
****
TANK 3 [illegible] PASS 0.092 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 39.94 INCHES
PRODUCT VOLUME 3247.2 GALLONS
LEAK DET START TIME 27MAR00 02:59:04
LEAK DET END TIME 27MAR00 15:44:15
LEAK DET PERIOD 12 HRS 45 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 26MAR00 16:55:11
LEAK TEST NO. 4739

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION PJE-ST 14.1

[illegible] OIL #16
1259 LAMBERT RD
WHITTIER CA 90604
2 562 694 9132
CHEVRON #208758

DATA HISTORY

28MAR00 07:57:54

FROM 27MAR00 07:52:00
TO 27MAR00 07:52:00

LEAK TEST 27MAR00 07:52:00
****
TANK 4 DIESEL #2 -0.010 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 40.09 INCHES
PRODUCT VOLUME 3287.3 GALLONS
LEAK DET START TIME 27MAR00 04:53:00
LEAK DET END TIME 27MAR00 07:52:00
LEAK DET PERIOD 02 HRS 57 MINS
LEAK DET START WATER 0.12 INCHES
LEAK DET END WATER 0.12 INCHES
LAST DELIVERY 24MAR00 11:55:15
LEAK TEST NO. 4741

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
(VERSION R1C-97 14.1)

[illegible] OIL BIA
1259 LOFFERT RD
WHITTIER CA 9060[illegible]
2 562 696 9139
CHECKSUM #2[illegible]

DATA HISTORY

[illegible] [illegible]

FROM 2[illegible] 12:12:49
TO 2[illegible] 12:12:49

LEAK TEST [illegible] 12:12:49
TANK 3 INCREASED PRES 0.094 GAL/H PASS

CONTINUOUS TEST
0.200 GAL/H LEAK RATE
PROBABILITY OF DETECTION 99.9%

PRODUCT WEIGHT	38.41 INCHES
PRODUCT VOLUME	4167.5 GALLONS
LEAK DET START TIME	[illegible] 23:24:07
LEAK DET END TIME	[illegible] 12:12:49
LEAK DET PERIOD	12 HRS 48 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	[illegible] 13:35:34
LEAK TEST ID 5154	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
(VERSION R1C-97 14.1)

[illegible] OIL BIA
1259 LOFFERT RD
WHITTIER CA 9060[illegible]
2 562 696 9139
CHECKSUM #2[illegible]

DATA HISTORY

[illegible] [illegible]

FROM 2[illegible] 15:01:37
TO 2[illegible] 15:01:37

LEAK TEST [illegible] 15:01:37
TANK 4 DIESEL #2 -0.017 GAL/H PASS

CONTINUOUS TEST
0.200 GAL/H LEAK RATE
PROBABILITY OF DETECTION 99.9%

PRODUCT WEIGHT	35.15 INCHES
PRODUCT VOLUME	[illegible] GALLONS
LEAK DET START TIME	[illegible] 17:04:04
LEAK DET END TIME	[illegible] 15:01:37
LEAK DET PERIOD	[illegible] HRS 57 MINS
LEAK DET START WATER	0.18 INCHES
LEAK DET END WATER	0.15 INCHES
LAST DELIVERY	[illegible]
LEAK TEST ID 5145	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

[illegible] OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

30JUN00 08:06:49

FROM 29JUN00 02:34:19
TO 29JUN00 02:34:19

LEAK TEST 29JUN00 02:34:19
****
TANK 1 UNLEADED [illegible] 0.023 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 32.97 INCHES
PRODUCT VOLUME 2951.3 GALLONS
LEAK DET START TIME 29JUN00 02:34:00
LEAK DET END TIME 29JUN00 02:34:19
LEAK DET PERIOD [illegible] HRS 00 MINS
LEAK DET START WATER 0.06 INCHES
LEAK DET END WATER 0.05 INCHES
LAST DELIVERY 27JUN00 02:19:45
LEAK TEST NO. 8A

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

[illegible] OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

30JUN00 08:07:48

FROM 30JUN00 03:40:33
TO 30JUN00 03:40:33

LEAK TEST 30JUN00 03:40:33
****
TANK 2 UNLEADED PLUS -0.068 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 43.50 INCHES
PRODUCT VOLUME 3475.4 GALLONS
LEAK DET START TIME 29JUN00 21:10:01
LEAK DET END TIME 30JUN00 03:40:33
LEAK DET PERIOD 04 HRS 30 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 27JUN00 02:13:07
LEAK TEST NO. 10S

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

A&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

30JUN00	08:10:14

FROM 26JUN00 04:09:47
TO 26JUN00 04:09:47

LEAK TEST 26JUN00 04:09:47
TANK 3 UNLEADED PREM 0.029 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	57.56 INCHES
PRODUCT VOLUME	5193.4 GALLONS
LEAK DET START TIME	25JUN00 22:59:13
LEAK DET END TIME	26JUN00 04:09:47
LEAK DET PERIOD	05 HRS 10 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	25JUN00 02:49:26
LEAK TEST NO 64	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

A&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

30JUN00	08:09:26

FROM 29JUN00 07:09:52
TO 29JUN00 07:09:52

LEAK TEST 29JUN00 07:09:52
TANK 4 DIESEL #2 -0.051 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	31.54 INCHES
PRODUCT VOLUME	2935.2 GALLONS
LEAK DET START TIME	29JUN00 03:41:13
LEAK DET END TIME	29JUN00 07:09:52
LEAK DET PERIOD	03 HRS 28 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	27JUN00 02:10:34
LEAK TEST NO 100	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

31.01.00 07:19:49

FROM 25.01.00 03:27:11
TO 25.01.00 03:27:11

LEAK TEST 25.01.00 03:27:11
TANK 1 UNLEADED RED 0.087 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 50.28 INCHES
PRODUCT VOLUME 3340.0 GALLONS
LEAK DET START TIME 24.04.00 14:06:10
LEAK DET END TIME 25.01.00 03:27:11
LEAK DET PERIOD 13 HRS 21 MINS
LEAK DET START WATER 0.10 INCHES
LEAK DET END WATER 0.08 INCHES
LAST DELIVERY 24.01.00 04:05:14
LEAK TEST NO 399

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28.01.00 07:42:11

FROM 28.01.00 03:30:10
TO 28.01.00 03:30:10

LEAK TEST 28.01.00 03:30:10
TANK 2 UNLEADED PLUS -0.068 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 43.13 INCHES
PRODUCT VOLUME 3591.7 GALLONS
LEAK DET START TIME 28.01.00 00:50:14
LEAK DET END TIME 28.01.00 03:30:10
LEAK DET PERIOD 02 HRS 39 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 27.01.00 10:25:04
LEAK TEST NO 435

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

28JUL00 07:43:13

FROM 28JUL00 03:09:02
TO 28JUL00 03:09:02

LEAK TEST 28JUL00 03:09:02

TANK 3: UNLEADED PREM. -0.047 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	38.35 INCHES
PRODUCT VOLUME	3072.2 GALLONS
LEAK DET START TIME	27JUL00 20:17:04
LEAK DET END TIME	28JUL00 03:09:02
LEAK DET PERIOD	06 HRS 51 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	27JUL00 10:16:28
LEAK TEST NO. 438	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

28JUL00 07:45:59

FROM 28JUL00 01:47:42
TO 28JUL00 01:47:42

LEAK TEST 28JUL00 01:47:47

TANK 4: DIESEL #2 -0.091 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	35.59 INCHES
PRODUCT VOLUME	3400.6 GALLONS
LEAK DET START TIME	27JUL00 23:27:04
LEAK DET END TIME	28JUL00 01:47:48
LEAK DET PERIOD	02 HRS 20 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	24JUL00 03:58:48
LEAK TEST NO. 434	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29AUG00 08:15:29

FROM 29AUG00 00:53:21
TO 29AUG00 00:53:21

LEAK TEST 29AUG00 00:53:21
TANK 1 INCREASED REG 0.033 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 47.20 INCHES
PRODUCT VOLUME 4930.4 GALLONS
LEAK DET START TIME 27AUG00 04:42:00
LEAK DET END TIME 29AUG00 00:53:21
LEAK DET PERIOD 20 HRS 11 MINS
LEAK DET START WATER 0.85 INCHES
LEAK DET END WATER 0.04 INCHES
LAST DELIVERY 26AUG00 15:35:31
LEAK TEST NO 313

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29AUG00 08:14:22

FROM 29AUG00 12:39:00
TO 29AUG00 12:39:00

LEAK TEST 29AUG00 12:39:00
TANK 2 INCREASED PLUS -0.038 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 78.23 INCHES
PRODUCT VOLUME 2026.3 GALLONS
LEAK DET START TIME 27AUG00 23:32:00
LEAK DET END TIME 29AUG00 12:39:00
LEAK DET PERIOD 13 HRS 06 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 26AUG00 15:27:54
LEAK TEST NO 825

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

29AUG00 06:17:17

FROM 29AUG00 11:22:49
TO 29AUG00 11:22:49

LEAK TEST 29AUG00 11:22:49
****
TANK 3 1% FADED PRES 0.021 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 39.77 INCHES
PRODUCT VOLUME 3121.1 GALLONS
LEAK DET START TIME 29AUG00 07:00:04
LEAK DET END TIME 29AUG00 11:22:49
LEAK DET PERIOD 03 HRS 22 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 29AUG00 15:30:42
LEAK TEST NO 824

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

29AUG00 06:18:05

FROM 29AUG00 10:01:45
TO 29AUG00 10:01:45

LEAK TEST 29AUG00 10:01:45
****
TANK 4 DIESEL #2 0.019 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT 31.92 INCHES
PRODUCT VOLUME 2931.9 GALLONS
LEAK DET START TIME 29AUG00 06:37:11
LEAK DET END TIME 29AUG00 10:01:45
LEAK DET PERIOD 03 HRS 24 MINS
LEAK DET START WATER 0.00 INCHES
LEAK DET END WATER 0.00 INCHES
LAST DELIVERY 29AUG00 20:32:16
LEAK TEST NO 829

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

GAN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28SEP00 07:43:13

FROM 28SEP00 02:04:34
TO 28SEP00 02:04:34

LEAK TEST 28SEP00 02:04:34
****
TANK 1 1% FAILED REQ 0.012 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	52.98 INCHES
PRODUCT VOLUME	5688.1 GALLONS
LEAK DET START TIME	28SEP00 02:04:13
LEAK DET END TIME	28SEP00 02:04:34
LEAK DET PERIOD	13 MIN 50 MINS
LEAK DET START WATER	1.64 INCHES
LEAK DET END WATER	1.64 INCHES
LAST DELIVERY	27SEP00 02:13:02
LEAK TEST NO 1296	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

GAN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28SEP00 07:44:56

FROM 28SEP00 10:54:56
TO 28SEP00 10:54:56

LEAK TEST 28SEP00 10:54:56
****
TANK 2 1% FAILED PLUS +0.014 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	52.49 INCHES
PRODUCT VOLUME	2459.2 GALLONS
LEAK DET START TIME	28SEP00 02:36:02
LEAK DET END TIME	28SEP00 10:54:56
LEAK DET PERIOD	08 HRS 18 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	27SEP00 02:04:15
LEAK TEST NO 1215	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

GEM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28SEP00 07:45:45

FROM 28SEP00 23:07:59
TO 28SEP00 23:07:59

LEAK TEST 28SEP00 23:07:59
TANK 3 IN FADED PREV -0.098 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	34.75 INCHES
PRODUCT VOLUME	2641.8 GALLONS
LEAK DET START TIME	28SEP00 01:40:12
LEAK DET END TIME	28SEP00 23:07:59
LEAK DET PERIOD	21 HRS 59 MINS
LEAK DET START WATER	0.82 INCHES
LEAK DET END WATER	0.82 INCHES
LAST DELIVERY	22SEP00 00:06:33
LEAK TEST NO 1212	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

GEM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28SEP00 07:42:42

FROM 28SEP00 23:29:51
TO 28SEP00 23:29:51

LEAK TEST 28SEP00 23:29:51
TANK 4 DIESEL #2 -0.034 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	32.74 INCHES
PRODUCT VOLUME	5035.9 GALLONS
LEAK DET START TIME	28SEP00 21:04:02
LEAK DET END TIME	28SEP00 23:29:51
LEAK DET PERIOD	02 HRS 25 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	27SEP00 07:00:52
LEAK TEST NO 1223	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29OCT00 09:06:07

FROM 29OCT00 04:45:46
TO 29OCT00 04:45:46

LEAK TEST 29OCT00 04:45:46
TANK 1 UNLEADED REG -0.031 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	52.30 INCHES
PRODUCT VOLUME	5600.0 GALLONS
LEAK DET START TIME	29OCT00 04:45:02
LEAK DET END TIME	29OCT00 04:45:46
LEAK DET PERIOD	24 HRS 00 MINS
LEAK DET START WATER	1.64 INCHES
LEAK DET END WATER	1.64 INCHES
LAST DELIVERY	27OCT00 16:44:15
LEAK TEST NO 1540	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29OCT00 09:07:12

FROM 29OCT00 00:05:31
TO 29OCT00 00:05:31

LEAK TEST 29OCT00 00:05:31
TANK 2 UNLEADED PLUS -0.000 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	37.83 INCHES
PRODUCT VOLUME	3021.0 GALLONS
LEAK DET START TIME	29OCT00 05:52:00
LEAK DET END TIME	29OCT00 00:05:31
LEAK DET PERIOD	18 HRS 13 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	29OCT00 06:20:57
LEAK TEST NO 1541	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29OCT00 09:10:54

FROM 29OCT00 04:06:34
TO 29OCT00 04:06:34

LEAK TEST 29OCT00 04:06:34
TANK 3 UNLEADED PREM -0.033 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT WEIGHT	40.25 INCHES
PRODUCT VOLUME	3281.1 GALLONS
LEAK DET START TIME	29OCT00 00:32:08
LEAK DET END TIME	29OCT00 04:06:34
LEAK DET PERIOD	03 HRS 34 MINS
LEAK DET START WATER	0.79 INCHES
LEAK DET END WATER	0.79 INCHES
LAST DELIVERY	26OCT00 06:19:08
LEAK TEST NO 1536	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJF-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29OCT00 09:11:49

FROM 29OCT00 07:30:35
TO 29OCT00 07:30:35

LEAK TEST 29OCT00 07:30:35
TANK 4 DIESEL #2 -0.018 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT WEIGHT	32.58 INCHES
PRODUCT VOLUME	3658.0 GALLONS
LEAK DET START TIME	29OCT00 04:25:10
LEAK DET END TIME	29OCT00 07:30:35
LEAK DET PERIOD	03 HRS 05 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	27OCT00 18:24:23
LEAK TEST NO 1539	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAN OIL CO #1A
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29NOV00 09:03:02

FROM 29NOV00 02:45:02
TO 29NOV00 02:45:02

LEAK TEST 29NOV00 02:45:02
TANK 1 10% FOUND REG 0.083 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	44.33 INCHES
PRODUCT VOLUME	4575.1 GALLONS
LEAK DET START TIME	29NOV00 23:54:02
LEAK DET END TIME	29NOV00 02:45:02
LEAK DET PERIOD	02 HRS 51 MINS
LEAK DET START WATER	1.65 INCHES
LEAK DET END WATER	1.65 INCHES
LAST DELIVERY	27NOV00 12:47:25
LEAK TEST NO. 1884	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAN OIL CO #1A
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29NOV00 09:04:50

FROM 29NOV00 04:49:51
TO 29NOV00 04:49:51

LEAK TEST 29NOV00 04:49:51
TANK 2 10% FOUND PLUS 0.042 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	52.30 INCHES
PRODUCT VOLUME	5118.2 GALLONS
LEAK DET START TIME	29NOV00 23:45:04
LEAK DET END TIME	29NOV00 04:49:51
LEAK DET PERIOD	05 HRS 04 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	29NOV00 12:44:04
LEAK TEST NO. 1848	

END OF REPORT

FED JACKET LEAK DETECTION SYSTEMS
VERSION PJE-ST 14.1

GAN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28NOV00 09:11:04

FROM: 27NOV00 02:38:45
TO: 27NOV00 02:38:45

LEAK TEST 27NOV00 02:38:45
TANK 3 UNLEADED PREM -0.097 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	32.43 INCHES
PRODUCT VOLUME	2944.0 GALLONS
LEAK DET START TIME	26NOV00 05:42:03
LEAK DET END TIME	27NOV00 02:38:45
LEAK DET PERIOD	20 HRS 55 MINS
LEAK DET START WATER	0.79 INCHES
LEAK DET END WATER	0.79 INCHES
LAST DELIVERY	25NOV00 17:46:53
LEAK TEST NO. 1653	

END OF REPORT

FED JACKET LEAK DETECTION SYSTEMS
VERSION PJE-ST 14.1

GAN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

28NOV00 09:12:10

FROM 28NOV00 14:54:17
TO 28NOV00 14:54:17

LEAK TEST 28NOV00 14:54:17
TANK 4 DIESEL #2 -0.080 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	40.40 INCHES
PRODUCT VOLUME	4024.1 GALLONS
LEAK DET START TIME	28NOV00 11:55:10
LEAK DET END TIME	28NOV00 14:54:17
LEAK DET PERIOD	02 HRS 59 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	25NOV00 17:50:17
LEAK TEST NO. 1079	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

G&M OIL CO #1A
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29DEC00 03:42:26

FROM 29DEC00 04:51:06
TO 29DEC00 04:51:06

LEAK TEST 29DEC00 04:51:06
TANK 1 UNLEADED REG -0.037 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	63.22 INCHES
PRODUCT VOLUME	2025.2 GALLONS
LEAK DET START TIME	29DEC00 00:49:13
LEAK DET END TIME	29DEC00 04:51:06
LEAK DET PERIOD	04 HRS 01 MINS
LEAK DET START WATER	1.45 INCHES
LEAK DET END WATER	1.45 INCHES
LAST DELIVERY	28DEC00 11:48:11
LEAK TEST NO 2166	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

G&M OIL CO #1A
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

29DEC00 03:43:34

FROM 29DEC00 03:27:17
TO 29DEC00 03:27:17

LEAK TEST 29DEC00 03:27:17
TANK 2 UNLEADED PLUS -0.042 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	49.01 INCHES
PRODUCT VOLUME	1237.0 GALLONS
LEAK DET START TIME	28DEC00 23:40:07
LEAK DET END TIME	29DEC00 03:27:17
LEAK DET PERIOD	03 HRS 47 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	27DEC00 02:13:30
LEAK TEST NO 2163	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

29DEC00 08:47:22

FROM 24DEC00 03:20:27
TO 24DEC00 03:20:27

LEAK TEST 24DEC00 03:20:27
****
TANK 3 UNLEADED PREM 0.060 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	34.52 INCHES
PRODUCT VOLUME	2670.9 GALLONS
LEAK DET START TIME	25DEC00 18:05:14
LEAK DET END TIME	26DEC00 03:20:27
LEAK DET PERIOD	09 HRS 15 MINS
LEAK DET START WATER	0.76 INCHES
LEAK DET END WATER	0.78 INCHES
LAST DELIVERY	24DEC00 03:50:42
LEAK TEST NO 2177	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90604
562 696 9132

DATA HISTORY

29DEC00 08:45:55

FROM 29DEC00 03:37:56
TO 29DEC00 03:37:56

LEAK TEST 29DEC00 03:37:56
****
TANK 4 DIESEL #2 0.071 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	44.80 INCHES
PRODUCT VOLUME	4610.2 GALLONS
LEAK DET START TIME	29DEC00 08:45:12
LEAK DET END TIME	29DEC00 03:37:56
LEAK DET PERIOD	02 HRS 52 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	28DEC00 14:44:28
LEAK TEST NO 2144	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 494 9132

DATA HISTORY

31JAN01 09:57:57

FROM 30JAN01 05:34:27
TO 30JAN01 05:34:27

LEAK TEST 30JAN01 05:34:27
TANK 1 IMPLEADED REG 0.046 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	33.92 INCHES
PRODUCT VOLUME	2833.8 GALLONS
LEAK DET START TIME	30JAN01 01:46:07
LEAK DET END TIME	30JAN01 05:34:27
LEAK DET PERIOD	03 HRS 48 MINS
LEAK DET START WATER	0.25 INCHES
LEAK DET END WATER	0.83 INCHES
LAST DELIVERY	30JAN01 16:07:12
LEAK TEST NO 2483	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 494 9132

DATA HISTORY

31JAN01 09:55:25

FROM 30JAN01 02:08:45
TO 30JAN01 02:08:45

LEAK TEST 30JAN01 02:08:45
TANK 2 IMPLEADED PLUS -0.038 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	33.57 INCHES
PRODUCT VOLUME	2520.9 GALLONS
LEAK DET START TIME	29JAN01 02:08:01
LEAK DET END TIME	30JAN01 02:08:45
LEAK DET PERIOD	24 HRS 40 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	30JAN01 14:07:25
LEAK TEST NO 2483	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GSH OIL CO #16
12859 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24SEP01 06140140

FROM 22SEP01 21:57:27
TO 23SEP01 21:57:27

LEAK TEST 22SEP01 21:57:27

TANK 1 UNLEADED REG 0.027 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	46.22 INCHES
PRODUCT VOLUME	4799.6 GALLONS
LEAK DET START TIME	22SEP01 06:00:11
LEAK DET END TIME	22SEP01 21:57:27
LEAK DET PERIOD	15 HRS 57 MINS
LEAK DET START WATER	1.63 INCHES
LEAK DET END WATER	1.63 INCHES
LAST DELIVERY	21SEP01 16:22:41
LEAK TEST NO 5294	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GSH OIL CO #16
12859 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24SEP01 06141155

FROM 23SEP01 04:35:41
TO 23SEP01 04:35:41

LEAK TEST 23SEP01 04:35:41

TANK 2 UNLEADED PLUS 0.036 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	39.94 INCHES
PRODUCT VOLUME	3236.0 GALLONS
LEAK DET START TIME	23SEP01 00:23:05
LEAK DET END TIME	23SEP01 04:35:41
LEAK DET PERIOD	04 HRS 02 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	21SEP01 16:29:00
LEAK TEST NO 5294	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24JUL01 07:20:04

FROM 09JUL01 02:27:02
TO 09JUL01 02:27:02

LEAK TEST 09JUL01 02:27:02

TANK 3 UNLEADED PREM -0.017 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	37.47 INCHES
PRODUCT VOLUME	2982.9 GALLONS
LEAK DET START TIME	08JUL01 03:25:09
LEAK DET END TIME	09JUL01 02:27:02
LEAK DET PERIOD	23 HRS 01 MINS
LEAK DET START WATER	0.78 INCHES
LEAK DET END WATER	0.76 INCHES
LAST DELIVERY	05JUL01 04:55:49
LEAK TEST NO 4327	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24JUL01 07:24:23

FROM 23JUL01 17:16:22
TO 23JUL01 17:16:22

LEAK TEST 23JUL01 17:16:22

TANK 4 DIESEL #2 -0.020 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	20.12 INCHES
PRODUCT VOLUME	2441.9 GALLONS
LEAK DET START TIME	23JUL01 14:15:03
LEAK DET END TIME	23JUL01 17:16:23
LEAK DET PERIOD	03 HRS 01 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	19JUL01 13:39:20
LEAK TEST NO 4512	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21MAY01 07:28:48

FROM 11MAY01 14:32:39
TO 11MAY01 14:32:39

LEAK TEST 11MAY01 14:32:39
TANK 3 1% FAILED PREM -0.077 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	59.59 INCHES
PRODUCT VOLUME	5321.5 GALLONS
LEAK DET START TIME	11MAY01 07:07:00
LEAK DET END TIME	11MAY01 14:32:39
LEAK DET PERIOD	12 HRS 25 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.75 INCHES
LAST DELIVERY	09MAY01 13:17:03
LEAK TEST NO. 3534	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST 14.1

GAM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21MAY01 07:27:16

FROM 20MAY01 21:47:14
TO 20MAY01 21:47:14

LEAK TEST 20MAY01 21:47:14
TANK 4 DIESEL #2 -0.093 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	41.15 INCHES
PRODUCT VOLUME	4126.2 GALLONS
LEAK DET START TIME	20MAY01 19:09:07
LEAK DET END TIME	20MAY01 21:47:14
LEAK DET PERIOD	02 HRS 38 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	20MAY01 06:40:40
LEAK TEST NO. 3656	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GUN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24JUL01 07114141

FROM 23JUL01 18141154
TO 23JUL01 18141154

LEAK TEST 23JUL01 18141154

TANK 1 UNLEADED REG 0.030 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	26.49 INCHES
PRODUCT VOLUME	2264.6 GALLONS
LEAK DET START TIME	23JUL01 03131162
LEAK DET END TIME	23JUL01 18141154
LEAK DET PERIOD	15 HRS 10 MINS
LEAK DET START WATER	1.66 INCHES
LEAK DET END WATER	1.45 INCHES
LAST DELIVERY	21JUL01 16102117
LEAK TEST ID 4506	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GUN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24JUL01 07116102

FROM 23JUL01 03136150
TO 23JUL01 03136150

LEAK TEST 23JUL01 03136150

TANK 2 UNLEADED PLUS -0.023 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	43.01 INCHES
PRODUCT VOLUME	2573.5 GALLONS
LEAK DET START TIME	23JUL01 00:22:06
LEAK DET END TIME	23JUL01 03136150
LEAK DET PERIOD	03 HRS 14 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	21JUL01 15:56:36
LEAK TEST ID 4502	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GCK OIL CO #16
12539 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24SEP01 06145151

FROM 23SEP01 06:36:15
TO 23SEP01 06:36:15

LEAK TEST 23SEP01 06:36:15
TANK 3 UNLEADED PREM -0.078 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	56.40 INCHES
PRODUCT VOLUME	2869.1 GALLONS
LEAK DET START TIME	23SEP01 03:17:02
LEAK DET END TIME	23SEP01 06:36:15
LEAK DET PERIOD	03 HRS 19 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.78 INCHES
LAST DELIVERY	21SEP01 16:13:40
LEAK TEST NO 5297	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GCK OIL CO #16
12539 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

24SEP01 05143107

FROM 23SEP01 01:23:24
TO 23SEP01 01:23:24

LEAK TEST 23SEP01 01:23:24
TANK 4 DIESEL #2 -0.012 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	32.16 INCHES
PRODUCT VOLUME	2562.4 GALLONS
LEAK DET START TIME	22SEP01 22:59:00
LEAK DET END TIME	23SEP01 01:23:24
LEAK DET PERIOD	02 HRS 24 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	20SEP01 18:23:47
LEAK TEST NO 5293	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 695 9132

DATA HISTORY

260CT01 05:42:11

FROM 260CT01 01:13:45
TO 260CT01 01:13:45

LEAK TEST 260CT01 01:13:45

TANK 1 UNLEADED REG 0.091 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	37.56 INCHES
PRODUCT VOLUME	3629.8 GALLONS
LEAK DET START TIME	250CT01 22:34:05
LEAK DET END TIME	260CT01 01:13:45
LEAK DET PERIOD	02 HRS 39 MINS
LEAK DET START WATER	1.67 INCHES
LEAK DET END WATER	1.67 INCHES
LAST DELIVERY	240CT01 21:49:29
LEAK TEST NO 5730	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEN OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 695 9132

DATA HISTORY

260CT01 05:42:53

FROM 260CT01 02:23:49
TO 260CT01 02:23:49

LEAK TEST 260CT01 02:23:49

TANK 2 UNLEADED PLUS 0.014 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	36.32 INCHES
PRODUCT VOLUME	2912.5 GALLONS
LEAK DET START TIME	250CT01 22:31:00
LEAK DET END TIME	260CT01 02:23:49
LEAK DET PERIOD	03 HRS 02 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	240CT01 21:42:25
LEAK TEST NO 5731	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

USA OIL CO #16
12359 LAMBERT
WHITTIER CA
90606
562 694 9132

DATA HISTORY

260CT01 05:45:19

FROM 220CT01 02:25:04
TO 220CT01 02:25:04

LEAK TEST 220CT01 02:25:04

TANK 3 UNLEADED PREM -0.048 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	29.19 INCHES
PRODUCT VOLUME	2122.1 GALLONS
LEAK DET START TIME	210CT01 22:55:03
LEAK DET END TIME	220CT01 02:25:04
LEAK DET PERIOD	03 HRS 30 MINS
LEAK DET START WATER	0.78 INCHES
LEAK DET END WATER	0.77 INCHES
LAST DELIVERY	150CT01 18:47:55
LEAK TEST NO 5662	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

USA OIL CO #16
12359 LAMBERT
WHITTIER CA
90606
562 694 9132

DATA HISTORY

260CT01 05:43:31

FROM 240CT01 00:39:47
TO 260CT01 00:39:47

LEAK TEST 260CT01 00:39:47

TANK 4 DIESEL #2 -0.022 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 95.9%

PRODUCT HEIGHT	32.30 INCHES
PRODUCT VOLUME	2900.2 GALLONS
LEAK DET START TIME	250CT01 22:25:12
LEAK DET END TIME	260CT01 00:39:47
LEAK DET PERIOD	02 HRS 14 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	240CT01 21:39:23
LEAK TEST NO 5729	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

01JAN02 11:55:12

FROM 25DEC01 02:03:09
TO 25DEC01 02:03:09

LEAK TEST 25DEC01 02:03:09
TANK 1 UNLEADED REG -0.054 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	50.59 INCHES
PRODUCT VOLUME	5381.4 GALLONS
LEAK DET START TIME	24DEC01 02:03:09
LEAK DET END TIME	25DEC01 02:03:09
LEAK DET PERIOD	23 HRS 59 MINS
LEAK DET START WATER	1.63 INCHES
LEAK DET END WATER	1.64 INCHES
LAST DELIVERY	23DEC01 16:02:36
LEAK TEST NO 6491	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

01JAN02 11:56:20

FROM 28DEC01 01:01:50
TO 29DEC01 01:01:50

LEAK TEST 28DEC01 01:01:50
TANK 2 UNLEADED PLUS -0.012 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	28.00 INCHES
PRODUCT VOLUME	2002.9 GALLONS
LEAK DET START TIME	27DEC01 01:39:13
LEAK DET END TIME	28DEC01 01:01:50
LEAK DET PERIOD	23 HRS 22 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	25DEC01 15:50:11
LEAK TEST NO 6565	

END OF REPORT

[illegible] LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

01JAN02 11:37:23

FROM 29DEC01 02:15:19
TO 29DEC01 02:15:19

LEAK TEST 29DEC01 02:15:19

TANK 3 UNLEADED PREM -0.083 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	30.12 INCHES
PRODUCT VOLUME	2215.6 GALLONS
LEAK DET START TIME	28DEC01 22:11:02
LEAK DET END TIME	29DEC01 02:15:19
LEAK DET PER100	04 HRS 04 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.01 INCHES
LAST DELIVERY	28DEC01 12:10:31
LEAK TEST NO 6517	

END OF REPORT

[illegible]

GEM OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

01JAN02 11:59:13

FROM 27DEC01 19:27:54
TO 27DEC01 19:27:54

LEAK TEST 27DEC01 19:27:54

TANK 4 DIESEL #2 -0.059 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	23.20 INCHES
PRODUCT VOLUME	2470.8 GALLONS
LEAK DET START TIME	27DEC01 17:01:01
LEAK DET END TIME	27DEC01 19:27:54
LEAK DET PER100	02 HRS 26 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	25DEC01 15:29:42
LEAK TEST NO 6512	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GSH OIL CO #16
12339 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JAN02 01:39:18

FROM 22JAN02 01:30:12
TO 22JAN02 01:30:12

LEAK TEST 22JAN02 01:30:12

TANK 1 UNLEADED REG 0.033 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	41.11 INCHES
PRODUCT VOLUME	4121.2 GALLONS
LEAK DET START TIME	21JAN02 21:13:09
LEAK DET END TIME	22JAN02 01:30:12
LEAK DET PERIOD	04 HRS 12 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	19JAN02 23:20:49
LEAK TEST NO 6790	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GSH OIL CO #16
12339 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JAN02 03:00:12

FROM 22JAN02 03:22:29
TO 22JAN02 03:22:29

LEAK TEST 22JAN02 03:22:29

TANK 2 UNLEADED PLUS -0.002 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	34.69 INCHES
PRODUCT VOLUME	2697.3 GALLONS
LEAK DET START TIME	21JAN02 23:20:07
LEAK DET END TIME	22JAN02 03:22:29
LEAK DET PERIOD	03 HRS 52 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	19JAN02 23:20:43
LEAK TEST NO 6791	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEM OIL CO #16
12559 LANDERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JAN02 09:01:40

FROM 18JAN02 02:57:25
TO 18JAN02 02:57:25

LEAK TEST 18JAN02 02:57:23
TANK 3 UNLEADED PREM -0.095 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	36.92 INCHES
PRODUCT VOLUME	2923.4 GALLONS
LEAK DET START TIME	17JAN02 22:55:03
LEAK DET END TIME	18JAN02 02:57:25
LEAK DET PERIOD	04 HRS 02 MINS
LEAK DET START WATER	0.80 INCHES
LEAK DET END WATER	0.79 INCHES
LAST DELIVERY	17JAN02 17:54:11
LEAK TEST NO 6755	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GEM OIL CO #16
12559 LANDERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JAN02 09:02:43

FROM 19JAN02 02:35:40
TO 19JAN02 02:35:40

LEAK TEST 19JAN02 02:35:40
TANK 4 DIESEL #2 0.006 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	28.25 INCHES
PRODUCT VOLUME	2473.0 GALLONS
LEAK DET START TIME	19JAN02 00:19:03
LEAK DET END TIME	19JAN02 02:35:40
LEAK DET PERIOD	02 HRS 16 MINS
LEAK DET START WATER	0.80 INCHES
LEAK DET END WATER	0.80 INCHES
LAST DELIVERY	15JAN02 18:27:16
LEAK TEST NO 6772	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

16FEB02 06119116

FROM 16FEB02 04110:50
TO 16FEB02 04110:50

LEAK TEST 16FEB02 04110:50

TANK 1 UNLEADED REG -0.074 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	31.29 INCHES
PRODUCT VOLUME	2853.2 GALLONS
LEAK DET START TIME	16FEB02 00131107
LEAK DET END TIME	16FEB02 04110:50
LEAK DET PERIOD	03 HRS 39 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	14FEB02 23:55:36
LEAK TEST NO 7114	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&H OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

16FEB02 03:35147

FROM 16FEB02 01143102
TO 16FEB02 01143102

LEAK TEST 16FEB02 01143:02

TANK 2 UNLEADED PLUS 0.066 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	58.75 INCHES
PRODUCT VOLUME	5302.5 GALLONS
LEAK DET START TIME	15FEB02 23:03:05
LEAK DET END TIME	16FEB02 01143:02
LEAK DET PERIOD	02 HRS 39 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	14FEB02 22:59:37
LEAK TEST NO 7115	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GAM OIL CO #16
12359 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

16FEB02 09:43:16

FROM 01FEB02 16:38:24
TO 01FEB02 16:38:24

LEAK TEST 01FEB02 16:38:24

TANK 3 UNLEADED PREM -0.034 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	37.13 INCHES
PRODUCT VOLUME	2946.4 GALLONS
LEAK DET START TIME	01FEB02 11:04:10
LEAK DET END TIME	01FEB02 16:38:24
LEAK DET PERIOD	05 HRS 34 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.73 INCHES
LAST DELIVERY	31JAN02 07:06:13
LEAK TEST NO 6907	

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

GAM OIL CO #16
12359 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

16FEB02 09:47:41

FROM 15FEB02 22:40:16
TO 15FEB02 22:40:16

LEAK TEST 15FEB02 22:40:16

TANK 4 DIESEL #2 -0.025 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	47.30 INCHES
PRODUCT VOLUME	4943.0 GALLONS
LEAK DET START TIME	15FEB02 19:52:10
LEAK DET END TIME	15FEB02 22:40:16
LEAK DET PERIOD	02 HRS 48 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	14FEB02 23:51:56
LEAK TEST NO 7111	

END OF REPORT

LEAK SUMMARY

13MAR02 05:00:12 - 14MAR02 05:00:12

TANK TEST

TANK 1
13MAR02 05:04:41 -0.007 GAL/H PASS
14MAR02 04:04:50 -0.058 GAL/H PASS

LAST PASSED TEST
14MAR02 04:04:50 38.07 INCHES

0000 DAYS SINCE LAST PASSED TEST

TANK 2
13MAR02 10:44:19 0.016 GAL/H PASS
14MAR02 04:06:25 0.019 GAL/H PASS

LAST PASSED TEST
14MAR02 04:06:25 32.27 INCHES

0000 DAYS SINCE LAST PASSED TEST

TANK 3

LAST PASSED TEST
08MAR02 02:31:51 28.65 INCHES

0006 DAYS SINCE LAST PASSED TEST

TANK 4
13MAR02 05:09:36 -0.040 GAL/H PASS
13MAR02 09:09:47 0.036 GAL/H PASS
13MAR02 12:27:56 0.076 GAL/H PASS
13MAR02 21:00:13 -0.070 GAL/H PASS
13MAR02 23:26:49 -0.038 GAL/H PASS
14MAR02 02:11:47 0.049 GAL/H PASS
14MAR02 04:55:14 -0.007 GAL/H PASS

LAST PASSED TEST
14MAR02 04:55:14 33.91 INCHES

0000 DAYS SINCE LAST PASSED TEST

END OF REPORT

ULLAGE	(90%)	6567.0 GALLONS
NET VOLUME		2339.9 GALLONS
WATER HEIGHT		0.00 INCHES
PROD TEMPERATURE		77.57 DEG F

LEAK SUMMARY

31MAR02 05:00:07 - 01APR02 05:00:07

TANK TEST

TANK 1
31MAR02 07:07:51 0.011 GAL/H PASS
01APR02 02:20:20 0.076 GAL/H PASS

LAST PASSED TEST
01APR02 02:20:20 36.42 INCHES

0000 DAYS SINCE LAST PASSED TEST

TANK 2
31MAR02 05:34:52 0.023 GAL/H PASS
31MAR02 19:25:50 -0.036 GAL/H PASS
01APR02 01:28:52 0.036 GAL/H PASS
01APR02 04:08:36 0.016 GAL/H PASS

LAST PASSED TEST
01APR02 04:08:36 35.04 INCHES

0000 DAYS SINCE LAST PASSED TEST

TANK 3
01APR02 03:37:29 0.006 GAL/H PASS

LAST PASSED TEST
01APR02 03:37:29 29.46 INCHES

0000 DAYS SINCE LAST PASSED TEST

TANK 4

LAST PASSED TEST
31MAR02 04:23:11 28.16 INCHES

0001 DAYS SINCE LAST PASSED TEST

END OF REPORT

ProTech Petroleum Services, Inc.

Fuel System Maintenance & Testing

MONITORING SYSTEM CERTIFICATION

For use by all jurisdictions within the State of California

Authority Cited: Chapter 6.7, Health and Safety Code; Chapter 16, Division 3, Title 23, California Code of Regulations

This form must be used to document testing and servicing of monitoring equipment. If more than one monitoring system control panel is installed a the facility, a separate certification or report must be prepared for each monitoring system control panel be the technician who performs the work. A copy of this form must be provided to the tank system owner/operator. Instructions are printed on the back of this page.

General Information

Facility Name: G & M Oil # 16 - Chevron Station		Bldg. No.:
ite Address: 12559 Lambert Road	City: Whittier	Zip: 90606
Facility Contact Person: ProTank Inc.	Phone No.: 562-696-9132	
Make/Model of Monitoring System: Red Jacket, ST-1401, SN: 4119501-9	Date of Test/Service: 9/6/01	

Inventory of Equipment Tested/Certified

Check the appropriate boxes to indicate specific equipment inspected/serviced:

Tank ID: T1 - 87 - 10K	Tank ID: T2 - 89 - 8K
☑ In-Tank Gauging Probe. Model:	☑ In-Tank Gauging Probe. Model:
☐ Annular Space or Vault Sensor: Model:	☐ Annular Space or Vault Sensor: Model:
☑ Piping Sump/Trench Sensor. Model: F	☑ Piping Sump/Trench Sensor. Model: F
☑ Mechanical Line Leak Detector. Model: FXIV	☑ Mechanical Line Leak Detector. Model: FXIV
☐ Electronic Line Leak Detector. Model:	☐ Electronic Line Leak Detector. Model:
☐ Tank Overfill/Hi-Level Sensor. Model:	☐ Tank Overfill/Hi-Level Sensor. Model:
☐ Dispenser Containment Sensor. Model:	☐ Dispenser Containment Sensor. Model:
☐ Shear Valve(s)	☐ Shear Valve(s)
☑ Dispenser Containment Float(s) and Chain(s).	☑ Dispenser Containment Float(s) and Chain(s).
☐ Other (specify equipment type and model in Section E on Page 2).	☐ Other (specify equipment type and model in Section E on Page 2).

Tank ID: T3 - 91 - 8K	Tank ID: T4 - Dual - 10K
☑ In-Tank Gauging Probe. Model:	☑ In-Tank Gauging Probe. Model:
☐ Annular Space or Vault Sensor: Model:	☐ Annular Space or Vault Sensor: Model:
☑ Piping Sump/Trench Sensor. Model: F	☑ Piping Sump/Trench Sensor. Model: F
☑ Mechanical Line Leak Detector. Model: 99-LD2000	☑ Mechanical Line Leak Detector. Model: FXIV
☐ Electronic Line Leak Detector. Model:	☐ Electronic Line Leak Detector. Model:
☐ Tank Overfill/Hi-Level Sensor. Model:	☐ Tank Overfill/Hi-Level Sensor. Model:
☐ Dispenser Containment Sensor. Model:	☐ Dispenser Containment Sensor. Model:
☐ Shear Valve(s)	☐ Shear Valve(s)
☑ Dispenser Containment Float(s) and Chain(s).	☑ Dispenser Containment Float(s) and Chain(s).
☐ Other (specify equipment type and model in Section E on Page 2).	☐ Other (specify equipment type and model in Section E on Page 2).

C. Certification – I Certified that the equipment identified in this document was inspected/serviced in accordance with the manufacturers' guidelines. Attached to this Certification is information (e.g. manufacturers' checklists) necessary to verify that this information is correct and a Site Plan showing the layout of monitoring equipment. For any equipment capable of generating such reports, I have also attached a copy of the (check all that apply): System set-up report ____, Alarm history report ____.

echnician Name (print): Eric Garrison	Cert./Lic. No.	Signature:

1020 N. Batavia Street, Suite F, Orange CA 92867
800-634-0085 • 714-633-9797 • Fax 714-633-9798

COPY SENT TO STATION

ProTech Petroleum Services, Inc.

Fuel System Maintenance & Testing

Monitoring System Certification

Site Address: 12559 Lambert Road, Whittier, CA, 90606	Date of Testing/Servicing: 9/6/01

D. Results of Testing/Servicing:

Software Version Installed: RJE ST 14.1

Complete the following checklist:

☑ Yes	☐ No*	Is the audible alarm operational?
☑ Yes	☐ No*	Is the visual alarm operational?
☑ Yes	☐ No*	Were all sensors visually inspected, functionally tested, and confirmed operational?
☑ Yes	☐ No* ☐ N/A	Were all sensors installed at the lowest point of the secondary containment and positioned so that other equipment will not interfere with their proper operation?
☐ Yes	☐ No* ☑ N/A	If alarms are relayed to a remote monitoring station , is all communications equipment(e.g. modem) operational?
☑ Yes	☐ No* ☐ N/A	For pressurized piping systems, does the turbine automatically shut down if the piping secondary containment monitoring system detects a leak, fails to operate, or is electrically disconnected? (*Check all that apply*) ✓ Sump/Trench Sensors; ____ Dispenser Containment Sensors; Did you confirm positive shut-down due to leaks and sensor failure/disconnection? ✓ Yes ____ No
☐ Yes	☐ No* ☑ N/A	For tank systems that utilize the monitoring system as the primary tank overfill warning device (i.e. no mechanical overfill device is installed), is the overfill warning alarm visible and audible at the tank fill point(s) and operating properly? If so, at what percent of the tank capacity does the alarm engage? _____ %
☐ Yes*	☑ No	Was any monitoring equipment replaced? If yes, identify specific sensors, probes, or other equipment replaced and list the manufacturer name and model for all replacement parts in Section E, below.
☐ Yes*	☑ No	Was any liquid found inside any secondary containment systems designed as a dry system? (*Check all that apply*) ____ Product; ____ Water. If yes, describe causes in Section E, below.
☑ Yes	☐ No*	Was monitoring system set-up reviewed to ensure proper settings?
☑ Yes	☐ No*	Is all monitoring equipment operational per manufacturer's specifications?

In Section E below, describe how and when these deficiencies were or will be corrected.

E. Comments:

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ProTech Petroleum Services, Inc.

Fuel System Maintenance & Testing

Monitoring System Certification

Site Address: 12559 Lambert Road, Whittier, CA 90606	Date of Testing/Servicing: 9/6/01

F. In-Tank Gauging/SIR Equipment:

☐ Check this box if tank gauging is used only for inventory control.

☐ Check this box if no tank gauging or SIR equipment is installed.

This section must be completed if in-tank gauging equipment is used to perform leak detection monitoring.

Complete the following checklist:

☑ Yes	☐ No*	Has all input wiring been inspected for proper entry and termination, Including testing for ground faults?
☑ Yes	☐ No*	Were all tank gauging probes visually inspected for damage and residue buildup?
☑ Yes	☐ No*	Was accuracy of system product level readings tested?
☑ Yes	☐ No*	Was accuracy of system water level readings tested?
☑ Yes	☐ No*	Were all probes reinstalled properly?
☑ Yes	☐ No*	Were all items on the equipment manufacturer's maintenance checklist completed?

*In the Section H, below, describe how and when these deficiencies were or will be corrected.

G. Line Leak Detectors (LLD):

☐ Check this box if LLDs are not installed

Complete the following checklist:

☑ Yes	☐ No* ☐ N/A	For equipment start-up or annual equipment certification, was a leak simulated to verify LLD performance? (Check all that apply) Simulated leak rate: ✓ 3 g.p.h.(1) ___ 0.1 g.p.h.(2) ___ 0.2 g.p.h.(2) Note: 1. Required for equipment start-up certification and annual certification. 2. Unless mandated by local agency, certification required only for electronic LLD start-up.
☑ Yes	☐ No*	Were all LLDs confirmed operational and accurate within regulatory requirements?
☑ Yes	☐ No*	Was the testing apparatus properly calibrated?
☑ Yes	☐ No* ☐ N/A	For mechanical LLDs, does the LLD restrict product flow if it detects a leak?
☐ Yes	☐ No* ☑ N/A	For electronic LLDs, does the turbine automatically shut off if the LLD detects a leak?
☐ Yes	☐ No* ☑ N/A	For electronic LLDs, does the turbine automatically shut off if any portion of the monitoring system is disabled or disconnected?
☐ Yes	☐ No* ☑ N/A	For electronic LLDs, does the turbine automatically shut off if any portion of the monitoring system malfunctions or fails a test?
☐ Yes	☐ No* ☑ N/A	For electronic LLDs, have all accessible wiring connections been visually inspected?
☑ Yes	☐ No*	Were all items on the equipment manufacturer's maintenance checklist completed?

*In the Section H, below, describe how and when these deficiencies were or will be corrected.

H. Comments: Replaced 91 MLD.

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ProTech Petroleum Services, Inc.

Fuel System Maintenance & Testing

LEAK DETECTOR TEST FORM

Facility Name: G & M Oil # 16 - Chevron Station	Site Contact: Jennifer Talbert
Address: 12559 Lambert Road	Phone: 562-696-9132
Whittier, CA 90606	Fax:
	Test Date: 9-06-01

LEAK DETECTOR TEST RESULTS:

Line Number:	1	2	3	4		
Product:	91	89	87	Diesel		
Manufacturer:	Red Jacket	Red Jacket	Red Jacket	Red Jacket		
Leak Detector Model:	XL	FX1V	FX1V	FX1V		
Serial Number:	307948007	212996356	211998460	204003346		
Line Pressure PSI:	24	26	26	29		
Check Valve PSI:	14	16	16	7		
Resiliency:	125ml	105ml	100ml	50ml		
Opening Time: (Sec.)	4.7	5.6	4.7	6.4		
Leak Rate:	3 gph	3 gph	3 gph	3 gph	3 gph	3 gph
Metering PSI:	Hesitates @ 8 psi	10	8	10		
PASS/FAIL:	FAILED	PASS	PASS	PASS		

Test Method used: Red Jacket Approved FTA (Field Test Apparatus) in accordance with EPA 40CFR280.44 (a) per RJ-21

All mechanical leak detectors are tested in line and in accordance with manufacturer's specifications.

Tester ID #:	
Tester Signature:	Thomas Benson
Tester Printed Name:	Thomas Benson
Test Comments:	

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ProTech Petroleum Services, Inc.

Fuel System Maintenance & Testing

LEAK DETECTOR TEST FORM

Facility Name: G & M Oil # 16 - Chevron Station	Site Contact: Jennifer Talbert
Address: 12559 Lambert Road	Phone: 562-696-9132
Whittier, CA 90606	Fax:
	Test Date: 9-06-01

LEAK DETECTOR TEST RESULTS:

Line Number:	1	2	3	4		
Product:	91					
Manufacturer:	VMI					
Leak Detector Model:	99LD-2000					
Serial Number:	001041565					
Line Pressure PSI:	24					
Check Valve PSI:	14					
Resiliency:	90ml					
Opening Time: (Sec.)	3.9					
Leak Rate:	3 gph	3 gph	3 gph	3 gph	3 gph	3 gph
Metering PSI:	19					
PASS/FAIL:	PASS					

Test Method used: Red Jacket Approved FTA (Field Test Apparatus) in accordance with EPA 40CFR280.44 (a) per RJ-21

All mechanical leak detectors are tested in line and in accordance with manufacturer's specifications.

Tester ID #:	
Tester Signature:	Thomas Benson
Tester Printed Name:	Thomas Benson
Test Comments:	

1020 N. Batavia Street, Suite F * Orange, CA 92867
800-634-0085 * 714-633-9797 * fax 714-633-9798

Site 16

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

17MAR03 08:26:05

FROM 10MAR03 00:32:29
TO 10MAR03 00:32:29

LEAK TEST 10MAR03 00:32:29
****
TANK 1 UNLEADED REG 0.081 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	33.26 INCHES
PRODUCT VOLUME	3101.4 GALLONS
LEAK DET START TIME	09MAR03 21:15:13
LEAK DET END TIME	10MAR03 00:32:29
LEAK DET PERIOD	03 HRS 17 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	07MAR03 13:34:37
LEAK TEST NO 12038	

****

END OF REPORT

Site 16

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

20MAR03 10:31:29

FROM 13MAR03 01:22:19
TO 13MAR03 01:22:19

LEAK TEST 13MAR03 01:22:19
****
TANK 3 UNLEADED PREM -0.045 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	39.05 INCHES
PRODUCT VOLUME	3151.8 GALLONS
LEAK DET START TIME	12MAR03 23:59:13
LEAK DET END TIME	13MAR03 01:22:19
LEAK DET PERIOD	01 HRS 23 MINS
LEAK DET START WATER	0.05 INCHES
LEAK DET END WATER	0.02 INCHES
LAST DELIVERY	06MAR03 16:19:40
LEAK TEST NO 12063	

****

Site 16

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

17MAR03 08:23:30

FROM 06MAR03 04:33:24
TO 06MAR03 04:33:24

LEAK TEST 06MAR03 04:33:24
****
TANK 2 UNLEADED PLUS 0.007 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	56.56 INCHES
PRODUCT VOLUME	5049.8 GALLONS
LEAK DET START TIME	06MAR03 01:25:09
LEAK DET END TIME	06MAR03 04:33:24
LEAK DET PERIOD	03 HRS 08 MINS
LEAK DET START WATER	0.01 INCHES
LEAK DET END WATER	0.03 INCHES
LAST DELIVERY	04MAR03 13:51:31
LEAK TEST NO 11975	

****

Site 16

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

17MAR03 08:21:24

FROM 04MAR03 01:38:40
TO 04MAR03 01:38:40

LEAK TEST 04MAR03 01:38:40
****
TANK 4 DIESEL #2 0.078 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	45.73 INCHES
PRODUCT VOLUME	4733.7 GALLONS
LEAK DET START TIME	03MAR03 23:05:08
LEAK DET END TIME	04MAR03 01:38:40
LEAK DET PERIOD	02 HRS 33 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	02MAR03 23:09:58
LEAK TEST NO 11939	

****

ST #10

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21APR03 08:08:25

FROM 20APR03 07:17:05
TO 20APR03 07:17:05

LEAK TEST 20APR03 07:17:05
****
TANK 2 UNLEADED PLUS 0.026 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	44.95 INCHES
PRODUCT VOLUME	3789.7 GALLONS
LEAK DET START TIME	20APR03 04:28:09
LEAK DET END TIME	20APR03 07:17:05
LEAK DET PERIOD	02 HRS 48 MINS
LEAK DET START WATER	0.04 INCHES
LEAK DET END WATER	0.05 INCHES
LAST DELIVERY	17APR03 00:12:18
LEAK TEST NO 12743	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21APR03 08:07:31

FROM 20APR03 03:01:02
TO 20APR03 03:01:02

LEAK TEST 20APR03 03:01:02
****
TANK 1 UNLEADED REG 0.043 GAL/H PASS

SHUTDOWN TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	30.57 INCHES
PRODUCT VOLUME	2762.9 GALLONS
LEAK DET START TIME	20APR03 00:41:12
LEAK DET END TIME	20APR03 03:01:02
LEAK DET PERIOD	02 HRS 19 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	18APR03 17:47:55
LEAK TEST NO 12735	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21APR03 08:10:37

FROM 20APR03 07:03:32
TO 20APR03 07:03:32

LEAK TEST 20APR03 07:03:32
****
TANK 4 DIESEL #2 0.031 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	46.21 INCHES
PRODUCT VOLUME	4798.8 GALLONS
LEAK DET START TIME	20APR03 04:21:04
LEAK DET END TIME	20APR03 07:03:32
LEAK DET PERIOD	02 HRS 42 MINS
LEAK DET START WATER	0.00 INCHES

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21APR03 08:09:23

FROM 20APR03 23:52:04
TO 20APR03 23:52:04

LEAK TEST 20APR03 23:52:04
****
TANK 3 UNLEADED PREM 0.026 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	56.20 INCHES
PRODUCT VOLUME	5011.3 GALLONS
LEAK DET START TIME	20APR03 17:49:00

ED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

OIL CO #16
9 LAMBERT
TIER CA
36
696 9132

DATA HISTORY

23MAY03 09:52:06

OM 22MAY03 23:20:55
22MAY03 23:20:55

EAK TEST 22MAY03 23:20:55
****
ANK 3 UNLEADED PREM 0.009 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	58.19 INCHES
PRODUCT VOLUME	5223.7 GALLONS
LEAK DET START TIME	22MAY03 17:46:14
LEAK DET END TIME	22MAY03 23:20:55
LEAK DET PERIOD	05HRS 3 INCHES
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	20MAY03 13:53:06
LAST DELIVERY	
LEAK TEST NO 13313	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

21MAY03 08:36:22

FROM 08MAY03 00:27:33
TO 08MAY03 00:27:33

LEAK TEST 08MAY03 00:27:33
****
TANK 4 DIESEL #2 -0.077 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	28.65 INCHES
PRODUCT VOLUME	2526.2 GALLONS
LEAK DET START TIME	07MAY03 21:23:09
LEAK DET END TIME	08MAY03 00:27:33
LEAK DET PERIOD	03 HRS 04 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	02MAY03 04:14:46
LEAK TEST NO 13066	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22MAY03 09:04:23

FROM 10MAY03 21:10:02
TO 10MAY03 21:10:02

LEAK TEST 10MAY03 21:10:02
****
TANK 1 UNLEADED REG -0.042 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	52.56 INCHES
PRODUCT VOLUME	5642.6 GALLONS
LEAK DET START TIME	10MAY03 05:55:01
LEAK DET END TIME	10MAY03 21:10:02
LEAK DET PERIOD	15 HRS 15 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	09MAY03 19:54:07
LEAK TEST NO 13107	

****

END OF REPORT

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

20MAY03 13:15:50
FROM 07MAY03 11:38:28
TO 07MAY03 11:38:28

LEAK TEST 07MAY03 11:38:28
****
TANK 2 UNLEADED PLUS 0.005 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	55.86 INCHES
PRODUCT VOLUME	4975.1 GALLONS
LEAK DET START TIME	07MAY03 06:17:02
LEAK DET END TIME	07MAY03 11:38:28
LEAK DET PERIOD	05 HRS 21 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.05 INCHES
LAST DELIVERY	06MAY03 20:16:55
LEAK TEST NO 13054	

****

END OF REPORT

JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

-IL CO #16
LAMBERT
.TER CA
36
-96 9132

DATA HISTORY

22JUN03 10:02:59

09JUN03 22:22:35
09JUN03 22:22:35

< TEST 09JUN03 22:22:35
****
ANK 2 UNLEADED PLUS -0.082 GAL/H PASS

ITINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

:ODUCT HEIGHT	45.63 INCHES
:ODUCT VOLUME	3864.0 GALLONS
LEAK DET START TIME	09JUN03 17:20:07
LEAK DET END TIME	09JUN03 22:22:35
EAK DET PERIOD	05 HRS 02 MINS
EAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.09 INCHES
LAST DELIVERY	08JUN03 23:02:02
EAK TEST NO 13653	

****

END OF REPORT

- JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JUN03 10:10:33

FROM 10JUN03 04:32:14
TO 10JUN03 04:32:14

EAK TEST 10JUN03 04:32:14
****
-TANK 4 DIESEL #2 -0.024 GAL/H PASS

ONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

RODUCT HEIGHT	40.79 INCHES
RODUCT VOLUME	4078.8 GALLONS
EAK DET START TIME	10JUN03 01:16:08
LEAK DET END TIME	10JUN03 04:32:14
EAK DET PERIOD	03 HRS 16 MINS
EAK DET START WATER	0.00 INCHES
EAK DET END WATER	0.00 INCHES
LAST DELIVERY	06JUN03 01:47:56
EAK TEST NO 13661	

RED JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JUN03 10:06:39

FROM 13JUN03 22:26:05
TO 13JUN03 22:26:05

LEAK TEST 13JUN03 22:26:05
****
TANK 1 UNLEADED REG -0.072 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	16.47 INCHES
PRODUCT VOLUME	1152.6 GALLONS
LEAK DET START TIME	13JUN03 03:31:01
LEAK DET END TIME	13JUN03 22:26:05
LEAK DET PERIOD	18 HRS 55 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.00 INCHES
LAST DELIVERY	10JUN03 19:15:57
LEAK TEST NO 13725	

****

END OF REPORT

- JACKET LEAK DETECTION SYSTEMS
VERSION RJE-ST_14.1

G&M OIL CO #16
12559 LAMBERT
WHITTIER CA
90606
562 696 9132

DATA HISTORY

22JUN03 10:04:27

FROM 12JUN03 02:27:26
TO 12JUN03 02:27:26

LEAK TEST 12JUN03 02:27:26
****
TANK 3 UNLEADED PREM -0.061 GAL/H PASS

CONTINUOUS TEST
ALARM LEAK RATE 0.200 GAL/H
PROBABILITY OF DETECTION 99.9%

PRODUCT HEIGHT	47.25 INCHES
PRODUCT VOLUME	4040.7 GALLONS
LEAK DET START TIME	12JUN03 01:17:09
LEAK DET END TIME	12JUN03 02:27:26
LEAK DET PERIOD	01 HRS 10 MINS
LEAK DET START WATER	0.00 INCHES
LEAK DET END WATER	0.04 INCHES
LAST DELIVERY	10JUN03 19:02:15
LEAK TEST NO 13697	

G&M #16
G&M 16
12559 lambert
whittier, ca

PRECISION TANK TIGHTNESS TEST LOG

'ank Information

'ank Number		1	2	3
)escription		87 regular	89 plus	91 prem
'uel Type		Gasoline-Low	Gasoline-Med	Gasoline-Hi
'iameter	(in)	95	95	95
'apacity	(gal)	9940	8136	8136
'uel Level	(in)	61.07	60.88	72.29
ercent Full	(%)	68	68	82

recision Test Results

tart Date		05/20/03	05/20/03	05/20/03
tart Time		20:15:29	21:15:24	20:15:26
uration		01:04:03	01:13:25	01:04:11
emp Rate	(F/hr)	-0.052	-0.005	-0.026
hreshold	(gal/hr)	+/- 0.05	+/- 0.05	+/- 0.05
eak Rate	(gal/hr)	-0.009	0.049	0.044
ass/Fail		Passed	Passed	Passed

llage Test Results

est Date	N/A	N/A	N/A
est Time	N/A	N/A	N/A
ass/Fail	N/A	N/A	N/A

operator: 96-1593 Signatu[illegible] Date: 07/09/03

G&M # 16

PRECISION TANK TIGHTNESS TEST LOG

Tank Information

Tank Number		1
Description		diesel #2
Fuel Type		Diesel 2
Diameter	(in)	91
Capacity	(gal)	9940
Fuel Level	(in)	60.33
Percent Full	(%)	70

Precision Test Results

Start Date		07/08/03
Start Time		19:53:29
Duration		00:59:03
Temp Rate	(F/hr)	-0.020
Threshold	(gal/hr)	+/- 0.05
Leak Rate	(gal/hr)	0.033
Pass/Fail		Passed

Ullage Test Results

Test Date	N/A
Test Time	N/A
Pass/Fail	N/A

Operator: 96-1593 Signatu[illegible] Date: 07/09/03

C

BORING LOG - PREPARED BY GeoRemediation, Inc.
& M Oil (50980)
-92 Drilling Method: Mobile B-61
: 12559 Lambert Rd. Logged By: JMC Depth to GW: 60'
Whittier, CA Total Depth: 70'
BORING NO.: W-1

SURFACE TOPOGRAPHY AND CONDITIONS: Asphalt

BACKFILL INFO.: Well Installation

FT	SAMPLE	USCS GROUP SYMBOL		DESCRIPTION	GAS TECH READING
-				2" Asphaltic Concrete	
-	X	CL	7 14	SILTY CLAY: Dark grey, moist, stiff, very slight odor.	25 ppm
0 -	X	SP	7 11	SAND: Grey, fine to medium grained, moist, medium dense, no odor.	10 ppm
5 -	X	CL	10 19	SILTY CLAY: Very dark brown, moist, very stiff, slight odor.	60 ppm
0 -	X	ML	11 19	CLAYEY SILT: Dark brown, moist, very stiff, slight odor.	130 ppm
5 -	X	CL	7 15	SILTY CLAY: Dark brown, stiff, moist, no odor.	10 ppm
0 -	X	CL	13 21	At 30', becoming very stiff to hard Silty Clay no odor.	30 ppm
5 -	X	CL SP	7 16	At 35', becoming light brown Silty Clay, odor. SAND: Light grey, fine to medium grained.	400 ppm
0 -	X	CL	12 17	SILTY CLAY: Dark brown, very stiff to hard, moist, no odor.	50 ppm
5 -	X	CL	10 16	At 45', becoming brown Silty Clay, slight odor.	350 ppm
0 -	X	CL	12 23	At 50', becoming hard Silty Clay with slight odor.	300 ppm
5 -	X	ML		SANDY SILT: Light brown, moist, stiff, slight odor.	450 ppm
0 -	X	SP		SAND: Grey, fine to medium grained, saturated, medium dense, no odor.	175 ppm
5 -					
0 -				Bottom of boring at 70'	
5 -				Well Installation 0 - 35': 4" I.D. blank casing 35 - 70': 4" I.D. well screen 3' thick bentonite plug at 30'	
-					
-					
-					
-					
-					
-					
-					

Reviewed by:

James J.M. Chang
R.C.E. 41896

BORING LOG - PREPARED BY GeoRemediation, Inc.
& M Oil (50980)
-92 Drilling Method: Mobile B-61
n: 12559 Lambert Rd. Logged By: JMC Depth to GW: 50'
Whittier, CA Total Depth: 70'
BORING NO.: B-12 (W-2)

SURFACE TOPOGRAPHY AND CONDITIONS: Soil

BACKFILL INFO.: Well Installation

DEPTH	SAMPLE	USCS GROUP SYMBOL		DESCRIPTION	GAS TECH READING
0					
5	X	ML	12 19	SANDY SILT: Medium brown, very stiff, moist, no odor.	25 ppm
10	X	CL	12 17	SILTY CLAY: Dark brown, very stiff, moist, no odor.	10 ppm
15	X	ML	11 17	CLAYEY SILT: Dark brown, very stiff, moist, no odor.	5 ppm
20	X	CL	9 17	SILTY CLAY: Medium to dark brown, very stiff, no odor.	5 ppm
25	X	CL	16 21	At 25', becoming dark grey brown, hard Silty Clay, no odor.	25 ppm
30	X	CL	12 17	At 30', becoming medium brown, very stiff to hard Silty Clay, no odor.	5 ppm
35	X	ML	9 14	SANDY SILT: Yellowish brown, stiff, moist, gasoline odor.	90% LEL
40	X	ML	12 14	At 40', becoming brown, very stiff Sandy Silt very slight odor.	250 ppm
45	X	SP-SM	12 21	SILTY SAND: Brown, fine grained, moist, medium dense, gasoline odor.	95% LEL
50	X	ML	11 21	SANDY SILT: Brown, very moist to wet, very stiff, odor.	20% LEL
55	X	ML	12 16	At 55', light brown, saturated, very stiff Sandy Silt, very slight odor.	60 ppm
60	X	SP	12 16	SAND: Grey, fine to coarse grained, saturated, medium dense, no odor.	
65					
70				Bottom of boring at 70'	
75				Well Installation 0 - 40': 2" I.D. blank casing 40 - 70': 2" I.D. well screen 3' thick bentonite plug at 30'	

Reviewed by:

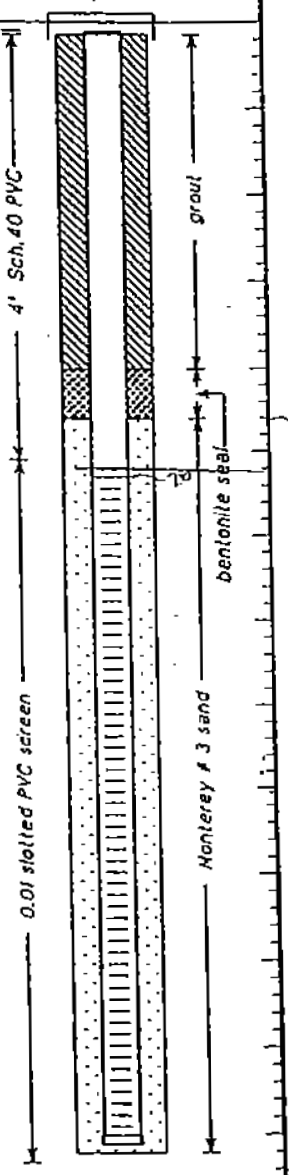
James J.M. Chang
R.C.E. 41896

ATLAS ENVIRONMENTAL ENGINEERING, INC.

DRING NUMBER W-3 DRILLER D. Duxbury
ATE DRILLED September 3, 1997 PROJECT G&H Oil Co. Station #18
URFACE ELEVATION Ft. Arbitrary GEOLOGIST Eloy Luna

DEPTH feet	SAMPLE	SAMP. NO.	BLOWS/FT.	PID (ppm)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION AND REMARKS
						ML	Asphaltic over base Gravel base.
5	■	W3-5	25	0			Sandy SILT: moist, brown, dense, subangular, no HC odor.
10	■	W3-10	30	0			Becomes sandy silt with clay, rootlets common, no HC odor.
15	■	W3-15	29	0		SM	Silty SAND with clay; moist, brown to dark brown, fine grained, moderately compact, no HC odor. (55% sand, 30% silt and 15% clay)
20	■	W3-20	29	0			
25	■	W3-25	36	30		ML	Sandy SILT with clay; moist, brown, low plasticity, moderately stiff, no HC odor.
30	■	W3-30	27	0			
35		W3-35	28	100		SM	Silty SAND with clay; moist, brown, fine grained, loose, subangular, no HC odor. White mottling common.
40	■	W3-40	28	20		CL	CLAY with silt; moist, dark brown, medium plasticity, mild HC odor.
45	■	W3-45	18	3500		SP	Poorly graded SAND with silt; moist, brown, fine grained, loose, subangular to subrounded, loose, no HC odor. (85% sand and 15% silt) Becomes wet.
50	■	W3-50	18	780			
55							Becomes gravelly sand, wet, brownish gray, medium to coarse grained, no HC odor. (80% sand and 20% fine gravel.
60							
65							Bottom of boring.
70							
75							
80							

WELL DIAGRAM



JOB NUMBER: GH16-W3

ATLAS ENVIRONMENTAL ENGINEERING, INC.

BORING NUMBER W-4

DATE DRILLED February 24, 1998

SURFACE ELEVATION 98.66 Feet NSL

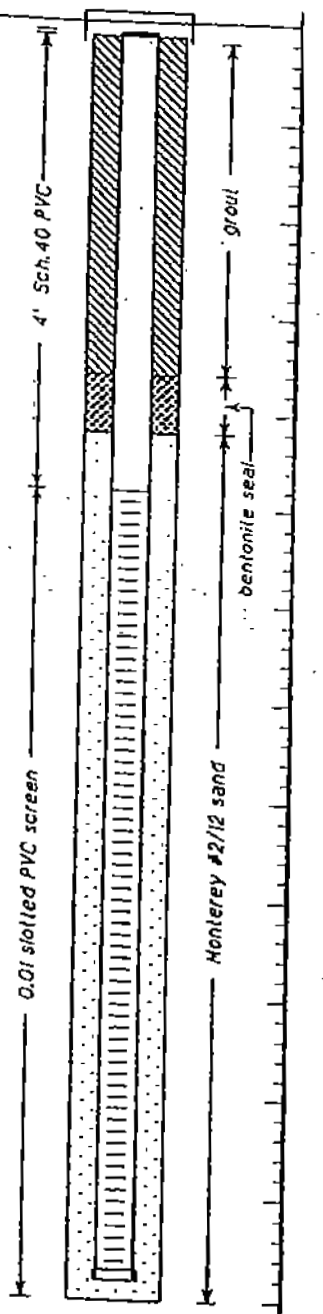
DRILLER D. Duxbury

PROJECT G&N Oil Co. Station #16

GEOLOGIST Eloy Luna

DEPTH feet	SAMPLE	SAMP. NO.	BLOWS/FT.	PID (ppm)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION AND REMARKS
						CL	Asphalt over base
5	■	W4-5	--	10		ML	Silty CLAY, grayish black, moist, low to medium plasticity, HC odor. (70% clay, 30% silt). Changes to brown at approximately 2 feet.
10	■	W410	21	0			Sandy SILT with clay, brown, moist, no HC odor. (60% silt, 30% fine grained sand and 10% clay). Clay percentage increases with depth.
15	■	W415	18	20			
20	■	W420	18	0		SP	Poorly Graded SAND with silt, brown, moist, fine grained, medium dense, subangular to subrounded, no HC odor. (80% sand, 15% silt, trace clay).
25	■	W425	19	0		CL	Silty CLAY, greenish brown, moist, very stiff, low to medium plasticity, no HC odor.
30	■	W430	18	10		SP	Clayey SAND with silt, brown with light brown streaks, moist, fine grained, low plasticity, subangular to subrounded.
						CL	
						SP	Silty CLAY, brownish black, HC odor.
35		W435	17	10			Poorly Graded SAND with silt, greenish-brown, moist fine grained, subrounded to rounded. (90% sand and 10% silt)
40	■	W440	20	20			
45	■	W445	34	1100			
50							
55							
60							
65							Bottom of Boring.
70							

WELL DIAGRAM

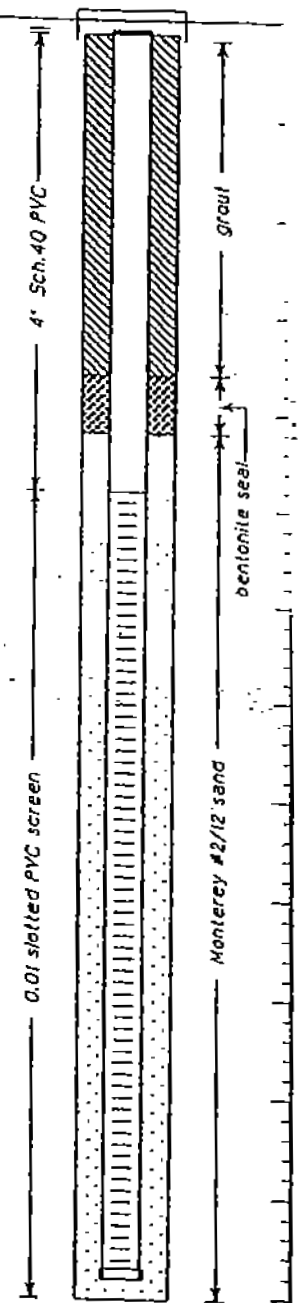


ATLAS ENVIRONMENTAL ENGINEERING, INC.

BORING NUMBER W-5
DATE DRILLED February 24, 1998
SURFACE ELEVATION 99.70 Feet MSL
DRILLER D. Durbury
PROJECT G&M Oil Co. Station #16
GEOLOGIST Eloy Luna

DEPTH feet	SAMPLE	SAMP. NO.	BLOWS/FT.	PID (ppm)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION AND REMARKS
						HL	Asphalt over base
5	■	W5-5	9	0			Clayey SILT, dark brown, moist, stiff, low to medium plasticity, no HC odor. (60% silt, 40% clay) at approx. 4 feet clay decreases to 30%.
10	■	W510	13	0		SM	Silty SAND with clay, brown, moist, fine grained subrounded to rounded (60% sand, 30% silt, 10% clay).
15	■	W515	12	0			Clay decreases to less than 5%.
20	■	W520	15	0			Silt decreases to 20%, some gravel present, medium grained, subangular.
25	■	W525	15	0			Silt increases to 30%, no HC odor.
						HL	Clayey SILT, dark brown, moist, very stiff, low to medium plasticity, clay modules observed (70% silt, 30% Clay).
30	■	W530	24	0			
						CL	Silty CLAY, moist (60% clay, 40% silt).
35		W535	18	0		HL	Clayey SAND with silt, brown, moist, fine grained, subrounded, no HC odor. (55% sand, 30% clay, 15% silt)
						SP	Poorly Graded SAND, brown, moist, loose, fine grained, no HC odor.
40	■	W540	14	0			
45	■	W545	--	0			
50							
55							
60							
65							Bottom of Boring.
70							

WELL DIAGRAM



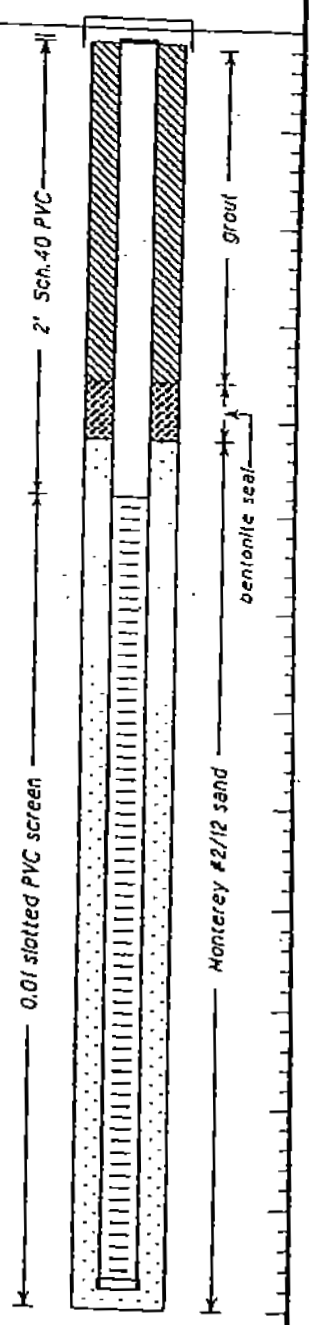
JOB NUMBER: GH16-W5

ATLAS ENVIRONMENTAL ENGINEERING, INC.

BORING NUMBER W-8
DATE DRILLED February 24, 1998
SURFACE ELEVATION 98.89 Feet MSL
DRILLER D. Duxbury
PROJECT G&N Oil Co. Station #18
GEOLOGIST Eloy Luna

DEPTH feet	SAMPLE	SAMP. NO.	BLOWS/FT.	PID (ppm)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION AND REMARKS
						CL	Asphalt over base
							Silty CLAY, grayish black, moist, low to medium plasticity, HC odor. (70% clay, 30% silt).
5	■	W8-S	--	10		HL	Changes to brown at approximately 2 feet.
							Sandy SILT with clay, brown, moist, no HC odor. (30% fine grained sand, 10% clay).
10	■	W810	21	0			
							Clay percentage increases with depth to approximally 15%.
15	■	W815	18	20			
						SP	Poorly Graded SAND with silt, brown, moist, fine grained, medium dense, subangular to subrounded, no HC odor. (80% sand, 15% silt, trace clay).
20	■	W820	18	0			
25	■	W825	18	0			
						CL	Silty CLAY, greenish brown, moist, very stiff, low to medium plasticity.
						SP	Clayey SAND with silt, brown with light brown streaks, moist, fine grained, low plasticity, subangular to subrounded.
30	■	W830	18	10		CL	Silty CLAY, brownish black, HC odor.
						SP	Poorly Graded SAND with silt, greenish-brown, moist fine grained, subrounded to rounded.
35		W835	17	10			
40	■	W840	20	20			
45	■	W845	34	1100			
50							
55							
60							
65							Bottom of Boring.
70							

WELL DIAGRAM

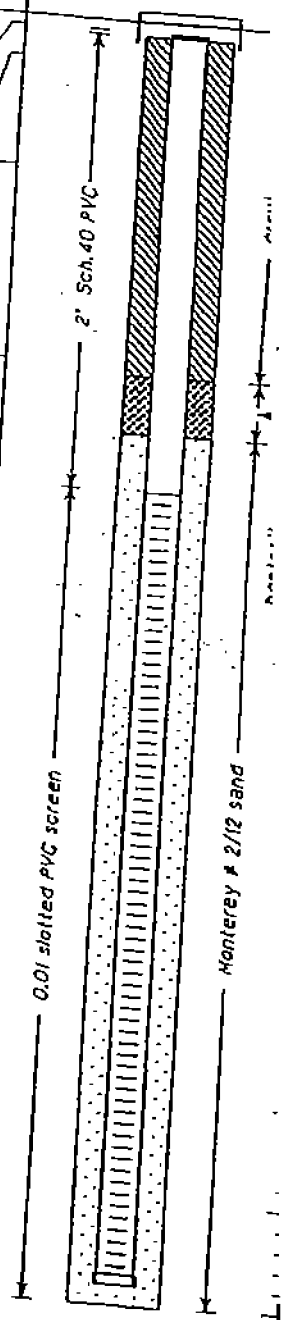


ATLAS ENVIRONMENTAL ENGINEERING, INC.

BORING NUMBER H-7
DATE DRILLED 2/24/98
SURFACE ELEVATION 100.27 Feet MSL
DRILLER D. Duxbury
PROJECT G&M Oil Co. Station #16
GEOLOGIST Eloy Luna

DEPTH feet	SAMPLE	SAMP. NO.	BLOWS/FT.	PID (ppm)	GRAPHIC LOG	SOIL CLASS	DESCRIPTION AND REMARKS
						HL	Asphalt over base
5	☒	H5-5	--	0		SP	Clayey SILT, brown, moist, low plasticity, no HC odor. (60% silt, 40% clay).
							Poorly Graded SAND with silt, yellowish-brown, moist, fine grained, subrounded, no HC odor.
10	☒	H5-10	18	0		HL	
15	☒	H5-15	17	0			Sandy SILT, brownish-red, moist, very stiff, no HC odor. (70% silt, 30% fine grained sand).
							Becomes clayey silt with sand, low plasticity (35% clay, 50% silt, 15% sand).
20	☒	H5-20	21	0		SM	Silty SAND, brownish-red, moist, medium dense fine grained, subangular, no HC odor.
25	☒	H5-25	20	0			Becomes grayish-brown, no HC odor.
30	☒	H5-30	29	0		CL	Silty CLAY, brownish-gray, moist, very stiff, low to medium plasticity, no HC odor.
35		H5-35	30	0		SM	Silty SAND, brown, moist, very stiff, fine grained, subangular to subrounded, no HC odor. (70% sand, 30% silt, trace clay).
40	☒	H5-40	25	0		SP	Poorly Graded SAND, moist, light brown, fine grained, medium dense, subrounded, no HC odor.
45							Becomes wet, fine to medium grained, no HC odor.
50							
55							
60							
65							Brown lense of clay with sand and silt.
70							Bottom of Boring.

WELL DIAGRAM



JOB NUMBER: GM6-H7

ATLAS ENVIRONMENTAL ENGINEERING, INC.

FIELD BOREHOLE LOG

BOREHOLE NO.: W-8

TOTAL DEPTH: 60

PROJECT INFORMATION

PROJECT:	G&M Oil Company #16
SITE LOCATION:	12559 Lambert Road, Whittier
JOB NO.:	G16
LOGGED BY:	Tom Robins
DATE(S) DRILLED:	1-18-99

DRILLING INFORMATION

DRILLING CO.:	Duxbury Drilling
DRILLER:	Doug Duxbury
RIG TYPE:	Mobile B53
METHOD OF DRILLING:	10" Hollow Stem Auger
SAMPLING METHODS:	California Split Spoon

NOTES: Cloudy

▼ Water level during drilling

▽ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0		SC	CEMENT: Concrete over base.					Well Box: Flush mounted, traffic rated.
-5		ML	CLAYEY SAND: Brown, damp, fine to medium grained, loose.	W8-5'	3/7/8	880		Bentonite
-10		SM	CLAYEY SILT: Dark gray, damp.	W8-10'	1/2/3	920		2-inch PVC blank casing
-15		ML	SILTY SAND: Light gray, moist, fine to medium grained, loose.	W8-15'	3/6/7	520		
-20			CLAYEY SILT: Reddish brown, moist, firm.	W8-20'	5/6/7	160		
-25				W8-25'	7/11/30	40		
-30		SM	SILTY SAND: Reddish brown, moist, fine grained, dense.	W8-30'	7/7/18	20		# 2/12 Sand
-35				W8-35'	5/6/8	20		
-40			Becomes saturated.	W8-40'	8/9/16	—		0.01 Slotting
-45								
-50								
-55								
-60			END OF BORING					End cap
-65								

ATLAS ENVIRONMENTAL ENGINEERING, INC.

FIELD BOREHOLE LOG

BOREHOLE NO.: W-9

TOTAL DEPTH: 60

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	G&M Oil Company #16	DRILLING CO.:	Duxbury Drilling
SITE LOCATION:	12559 Lambert Road, Whittier	DRILLER:	Doug Duxbury
JOB NO.:	G16	RIG TYPE:	Mobile B53
LOGGED BY:	Tom Robins	METHOD OF DRILLING:	10" Hollow Stem Auger
DATE(S) DRILLED:	3-13-01	SAMPLING METHODS:	California Split Spoon

NOTES:
Groundwater encountered at 45 feet bg.

Water level during drilling
Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0		SC	ASPHALT: Asphalt over base.					Well Box: Flush mounted, traffic rated.
-5		ML	CLAYEY SAND: Brown, damp, fine to medium grained, loose.	W9-5	5	0		Bentonite
-10		SM	CLAYEY SILT: Dark gray, damp.	W9-10	15	0		4-inch PVC blank casing
-15		ML	SILTY SAND: Light gray, moist, fine to medium grained, loose.	W9-15	13	0		
-20			CLAYEY SILT: Reddish brown, moist, firm.	W9-20	13	0		
-25				W9-25	22	0		
-30		SM	SILTY SAND: Reddish brown, moist, fine grained, dense.	W9-30	26	0		# 2/12 Sand
-35				W9-35	31	0		
-40				W9-40	30	0		0.01 Slotting
-45			Becomes saturated.	W9-45	33	0		
-50								
-55								
-60			END OF BORING					End cap
-65								

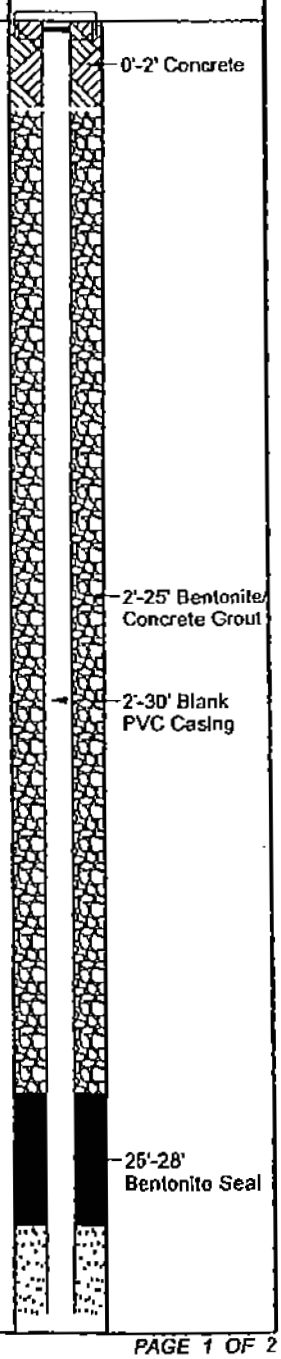
GRADIENT ENGINEERS INC.
Construction, Engineering and Environmental Services

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690001	BORING/WELL NUMBER	W-10
PROJECT NAME	G&M #16	DATE DRILLED	8/15/2001
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch 40 PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 inch / 30'-60'
SAMPLING METHOD	California Split Spoon	GRAVEL PACK TYPE	Monterey #2/12 Sand
GROUND ELEVATION	175.59ft.	GROUT TYPE/QUANTITY	Bentonite / 2'-28'
TOP OF CASING	174.91ft.	DEPTH TO WATER	53.0ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	122.6ft.
REMARKS			

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: Concrete.	0.8
						GP		@0.8': Gravelly SAND, light brown, moist, predominantly medium to coarse size grain.	5.0
5	4 5 5		MW-10 -5'		128	CL ML		@5': CLAYEY SILT, brown, moist, some medium size grain.	10.0
10	3 4 5		MW-10 -10'		65	CL ML		@10': CLAYEY SILT, brown, moist, some medium size grain.	15.0
15	4 4 4		MW-10 -15'		100	CL		@15': CLAY, brown, moist, fine to medium size gravel.	20.0
20	5 6 8		MW-10 -20'		67	GP		@20': Gravelly SAND, brown, moist, medium to coarse size grain.	25.0
25	9 12 17		MW-10 -25'		130	GP		@25': Gravelly SAND, brown, moist, medium to coarse size grain.	30.0
30									

WELL DIAGRAM



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GRADIENT ENGINEERS INC
Construction, Engineering & Environmental Services

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690001 BORING/WELL NUMBER W-10
PROJECT NAME G&M #16 DATE DRILLED 8/15/2001

Continued from Previous Page

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (Inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
	12 17 24		MW-10 -30'		95	SP ML		@30': SANDY SILT, brown, moist, predominantly fine size grain.		
35	7 9 9		MW-10 -35'		147	SP ML		@35': SANDY SILT, brown, moist, predominantly fine size grain.	35.0	
40	7 7 7		MW-10 -40'		115	SP ML		@40': SANDY SILT, light brown, moist, predominantly fine size grain, some fine size gravel.	40.0	
45	6 7 7		MW-10 -45'		90	SP ML		@45': SANDY SILT, light brown, moist, predominantly fine size grain, some fine size gravel.	45.0	28'-61.6' Monterey #3 Sand 30'-60' 0.010 Screen Casing
50	6 6 8		MW-10 -50'		25	SP		@50': SAND, light brown, moist, fine to medium size grain.	50.0	
55	4 5 6		MW-10 -55'		30	SP ML		@55': SANDY SILT, light brown, predominantly fine size grain.	55.0	
60	4 4 5		MW-10 -60'		40	SP ML		@60': SANDY SILT, light brown, predominantly fine size grain.	60.0	
								End of Boring: 61.6' bgs. Groundwater Encountered: 53' bgs.	61.6	

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GRADIENT ENGINEERS INC.
Construction, Engineering & Environmental Services

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690001	BORING/WELL NUMBER	W-11
PROJECT NAME	G&M #16	DATE DRILLED	8/14/2001
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch 40 PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 inch / 30'-60'
SAMPLING METHOD	California Split Spoon	GRAVEL PACK TYPE	Monterey #2/12 Sand
GROUND ELEVATION	175.53ft.	GROUT TYPE/QUANTITY	Bentonite / 2'-28'
TOP OF CASING	174.89ft.	DEPTH TO WATER	45.0ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	130.5ft.
REMARKS			

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (Inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: Asphalt.	0.4
						GP		@0.4': Gravelly SAND, brown, moist, predominantly medium to coarse size grain.	3.0
						SP ML		@3': SANDY SILT, reddish brown, moist.	5.0
5	3 3 3		W-11 -5'		15	CL ML		@5': CLAYEY SILT, brown, moist, predominantly fine size grain.	10.0
10	3 4 4		W-11 -10'		3	CL ML		@10': CLAYEY SILT, brown, moist, predominantly fine size grain.	15.0
15	3 4 5		W-11 -15'		0	CL ML		@15': CLAYEY SILT, brown, moist, predominantly fine size grain.	20.0
20	4 6 7		W-11 -20'		8	CL		@20': CLAY, reddish brown, moist, predominantly fine size grain.	25.0
25	5 6 7		W-11 -25'		5	CL		@25': CLAY, reddish brown, moist, predominantly fine size grain.	30.0
30									

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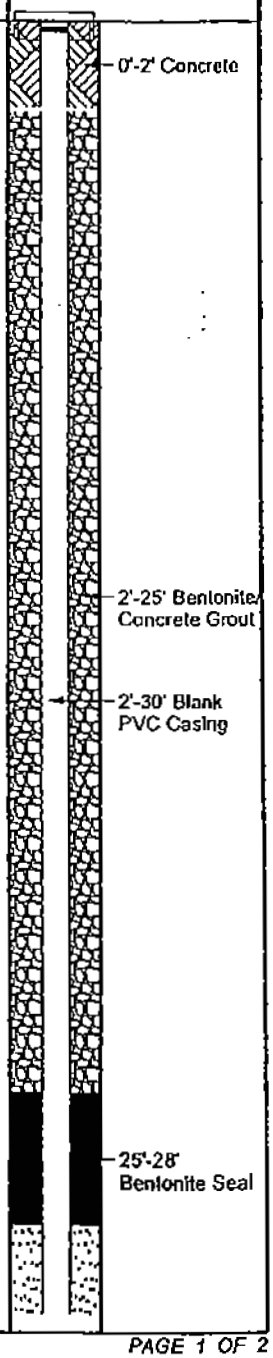
WELL DIAGRAM



GRADIENT ENGINEERS INC
Construction, Engineering and Environmental Services

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690001 BORING/WELL NUMBER W-11
PROJECT NAME G&M #16 DATE DRILLED 8/14/2001

Continued from Previous Page

DEPTH (ft BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
	6 7 7		W-11 -30'		5	CL		@30': CLAY, light brown, moist, predominantly fine size grain.	35.0	
35	7 7 8		W-11 -35'		5	SP ML		@35': SANDY SILT, brown, moist, predominantly fine size grain.	40.0	
40	6 8 9		W-11 -40'		7	SP ML		@40': SANDY SILT, brown, moist, some fine to medium size grain.	45.0	28'-61.6' Monterey #3 Sand 30'-60' 0.010 Screen Casing
45	7 7 9		W-11 -45'		8	ML SP		@45': SILTY SAND, brown, moist, predominantly fine size grain.	50.0	
50	7 9 9		W-11 -50'		10	SP		@50': SAND, olive green, wet, fine to medium size grain.	55.0	
55	5 7 10		W-11 -55'		9	ML SP		@55': SILTY SAND, olive brown, wet, predominantly fine size grain.	60.0	
60	7 8 9		W-11 -60'		5	SP		@60': SAND, brown, wet, fine to medium size grain.	61.6	

End of Boring: 61.6' bgs.
Groundwater Encountered: 45' bgs.

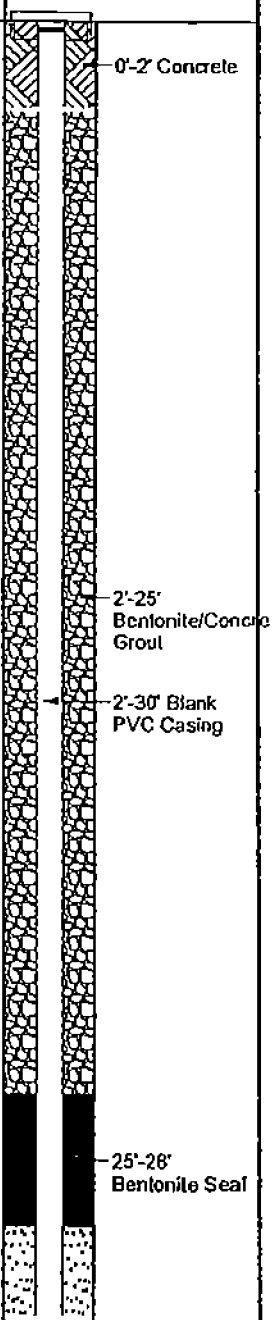
GRADIENT ENGINEERS INC.
Construction, Engineering & Environmental Services

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690001	BORING/WELL NUMBER	W-12
PROJECT NAME	G&M #16	DATE DRILLED	8/14/2001
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch 40 PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 inch / 30'-60'
SAMPLING METHOD	California Split Spoon	GRAVEL PACK TYPE	Monterey #2/12 Sand
GROUND ELEVATION	171.99ft.	GROUT TYPE/QUANTITY	Bentonite / 2'-28'
TOP OF CASING	171.36ft.	DEPTH TO WATER	40.0ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	132.0ft.
REMARKS	Sawcut a 24"x24" box		

DEPTH (ft BGL)	BLOW COUNTS	RECOVERY (Inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: Concrete.	
						GP		@1': Gravelly SAND, light brown, moist, medium to coarse size grain.	1.0
5	2 3 3		W-12 -5'		800	CL ML		@5': CLAYEY SILT, brown, moist.	5.0
10	3 4 5		W-12 -10'		210	CL ML		@10': CLAYEY SILT, brown, moist.	10.0
15	3 4 5		W-12 -15'		120	ML		@15': SILT, reddish brown, moist, predominantly fine size grain.	15.0
20	4 5 7		W-12 -20'		15	ML		@20': SILT, reddish brown, moist, predominantly fine size grain.	20.0
25	4 5 5		W-12 -25'		65	ML		@25': SILT, brown, moist, predominantly fine size grain.	25.0
30									30.0

WELL DIAGRAM



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GRADIENT ENGINEERS INC
Construction, Engineering and Environmental Services

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690001 BORING/WELL NUMBER W-12
PROJECT NAME G&M #16 DATE DRILLED 8/14/2001

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DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (Inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
	4 5 6		W-12 -30'		15	SP ML		@30': SANDY SILT, brown, moist, predominantly fine size grain.		
35	4 5 7		W-12 -35'		5	SP ML		@25': SANDY SILT, brown, moist, predominantly fine size grain.	35.0	
40	5 6 7		W-12 -40'		10	SP		@40': Poorly Graded SAND, light brown, wet, medium to coarse size grain.	40.0	
45	6 7 7		W-12 -45'		0	SP		@45': Poorly Graded SAND, light brown, wet, medium to coarse size grain.	45.0	28'-61.6' Monterey #3 Sand 30'-60' 0.010 Screen Casing
50	7 7 7		W-12 -50'		0	SP		@50': Poorly Graded SAND, light brown, wet, medium to coarse size grain.	50.0	
55	7 7 9		W-12 -55'		3	SP		@55': Poorly Graded SAND, light brown, wet, medium to coarse size grain.	55.0	
60	6 7 8		W-12 -60'		0	SP		@60': Poorly Graded SAND, light brown, wet, medium to coarse size grain.	60.0	
									61.6	

End of Boring: 61.6' bgs.
Groundwater Encountered: 40' bgs.

Gradient Engineers, Inc.
A Leighton Group Company

MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690-005	BORING/WELL NUMBER	MW-13
PROJECT NAME	G&M #16	DATE DRILLED	4/29/2003
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 / 30-60
SAMPLING METHOD	Split Spoon	GRAVEL PACK TYPE	Monterey 2/12
GROUND ELEVATION	172.85ft.	GROUT TYPE/QUANTITY	Bentonite
TOP OF CASING	172.24ft.	DEPTH TO WATER	45.5ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	127.3ft.

REMARKS: Hand auger first 5' bgs. Collected Encore samples.

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: 4" ASPHALT Core.	0.4
						GW		Well Graded GRAVELLY SAND, brown, moist, fine to coarse size grain.	5.0
5			MW13 -5'		0	ML		@5': SANDY SILT, reddish brown, moist, fine to medium size grain.	10.0
10	4 6 8		MW13 -10'		0	ML		@10': SANDY SILT, reddish brown, moist, fine to medium size grain.	15.0
15	6 9 10		MW13-15'		0	ML		@15': SILT, reddish brown, moist, some medium size gravel.	20.0
20	10 12 16		MW13 -20'		0	ML		@20': SILT, reddish brown, moist, some medium size gravel.	25.0
25	9 11 15		MW13 -25'		0	CL		@25': SILTY CLAY, brown, moist.	30.0
30									

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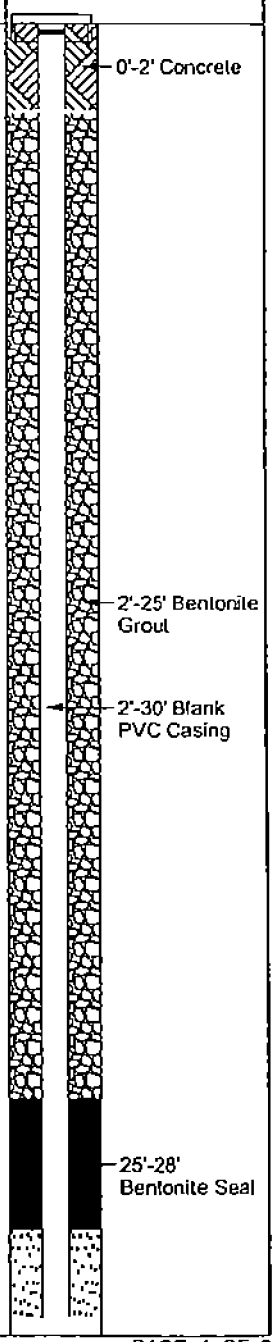
WELL DIAGRAM



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Gradient Engineers, Inc.
A Leighton Group Company

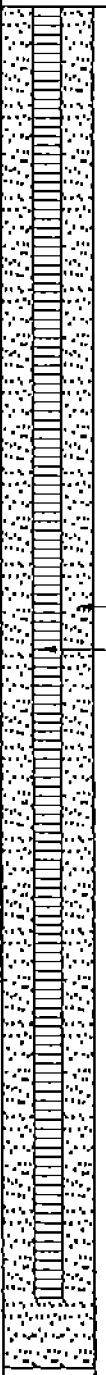
MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690-005 BORING/WELL NUMBER MW-13
PROJECT NAME G&M #16 DATE DRILLED 4/29/2003

Continued from Previous Page

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
	10 12 14		MW13 -30'		0	CL		@30': SILTY CLAY, brown, moist.	35.0
35	14 17 21		MW13 -35'		0	ML		@35': SANDY SILT, light brown, moist.	40.0
40	13 16 18		MW13 -40'		0	ML		@40': SANDY SILT, moist.	45.0
45	15 17 23		MW13 -45'		0	ML		@45': SILT, gray, moist.	50.0
50	9 12 15		MW13 -50'		0	SM		@50': SILTY SAND, gray, wet, predominantly fine size grain.	55.0
55	10 10 15		MW13 -55'		0	SP		@55': SAND, brown, wet, fine to medium size grain.	60.0
60	7 9 11		MW13 -60'		0	SP		@60': SAND, brown, wet, fine to medium size grain.	61.5
								End of Boring: 61.5 bgs.	

WELL DIAGRAM



LAEWNN01 301695MW.GPJ LAEWNN01.GDT 7/8/03

Gradient Engineers, Inc.
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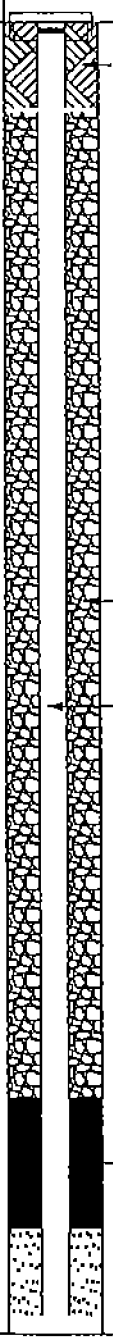
MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690-005	BORING/WELL NUMBER	MW-14
PROJECT NAME	G&M #16	DATE DRILLED	4/29/2003
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 / 30-60
SAMPLING METHOD	Split Spoon	GRAVEL PACK TYPE	Monterey 2/12
GROUND ELEVATION	173.85ft.	GROUT TYPE/QUANTITY	Bentonite
TOP OF CASING	173.24ft.	DEPTH TO WATER	46.3ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	127.5ft.
REMARKS	Hand auger first 5' bgs.		

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: Soil and vegetation.	5.0
5	5 7 9		MW14 -5'		0	ML		@5': SANDY SILT, brown, moist.	10.0
10	9 9 9		MW14 -10'		0	ML		@10': SILT, brown, moist.	15.0
15	10 12 14		MW14 -15'		0	ML		@15': SILT, brown, moist.	20.0
20	9 13 15		MW14 -20'		0	CL		@20': SILTY CLAY, brown, moist.	25.0
25	15 15 17		MW14 -25'		0	CL		@25': SILTY CLAY, brown, moist.	30.0
30									

Continued Next Page

WELL DIAGRAM



LAEWNN01: 301695MW.GPJ LAEWNN01.GDT 7/8/03

Gradient Engineers, Inc.
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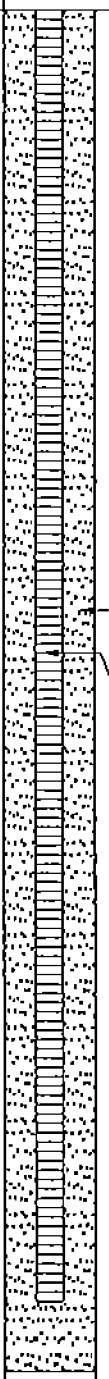
MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690-005 BORING/WELL NUMBER MW-14
PROJECT NAME G&M #16 DATE DRILLED 4/29/2003

Continued from Previous Page

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
	7 11 15		MW14 -30'		0	ML		@30': SILT, reddish brown, moist, interbedded Clay.	
35	12 15 16		MW14 -35'		0	ML		@35': SILT, reddish brown, moist.	35.0
40	10 12 14		MW14 -40'		0	ML		@40': SILT, light brown, moist.	40.0
45	15 18 23		MW14 -45'		0	SP		@45': SAND, brown, wet.	45.0
50	13 15 17		MW14 -50'		0	SP		@50': SAND, brown, wet, fine to medium size grain.	50.0
55	10 15 20		MW14 -55'		0	SW		@55': Well Graded SAND, light brown, wet, fine to coarse size grain.	55.0
60	16 18 22		MW14 -60'		0	SP		@60': SAND, light brown, wet, fine to coarse size grain.	60.0
								End of Boring: 61.5' bgs.	61.5

WELL DIAGRAM



LAEWNN01 301690MW.GPJ LAEWNN01.GDT 7/8/03

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MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690-005	BORING/WELL NUMBER	MW-15
PROJECT NAME	G&M #16	DATE DRILLED	4/30/2003
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 / 30-60
SAMPLING METHOD	Split Spoon	GRAVEL PACK TYPE	Monterey 2/12
GROUND ELEVATION	174.00ft.	GROUT TYPE/QUANTITY	Bentonite
TOP OF CASING	173.67ft.	DEPTH TO WATER	46.4ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	127.6ft.
REMARKS	Hand auger first 5' bgs.		

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: CONCRETE Core, 12".	1.0
						ML			
5			MW15 -5'		0	ML		@5': SANDY SILT, reddish brown, moist.	5.0
10	4 6 12		MW15 -10'		0	CL		@10': SILTY CLAY, brown, moist.	10.0
15	6 8 14		MW15 -15'		0	CL		@15': SILTY CLAY, brown, moist, some medium size gravel.	15.0
20	7 10 17		MW15 -20'		0	ML		@20': SILT, reddish brown, moist, some medium size gravel.	20.0
25	8 10 12		MW15 -25'		0	ML		@25': SILT, reddish brown, moist, some medium size gravel.	25.0
30									30.0

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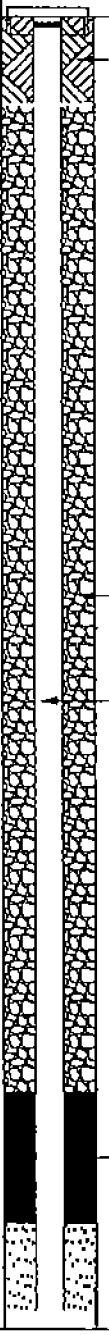
WELL DIAGRAM



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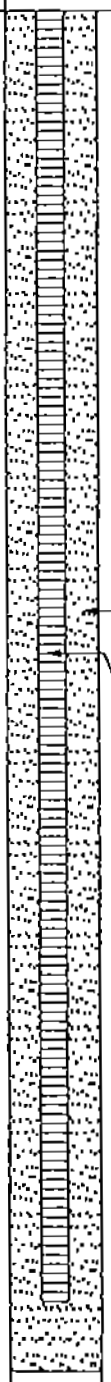
MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690-005 BORING/WELL NUMBER MW-15
PROJECT NAME G&M #16 DATE DRILLED 4/30/2003

Continued from Previous Page

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
	11 15 16		MW15 -30'		0	ML		@30': SILT, reddish brown, moist, some medium size gravel.	
35	12 14 17		MW15 -35'		0	ML		@35': SILT, light brown, moist.	35.0
40	10 10 12		MW15 -40'		0	ML		@40': SILT, light brown, moist.	40.0
45	13 15 17		MW1 -45'		0	SM		@45': SILTY SAND, light brown, moist, predominantly fine size grain.	45.0
50	7 8 9		MW15 -50'		0	SM		@50': SILTY SAND, light brown, wet, predominantly fine size grain.	50.0
55	10 12 14		MW15 -55'		0	ML		@55': SANDY SILT, light brown, wet.	55.0
60	15 18 23		MW15 -60'		0	SW		@60': Well Graded SAND, light brown, wet, fine to coarse size grain.	60.0
								End of Boring: 61.5' bgs.	61.5



LAEWNN01 301695MW.GPJ LAEWNN01.GDT 7/8/03

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MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER	301690-005	BORING/WELL NUMBER	MW-16
PROJECT NAME	G&M #16	DATE DRILLED	4/30/2003
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	PVC / 2"
DRILLING METHOD	Hollow Stem Auger	SCREEN TYPE/SLOT	0.010 / 30-60
SAMPLING METHOD	Split Spoon	GRAVEL PACK TYPE	Monterey 2/12
GROUND ELEVATION	176.60ft.	GROUT TYPE/QUANTITY	Bentonite
TOP OF CASING	172.24ft.	DEPTH TO WATER	48.9ft.
LOGGED BY	MMP	GROUND WATER ELEVATION	127.7ft.
REMARKS	Hand auger first 5' bgs.		

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
								@Surface: ASPHALT Core 4".	0.5
						ML			
5			MW16 -5'		0	ML		@5': SANDY SILT, brown, moist.	5.0
10	5 7 8		MW16 -10'		0	ML		@10': SILT, reddish brown, moist, interbedded Clay.	10.0
15	8 9 10		MW16 -15'		0	CL		@15': SILTY CLAY, brown, moist, moderate plasticity.	15.0
20	10 13 15		MW16 -20'		0	CL		@20': SILTY CLAY, brown, moist, moderate plasticity.	20.0
25	8 14 16		MW16 -25'		0	CL		@25': SILTY CLAY, brown, moist, moderate plasticity.	25.0
30									30.0

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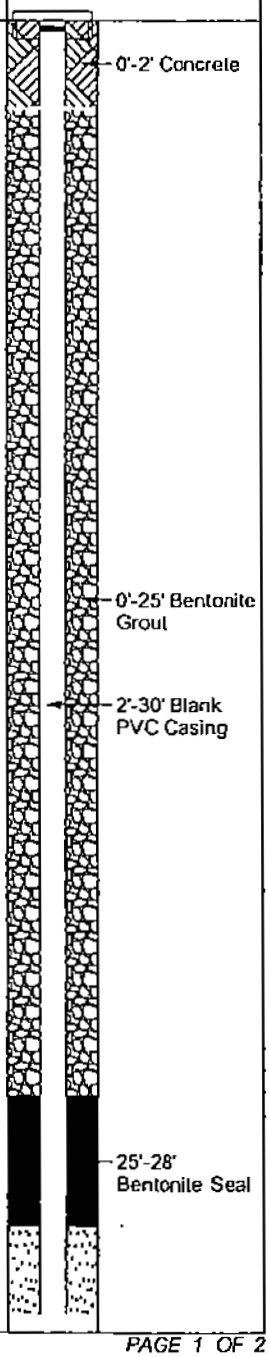
WELL DIAGRAM



LAEWNN01 301695MW.GPJ LAEWNN01.GDT 7/8/03

Gradient Engineers, Inc.
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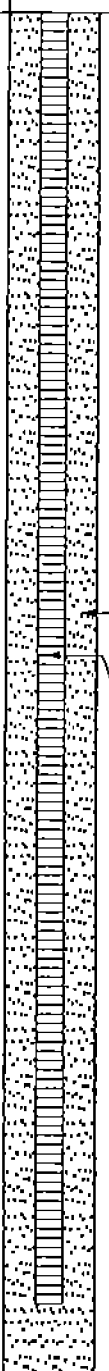
MONITORING WELL CONSTRUCTION LOG

PROJECT NUMBER 301690-005
PROJECT NAME G&M #16
BORING/WELL NUMBER MW-16
DATE DRILLED 4/30/2003

Continued from Previous Page

DEPTH (ft. BGL)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	PID (ppm)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
	10 12 18		MW16 -30'		0	ML		@30': SANDY SILT, reddish brown, moist, fine to medium size grain.	
35	12 13 16		MW16 -35'		0	CL		@35': CLAY, brown, moist, stiff.	35.0
40	14 17 21		MW16 -40'		0	ML		@40': CLAYEY SILT, brown, moist.	40.0
45	8 12 18		MW16 -45'		0	ML		@45': SILT, light brown, moist.	45.0
50	10 15 20		MW16 -50'		0	ML		@50': SILT, light brown, wet.	50.0
55	14 16 18		MW16 -55'		0	SM		@55': SILTY SAND, light brown, wet, fine to mediume size grain.	55.0
60	25 50		MW16 -60'		0	SW		@60': Well Graded SAND, brown, wet, fine to coarse size grain.	60.0
								End of Boring: 61.5' bgs.	61.5

WELL DIAGRAM



LAEWNN01 301695MW.GPJ LAEWNN01.GDT 7/8/03

D

MONITORING WELL NO: W-1

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Weather: Partly Cloudy
Sampling Crew: BRJ/KCH
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	173.71	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Product:	N/A	ft.	Well Sounding Method:	Interface Probe
2) Depth to Water Surface:	51.76	ft.		
3) Static Water Elevation:	121.95	ft. (#1-#2)		
4) Depth to Well Bottom:	66.00	ft.		
5) Height of Water Column:	14.24	ft. (#4-#2)		
6) 80 % Recharge	54.61	ft.		
Water Volume in Well =	9.3	gal.		
(4": h x 0.653 gal/ft)				
Total Water Volume =	27.9	gal.		

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	Probe with Paste	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 28

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
13:20			0	21.9	0.00	7.02	-223	216	Prepurge sample
13:23			0						Start
13:33	10	0.9	9	22.7	1.58	7.81	-172	216	Clear
13:35	2	4.5	18	22.8	1.84	8.01	-133	224	Clear
13:39	4	2.5	28	21.7	2.00	8.16	-95	224	Clear
13:47				21.1	0.00	7.16	-134	248	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: 1320/1340
Sampling Method: Disposable Bailer
Sample ID: W-1
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 51.76/50.35
Sample Preservative: VOAs: HCl
Physical Appearance: Clear/Clear
Comments:
Prepurge sample collected:4/13/05@ 13:20
Post purge sample collected: 4/13/05 @ 13:40

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-1
Date: 04/13/05

Leighton Consulting, Inc.
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MONITORING WELL NO: W-2

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Sampling Crew: BRJ/KCH
Weather: Partly Cloudy
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	174.10	ft. (above MSL)
2) Depth to Water Surface:	49.90	ft.
3) Static Water Elevation:	124.20	ft. (#1-#2)
4) Depth to Well Bottom:	69.60	ft.
5) Height of Water Column:	19.70	ft. (#4-#2)
6) 80 % Recharge	53.84	ft.
Water Volume in Well =	3.2	gal.
(2": h x 0.163 gal/ft)		
Total Water Volume =	9.6	gal.

Well Reference Point: North edge of casing
Well Sounding Method: Solinst Water Level Indicator

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 10

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
12:54			0	22.7	0.00	7.20	-46	211	Prepurge Sample
13:02			0						Start
13:06	4	0.8	3	23.4	2.15	7.79	-50	222	Murky
13:08	2	1.5	6	21.8	2.88	7.72	-101	233	Sl. Murky
13:10	2	2.0	10	21.8	2.34	7.99	-69	224	Sl. Murky
13:11				21.0	0.00	7.00	-61	231	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: 1254/1311
Sampling Method: Disposable Bailer
Sample ID: W-2
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (1) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 49.90/50.92
Sample Preservative: VOAs: HCl
Physical Appearance: Murky/ Murky
Comments:
Prepurge sample collected: 4/13/05 @ 12:54
Post purge sample collected: 4/13/05 @ 13:11

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-2
Date: 04/13/05

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MONITORING WELL NO: W-3

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Weather: Partly Cloudy
Sampling Crew: BRJ/KCH
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	174.36	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Water Product:	51.23	ft.	Well Sounding Method:	Solinst Water Level Indicator
2) Depth to Water Surface:	51.54	ft.		
3) Static Water Elevation:	122.82	ft. (#1-#2)		
4) Depth to Well Bottom:	64.30	ft.		
5) Height of Water Column:	12.76	ft. (#4-#2)		
6) 80 % Recharge	54.09	ft.		
Water Volume in Well =	8.3	gal.		
(4": h x 0.653 gal/ft)				
Total Water Volume =	25.0	gal.		

PRODUCT OBSERVATION

Product Observed: Yes X No
Product Thickness (ft.): 0.31
Method of Measurement: Duel Interface Probe
Product Appearance: Gasoline

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 26

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	
								N/S	Prepurge sample
11:44			0						Start
12:02	18	0.5	9	20.9	1.35	7.97	-119	207	Slightly murky
12:07	18	0.6	18	20.7	2.14	8.06	-66	217	Slightly murky
12:12	18	0.6	26	20.8	2.36	8.09	-45	217	Slightly murky
12:20				21.4	1.81	7.17	-25	228	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: N/S / 1220
Sampling Method: Disposable Bailer
Sample ID: W-3
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (1) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: N/A / 51.70
Sample Preservative: VOAs: HCl
Physical Appearance: N/S /Clear
Comments:
Prepurge sample not collected
Post purge sample collected: 4/13/05 @ 12:20

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-3
Date: 04/13/05

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MONITORING WELL NO: W-4

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Sampling Crew: BRJ/KCH
Weather: Partly Cloudy
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	173.28	ft.	(above MSL)
2) Depth to Product:	N/A	ft.	
2) Depth to Water Surface:	50.22	ft.	
3) Static Water Elevation:	123.06	ft.	(#1-#2)
4) Depth to Well Bottom:	61.70	ft.	
5) Height of Water Column:	11.48	ft.	(#4-#2)
6) 80 % Recharge	52.52	ft.	
Water Volume in Well =	7.5	gal.	
(4": h x 0.653 gal/ft)			
Total Water Volume =	22.5	gal.	

Well Reference Point: North edge of casing
Well Sounding Method: Interface Probe Indicator

PRODUCT OBSERVATION

Product Observed: Yes No X
Product Thickness (ft.): N/A
Method of Measurement: Interface probe w/paste
Product Appearance: N/A

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 23

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
13:06			0	22.5	2.37	7.01	-210	175	Prepurge sample
14:00			0						Start
14:06	6	1.3	8	22.3	2.22	8.06	-99	194	Slightly murky
14:11	5	1.6	16	22.1	2.37	8.10	-122	202	Clear
14:15	4	1.8	23	21.8	2.48	8.13	-92	203	Clear
14:17				21.2	0.36	7.00	-22	230	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: 1306/1417
Sampling Method: Disposable Bailer
Sample ID: W-4
Containers Used: Prepurge: (2) VOAs (yellow cap) & (1) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 50.22/50.08
Sample Preservative: VOAs: HCl
Physical Appearance: Sl. Murky /Clear
Comments:
Prepurge sample collected: 4/13/05 @ 13:06
Post purge sample collected: 4/13/05 @ 14:17

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-4
Date: 04/13/05

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MONITORING WELL NO: W-5

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Weather: Partly Cloudy
Sampling Crew: BRJ/KCH
Ambient Temperature: 68 F

WATER ELEVATION DATA

1) Well Reference Elevation:	174.31	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Product:	51.24	ft.	Well Sounding Method:	Solinst Water Level Indicator
2) Depth to Water Surface:	51.44	ft. (#1-#2)		
3) Static Water Elevation:	122.87	ft.		
4) Depth to Well Bottom:	59.90	ft. (#4-#2)		
5) Height of Water Column:	8.66	ft.		
6) 80 % Recharge	52.97	gal.		
Water Volume in Well =	5.7			
(4": h x 0.653 gal/ft)		gal.		
Total Water Volume =	17.0			

PRODUCT OBSERVATION

Product Observed:	Yes X	No
Product Thickness (ft.):	0.20	
Method of Measurement:	Duel Interface Probe	
Product Appearance:	Gasoline	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 17

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
			0					N/S	Prepurge sample
10:40			0						Start
10:46	6	1.0	6	22.3	2.54	7.96	28	197	Clear
10:51	5	1.2	12	21.1	2.48	8.21	-13	201	Clear
10:55	4	1.3	17	20.6	2.60	8.20	-30	201	Clear
10:58				21.9	1.54	7.63	-112	207	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: N/S /1058
Sampling Method: Disposable Bailer
Sample ID: W-5
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (1) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 51.44/51.60
Sample Preservative: VOAs: HCl
Physical Appearance: N/S /Clear
Comments:
Prepurge sample not collected
Post purge sample collected: 4/13/05 @ 10:58

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-5
Date: 04/13/05

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

MONITORING WELL NO: W-6

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05 | Weather: Partly Cloudy

Sampling Crew: BRJ/KCH | Ambient Temperature: 68 F

WATER ELEVATION DATA

1) Well Reference Elevation:	173.52	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Water Surface:	50.41	ft.	Well Sounding Method:	Solinst Water Level Indicator
3) Static Water Elevation:	123.11	ft. (#1-#2)		
4) Depth to Well Bottom:	62.80	ft.		
5) Height of Water Column:	12.39	ft. (#4-#2)		
6) 80 % Recharge	52.89	ft.		
Water Volume in Well =	2.0	gal.		
(2": h x 0.163 gal/ft)				
Total Water Volume =	6.1	gal.		

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck

Date: 4/13/2005 | Total Volume Purged (gallons): 6

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
11:13			0	21.7	1.14	7.02	59	217	Prepurge sample
11:18			0						Start
11:20	2	1.0	2	22.6	1.29	7.59	58	208	Slightly murky
11:22	2	1.0	4	21.2	1.39	8.00	64	212	Slightly murky
11:24	2	1.0	6	22.9	1.49	8.00	73	220	Slightly murky
11:35				21.2	0.00	6.94	101	220	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH | Date: 4/13/2005 | Time: 1113 /1127

Sampling Method: Disposable Bailer | Sample ID: W-6

Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly | DTW: 50.41/50.45

Postpurge: (4) VOAs & (1) 1 liter amber

Sample Preservative: VOAs: HCl | Physical Appearance: Sl. Murky/ Clear

Comments:

Prepurge sample collected: 4/13/05 @ 11:13

Post purge sample collected: 4/13/05 @ 11:27

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-6
Date: 04/13/05

Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

MONITORING WELL NO: W-7

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Weather: Partly Cloudy
Sampling Crew: BRJ/KCH
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	174.88	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Water Surface:	50.70	ft.	Well Sounding Method:	Solinst Water Level Indicator
3) Static Water Elevation:	124.18	ft. (#1-#2)		
4) Depth to Well Bottom:	63.95	ft.		
5) Height of Water Column:	13.25	ft. (#4-#2)		
6) 80 % Recharge	53.35	ft.		
Water Volume in Well =	2.2	gal.		
(2": h x 0.163 gal/ft)				
Total Water Volume =	6.5	gal.		

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 7

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
12:23			0	21.9	0.46	6.98	-43	285	Prepurge sample
12:27			0						Start
12:31	4	0.5	2	23.6	1.75	7.75	-33	283	Murky
12:33	2	1.0	4	22.8	2.00	7.98	-8	253	Murky
12:35	2	1.5	7	22.2	2.05	8.05	9	231	Slightly murky
12:38				21.3	0.17	7.03	56	224	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: 1223/ 1238
Sampling Method: Disposable Bailer
Sample ID: W-7
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 50.70 / 51.65
Sample Preservative: VOAs: HCl
Physical Appearance: Murky/ Murky
Comments:
Prepurge sample collected: 4/13/05 @ 12:23
Post purge sample collected: 4/13/05@ 12:38

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-7
Date: 04/13/05

Leighton Consulting, Inc.
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MONITORING WELL NO: W-8

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/14/05
Sampling Crew: BRJ/KCH
Weather: Partly Cloudy
Ambient Temperature: 60 F

WATER ELEVATION DATA

1) Well Reference Elevation:	173.73	ft. (above MSL)
2) Depth to Water Surface:	50.40	ft.
3) Static Water Elevation:	123.33	ft. (#1-#2)
4) Depth to Well Bottom:	59.00	ft.
5) Height of Water Column:	8.60	ft. (#4-#2)
6) 80 % Recharge	52.12	ft.
Water Volume in Well =	1.4	gal.
(2": h x 0.163 gal/ft)		
Total Water Volume =	4.2	gal.

Well Reference Point: North edge of casing
Well Sounding Method: Solinst Water Level Indicator

PRODUCT OBSERVATION

Product Observed: Yes No X
Product Thickness (ft.): N/A
Method of Measurement: N/A
Product Appearance: N/A

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/14/2005
Total Volume Purged (gallons): 4

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
07:26			0	17.0	0.00	7.07	125	234	Prepurge sample
07:35			0						Start
07:38	3	0.3	1	17.5	1.64	7.91	91	238	Sl. Murky
07:39	1	1.0	2	17.4	1.92	8.08	91	238	Sl. Murky
07:40	1	2.0	4	17.4	2.06	8.17	93	247	Clear
07:53				21.1	0.00	7.10	105	242	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/14/2005
Time: 0726/0750
Sampling Method: Disposable Bailer
Sample ID: W-8
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (1) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 50.40/50.42
Sample Preservative: VOAs: HCl
Physical Appearance: Murky / Murky
Comments:
Prepurge sample collected: 4/14/05 @ 07:26
Post purge sample collected: 4/14/05 @ 07:50

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-8
Date: 04/14/05

Leighton Consulting, Inc.
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MONITORING WELL NO: W-9

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05

Sampling Crew: BRJ/KCH

Weather: Partly Cloudy

Ambient Temperature: 60 F

WATER ELEVATION DATA

1) Well Reference Elevation:	171.88	ft. (above MSL)
2) Depth to Water Surface:	49.12	ft.
3) Static Water Elevation:	122.76	ft. (#1-#2)
4) Depth to Well Bottom:	58.95	ft.
5) Height of Water Column:	9.83	ft. (#4-#2)
6) 80 % Recharge	51.09	ft.
Water Volume in Well =	6.4	gal.
(4": h x 0.653 gal/ft)		
Total Water Volume =	19.3	gal.

Well Reference Point: North edge of casing

Well Sounding Method: Solinst Water Level Indicator

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck

Date: 4/13/2005 Total Volume Purged (gallons): 19

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
07:25			0	20.0	1.35	7.09	191	223	Prepurge Sample
08:45			0						Start
09:13	28	0.2	6	20.8	2.26	8.28	152	210	Slightly murky
09:37	24	0.3	12	21.8	2.42	8.18	146	223	Slightly murky
09:41	4	1.8	19	21.8	2.13	8.24	144	215	Clear
09:53				21.3	2.18	7.08	160	224	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH Date: 4/13/2005 Time: 0725/0946

Sampling Method: Disposable Bailer Sample ID: W-9

Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (1) 0.5L poly DTW: 49.12/48.85

Postpurge: (4) VOAs & (1) 1 liter amber

Sample Preservative: VOAs: HCl Physical Appearance: Clear / Clear

Comments:

Prepurge sample collected: 4/13/05 @ 07:25

Post purge sample collected: 4/13/05 @ 09:46

Project Name: G&M Oil # 16

Project No: 600143002

Well I.D. No: W-9

Date: 04/13/05

Leighton Consulting, Inc.

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MONITORING WELL NO: W-10

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/14/05
Weather: Sunny
Sampling Crew: BRJ/KCH
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	174.91	ft. (above MSL)	Well Reference Point: North edge of casing
2) Depth to Water Surface:	51.51	ft.	Well Sounding Method: Solinst Water Level Indicator
3) Static Water Elevation:	123.40	ft. (#1-#2)	
4) Depth to Well Bottom:	56.85	ft.	
5) Height of Water Column:	5.34	ft. (#4-#2)	
6) 80 % Recharge	52.58	ft.	
Water Volume in Well =	0.9	gal.	
(2": h x 0.163 gal/ft)			
Total Water Volume =	2.6	gal.	

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/14/2005
Total Volume Purged (gallons): 3

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
11:14			0	21.2	1.80	6.96	111	296	Prepurge Sample
11:16			0						Start
11:23	7	0.1	1	20.5	3.26	7.95	95	302	Murky
11:28	5	0.2	2	20.0	7.09	7.96	93	301	Murky
11:32	4	0.3	3	20.2	7.73	7.92	89	308	Murky
11:47				21.1	2.38	7.01	111	307	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/14/2005
Time: 1055/1147
Sampling Method: Disposable Bailer
Sample ID: W-10
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 51.51/52.57
Sample Preservative: VOAs: HCl
Physical Appearance: Murky / Murky
Comments:
Prepurge sample collected: 4/14/05 @ 10:55
Post purge sample collected: 4/14/05 @ 11:47

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-10
Date: 04/14/05

Leighton Consulting, Inc.
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MONITORING WELL NO: W-11

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05
Sampling Crew: BRJ/KCH
Weather: Partly Cloudy
Ambient Temperature: 68 F

WATER ELEVATION DATA

1) Well Reference Elevation:	174.89	ft. (above MSL)
2) Depth to Water Surface:	51.70	ft.
3) Static Water Elevation:	123.19	ft. (#1-#2)
4) Depth to Well Bottom:	60.15	ft.
5) Height of Water Column:	8.45	ft. (#4-#2)
6) 80 % Recharge	53.39	ft.
Water Volume in Well =	1.4	gal.
(2": h x 0.163 gal/ft)		
Total Water Volume =	4.1	gal.

Well Reference Point: North edge of casing
Well Sounding Method: Solinst Water Level Indicator

PRODUCT OBSERVATION

Product Observed: Yes No X
Product Thickness (ft.): N/A
Method of Measurement: N/A
Product Appearance: N/A

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/13/2005
Total Volume Purged (gallons): 4

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
10:09			0	21.8	2.16	7.10	169	200	Prepurge Sample
10:12			0						Start
10:16	2	0.5	1	20.6	2.14	7.64	146	199	Slightly Murky
10:18	1	4.0	3	20.2	2.38	8.11	147	203	Clear
10:20	1	2.0	4	20.2	2.57	8.06	149	194	Clear
10:30				21.3	0.20	6.88	176	200	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/13/2005
Time: 1009/1025
Sampling Method: Disposable Bailer
Sample ID: W-11
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 51.70/52.25
Sample Preservative: VOAs: HCl
Physical Appearance: Slightly Murky /Clear
Comments:
Prepurge sample collected: 4/13/05 @ 10:09
Post purge sample collected: 4/13/05 @ 10:25

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-11
Date: 04/13/05

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MONITORING WELL NO: W-12

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/14/05
Sampling Crew: BRJ/KCH
Weather: Partly Cloudy
Ambient Temperature: 65 F

WATER ELEVATION DATA

1) Well Reference Elevation:	171.36	ft. (above MSL)	Well Reference Point: North edge of casing
2) Depth to Water Surface:	48.28	ft.	Well Sounding Method: Solinst Water Level Indicator
3) Static Water Elevation:	123.08	ft. (#1-#2)	
4) Depth to Well Bottom:	59.80	ft.	
5) Height of Water Column:	11.52	ft. (#4-#2)	
6) 80 % Recharge	50.58	ft.	
Water Volume in Well =	1.9	gal.	
(2": h x 0.163 gal/ft)			
Total Water Volume =	5.6	gal.	

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/14/2005
Total Volume Purged (gallons): 6

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
09:15			0	19.2	0.10	7.09	106	235	Prepurge sample
09:20			0						Start
09:32	12	0.2	2	21.2	2.69	8.02	80	233	Slighty Murky
09:34	2	1.0	4	21.5	1.48	8.04	81	235	Slighty Murky
09:36	2	1.0	6	21.7	1.55	8.06	82	240	Slighty Murky
09:40				21.2	1.33	7.06	105	237	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/14/2005
Time: 0915/0940
Sampling Method: Disposable Bailer
Sample ID: W-12
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (1) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 48.28 /48.35
Sample Preservative: VOAs: HCl
Physical Appearance: Sl. Murky/ Sl. Murky
Comments:
Prepurge sample collected: 4/14/05 @ 09:15
Post purge sample collected: 4/14/05 @ 09:40

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: W-12
Date: 04/14/05

Leighton Consulting, Inc.
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MONITORING WELL NO: MW-13

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/14/05
Weather: Sunny
Sampling Crew: BRJ/KCH
Ambient Temperature: 70 F

WATER ELEVATION DATA

1) Well Reference Elevation:	172.54	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Water Surface:	49.66	ft.	Well Sounding Method:	Solinst Water Level Indicator
3) Static Water Elevation:	122.88	ft. (#1-#2)		
4) Depth to Well Bottom:	59.00	ft.		
5) Height of Water Column:	9.34	ft. (#4-#2)		
6) 80 % Recharge	51.53	ft.		
Water Volume in Well =	1.5	gal.		
(2": h x 0.163 gal/ft)				
Total Water Volume =	4.6	gal.		

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/14/2005
Total Volume Purged (gallons): 5

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
12:12			0	22.7	7.96	7.75	94	313	Prepurge sample
12:14			0						Start
12:17	3	0.7	2	26.4	6.90	7.98	86	209	Murky
12:19	2	1.0	4	24.9	2.81	8.08	88	215	Murky
12:21	2	0.5	5	23.6	3.57	8.08	90	210	Murky
12:26				21.4	0.94	7.07	125	216	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/14/2005
Time: 1212 / 1226
Sampling Method: Disposable Bailer
Sample ID: MW-13
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 49.66 / 49.70
Sample Preservative: VOAs: HCl
Physical Appearance: Murky /Murky
Comments:
Prepurge sample collected: 4/14/05@ 12:12
Post purge sample collected: 4/14/05 @ 12:26

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: MW-13
Date: 04/14/05

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MONITORING WELL NO: MW-14

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/13/05

Sampling Crew: BRJ/KCH

Weather: Partly Cloudy

Ambient Temperature: 60 F

WATER ELEVATION DATA

1) Well Reference Elevation:	173.24	ft. (above MSL)
2) Depth to Water Surface:	50.62	ft.
3) Static Water Elevation:	122.62	ft. (#1-#2)
4) Depth to Well Bottom:	60.35	ft.
5) Height of Water Column:	9.73	ft. (#4-#2)
6) 80 % Recharge	52.57	ft.
Water Volume in Well =	1.6	gal.
(2": h x 0.163 gal/ft)		
Total Water Volume =	4.8	gal.

Well Reference Point: North edge of casing

Well Sounding Method: Solinst Water Level Indicator

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck

Date: 4/13/2005

Total Volume Purged (gallons): 5

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
07:20			0	19.0	1.42	7.90	192	173	Prepurge sample
07:46			0						
07:48	2	1.0	2	17.4	2.16	7.71	140	210	Murky
07:52	4	0.5	4	18.1	1.85	8.17	149	213	Murky
07:53	1	2.0	6	17.9	2.16	8.16	154	215	Slightly Murky
8:00				20.8	1.90	6.97	176	219	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH

Date: 4/13/2005

Time: 0720 / 0800

Sampling Method: Disposable Bailer

Sample ID: **MW-14**

Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly

Postpurge: (4) VOAs & (1) 1 liter amber

DTW: 50.62 /50.65

Sample Preservative: VOAs: HCl

Physical Appearance: Murky / Murky

Comments:

Prepurge sample collected: 4/13/05 @ 07:20

Post purge sample collected: 4/13/05 @ 08:00

Project Name: G&M Oil # 16

Project No: 600143002

Well I.D. No: **MW-14**

Date: 04/13/05

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MONITORING WELL NO: MW-15

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/14/05 | Weather: Sunny

Sampling Crew: BRJ/KCH | Ambient Temperature: 68 F

WATER ELEVATION DATA

1) Well Reference Elevation:	173.67	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Water Surface:	50.42	ft.	Well Sounding Method:	Solinst Water Level Indicator
3) Static Water Elevation:	123.25	ft. (#1-#2)		
4) Depth to Well Bottom:	59.55	ft.		
5) Height of Water Column:	9.13	ft. (#4-#2)		
6) 80 % Recharge	52.25	ft.		
Water Volume in Well =	1.5	gal.		
(2": h x 0.163 gal/ft)				
Total Water Volume =	4.5	gal.		

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck

Date: 4/14/2005 | Total Volume Purged (gallons): 5

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
10:34			0	23.1	3.47	7.69	103	139	Prepurge sample
			0						Start
10:48	48	0.0	2	23.5	1.92	8.04	83	227	Murky
10:51	3	0.7	4	23.1	2.05	8.04	77	239	Murky
10:53	2	0.5	5	22.6	7.06	8.11	80	232	Murky
11:00				21.6	3.42	7.14	102	198	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH | Date: 4/14/2005 | Time: 1034 / 1100

Sampling Method: Disposable Bailer | Sample ID: MW-15

Containers Used: Prepurge: (2) VOAs (yellow cap) & (2) 0.5L poly | DTW: 50.42 / 50.40

Postpurge: (4) VOAs & (1) 1 liter amber

Sample Preservative: VOAs: HCl | Physical Appearance: Sl. Murky/Murky

Comments:

Prepurge sample collected: 4/14/05@ 10:34

Post purge sample collected: 4/14/05 @ 11:00

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: MW-15
Date: 04/14/05

Leighton Consulting, Inc.
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MONITORING WELL NO: MW-16

GROUNDWATER SAMPLING LOG

FIELD DATA

Date: 04/14/05
Weather: Partly Cloudy
Sampling Crew: BRJ/KCH
Ambient Temperature: 68 F

WATER ELEVATION DATA

1) Well Reference Elevation:	176.20	ft. (above MSL)	Well Reference Point:	North edge of casing
2) Depth to Water Surface:	52.87	ft.	Well Sounding Method:	Solinst Water Level Indicator
3) Static Water Elevation:	123.33	ft. (#1-#2)		
4) Depth to Well Bottom:	58.85	ft.		
5) Height of Water Column:	5.98	ft. (#4-#2)		
6) 80 % Recharge	54.07	ft.		
Water Volume in Well =	1.0	gal.		
(2": h x 0.163 gal/ft)				
Total Water Volume =	2.9	gal.		

PRODUCT OBSERVATION

Product Observed:	Yes	No X
Product Thickness (ft.):	N/A	
Method of Measurement:	N/A	
Product Appearance:	N/A	

WELL PURGE DATA

Purge Method: Vacuum Truck
Date: 4/14/2005
Total Volume Purged (gallons): 3

Time	Duration (min)	Rate (gal/min)	Volume (gal)	Temp (C)	DO (mg/L)	pH	ORP (mV)	Conductivity (µS/cm)	Comment
10:00			0	21.1	6.75	7.88	97	5.0	Prepurge sample
10:07			0						Start
10:08	1	1.0	1	20.8	7.13	8.11	93	206	Murky
10:09	1	1.0	2	20.3	3.16	8.04	91	145	Murky
10:10	1	1.0	3	20.6	2.48	7.97	90	148	Murky
10:14				21.1	0.00	6.93	104	135	Postpurge Sample (down well)

WATER SAMPLE DATA

Sampler Initials: BRJ/KCH
Date: 4/14/2005
Time: 1000/ 1014
Sampling Method: Disposable Bailer
Sample ID: MW-16
Containers Used: **Prepurge:** (2) VOAs (yellow cap) & (2) 0.5L poly
Postpurge: (4) VOAs & (1) 1 liter amber
DTW: 52.87 / 53.00
Sample Preservative: VOAs: HCl
Physical Appearance: Sl. murky/ Murky
Comments:
Prepurge sample collected: 4/14/05 @ 10:00
Post purge sample collected: 4/14/05 @ 10:14

Project Name: G&M Oil # 16
Project No: 600143002
Well I.D. No: MW-16
Date: 04/14/05

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LABORATORY REPORT

Prepared For: Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project: G&M #16, Whittier, CA
600143002

Sampled: 04/13/05
Received: 04/13/05
Issued: 04/22/05 15:44

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOD0920-01	W-1	Water
IOD0920-02	W-2	Water
IOD0920-03	W-3	Water
IOD0920-04	W-4	Water
IOD0920-05	W-5	Water
IOD0920-06	W-6	Water
IOD0920-07	W-7	Water
IOD0920-08	W-9	Water
IOD0920-09	W-11	Water
IOD0920-10	W-14	Water
IOD0920-11	W-1 Pre	Water
IOD0920-12	W-2 Pre	Water
IOD0920-13	W-4 Pre	Water
IOD0920-14	W-6 Pre	Water
IOD0920-15	W-7 Pre	Water
IOD0920-16	W-9 Pre	Water
IOD0920-17	W-11 Pre	Water
IOD0920-18	W-14 Pre	Water

Reviewed By:

Del Mar Analytical, Irvine
Patty Mata
Project Manager

Del Mar Analytical

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/8015 CADHS Modified)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-01 (W-1 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	10	36	18.9	4/15/2005	4/18/2005	CRb
Surrogate: n-Octacosane (40-125%)				*426 %*				*Z3*
Sample ID: IOD0920-02 (W-2 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	0.50	0.943	4/15/2005	4/15/2005	CRc
Surrogate: n-Octacosane (40-125%)				*47 %*				
Sample ID: IOD0920-03 (W-3 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	1.0	2.4	1.89	4/15/2005	4/16/2005	CRa
Surrogate: n-Octacosane (40-125%)				*65 %*				
Sample ID: IOD0920-04 (W-4 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	0.74	0.943	4/15/2005	4/15/2005	CRc
Surrogate: n-Octacosane (40-125%)				*60 %*				
Sample ID: IOD0920-05 (W-5 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	100	530	189	4/15/2005	4/18/2005	CR
Surrogate: n-Octacosane (40-125%)				*45 %*				*Z3*
Sample ID: IOD0920-06 (W-6 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.952	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*61 %*				
Sample ID: IOD0920-07 (W-7 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.952	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*66 %*				
Sample ID: IOD0920-08 (W-9 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.943	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*63 %*				

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Patty Mata
Project Manager

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/8015 CADHS Modified)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-09 (W-11 - Water)								RL-4
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.56	ND	1.11	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*51 %*				
Sample ID: IOD0920-10 (W-14 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.943	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*66 %*				

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-01 (W-1 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	1000	**11000**	20	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*112 %*				
Sample ID: IOD0920-02 (W-2 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	1000	**2900**	20	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*87 %*				
Sample ID: IOD0920-03 (W-3 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	1000	**12000**	20	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*119 %*				
Sample ID: IOD0920-04 (W-4 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	250	**2200**	5	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*96 %*				
Sample ID: IOD0920-05 (W-5 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	500000	**7500000**	10000	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*130 %*				
Sample ID: IOD0920-06 (W-6 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	50	ND	1	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*84 %*				
Sample ID: IOD0920-07 (W-7 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	50	**59**	1	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*82 %*				
Sample ID: IOD0920-08 (W-9 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	50	**91**	1	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*86 %*				

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-09 (W-11 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	50	ND	1	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*88 %*				
Sample ID: IOD0920-10 (W-14 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D20114	50	ND	1	4/20/2005	4/20/2005	
Surrogate: 4-BFB (FID) (65-140%)				*89 %*				

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-01 (W-1 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D18020	25	1900	50	4/18/2005	4/18/2005	
Ethylbenzene	EPA 8260B	5D18020	25	360	50	4/18/2005	4/18/2005	
Toluene	EPA 8260B	5D18020	25	1200	50	4/18/2005	4/18/2005	
o-Xylene	EPA 8260B	5D18020	25	350	50	4/18/2005	4/18/2005	
m,p-Xylenes	EPA 8260B	5D18020	50	700	50	4/18/2005	4/18/2005	
Xylenes, Total	EPA 8260B	5D18020	50	1000	50	4/18/2005	4/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D18020	250	ND	50	4/18/2005	4/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D18020	250	ND	50	4/18/2005	4/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D18020	250	ND	50	4/18/2005	4/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D18020	250	870	50	4/18/2005	4/18/2005	
tert-Butanol (TBA)	EPA 8260B	5D18020	500	ND	50	4/18/2005	4/18/2005	
Surrogate: Dibromofluoromethane (80-120%)				*105 %*				
Surrogate: Toluene-d8 (80-120%)				*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				
Sample ID: IOD0920-02 (W-2 - Water)								HS
Reporting Units: ug/l								
Benzene	EPA 8260B	5D19020	10	550	20	4/19/2005	4/20/2005	
Ethylbenzene	EPA 8260B	5D19020	10	120	20	4/19/2005	4/20/2005	
Toluene	EPA 8260B	5D19020	10	380	20	4/19/2005	4/20/2005	
o-Xylene	EPA 8260B	5D19020	10	100	20	4/19/2005	4/20/2005	
m,p-Xylenes	EPA 8260B	5D19020	20	350	20	4/19/2005	4/20/2005	
Xylenes, Total	EPA 8260B	5D19020	20	450	20	4/19/2005	4/20/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D19020	100	ND	20	4/19/2005	4/20/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D19020	100	ND	20	4/19/2005	4/20/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D19020	100	ND	20	4/19/2005	4/20/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D19020	100	1400	20	4/19/2005	4/20/2005	
tert-Butanol (TBA)	EPA 8260B	5D19020	200	560	20	4/19/2005	4/20/2005	
Surrogate: Dibromofluoromethane (80-120%)				*108 %*				
Surrogate: Toluene-d8 (80-120%)				*114 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*102 %*				

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Patty Mata
Project Manager

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-03 (W-3 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D18020	10	220	20	4/18/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D18020	10	380	20	4/18/2005	4/19/2005	
Toluene	EPA 8260B	5D18020	10	1500	20	4/18/2005	4/19/2005	
o-Xylene	EPA 8260B	5D18020	10	720	20	4/18/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D18020	20	1800	20	4/18/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D18020	20	2500	20	4/18/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D18020	100	ND	20	4/18/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D18020	100	ND	20	4/18/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D18020	100	ND	20	4/18/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D18020	100	400	20	4/18/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D18020	200	210	20	4/18/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*106 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*104 %*				
Sample ID: IOD0920-04 (W-4 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D18020	10	1300	20	4/18/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D18020	10	20	20	4/18/2005	4/19/2005	
Toluene	EPA 8260B	5D18020	10	20	20	4/18/2005	4/19/2005	
o-Xylene	EPA 8260B	5D18020	10	ND	20	4/18/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D18020	20	ND	20	4/18/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D18020	20	22	20	4/18/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D18020	100	ND	20	4/18/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D18020	100	ND	20	4/18/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D18020	100	ND	20	4/18/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D18020	100	2100	20	4/18/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D18020	200	7200	20	4/18/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*107 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*99 %*				

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Patty Mata
Project Manager

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-05 (W-5 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D18020	50	**3600**	100	4/18/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D18020	50	**3300**	100	4/18/2005	4/19/2005	
Toluene	EPA 8260B	5D18020	50	**4200**	100	4/18/2005	4/19/2005	
o-Xylene	EPA 8260B	5D18020	50	**2100**	100	4/18/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D18020	100	**5800**	100	4/18/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D18020	100	**7900**	100	4/18/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D18020	500	ND	100	4/18/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D18020	500	ND	100	4/18/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D18020	500	ND	100	4/18/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D18020	500	**580**	100	4/18/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D18020	1000	ND	100	4/18/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*105 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*104 %*				
Sample ID: IOD0920-06 (W-6 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D19020	0.50	ND	1	4/19/2005	4/20/2005	
Ethylbenzene	EPA 8260B	5D19020	0.50	ND	1	4/19/2005	4/20/2005	
Toluene	EPA 8260B	5D19020	0.50	ND	1	4/19/2005	4/20/2005	
o-Xylene	EPA 8260B	5D19020	0.50	ND	1	4/19/2005	4/20/2005	
m,p-Xylenes	EPA 8260B	5D19020	1.0	ND	1	4/19/2005	4/20/2005	
Xylenes, Total	EPA 8260B	5D19020	1.0	ND	1	4/19/2005	4/20/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D19020	5.0	ND	1	4/19/2005	4/20/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D19020	5.0	ND	1	4/19/2005	4/20/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D19020	5.0	ND	1	4/19/2005	4/20/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D19020	5.0	ND	1	4/19/2005	4/20/2005	
tert-Butanol (TBA)	EPA 8260B	5D19020	10	ND	1	4/19/2005	4/20/2005	
Surrogate: Dibromofluoromethane (80-120%)				*110 %*				
Surrogate: Toluene-d8 (80-120%)				*112 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD0920

Sampled: 04/13/05
Received: 04/13/05

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-07 (W-7 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
Toluene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
o-Xylene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D19007	1.0	ND	1	4/19/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D19007	1.0	ND	1	4/19/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D19007	5.0	**170**	1	4/19/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D19007	10	ND	1	4/19/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*100 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*94 %*				
Sample ID: IOD0920-08 (W-9 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D19007	10	ND	20	4/19/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D19007	10	ND	20	4/19/2005	4/19/2005	
Toluene	EPA 8260B	5D19007	10	ND	20	4/19/2005	4/19/2005	
o-Xylene	EPA 8260B	5D19007	10	ND	20	4/19/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D19007	20	ND	20	4/19/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D19007	20	ND	20	4/19/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D19007	100	ND	20	4/19/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D19007	100	ND	20	4/19/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D19007	100	ND	20	4/19/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D19007	100	**940**	20	4/19/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D19007	200	ND	20	4/19/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*90 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*90 %*				

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-09 (W-11 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
Toluene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
o-Xylene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D19007	1.0	ND	1	4/19/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D19007	1.0	ND	1	4/19/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D19007	10	ND	1	4/19/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*103 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				
Sample ID: IOD0920-10 (W-14 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D19007	0.50	0.57	1	4/19/2005	4/19/2005	
Ethylbenzene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
Toluene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
o-Xylene	EPA 8260B	5D19007	0.50	ND	1	4/19/2005	4/19/2005	
m,p-Xylenes	EPA 8260B	5D19007	1.0	ND	1	4/19/2005	4/19/2005	
Xylenes, Total	EPA 8260B	5D19007	1.0	ND	1	4/19/2005	4/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D19007	5.0	ND	1	4/19/2005	4/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D19007	5.0	79	1	4/19/2005	4/19/2005	
tert-Butanol (TBA)	EPA 8260B	5D19007	10	ND	1	4/19/2005	4/19/2005	
Surrogate: Dibromofluoromethane (80-120%)				*107 %*				
Surrogate: Toluene-d8 (80-120%)				*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*94 %*				

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD0920

Sampled: 04/13/05
Received: 04/13/05

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-11 (W-1 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	0.29	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-12 (W-2 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	0.18	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-13 (W-4 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	0.47	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-14 (W-6 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-15 (W-7 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	0.11	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-16 (W-9 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-17 (W-11 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD0920-18 (W-14 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14090	0.040	ND	1	4/14/2005	4/15/2005	

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD0920

Sampled: 04/13/05
Received: 04/13/05

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0920-11 (W-1 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	0.30	ND	2	4/13/2005	4/13/2005	RL-1
Sulfate	EPA 300.0	5D13059	25	850	50	4/13/2005	4/13/2005	
Sample ID: IOD0920-12 (W-2 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	0.30	0.67	2	4/13/2005	4/13/2005	
Sulfate	EPA 300.0	5D13059	25	830	50	4/13/2005	4/14/2005	
Sample ID: IOD0920-13 (W-4 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	0.15	ND	1	4/13/2005	4/13/2005	
Sulfate	EPA 300.0	5D13059	25	560	50	4/13/2005	4/14/2005	
Sample ID: IOD0920-14 (W-6 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	0.30	5.5	2	4/13/2005	4/13/2005	
Sulfate	EPA 300.0	5D13059	25	970	50	4/13/2005	4/14/2005	
Sample ID: IOD0920-15 (W-7 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	0.30	3.0	2	4/13/2005	4/13/2005	
Sulfate	EPA 300.0	5D13059	25	1300	50	4/13/2005	4/14/2005	
Sample ID: IOD0920-16 (W-9 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	0.30	5.6	2	4/13/2005	4/13/2005	
Sulfate	EPA 300.0	5D13059	25	940	50	4/13/2005	4/14/2005	
Sample ID: IOD0920-17 (W-11 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	3.0	10	20	4/13/2005	4/14/2005	
Sulfate	EPA 300.0	5D13059	10	720	20	4/13/2005	4/14/2005	
Sample ID: IOD0920-18 (W-14 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D13059	3.0	4.6	20	4/13/2005	4/14/2005	
Sulfate	EPA 300.0	5D13059	10	480	20	4/13/2005	4/14/2005	

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Leighton Consulting, Inc.
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Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD0920

Sampled: 04/13/05
Received: 04/13/05

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: W-1 Pre (IOD0920-11) - Water					
EPA 300.0	2	04/13/2005 13:20	04/13/2005 15:40	04/13/2005 19:00	04/13/2005 19:38
Sample ID: W-2 Pre (IOD0920-12) - Water					
EPA 300.0	2	04/13/2005 12:54	04/13/2005 15:40	04/13/2005 19:00	04/13/2005 19:51
Sample ID: W-4 Pre (IOD0920-13) - Water					
EPA 300.0	2	04/13/2005 13:06	04/13/2005 15:40	04/13/2005 19:00	04/13/2005 20:05
Sample ID: W-6 Pre (IOD0920-14) - Water					
EPA 300.0	2	04/13/2005 11:13	04/13/2005 15:40	04/13/2005 19:00	04/13/2005 20:19
Sample ID: W-7 Pre (IOD0920-15) - Water					
EPA 300.0	2	04/13/2005 12:23	04/13/2005 15:40	04/13/2005 19:00	04/13/2005 20:33
Sample ID: W-9 Pre (IOD0920-16) - Water					
EPA 300.0	2	04/13/2005 07:25	04/13/2005 15:40	04/13/2005 19:00	04/13/2005 20:46
Sample ID: W-11 Pre (IOD0920-17) - Water					
EPA 300.0	2	04/13/2005 10:09	04/13/2005 15:40	04/13/2005 19:00	04/14/2005 01:12
Sample ID: W-14 Pre (IOD0920-18) - Water					
EPA 300.0	2	04/13/2005 07:20	04/13/2005 15:40	04/13/2005 19:00	04/14/2005 01:26

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Leighton Consulting, Inc.	Project ID:	G&M #16, Whittier, CA 600143002	
17781 Cowan, Suite 140			Sampled: 04/13/05
Irvine, CA 92614	Report Number:	IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki			

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/8015 CADHS Modified)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D15050 Extracted: 04/15/05										
Blank Analyzed: 04/15/2005 (5D15050-BLK1)										
EFH (C8 - C40)	ND	0.50	mg/l							
Surrogate: n-Octacosane	*0.0878*		*mg/l*	*0.200*		*44*	*40-125*			
LCS Analyzed: 04/16/2005 (5D15050-BS1)										**M-NR1**
EFH (C8 - C40)	0.681	0.50	mg/l	1.00		68	40-120			
Surrogate: n-Octacosane	*0.105*		*mg/l*	*0.200*		*52*	*40-125*			
LCS Dup Analyzed: 04/15/2005 (5D15050-BSD1)										
EFH (C8 - C40)	0.659	0.50	mg/l	1.00		66	40-120	3	25	
Surrogate: n-Octacosane	*0.0853*		*mg/l*	*0.200*		*43*	*40-125*			

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D20114 Extracted: 04/20/05										
Blank Analyzed: 04/20/2005 (5D20114-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	50	ug/l							
Surrogate: 4-BFB (FID)	*9.36*		*ug/l*	*10.0*		*94*	*65-140*			
LCS Analyzed: 04/20/2005 (5D20114-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	769	50	ug/l	800		96	70-140			
Surrogate: 4-BFB (FID)	*28.6*		*ug/l*	*30.0*		*95*	*65-140*			
Matrix Spike Analyzed: 04/20/2005 (5D20114-MS1)					**Source: IOD0806-02**					
Volatile Fuel Hydrocarbons (C6-C12)	70400	10000	ug/l	44000	46000	55	60-140			*M2*
Surrogate: 4-BFB (FID)	*1630*		*ug/l*	*2000*		*82*	*65-140*			
Matrix Spike Dup Analyzed: 04/20/2005 (5D20114-MSD1)					**Source: IOD0806-02**					
Volatile Fuel Hydrocarbons (C6-C12)	84900	10000	ug/l	44000	46000	88	60-140	19	20	
Surrogate: 4-BFB (FID)	*2160*		*ug/l*	*2000*		*108*	*65-140*			

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D18020 Extracted: 04/18/05										
Blank Analyzed: 04/18/2005 (5D18020-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	10	ug/l							
Surrogate: Dibromofluoromethane	*26.0*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
LCS Analyzed: 04/18/2005 (5D18020-BS1)										
Benzene	23.8	0.50	ug/l	25.0		95	70-120			
Ethylbenzene	22.3	0.50	ug/l	25.0		89	80-120			
Toluene	22.0	0.50	ug/l	25.0		88	75-120			
o-Xylene	22.4	0.50	ug/l	25.0		90	75-125			
m,p-Xylenes	45.5	1.0	ug/l	50.0		91	75-120			
Xylenes, Total	67.8	1.0	ug/l	75.0		90	75-125			
Di-isopropyl Ether (DIPE)	27.5	5.0	ug/l	25.0		110	65-135			
Ethyl tert-Butyl Ether (ETBE)	26.5	5.0	ug/l	25.0		106	60-140			
tert-Amyl Methyl Ether (TAME)	26.5	5.0	ug/l	25.0		106	60-140			
Methyl-tert-butyl Ether (MTBE)	26.1	5.0	ug/l	25.0		104	55-145			
tert-Butanol (TBA)	136	10	ug/l	125		109	70-140			
Surrogate: Dibromofluoromethane	*26.6*		*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD0920

Sampled: 04/13/05
Received: 04/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D18020 Extracted: 04/18/05										
Matrix Spike Analyzed: 04/18/2005 (5D18020-MS1)					**Source: IOD0624-17**					
Benzene	26.9	0.50	ug/l	25.0	4.6	89	70-120			
Ethylbenzene	22.6	0.50	ug/l	25.0	0.39	89	70-130			
Toluene	22.0	0.50	ug/l	25.0	ND	88	70-120			
o-Xylene	21.9	0.50	ug/l	25.0	ND	88	65-125			
m,p-Xylenes	44.7	1.0	ug/l	50.0	ND	89	65-130			
Xylenes, Total	66.5	1.0	ug/l	75.0	ND	89	65-135			
Di-isopropyl Ether (DIPE)	26.8	5.0	ug/l	25.0	1.3	102	65-140			
Ethyl tert-Butyl Ether (ETBE)	23.9	5.0	ug/l	25.0	ND	96	60-140			
tert-Amyl Methyl Ether (TAME)	24.0	5.0	ug/l	25.0	ND	96	55-145			
Methyl-tert-butyl Ether (MTBE)	27.9	5.0	ug/l	25.0	4.8	92	50-155			
tert-Butanol (TBA)	149	10	ug/l	125	ND	119	65-145			
Surrogate: Dibromofluoromethane	*26.2*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
Matrix Spike Dup Analyzed: 04/18/2005 (5D18020-MSD1)					**Source: IOD0624-17**					
Benzene	26.8	0.50	ug/l	25.0	4.6	89	70-120	0	20	
Ethylbenzene	23.0	0.50	ug/l	25.0	0.39	90	70-130	2	20	
Toluene	22.4	0.50	ug/l	25.0	ND	90	70-120	2	20	
o-Xylene	22.3	0.50	ug/l	25.0	ND	89	65-125	2	20	
m,p-Xylenes	45.6	1.0	ug/l	50.0	ND	91	65-130	2	25	
Xylenes, Total	67.9	1.0	ug/l	75.0	ND	91	65-135	2	20	
Di-isopropyl Ether (DIPE)	27.5	5.0	ug/l	25.0	1.3	105	65-140	3	25	
Ethyl tert-Butyl Ether (ETBE)	24.5	5.0	ug/l	25.0	ND	98	60-140	2	25	
tert-Amyl Methyl Ether (TAME)	24.8	5.0	ug/l	25.0	ND	99	55-145	3	30	
Methyl-tert-butyl Ether (MTBE)	29.1	5.0	ug/l	25.0	4.8	97	50-155	4	25	
tert-Butanol (TBA)	148	10	ug/l	125	ND	118	65-145	1	25	
Surrogate: Dibromofluoromethane	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.4*		*ug/l*	*25.0*		*102*	*80-120*			

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Leighton Consulting, Inc.	Project ID:	G&M #16, Whittier, CA 600143002	
17781 Cowan, Suite 140			Sampled: 04/13/05
Irvine, CA 92614	Report Number:	IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki			

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D19007 Extracted: 04/19/05										
Blank Analyzed: 04/19/2005 (5D19007-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	10	ug/l							
Surrogate: Dibromofluoromethane	*27.0*		*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.4*		*ug/l*	*25.0*		*94*	*80-120*			
LCS Analyzed: 04/19/2005 (5D19007-BS1)										
Benzene	27.1	0.50	ug/l	25.0		108	70-120			
Ethylbenzene	27.2	0.50	ug/l	25.0		109	80-120			
Toluene	28.1	0.50	ug/l	25.0		112	75-120			
o-Xylene	26.9	0.50	ug/l	25.0		108	75-125			
m,p-Xylenes	54.8	1.0	ug/l	50.0		110	75-120			
Xylenes, Total	81.7	1.0	ug/l	75.0		109	75-125			
Di-isopropyl Ether (DIPE)	30.1	5.0	ug/l	25.0		120	65-135			
Ethyl tert-Butyl Ether (ETBE)	29.4	5.0	ug/l	25.0		118	60-140			
tert-Amyl Methyl Ether (TAME)	30.9	5.0	ug/l	25.0		124	60-140			
Methyl-tert-butyl Ether (MTBE)	30.2	5.0	ug/l	25.0		121	55-145			*M-3*
tert-Butanol (TBA)	119	10	ug/l	125		95	70-140			
Surrogate: Dibromofluoromethane	*26.3*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.4*		*ug/l*	*25.0*		*102*	*80-120*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D19007 Extracted: 04/19/05										
Matrix Spike Analyzed: 04/19/2005 (5D19007-MS1)					Source: IOD0920-07					
Benzene	28.9	0.50	ug/l	25.0	ND	116	70-120			
Ethylbenzene	28.4	0.50	ug/l	25.0	ND	114	70-130			
Toluene	30.4	0.50	ug/l	25.0	ND	122	70-120			*M1*
o-Xylene	28.3	0.50	ug/l	25.0	ND	113	65-125			
m,p-Xylenes	56.6	1.0	ug/l	50.0	ND	113	65-130			
Xylenes, Total	84.9	1.0	ug/l	75.0	ND	113	65-135			
Di-isopropyl Ether (DIPE)	36.6	5.0	ug/l	25.0	2.4	137	65-140			
Ethyl tert-Butyl Ether (ETBE)	36.0	5.0	ug/l	25.0	2.2	135	60-140			
tert-Amyl Methyl Ether (TAME)	37.1	5.0	ug/l	25.0	1.1	144	55-145			
tert-Butanol (TBA)	140	10	ug/l	125	ND	112	65-145			
Surrogate: Dibromofluoromethane	*27.1*		*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.8*		*ug/l*	*25.0*		*99*	*80-120*			
Matrix Spike Dup Analyzed: 04/19/2005 (5D19007-MSD1)					Source: IOD0920-07					
Benzene	28.4	0.50	ug/l	25.0	ND	114	70-120	2	20	
Ethylbenzene	28.4	0.50	ug/l	25.0	ND	114	70-130	0	20	
Toluene	28.5	0.50	ug/l	25.0	ND	114	70-120	6	20	
o-Xylene	28.2	0.50	ug/l	25.0	ND	113	65-125	0	20	
m,p-Xylenes	57.4	1.0	ug/l	50.0	ND	115	65-130	1	25	
Xylenes, Total	85.6	1.0	ug/l	75.0	ND	114	65-135	1	20	
Di-isopropyl Ether (DIPE)	32.0	5.0	ug/l	25.0	2.4	118	65-140	13	25	
Ethyl tert-Butyl Ether (ETBE)	30.9	5.0	ug/l	25.0	2.2	115	60-140	15	25	
tert-Amyl Methyl Ether (TAME)	30.0	5.0	ug/l	25.0	1.1	116	55-145	21	30	
tert-Butanol (TBA)	136	10	ug/l	125	ND	109	65-145	3	25	
Surrogate: Dibromofluoromethane	*25.8*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*25.8*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.1*		*ug/l*	*25.0*		*100*	*80-120*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D19020 Extracted: 04/19/05										
Blank Analyzed: 04/19/2005 (5D19020-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	10	ug/l							
Surrogate: Dibromofluoromethane	*26.2*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*28.1*		*ug/l*	*25.0*		*112*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.1*		*ug/l*	*25.0*		*100*	*80-120*			
LCS Analyzed: 04/19/2005 (5D19020-BS1)										
Benzene	25.6	0.50	ug/l	25.0		102	70-120			
Ethylbenzene	26.4	0.50	ug/l	25.0		106	80-120			
Toluene	25.9	0.50	ug/l	25.0		104	75-120			
o-Xylene	25.6	0.50	ug/l	25.0		102	75-125			
m,p-Xylenes	49.4	1.0	ug/l	50.0		99	75-120			
Xylenes, Total	74.9	1.0	ug/l	75.0		100	75-125			
Di-isopropyl Ether (DIPE)	27.3	5.0	ug/l	25.0		109	65-135			
Ethyl tert-Butyl Ether (ETBE)	26.8	5.0	ug/l	25.0		107	60-140			
tert-Amyl Methyl Ether (TAME)	27.2	5.0	ug/l	25.0		109	60-140			
Methyl-tert-butyl Ether (MTBE)	25.7	5.0	ug/l	25.0		103	55-145			
tert-Butanol (TBA)	140	10	ug/l	125		112	70-140			
Surrogate: Dibromofluoromethane	*26.7*		*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*28.4*		*ug/l*	*25.0*		*114*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.0*		*ug/l*	*25.0*		*104*	*80-120*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D19020 Extracted: 04/19/05										
Matrix Spike Analyzed: 04/19/2005 (5D19020-MS1)					**Source: IOD0860-01**					
Benzene	28.2	0.50	ug/l	25.0	0.39	111	70-120			
Ethylbenzene	29.0	0.50	ug/l	25.0	ND	116	70-130			
Toluene	28.0	0.50	ug/l	25.0	ND	112	70-120			
o-Xylene	27.6	0.50	ug/l	25.0	ND	110	65-125			
m,p-Xylenes	54.4	1.0	ug/l	50.0	ND	109	65-130			
Xylenes, Total	82.0	1.0	ug/l	75.0	ND	109	65-135			
Di-isopropyl Ether (DIPE)	30.1	5.0	ug/l	25.0	ND	120	65-140			
Ethyl tert-Butyl Ether (ETBE)	29.8	5.0	ug/l	25.0	ND	119	60-140			
tert-Amyl Methyl Ether (TAME)	30.5	5.0	ug/l	25.0	ND	122	55-145			
Methyl-tert-butyl Ether (MTBE)	28.8	5.0	ug/l	25.0	ND	115	50-155			
tert-Butanol (TBA)	155	10	ug/l	125	ND	124	65-145			
Surrogate: Dibromofluoromethane	*26.5*		*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*28.2*		*ug/l*	*25.0*		*113*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.2*		*ug/l*	*25.0*		*105*	*80-120*			
Matrix Spike Dup Analyzed: 04/19/2005 (5D19020-MSD1)					**Source: IOD0860-01**					
Benzene	27.9	0.50	ug/l	25.0	0.39	110	70-120	1	20	
Ethylbenzene	29.2	0.50	ug/l	25.0	ND	117	70-130	1	20	
Toluene	27.8	0.50	ug/l	25.0	ND	111	70-120	1	20	
o-Xylene	28.0	0.50	ug/l	25.0	ND	112	65-125	1	20	
m,p-Xylenes	54.4	1.0	ug/l	50.0	ND	109	65-130	0	25	
Xylenes, Total	82.4	1.0	ug/l	75.0	ND	110	65-135	1	20	
Di-isopropyl Ether (DIPE)	28.8	5.0	ug/l	25.0	ND	115	65-140	4	25	
Ethyl tert-Butyl Ether (ETBE)	28.3	5.0	ug/l	25.0	ND	113	60-140	5	25	
tert-Amyl Methyl Ether (TAME)	29.1	5.0	ug/l	25.0	ND	116	55-145	5	30	
Methyl-tert-butyl Ether (MTBE)	27.1	5.0	ug/l	25.0	ND	108	50-155	6	25	
tert-Butanol (TBA)	165	10	ug/l	125	ND	132	65-145	6	25	
Surrogate: Dibromofluoromethane	*26.1*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: Toluene-d8	*28.2*		*ug/l*	*25.0*		*113*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.3*		*ug/l*	*25.0*		*105*	*80-120*			

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Patty Mata
Project Manager

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

METHOD BLANK/QC DATA

DISSOLVED GASES BY HEADSPACE EQUILIBRIUM (RSK-175 MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D14051 Extracted: 04/14/05										
Blank Analyzed: 04/14/2005 (5D14051-BLK1)										
Methane	ND	0.050	mg/l							
LCS Analyzed: 04/14/2005 (5D14051-BS1)										
Methane	1.16	0.050	mg/l	1.36		85	80-120			
Matrix Spike Analyzed: 04/14/2005 (5D14051-MS1)					Source: IOD0582-04					
Methane	1.35	0.050	mg/l	1.36	0.013	98	80-120			
Matrix Spike Dup Analyzed: 04/14/2005 (5D14051-MSD1)					Source: IOD0582-04					
Methane	1.39	0.050	mg/l	1.36	0.013	101	80-120	3	25	
Batch: 5D20066 Extracted: 04/20/05										
Blank Analyzed: 04/20/2005 (5D20066-BLK1)										
Methane	ND	0.050	mg/l							
LCS Analyzed: 04/20/2005 (5D20066-BS1)										
Methane	1.54	0.050	mg/l	1.36		113	80-120			
Matrix Spike Analyzed: 04/20/2005 (5D20066-MS1)					Source: IOD1117-02					
Methane	1.49	0.050	mg/l	1.36	0.012	109	80-120			
Matrix Spike Dup Analyzed: 04/20/2005 (5D20066-MSD1)					Source: IOD1117-02					
Methane	1.54	0.050	mg/l	1.36	0.012	112	80-120	3	25	

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D14090 Extracted: 04/14/05										
Blank Analyzed: 04/15/2005 (5D14090-BLK1)										
Iron, Dissolved	ND	0.040	mg/l							
LCS Analyzed: 04/15/2005 (5D14090-BS1)										
Iron, Dissolved	0.930	0.040	mg/l	1.00		93	80-120			
Matrix Spike Analyzed: 04/15/2005 (5D14090-MS1)					**Source: IOD0920-11**					
Iron, Dissolved	1.19	0.040	mg/l	1.00	0.29	90	75-125			
Matrix Spike Dup Analyzed: 04/15/2005 (5D14090-MSD1)					**Source: IOD0920-11**					
Iron, Dissolved	1.19	0.040	mg/l	1.00	0.29	90	75-125	0	20	

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Leighton Consulting, Inc.	Project ID:	G&M #16, Whittier, CA	
17781 Cowan, Suite 140		600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number:	IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki			

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D13059 Extracted: 04/13/05										
Blank Analyzed: 04/13/2005 (5D13059-BLK1)										
Nitrate-N	ND	0.15	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 04/13/2005 (5D13059-BS1)										
Nitrate-N	1.15	0.15	mg/l	1.13		102	90-110			
Sulfate	9.64	0.50	mg/l	10.0		96	90-110			*M-3*
Matrix Spike Analyzed: 04/13/2005 (5D13059-MS1)					Source: IOD0840-07					
Nitrate-N	1.17	0.75	mg/l	1.13	ND	104	80-120			
Matrix Spike Dup Analyzed: 04/13/2005 (5D13059-MSD1)					Source: IOD0840-07					
Nitrate-N	1.19	0.75	mg/l	1.13	ND	105	80-120	2	20	

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/13/05
Irvine, CA 92614	Report Number: IOD0920	Received: 04/13/05
Attention: Charles Mazowiecki		

DATA QUALIFIERS AND DEFINITIONS

CR	The carbon range of the fuel found in the sample = C8-C18
CRa	The carbon range of the fuel found in the sample = C8-C30
CRb	The carbon range of the fuel found in the sample = C8-C34
CRc	The carbon range of the fuel found in the sample = C8-C40
HS	HS = Sample container contained headspace.
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M-3	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
M-NR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
RL-1	Reporting limit raised due to sample matrix effects.
RL-4	Reporting limit raised due to insufficient sample volume.
Z3	The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD. The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD0920	Sampled: 04/13/05 Received: 04/13/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 300.0	Water	X	X
EPA 6010B-Diss	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
RSK-175 MOD.	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
Patty Mata
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CHAIN OF CUSTODY FORM

Pg 1 of 2

Client Name/Address: LCI, 17781 Cowan, Irvine, CA

P.O. #: 66143002

Project: G/m #16

Project Manager/Phone Number: Charles Mazowiecki x216

Phone Number: (949) 253-9836

Sampler: KLH/BRT

Fax Number: (949) 757-7230

ANALYSIS REQUIRED: 8015-g, 8015-d, 8260 + BTEX + Oxys, SO_4, NO_3, Fe2, Diss. Methane

1DD0920

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	8015-g	8015-d	8260 + BTEX + Oxys	SO_4, NO_3, Fe2	Diss. Methane					Special Instructions
W-1	GW	VOA Amb	5	4/13/05 1340	HCl / None	X	X	X							
W-2				1311											
W-3				1220											
W-4				1417											
W-5				1058											
W-6				1127											
W-7				1238											
W-9				0946											
W-11				1065											
W-14				0800											
~~Pre~~ W-1 Pre	GW	VOA Poly	3	1320					X	X					
~~Pre~~ W-2 Pre				1254											
~~Pre~~ W-3 Pre															
~~Pre~~ W-4 Pre				1306											
~~Pre~~ W-5 Pre															

Relinquished By	Date/Time:	Received By	Date/Time:
[signature] 1540	4-13-05		
		[signature]	4/13/05 1540

Turnaround Time: (check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
Intact X On Ice: 3°C

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CHAIN OF CUSTODY FORM

Pg 2 of 2

Client Name/Address: LCI, 17781 Cowan, Irvine, CA

P.O. #: 60C143002

Project: G/m #16

Project Manager/Phone Number: Charles Mazowiecki x216

Phone Number: (949) 253-9836

Sampler: KCH/BRJ

Fax Number: (949) 757-7230

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	SO4, NO3, Fe2	Diss Methane		HOLD						Special Instructions
~~Pre~~ W-6 Pre	GW	Vou Poly	3	4/13/05 ~~1330~~ 1113	HCl/None	X	X								
~~Pre~~ W-7 Pre	↓	↓	↓	1223 ~~1254~~	↓	↓	↓								
~~Pre~~ W-9 Pre	↓	↓	↓	0725	↓	↓	↓								
~~Pre~~ W-11 Pre	↓	↓	↓	1009	↓	↓	↓								
~~Pre~~ W-14 Pre	↓	↓	↓	0720	↓	↓	↓								
Trip Blanks	H2O	VOAs	4	N/A	HCl				X						

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	4/13-05 1540		
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By [signature]	Date/Time: 4/13/05 15:40

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal ✓

Sample Integrity: (Check)
Intact X On Ice: 3°C

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LABORATORY REPORT

Prepared For: Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project: G&M #16, Whittier, CA
600143002

Sampled: 04/14/05
Received: 04/14/05
Issued: 04/29/05 09:40

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOD1002-01	W-8	Water
IOD1002-02	W-10	Water
IOD1002-03	W-12	Water
IOD1002-04	MW-13	Water
IOD1002-05	MW-15	Water
IOD1002-06	MW-16	Water
IOD1002-07	W-8 Pre	Water
IOD1002-08	W-10 Pre	Water
IOD1002-09	W-12 Pre	Water
IOD1002-10	MW-13 Pre	Water
IOD1002-11	MW-15 Pre	Water
IOD1002-12	MW-16 Pre	Water

Reviewed By:

Del Mar Analytical, Irvine
Patty Mata
Project Manager

Del Mar Analytical

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/8015 CADHS Modified)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-01 (W-8 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	0.63	0.952	4/15/2005	4/16/2005	CR
Surrogate: n-Octacosane (40-125%)				*84 %*				
Sample ID: IOD1002-02 (W-10 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.943	4/15/2005	4/16/2005	
Surrogate: n-Octacosane (40-125%)				*62 %*				
Sample ID: IOD1002-03 (W-12 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.957	4/15/2005	4/16/2005	
Surrogate: n-Octacosane (40-125%)				*46 %*				
Sample ID: IOD1002-04 (MW-13 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.943	4/15/2005	4/16/2005	
Surrogate: n-Octacosane (40-125%)				*71 %*				
Sample ID: IOD1002-05 (MW-15 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	1.05	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*66 %*				
Sample ID: IOD1002-06 (MW-16 - Water)								
Reporting Units: mg/l								
EFH (C8 - C40)	EPA 8015B	5D15050	0.50	ND	0.952	4/15/2005	4/15/2005	
Surrogate: n-Octacosane (40-125%)				*66 %*				

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Patty Mata
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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-01 (W-8 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D21041	50	ND	1	4/21/2005	4/21/2005	
Surrogate: 4-BFB (FID) (65-140%)				*87 %*				
Sample ID: IOD1002-02 (W-10 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D21041	50	ND	1	4/21/2005	4/21/2005	
Surrogate: 4-BFB (FID) (65-140%)				*88 %*				
Sample ID: IOD1002-03 (W-12 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D21041	50	ND	1	4/21/2005	4/21/2005	
Surrogate: 4-BFB (FID) (65-140%)				*104 %*				
Sample ID: IOD1002-04 (MW-13 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D21041	50	ND	1	4/21/2005	4/21/2005	
Surrogate: 4-BFB (FID) (65-140%)				*105 %*				
Sample ID: IOD1002-05 (MW-15 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D21041	50	180	1	4/21/2005	4/21/2005	
Surrogate: 4-BFB (FID) (65-140%)				*126 %*				
Sample ID: IOD1002-06 (MW-16 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	5D21041	50	ND	1	4/21/2005	4/21/2005	
Surrogate: 4-BFB (FID) (65-140%)				*113 %*				

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-01 (W-8 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
Ethylbenzene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
Toluene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
o-Xylene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
m,p-Xylenes	EPA 8260B	5D22014	1.0	ND	1	4/22/2005	4/22/2005	
Xylenes, Total	EPA 8260B	5D22014	1.0	ND	1	4/22/2005	4/22/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D22014	5.0	**6.4**	1	4/22/2005	4/22/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
tert-Butanol (TBA)	EPA 8260B	5D22014	10	ND	1	4/22/2005	4/22/2005	
Surrogate: Dibromofluoromethane (80-120%)				*108 %*				
Surrogate: Toluene-d8 (80-120%)				*108 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*103 %*				
Sample ID: IOD1002-02 (W-10 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D22014	5.0	ND	10	4/22/2005	4/22/2005	
Ethylbenzene	EPA 8260B	5D22014	5.0	ND	10	4/22/2005	4/22/2005	
Toluene	EPA 8260B	5D22014	5.0	ND	10	4/22/2005	4/22/2005	
o-Xylene	EPA 8260B	5D22014	5.0	ND	10	4/22/2005	4/22/2005	
m,p-Xylenes	EPA 8260B	5D22014	10	ND	10	4/22/2005	4/22/2005	
Xylenes, Total	EPA 8260B	5D22014	10	ND	10	4/22/2005	4/22/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D22014	50	ND	10	4/22/2005	4/22/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D22014	50	ND	10	4/22/2005	4/22/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D22014	50	ND	10	4/22/2005	4/22/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D22014	50	400	10	4/22/2005	4/22/2005	
tert-Butanol (TBA)	EPA 8260B	5D22014	100	ND	10	4/22/2005	4/22/2005	
Surrogate: Dibromofluoromethane (80-120%)				*105 %*				
Surrogate: Toluene-d8 (80-120%)				*108 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*102 %*				

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-03 (W-12 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
Ethylbenzene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
Toluene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
o-Xylene	EPA 8260B	5D22014	0.50	ND	1	4/22/2005	4/22/2005	
m,p-Xylenes	EPA 8260B	5D22014	1.0	ND	1	4/22/2005	4/22/2005	
Xylenes, Total	EPA 8260B	5D22014	1.0	ND	1	4/22/2005	4/22/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D22014	5.0	ND	1	4/22/2005	4/22/2005	
tert-Butanol (TBA)	EPA 8260B	5D22014	10	ND	1	4/22/2005	4/22/2005	
Surrogate: Dibromofluoromethane (80-120%)				*108 %*				
Surrogate: Toluene-d8 (80-120%)				*110 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*103 %*				
Sample ID: IOD1002-04 (MW-13 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D23006	0.50	ND	1	4/23/2005	4/23/2005	
Ethylbenzene	EPA 8260B	5D23006	0.50	ND	1	4/23/2005	4/23/2005	
Toluene	EPA 8260B	5D23006	0.50	ND	1	4/23/2005	4/23/2005	
o-Xylene	EPA 8260B	5D23006	0.50	ND	1	4/23/2005	4/23/2005	
m,p-Xylenes	EPA 8260B	5D23006	1.0	ND	1	4/23/2005	4/23/2005	
Xylenes, Total	EPA 8260B	5D23006	1.0	ND	1	4/23/2005	4/23/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D23006	5.0	ND	1	4/23/2005	4/23/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D23006	5.0	ND	1	4/23/2005	4/23/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D23006	5.0	ND	1	4/23/2005	4/23/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D23006	5.0	**6.4**	1	4/23/2005	4/23/2005	
tert-Butanol (TBA)	EPA 8260B	5D23006	10	ND	1	4/23/2005	4/23/2005	
Surrogate: Dibromofluoromethane (80-120%)				*102 %*				
Surrogate: Toluene-d8 (80-120%)				*105 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				

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Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-05 (MW-15 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D23006	2.5	ND	5	4/23/2005	4/23/2005	
Ethylbenzene	EPA 8260B	5D23006	2.5	ND	5	4/23/2005	4/23/2005	
Toluene	EPA 8260B	5D23006	2.5	ND	5	4/23/2005	4/23/2005	
o-Xylene	EPA 8260B	5D23006	2.5	ND	5	4/23/2005	4/23/2005	
m,p-Xylenes	EPA 8260B	5D23006	5.0	ND	5	4/23/2005	4/23/2005	
Xylenes, Total	EPA 8260B	5D23006	5.0	ND	5	4/23/2005	4/23/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D23006	25	ND	5	4/23/2005	4/23/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D23006	25	ND	5	4/23/2005	4/23/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D23006	25	ND	5	4/23/2005	4/23/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D23006	25	480	5	4/23/2005	4/23/2005	
tert-Butanol (TBA)	EPA 8260B	5D23006	50	50	5	4/23/2005	4/23/2005	
Surrogate: Dibromofluoromethane (80-120%)				*103 %*				
Surrogate: Toluene-d8 (80-120%)				*105 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*101 %*				
Sample ID: IOD1002-06 (MW-16 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	5D23004	5.0	ND	10	4/23/2005	4/23/2005	
Ethylbenzene	EPA 8260B	5D23004	5.0	ND	10	4/23/2005	4/23/2005	
Toluene	EPA 8260B	5D23004	5.0	15	10	4/23/2005	4/23/2005	
o-Xylene	EPA 8260B	5D23004	5.0	ND	10	4/23/2005	4/23/2005	
m,p-Xylenes	EPA 8260B	5D23004	10	ND	10	4/23/2005	4/23/2005	
Xylenes, Total	EPA 8260B	5D23004	10	12	10	4/23/2005	4/23/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5D23004	50	ND	10	4/23/2005	4/23/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5D23004	50	ND	10	4/23/2005	4/23/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5D23004	50	ND	10	4/23/2005	4/23/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5D23004	50	970	10	4/23/2005	4/23/2005	
tert-Butanol (TBA)	EPA 8260B	5D23004	100	ND	10	4/23/2005	4/23/2005	
Surrogate: Dibromofluoromethane (80-120%)				*99 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*94 %*				

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Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

DISSOLVED GASES BY HEADSPACE EQUILIBRIUM (RSK-175 MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-07 (W-8 Pre - Water)								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5D20066	0.050	ND	1	4/20/2005	4/20/2005	
Sample ID: IOD1002-08 (W-10 Pre - Water)								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5D20066	0.050	ND	1	4/20/2005	4/20/2005	
Sample ID: IOD1002-09 (W-12 Pre - Water)								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5D20066	0.050	ND	1	4/20/2005	4/20/2005	
Sample ID: IOD1002-10 (MW-13 Pre - Water)								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5D20066	0.050	ND	1	4/20/2005	4/20/2005	
Sample ID: IOD1002-11 (MW-15 Pre - Water)								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5D20066	0.050	ND	1	4/20/2005	4/20/2005	
Sample ID: IOD1002-12 (MW-16 Pre - Water)								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5D20066	0.050	ND	1	4/20/2005	4/20/2005	

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Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-07 (W-8 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14106	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD1002-08 (W-10 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14106	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD1002-09 (W-12 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14106	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD1002-10 (MW-13 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14106	0.040	ND	1	4/14/2005	4/15/2005	
Sample ID: IOD1002-11 (MW-15 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14106	0.040	0.084	1	4/14/2005	4/15/2005	
Sample ID: IOD1002-12 (MW-16 Pre - Water)								
Reporting Units: mg/l								
Iron, Dissolved	EPA 6010B-Diss	5D14106	0.040	ND	1	4/14/2005	4/15/2005	

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Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD1002-07 (W-8 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D14112	7.5	11	50	4/14/2005	4/15/2005	
Sulfate	EPA 300.0	5D14112	25	1200	50	4/14/2005	4/15/2005	
Sample ID: IOD1002-08 (W-10 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D14112	0.30	ND	2	4/14/2005	4/15/2005	RL-1
Sulfate	EPA 300.0	5D14112	25	1700	50	4/14/2005	4/15/2005	
Sample ID: IOD1002-09 (W-12 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D14112	7.5	9.0	50	4/14/2005	4/15/2005	
Sulfate	EPA 300.0	5D14112	25	1200	50	4/14/2005	4/15/2005	
Sample ID: IOD1002-10 (MW-13 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D14112	0.30	2.1	2	4/14/2005	4/15/2005	
Sulfate	EPA 300.0	5D14112	25	630	50	4/14/2005	4/15/2005	
Sample ID: IOD1002-11 (MW-15 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D14112	0.30	2.5	2	4/14/2005	4/15/2005	
Sulfate	EPA 300.0	5D14112	25	990	50	4/14/2005	4/15/2005	
Sample ID: IOD1002-12 (MW-16 Pre - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	5D14112	0.15	1.3	1	4/14/2005	4/15/2005	
Sulfate	EPA 300.0	5D14112	10	260	20	4/14/2005	4/15/2005	

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Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: W-8 Pre (IOD1002-07) - Water					
EPA 300.0	2	04/14/2005 07:26	04/14/2005 14:30	04/14/2005 21:00	04/15/2005 01:30
Sample ID: W-10 Pre (IOD1002-08) - Water					
EPA 300.0	2	04/14/2005 10:55	04/14/2005 14:30	04/14/2005 21:00	04/15/2005 01:44
Sample ID: W-12 Pre (IOD1002-09) - Water					
EPA 300.0	2	04/14/2005 09:15	04/14/2005 14:30	04/14/2005 21:00	04/15/2005 02:25
Sample ID: MW-13 Pre (IOD1002-10) - Water					
EPA 300.0	2	04/14/2005 12:12	04/14/2005 14:30	04/14/2005 21:00	04/15/2005 02:39
Sample ID: MW-15 Pre (IOD1002-11) - Water					
EPA 300.0	2	04/14/2005 10:34	04/14/2005 14:30	04/14/2005 21:00	04/15/2005 03:06
Sample ID: MW-16 Pre (IOD1002-12) - Water					
EPA 300.0	2	04/14/2005 10:00	04/14/2005 14:30	04/14/2005 21:00	04/15/2005 04:01

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/8015 CADHS Modified)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D15050 Extracted: 04/15/05										
Blank Analyzed: 04/15/2005 (5D15050-BLK1)										
EFH (C8 - C40)	ND	0.50	mg/l							
Surrogate: n-Octacosane	*0.0878*		*mg/l*	*0.200*		*44*	*40-125*			
LCS Analyzed: 04/16/2005 (5D15050-BS1)										M-NR1
EFH (C8 - C40)	0.681	0.50	mg/l	1.00		68	40-120			
Surrogate: n-Octacosane	*0.105*		*mg/l*	*0.200*		*52*	*40-125*			
LCS Dup Analyzed: 04/15/2005 (5D15050-BSD1)										
EFH (C8 - C40)	0.659	0.50	mg/l	1.00		66	40-120	3	25	
Surrogate: n-Octacosane	*0.0853*		*mg/l*	*0.200*		*43*	*40-125*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D21041 Extracted: 04/21/05										
Blank Analyzed: 04/21/2005 (5D21041-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	50	ug/l							
Surrogate: 4-BFB (FID)	*9.36*		*ug/l*	*10.0*		*94*	*65-140*			
LCS Analyzed: 04/21/2005 (5D21041-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	769	50	ug/l	800		96	70-140			
Surrogate: 4-BFB (FID)	*31.7*		*ug/l*	*30.0*		*106*	*65-140*			
Matrix Spike Analyzed: 04/21/2005 (5D21041-MS1)					**Source: IOD0789-07**					
Volatile Fuel Hydrocarbons (C6-C12)	267	50	ug/l	220	ND	121	60-140			
Surrogate: 4-BFB (FID)	*11.0*		*ug/l*	*10.0*		*110*	*65-140*			
Matrix Spike Dup Analyzed: 04/21/2005 (5D21041-MSD1)					**Source: IOD0789-07**					
Volatile Fuel Hydrocarbons (C6-C12)	260	50	ug/l	220	ND	118	60-140	3	20	
Surrogate: 4-BFB (FID)	*11.5*		*ug/l*	*10.0*		*115*	*65-140*			

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D22014 Extracted: 04/22/05										
Blank Analyzed: 04/22/2005 (5D22014-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	10	ug/l							
Surrogate: Dibromofluoromethane	*26.7*		*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*27.6*		*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
LCS Analyzed: 04/22/2005 (5D22014-BS1)										
Benzene	25.9	0.50	ug/l	25.0		104	70-120			
Ethylbenzene	25.2	0.50	ug/l	25.0		101	80-120			
Toluene	25.9	0.50	ug/l	25.0		104	75-120			
o-Xylene	26.4	0.50	ug/l	25.0		106	75-125			
m,p-Xylenes	52.8	1.0	ug/l	50.0		106	75-120			
Xylenes, Total	79.2	1.0	ug/l	75.0		106	75-125			
Di-isopropyl Ether (DIPE)	28.5	5.0	ug/l	25.0		114	65-135			
Ethyl tert-Butyl Ether (ETBE)	27.6	5.0	ug/l	25.0		110	60-140			
tert-Amyl Methyl Ether (TAME)	28.0	5.0	ug/l	25.0		112	60-140			
Methyl-tert-butyl Ether (MTBE)	26.9	5.0	ug/l	25.0		108	55-145			
tert-Butanol (TBA)	119	10	ug/l	125		95	70-140			
Surrogate: Dibromofluoromethane	*26.7*		*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*27.2*		*ug/l*	*25.0*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.7*		*ug/l*	*25.0*		*107*	*80-120*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D22014 Extracted: 04/22/05										
Matrix Spike Analyzed: 04/22/2005 (5D22014-MS1)					**Source: IOD1002-01**					
Benzene	24.7	0.50	ug/l	25.0	ND	99	70-120			
Ethylbenzene	24.1	0.50	ug/l	25.0	ND	96	70-130			
Toluene	24.3	0.50	ug/l	25.0	ND	97	70-120			
o-Xylene	25.1	0.50	ug/l	25.0	ND	100	65-125			
m,p-Xylenes	49.4	1.0	ug/l	50.0	ND	99	65-130			
Xylenes, Total	74.5	1.0	ug/l	75.0	ND	99	65-135			
Di-isopropyl Ether (DIPE)	31.8	5.0	ug/l	25.0	6.4	102	65-140			
Ethyl tert-Butyl Ether (ETBE)	24.6	5.0	ug/l	25.0	ND	98	60-140			
tert-Amyl Methyl Ether (TAME)	23.8	5.0	ug/l	25.0	ND	95	55-145			
Methyl-tert-butyl Ether (MTBE)	23.1	5.0	ug/l	25.0	0.61	90	50-155			
tert-Butanol (TBA)	128	10	ug/l	125	ND	102	65-145			
Surrogate: Dibromofluoromethane	*26.7*		*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*27.4*		*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*27.2*		*ug/l*	*25.0*		*109*	*80-120*			
Matrix Spike Dup Analyzed: 04/22/2005 (5D22014-MSD1)					**Source: IOD1002-01**					
Benzene	24.9	0.50	ug/l	25.0	ND	100	70-120	1	20	
Ethylbenzene	24.9	0.50	ug/l	25.0	ND	100	70-130	3	20	
Toluene	24.7	0.50	ug/l	25.0	ND	99	70-120	2	20	
o-Xylene	25.3	0.50	ug/l	25.0	ND	101	65-125	1	20	
m,p-Xylenes	50.6	1.0	ug/l	50.0	ND	101	65-130	2	25	
Xylenes, Total	75.8	1.0	ug/l	75.0	ND	101	65-135	2	20	
Di-isopropyl Ether (DIPE)	33.7	5.0	ug/l	25.0	6.4	109	65-140	6	25	
Ethyl tert-Butyl Ether (ETBE)	26.7	5.0	ug/l	25.0	ND	107	60-140	8	25	
tert-Amyl Methyl Ether (TAME)	26.2	5.0	ug/l	25.0	ND	105	55-145	10	30	
Methyl-tert-butyl Ether (MTBE)	25.6	5.0	ug/l	25.0	0.61	100	50-155	10	25	
tert-Butanol (TBA)	134	10	ug/l	125	ND	107	65-145	5	25	
Surrogate: Dibromofluoromethane	*26.9*		*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*27.0*		*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.6*		*ug/l*	*25.0*		*106*	*80-120*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D23004 Extracted: 04/23/05										
Blank Analyzed: 04/23/2005 (5D23004-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	10	ug/l							
Surrogate: Dibromofluoromethane	*22.7*		*ug/l*	*25.0*		*91*	*80-120*			
Surrogate: Toluene-d8	*24.8*		*ug/l*	*25.0*		*99*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.8*		*ug/l*	*25.0*		*95*	*80-120*			
LCS Analyzed: 04/23/2005 (5D23004-BS1)										
Benzene	27.6	0.50	ug/l	25.0		110	65-120			
Ethylbenzene	28.8	0.50	ug/l	25.0		115	70-125			
Toluene	29.3	0.50	ug/l	25.0		117	70-125			
o-Xylene	28.3	0.50	ug/l	25.0		113	70-125			
m,p-Xylenes	58.8	1.0	ug/l	50.0		118	70-125			
Xylenes, Total	87.0	1.0	ug/l	75.0		116	70-125			
Di-isopropyl Ether (DIPE)	25.3	5.0	ug/l	25.0		101	60-135			
Ethyl tert-Butyl Ether (ETBE)	23.7	5.0	ug/l	25.0		95	60-135			
tert-Amyl Methyl Ether (TAME)	24.6	5.0	ug/l	25.0		98	60-135			
Methyl-tert-butyl Ether (MTBE)	23.1	5.0	ug/l	25.0		92	55-140			
tert-Butanol (TBA)	150	10	ug/l	125		120	65-135			
Surrogate: Dibromofluoromethane	*22.8*		*ug/l*	*25.0*		*91*	*80-120*			
Surrogate: Toluene-d8	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.4*		*ug/l*	*25.0*		*94*	*80-120*			

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Leighton Consulting, Inc.
17781 Cowan, Suite 140
Irvine, CA 92614
Attention: Charles Mazowiecki

Project ID: G&M #16, Whittier, CA
600143002
Report Number: IOD1002

Sampled: 04/14/05
Received: 04/14/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D23004 Extracted: 04/23/05										
Matrix Spike Analyzed: 04/23/2005 (5D23004-MS1)					**Source: IOD0886-02**					
Benzene	25.8	0.50	ug/l	25.0	ND	103	60-125			
Ethylbenzene	27.5	0.50	ug/l	25.0	ND	110	65-130			
Toluene	27.3	0.50	ug/l	25.0	ND	109	65-125			
o-Xylene	28.4	0.50	ug/l	25.0	ND	114	60-125			
m,p-Xylenes	56.0	1.0	ug/l	50.0	ND	112	60-130			
Xylenes, Total	84.4	1.0	ug/l	75.0	ND	113	60-130			
Di-isopropyl Ether (DIPE)	26.9	5.0	ug/l	25.0	ND	108	60-140			
Ethyl tert-Butyl Ether (ETBE)	27.0	5.0	ug/l	25.0	ND	108	55-135			
tert-Amyl Methyl Ether (TAME)	29.2	5.0	ug/l	25.0	ND	117	55-140			
Methyl-tert-butyl Ether (MTBE)	29.3	5.0	ug/l	25.0	0.84	114	50-150			
tert-Butanol (TBA)	126	10	ug/l	125	ND	101	60-145			
Surrogate: Dibromofluoromethane	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*25.4*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Matrix Spike Dup Analyzed: 04/23/2005 (5D23004-MSD1)					**Source: IOD0886-02**					
Benzene	26.7	0.50	ug/l	25.0	ND	107	60-125	3	20	
Ethylbenzene	29.4	0.50	ug/l	25.0	ND	118	65-130	7	20	
Toluene	28.3	0.50	ug/l	25.0	ND	113	65-125	4	20	
o-Xylene	28.7	0.50	ug/l	25.0	ND	115	60-125	1	20	
m,p-Xylenes	58.4	1.0	ug/l	50.0	ND	117	60-130	4	25	
Xylenes, Total	87.0	1.0	ug/l	75.0	ND	116	60-130	3	20	
Di-isopropyl Ether (DIPE)	26.2	5.0	ug/l	25.0	ND	105	60-140	3	25	
Ethyl tert-Butyl Ether (ETBE)	24.6	5.0	ug/l	25.0	ND	98	55-135	9	25	
tert-Amyl Methyl Ether (TAME)	26.0	5.0	ug/l	25.0	ND	104	55-140	12	30	
Methyl-tert-butyl Ether (MTBE)	25.9	5.0	ug/l	25.0	0.84	100	50-150	12	25	
tert-Butanol (TBA)	127	10	ug/l	125	ND	102	60-145	1	25	
Surrogate: Dibromofluoromethane	*24.1*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: Toluene-d8	*25.3*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D23006 Extracted: 04/23/05										
Blank Analyzed: 04/23/2005 (5D23006-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	10	ug/l							
Surrogate: Dibromofluoromethane	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.1*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.8*		*ug/l*	*25.0*		*99*	*80-120*			
LCS Analyzed: 04/23/2005 (5D23006-BS1)										
Benzene	26.1	0.50	ug/l	25.0		104	70-120			
Ethylbenzene	26.9	0.50	ug/l	25.0		108	80-120			
Toluene	26.0	0.50	ug/l	25.0		104	75-120			
o-Xylene	26.1	0.50	ug/l	25.0		104	75-125			
m,p-Xylenes	53.4	1.0	ug/l	50.0		107	75-120			
Xylenes, Total	79.5	1.0	ug/l	75.0		106	75-125			
Di-isopropyl Ether (DIPE)	25.7	5.0	ug/l	25.0		103	65-135			
Ethyl tert-Butyl Ether (ETBE)	25.8	5.0	ug/l	25.0		103	60-140			
tert-Amyl Methyl Ether (TAME)	27.3	5.0	ug/l	25.0		109	60-140			
Methyl-tert-butyl Ether (MTBE)	25.9	5.0	ug/l	25.0		104	55-145			
tert-Butanol (TBA)	124	10	ug/l	125		99	70-140			
Surrogate: Dibromofluoromethane	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*26.2*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			

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Project Manager

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA 600143002	
17781 Cowan, Suite 140		Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D23006 Extracted: 04/23/05										
Matrix Spike Analyzed: 04/23/2005 (5D23006-MS1)					Source: IOD1085-15					
Benzene	28.6	0.50	ug/l	25.0	ND	114	70-120			
Ethylbenzene	29.5	0.50	ug/l	25.0	ND	118	70-130			
Toluene	28.9	0.50	ug/l	25.0	ND	116	70-120			
o-Xylene	28.5	0.50	ug/l	25.0	ND	114	65-125			
m,p-Xylenes	57.7	1.0	ug/l	50.0	ND	115	65-130			
Xylenes, Total	86.2	1.0	ug/l	75.0	ND	115	65-135			
Di-isopropyl Ether (DIPE)	28.8	5.0	ug/l	25.0	ND	115	65-140			
Ethyl tert-Butyl Ether (ETBE)	32.2	5.0	ug/l	25.0	2.9	117	60-140			
tert-Amyl Methyl Ether (TAME)	30.8	5.0	ug/l	25.0	ND	123	55-145			
Methyl-tert-butyl Ether (MTBE)	30.5	5.0	ug/l	25.0	0.38	120	50-155			
tert-Butanol (TBA)	136	10	ug/l	125	ND	109	65-145			
Surrogate: Dibromofluoromethane	*25.8*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.4*		*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.3*		*ug/l*	*25.0*		*105*	*80-120*			
Matrix Spike Dup Analyzed: 04/23/2005 (5D23006-MSD1)					Source: IOD1085-15					
Benzene	29.1	0.50	ug/l	25.0	ND	116	70-120	2	20	
Ethylbenzene	30.0	0.50	ug/l	25.0	ND	120	70-130	2	20	
Toluene	29.2	0.50	ug/l	25.0	ND	117	70-120	1	20	
o-Xylene	29.1	0.50	ug/l	25.0	ND	116	65-125	2	20	
m,p-Xylenes	58.7	1.0	ug/l	50.0	ND	117	65-130	2	25	
Xylenes, Total	87.8	1.0	ug/l	75.0	ND	117	65-135	2	20	
Di-isopropyl Ether (DIPE)	30.0	5.0	ug/l	25.0	ND	120	65-140	4	25	
Ethyl tert-Butyl Ether (ETBE)	34.9	5.0	ug/l	25.0	2.9	128	60-140	8	25	
tert-Amyl Methyl Ether (TAME)	34.7	5.0	ug/l	25.0	ND	139	55-145	12	30	
Methyl-tert-butyl Ether (MTBE)	35.1	5.0	ug/l	25.0	0.38	139	50-155	14	25	
tert-Butanol (TBA)	131	10	ug/l	125	ND	105	65-145	4	25	
Surrogate: Dibromofluoromethane	*26.2*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*26.3*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.4*		*ug/l*	*25.0*		*106*	*80-120*			

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Patty Mata
Project Manager

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

DISSOLVED GASES BY HEADSPACE EQUILIBRIUM (RSK-175 MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D20066 Extracted: 04/20/05										
Blank Analyzed: 04/20/2005 (5D20066-BLK1)										
Methane	ND	0.050	mg/l							
LCS Analyzed: 04/20/2005 (5D20066-BS1)										
Methane	1.54	0.050	mg/l	1.36		113	80-120			
Matrix Spike Analyzed: 04/20/2005 (5D20066-MS1)					Source: IOD1117-02					
Methane	1.49	0.050	mg/l	1.36	0.012	109	80-120			
Matrix Spike Dup Analyzed: 04/20/2005 (5D20066-MSD1)					Source: IOD1117-02					
Methane	1.54	0.050	mg/l	1.36	0.012	112	80-120	3	25	

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D14106 Extracted: 04/14/05										
Blank Analyzed: 04/15/2005 (5D14106-BLK1)										
Iron, Dissolved	ND	0.040	mg/l							
LCS Analyzed: 04/15/2005 (5D14106-BS1)										
Iron, Dissolved	0.918	0.040	mg/l	1.00		92	80-120			
Matrix Spike Analyzed: 04/15/2005 (5D14106-MS1)					Source: IOD1002-07					
Iron, Dissolved	0.918	0.040	mg/l	1.00	ND	92	75-125			
Matrix Spike Dup Analyzed: 04/15/2005 (5D14106-MSD1)					Source: IOD1002-07					
Iron, Dissolved	0.908	0.040	mg/l	1.00	ND	91	75-125	1	20	

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA 600143002	
17781 Cowan, Suite 140		Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D14112 Extracted: 04/14/05										
Blank Analyzed: 04/14/2005 (5D14112-BLK1)										
Nitrate-N	ND	0.15	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 04/14/2005 (5D14112-BS1)										
Nitrate-N	1.18	0.15	mg/l	1.13		104	90-110			
Sulfate	9.91	0.50	mg/l	10.0		99	90-110			
Matrix Spike Analyzed: 04/14/2005 (5D14112-MS1)					Source: IOD1049-01					
Nitrate-N	3.20	0.15	mg/l	1.13	2.0	106	80-120			
Sulfate	55.9	0.50	mg/l	10.0	46	99	80-120			
Matrix Spike Dup Analyzed: 04/14/2005 (5D14112-MSD1)					Source: IOD1049-01					
Nitrate-N	3.14	0.15	mg/l	1.13	2.0	101	80-120	2	20	
Sulfate	54.9	0.50	mg/l	10.0	46	89	80-120	2	20	

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Leighton Consulting, Inc.	Project ID: G&M #16, Whittier, CA	
17781 Cowan, Suite 140	600143002	Sampled: 04/14/05
Irvine, CA 92614	Report Number: IOD1002	Received: 04/14/05
Attention: Charles Mazowiecki		

DATA QUALIFIERS AND DEFINITIONS

CR	The carbon range of the fuel found in the sample = C8-C34
M-NR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
RL-1	Reporting limit raised due to sample matrix effects.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD. The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

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Leighton Consulting, Inc. 17781 Cowan, Suite 140 Irvine, CA 92614 Attention: Charles Mazowiecki	Project ID: G&M #16, Whittier, CA 600143002 Report Number: IOD1002	Sampled: 04/14/05 Received: 04/14/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 300.0	Water	X	X
EPA 6010B-Diss	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
RSK-175 MOD.	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

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CHAIN OF CUSTODY FORM

Client Name/Address: LCI 17781 COWAN Irvine, CA

P.O. #: 600143002

Project: Gam #16

Project Manager/Phone Number: Charles Mazowiecki x216

Phone Number: 949-253-9836

Sampler: BR / KCH

Fax Number: 949-757-7230

ANALYSIS REQUIRED: 8015-G, 8015-D, 8260B BTEX & OXYGS, SO4, NO3, Fe2, Diss Methane, Hold

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IOD1002

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	8015-G	8015-D	8260B BTEX & OXYGS	SO4, NO3, Fe2	Diss Methane	Hold					Special Instructions
W-8	GW	VOA Amber	5	4-14-05 0750	HCL None	X	X									
W-10				1147		X	X									
W-12				0940		X	X									
~~MW~~ MW-13				1226		X	X									
MW-15				1100		X	X									
MW-16				1014		X	X									
W-8 pre	GW	VOA Poly	3	0726	HCL None			X	X							
W-10 pre				1055				X	X							
W-12 pre				0915				X	X							
MW-13 pre				1212				X	X							
MW-15 pre				1034				X	X							
MW-16 pre				1000				X	X							
Trip Blanks	W	VOA	4	N/A	HCL					X						

Relinquished By	Date/Time:	Received By	Date/Time:
4-14-05	14:30		
		4/14/05	14:30

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal ✓

Sample Integrity: (Check)
Intact X On Ice: 4° C

F

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C.A.L.0.0.0.0.0.4.9.3.6
Manifest Document No.: 5.1.5.3.1
2. Page 1 of 1

Generator's Name and Mailing Address
[illegible] OIL COMPANY-LEIGHTON CONSULTING
[illegible] LAMBERT ROAD
[illegible]ER, CA
Generator's Phone (949) 477-0555

Transporter 1 Company Name: [illegible]ND ENVIRONMENTAL SERVICES
6. US EPA ID Number: C.A.R.0.0.0.0.5.3.4.0.5
A. Transporter's Phone: (909)598-4449

Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

Designated Facility Name and Site Address
[illegible] ENVIRONMENTAL
[illegible] FRONTERA ST.
[illegible]EIM, CA 92806
10. US EPA ID Number: C.A.L.0.0.0.2.0.0.5.0.0
C. Facility's Phone: (714)630-2307

Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
NON HAZARDOUS WASTE LIQUIDS, (PURGE WATE)	001	T.T	001 71	G

Additional Descriptions for Materials Listed Above
[illegible] PURGE WATER
T 20.0 pH 8.03

E. Handling Codes for Wastes Listed Above

18. Special Handling Instructions and Additional Information
[illegible] APPROPRIATE PROTECTIVE GEAR. 24 HOUR PHONE (909) 598-4449
[illegible]: LEIGHTON CONSULTING
[illegible] TO: ISLAND ENVIRON.
W.O. # 051531 JOB SITE: 12559 LAMBERT RD. WHITTIER, CA

19. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
[illegible] J Roy Jr	[signature]	0.4	1.3	0.5

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[signature]	0.4	1.3	0.5

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Erik Montelongo	[signature]	0.4	1.4	0.5

TRANSPORTER #2

G

Site Address: G&M 16 12559 Lambert Road, Whittier CA (ID# R-10316)			Range
X axis dispersivity	1.1	ft	0.1-10
Y axis dispersivity	0.71	ft	(0.33-0.65) D.
Distance parallel to direction of GW flow	140	ft	
Distance perpendicular to direction of GW flow	0	ft	
Groundwater velocity	0.087	ft/day	0.01-3.0
Source concentration	9.75E+06	ug/L	9.75E+03
Rate of discharge	25	ft^2/yr	mg/L
Discharge duration or *dt*	8.33E-02	yr	
Mass discharged per unit depth (C_oQdt)	5.75E+08	ug/ft	
	5.75E+02	g/ft	
Distance (X_2) to DG well-2	0		
Distance (Y_2) perpendicular to direction of flow	0	ft	
Distance (X_3) to drinking water well	2600	ft	
Distance (Y_3) perpendicular to direction of flow	0	ft	

Soil Type	Velocity Range
Gravel	up to 3 ft/d
Coarse Sand	up to 1.5 ft/d
Clean Sand	up to 1.0 ft/d
Fine Sand	up to 0.5 ft/d
Silty Sand	up to 0.1 ft/d
Sandy Silt	0.01-0.05 ft/d
Silt	0.01 ft/d

Soil Type	Date Release Discovered
Fine, Silty Sand	5/1/1986
	Date of 1st Monit. Event
	5/12/1992

Clayey gravel (<10 fbg)
Fine Sand (10-15 fbg)
Silty Sand (15-40 fbg)
Aquiclude (40-120 fbg)

GW at ~15-12 fbg

Maximum concentration in drinking water well	694.49	ug/L
Time when plume reached its peak in DW well	30000	days
Time when plume first reached 5 ug/L in DW well	27500	days
Time remaining for plume to reach 5 ug/L in DW well	69.9	years

Well Name	Well No	Distance(x)	Distance(y)	C (ug/L)	Time (days)
Downgradient Well 1 at T_1	W-9	140	0	6400	1124
T_2				3900	1217
T_3				14000	1313
T_4				18000	1398
T_5				2600	1489
T_6				1800	1582
T_7				2400	1669
T_8				3300	1764
T_9				2900	1880
T_{10}				4500	1969
T_{11}				3100	2040
T_{12}				5300	2107
T_{13}				4700	2213
T_{14}				1900	2282
T_{15}				940	2366
Date of Last Record	4/13/2005			Date of First Record	11/14/2001
Downgradient Well 2 at T_1					
T_2					
T_3					
T_4					
T_5					
T_6					
T_7					
T_8					
T_9					
T_{10}					
T_{11}					
T_{12}					
T_{13}					
T_{14}					
T_{15}					
Date of Last Record				Date of First Record	

Comment	Max Time (data)
	1969

Time	$4(pi)ut(D_xD_y)^{1/2}$	C_oQdt/H	$(X_1-ut)^2$	$-4D_xut$	J/K	$Y_1^2/-4D_yut$	L+M	exp[N]	C_1 (ug/ft^3)	C_1(ug/L)	$(X_2-ut)^2$
20	19.32344829	29756594	19115.828	-7.656	-2496.843	0	-2496.843	0	0	0	3.0276
40	38.64689657	14878297	18637.71	-15.312	-1217.196	0	-1217.196	0	0	0	12.1104
60	57.97034486	9918864.6	18165.648	-22.968	-790.9112	0	-790.9112	0	0	0	27.2484
80	77.29379315	7439148.4	17699.642	-30.624	-577.9664	0	-577.9664	9.83E-252	7.31E-245	2.58E-246	48.4416
100	96.61724144	5951318.7	17239.69	-38.28	-450.3576	0	-450.3576	2.58E-196	1.54E-189	5.43E-191	75.69
120	115.9406897	4959432.3	16785.794	-45.936	-365.417	0	-365.417	2E-159	9.93E-153	3.51E-154	108.9936
140	135.264138	4250942	16337.952	-53.592	-304.858	0	-304.858	4E-133	1.7E-126	6E-128	148.3524
160	154.5875863	3719574.2	15896.166	-61.248	-259.5377	0	-259.5377	1.92E-113	7.16E-107	2.53E-108	193.7664
180	173.9110346	3306288.2	15460.436	-68.904	-224.3765	0	-224.3765	3.585E-98	1.185E-91	4.186E-93	245.2356
200	193.2344829	2975659.4	15030.76	-76.56	-196.3265	0	-196.3265	5.451E-86	1.622E-79	5.728E-81	302.76
220	212.5579312	2705144.9	14607.14	-84.216	-173.4485	0	-173.4485	4.702E-76	1.272E-69	4.492E-71	366.3396
240	231.8813794	2479716.1	14189.574	-91.872	-154.4494	0	-154.4494	8.385E-68	2.079E-61	7.342E-63	435.9744
260	251.2048277	2288968.7	13778.064	-99.528	-138.4341	0	-138.4341	7.566E-61	1.732E-54	6.116E-56	511.6644
280	270.528276	2125471	13372.61	-107.184	-124.7631	0	-124.7631	6.547E-55	1.392E-48	4.914E-50	593.4096
300	289.8517243	1983772.9	12973.21	-114.84	-112.9677	0	-112.9677	8.685E-50	1.723E-43	6.084E-45	681.21
320	309.1751726	1859787.1	12579.866	-122.496	-102.6961	0	-102.6961	2.51E-45	4.668E-39	1.648E-40	775.0656
340	328.4986209	1750387.9	12192.576	-130.152	-93.67952	0	-93.67952	2.068E-41	3.619E-35	1.278E-36	874.9764
360	347.8220692	1653144.1	11811.342	-137.808	-85.70868	0	-85.70868	5.987E-38	9.897E-32	3.495E-33	980.9424
380	367.1455175	1566136.5	11436.164	-145.464	-78.61851	0	-78.61851	7.185E-35	1.125E-28	3.974E-30	1092.9636
400	386.4689657	1487829.7	11067.04	-153.12	-72.27691	0	-72.27691	4.079E-32	6.069E-26	2.143E-27	1211.04
420	405.792414	1416980.7	10703.972	-160.776	-66.57692	0	-66.57692	1.219E-29	1.727E-23	6.1E-25	1335.1716
440	425.1158623	1352572.4	10346.958	-168.432	-61.43107	0	-61.43107	2.093E-27	2.831E-21	9.999E-23	1465.3584
460	444.4393106	1293764.9	9996.0004	-176.088	-56.76707	0	-56.76707	2.22E-25	2.872E-19	1.014E-20	1601.6004
480	463.7627589	1239858.1	9651.0976	-183.744	-52.5247	0	-52.5247	1.545E-23	1.915E-17	6.763E-19	1743.8976
500	483.0862072	1190263.7	9312.25	-191.4	-48.65334	0	-48.65334	7.415E-22	8.826E-16	3.117E-17	1892.25
520	502.4096555	1144484.4	8979.4576	-199.056	-45.11021	0	-45.11021	2.564E-20	2.934E-14	1.036E-15	2046.6576
540	521.7331038	1102096.1	8652.7204	-206.712	-41.85882	0	-41.85882	6.621E-19	7.297E-13	2.577E-14	2207.1204
560	541.056552	1062735.5	8332.0384	-214.368	-38.86792	0	-38.86792	1.318E-17	1.401E-11	4.946E-13	2373.6384
580	560.3800003	1026089.4	8017.4116	-222.024	-36.11056	0	-36.11056	2.077E-16	2.131E-10	7.525E-12	2546.2116
600	579.7034486	991886.46	7708.84	-229.68	-33.56339	0	-33.56339	2.652E-15	2.631E-09	9.29E-11	2724.84
620	599.0268969	959890.12	7406.3236	-237.336	-31.20607	0	-31.20607	2.801E-14	2.689E-08	9.496E-10	2909.5236
640	618.3503452	929893.55	7109.8624	-244.992	-29.02079	0	-29.02079	2.491E-13	2.317E-07	8.181E-09	3100.2624
660	637.6737935	901714.96	6819.4564	-252.648	-26.99193	0	-26.99193	1.895E-12	1.709E-06	6.034E-08	3297.0564
680	656.9972418	875193.93	6535.1056	-260.304	-25.10567	0	-25.10567	1.25E-11	1.094E-05	3.862E-07	3499.9056
700	676.32069	850188.39	6256.81	-267.96	-23.34979	0	-23.34979	7.233E-11	6.149E-05	2.172E-06	3708.81
720	695.6441383	826572.05	5984.5696	-275.616	-21.71343	0	-21.71343	3.715E-10	0.0003071	1.084E-05	3923.7696
740	714.9675866	804232.26	5718.3844	-283.272	-20.1869	0	-20.1869	1.71E-09	0.0013751	4.856E-05	4144.7844
760	734.2910349	783068.26	5458.2544	-290.928	-18.76153	0	-18.76153	7.112E-09	0.0055689	0.0001967	4371.8544
780	753.6144832	762989.58	5204.1796	-298.584	-17.42953	0	-17.42953	2.694E-08	0.0205574	0.000726	4604.9796
800	772.9379315	743914.84	4956.16	-306.24	-16.18391	0	-16.18391	9.363E-08	0.0696532	0.0024598	4844.16
820	792.2613798	725770.58	4714.1956	-313.896	-15.01834	0	-15.01834	3.003E-07	0.2179811	0.0076979	5089.3956
840	811.5848281	708490.33	4478.2864	-321.552	-13.9271	0	-13.9271	8.944E-07	0.6336827	0.0223783	5340.6864
860	830.9082763	692013.81	4248.4324	-329.208	-12.90501	0	-12.90501	2.486E-06	1.720047	0.060743	5598.0324
880	850.2317246	676286.22	4024.6336	-336.864	-11.94735	0	-11.94735	6.476E-06	4.3798621	0.1546736	5861.4336
900	869.5551729	661257.64	3806.89	-344.52	-11.04984	0	-11.04984	1.589E-05	10.507207	0.3710591	6130.89
920	888.8786212	646882.47	3595.2016	-352.176	-10.20854	0	-10.20854	3.685E-05	23.840439	0.8419186	6406.4016
940	908.2020695	633119.02	3389.5684	-359.832	-9.419864	0	-9.419864	8.11E-05	51.344098	1.8132027	6687.9684
960	927.5255178	619929.04	3189.9904	-367.488	-8.680529	0	-8.680529	0.0001699	105.30184	3.7187054	6975.5904
980	946.8489661	607277.42	2996.4676	-375.144	-7.987513	0	-7.987513	0.0003397	206.27865	7.2846739	7269.2676
1000	966.1724144	595131.87	2809	-382.8	-7.338036	0	-7.338036	0.0006503	387.03022	13.667866	7569
1020	985.4958626	583462.62	2627.5876	-390.456	-6.729536	0	-6.729536	0.0011951	697.28899	24.624569	7874.7876
1060	1024.142759	561445.16	2282.9284	-405.768	-5.626191	0	-5.626191	0.0036023	2022.4766	71.423204	8504.5284
1080	1043.466208	551048.03	2119.6816	-413.424	-5.127137	0	-5.127137	0.0059335	3269.6558	115.46699	8828.4816
1100	1062.789656	541028.98	1962.49	-421.08	-4.660611	0	-4.660611	0.0094607	5118.5031	180.75853	9158.49
1120	1082.113104	531367.75	1811.3536	-428.736	-4.224869	0	-4.224869	0.0146272	7772.4463	274.4818	9494.5536
1140	1101.436552	522045.5	1666.2724	-436.392	-3.818293	0	-3.818293	0.0219653	11466.87	404.94937	9836.6724
1160	1120.760001	513044.72	1527.2464	-444.048	-3.439372	0	-3.439372	0.0320848	16460.946	581.31379	10184.846
1180	1140.083449	504349.05	1394.2756	-451.704	-3.086702	0	-3.086702	0.0456523	23024.68	813.11023	10539.076
1200	1159.406897	495943.23	1267.36	-459.36	-2.758969	0	-2.758969	0.0633571	31421.503	1109.6417	10899.36
1220	1178.730346	487813.01	1146.4996	-467.016	-2.454947	0	-2.454947	0.0858677	41887.398	1479.2419	11265.7
1240	1198.053794	479945.06	1031.6944	-474.672	-2.173489	0	-2.173489	0.1137799	54608.119	1928.4707	11638.094
1260	1217.377242	472326.88	922.9444	-482.328	-1.91352	0	-1.91352	0.14756	69696.565	2461.315	12016.544
1280	1236.70069	464946.78	820.2496	-489.984	-1.674033	0	-1.674033	0.1874893	87172.551	3078.4747	12401.05

1300	1256.024139	457793.75	723.61	-497.64	-1.454083	0	-1.454083	0.2336144	106947.22	3776.8118	12791.61
1320	1275.347587	450857.48	633.0256	-505.296	-1.252782	0	-1.252782	0.2857089	128814.01	4549.0312	13188.226
1340	1294.671035	444128.26	548.4964	-512.952	-1.069294	0	-1.069294	0.3432508	152447.4	5383.6378	13590.896
1360	1313.994484	437596.97	470.0224	-520.608	-0.902834	0	-0.902834	0.4054192	177410.23	6265.1933	13999.622
1380	1333.317932	431254.98	397.6036	-528.264	-0.752661	0	-0.752661	0.4711114	203169.12	7174.8615	14414.404
1400	1352.64138	425094.2	331.24	-535.92	-0.618077	0	-0.618077	0.5389797	229117.15	8091.2092	14835.24
1420	1371.964828	419106.95	270.9316	-543.576	-0.498425	0	-0.498425	0.607487	254602.03	8991.2005	15262.132
1440	1391.288277	413286.02	216.6784	-551.232	-0.39308	0	-0.39308	0.6749746	278957.57	9851.3097	15695.078
1460	1410.611725	407624.57	168.4804	-558.888	-0.301456	0	-0.301456	0.73974	301536.21	10648.668	16134.08
1480	1429.935173	402116.13	126.3376	-566.544	-0.222997	0	-0.222997	0.8001173	321740.06	11362.162	16579.138
1500	1449.258622	396754.58	90.25	-574.2	-0.157175	0	-0.157175	0.8545543	339048.35	11973.399	17030.25
1520	1468.58207	391534.13	60.2176	-581.856	-0.103492	0	-0.103492	0.901683	353039.66	12467.499	17487.418
1540	1487.905518	386449.27	36.2404	-589.512	-0.061475	0	-0.061475	0.9403762	363407.7	12833.643	17950.64
1560	1507.228966	381494.79	18.3184	-597.168	-0.030675	0	-0.030675	0.9697903	369969.93	13065.386	18419.918
1580	1526.552415	376665.74	6.4516	-604.824	-0.010667	0	-0.010667	0.9893898	372669.24	13160.712	18895.252
1600	1545.875863	371957.42	0.64	-612.48	-0.001045	0	-0.001045	0.9989556	371568.95	13121.855	19376.64
1620	1565.199311	367365.35	0.8836	-620.136	-0.001425	0	-0.001425	0.9985762	366842.29	12954.934	19864.084
1640	1584.52276	362885.29	7.1824	-627.792	-0.011441	0	-0.011441	0.9886245	358757.27	12669.414	20357.582
1660	1603.846208	358513.18	19.5364	-635.448	-0.030744	0	-0.030744	0.9697235	347658.66	12277.47	20857.136
1680	1623.169656	354245.16	37.9456	-643.104	-0.059004	0	-0.059004	0.9427032	333948.03	11793.283	21362.746
1700	1642.493104	350077.57	62.41	-650.76	-0.095903	0	-0.095903	0.9085519	318063.65	11232.33	21874.41
1720	1661.816553	346006.9	92.9296	-658.416	-0.141141	0	-0.141141	0.8683667	300460.88	10610.693	22392.13
1740	1681.140001	342029.81	129.5044	-666.072	-0.19443	0	-0.19443	0.8233038	281594.44	9944.4301	22915.904
1760	1700.463449	338143.11	172.1344	-673.728	-0.255495	0	-0.255495	0.7745327	261902.9	9249.0288	23445.734
1780	1719.786898	334343.75	220.8196	-681.384	-0.324075	0	-0.324075	0.7231959	241796.03	8538.9604	23981.62
1800	1739.110346	330628.82	275.56	-689.04	-0.399919	0	-0.399919	0.6703745	221645.14	7827.3371	24523.56
1820	1758.433794	326995.54	336.3556	-696.696	-0.482787	0	-0.482787	0.6170614	201776.32	7125.6753	25071.556
1840	1777.757242	323441.24	403.2064	-704.352	-0.57245	0	-0.57245	0.5641415	182466.63	6443.7588	25625.606
1860	1797.080691	319963.37	476.1124	-712.008	-0.66869	0	-0.66869	0.5123795	163942.68	5789.5906	26185.712
1880	1816.404139	316559.51	555.0736	-719.664	-0.771295	0	-0.771295	0.4624136	146381.43	5169.4199	26751.874
1900	1835.727587	313227.3	640.09	-727.32	-0.880067	0	-0.880067	0.4147553	129912.69	4587.8308	27324.09
1920	1855.051036	309964.52	731.1616	-734.976	-0.99481	0	-0.99481	0.3697936	114622.91	4047.8764	27902.362
1940	1874.374484	306769.01	828.2884	-742.632	-1.115342	0	-1.115342	0.3278033	100559.88	3551.2446	28486.688
1960	1893.697932	303638.71	931.4704	-750.288	-1.241484	0	-1.241484	0.2889551	87737.969	3098.4422	29077.07
1980	1913.02138	300571.65	1040.7076	-757.944	-1.373067	0	-1.373067	0.2533289	76143.488	2688.9863	29673.508
2000	1932.344829	297565.94	1156	-765.6	-1.509927	0	-1.509927	0.2209261	65740.093	2321.5933	30276
2050	1980.653449	290308.23	1470.7225	-784.74	-1.874153	0	-1.874153	0.153485	44557.952	1573.5518	31808.723
2100	2028.96207	283396.13	1823.29	-803.88	-2.268112	0	-2.268112	0.1035074	29333.597	1035.9079	33379.29
2150	2077.270691	276805.52	2213.7025	-823.02	-2.689731	0	-2.689731	0.0678992	18794.872	663.73573	34987.703
2200	2125.579312	270514.49	2641.96	-842.16	-3.137124	0	-3.137124	0.0434075	11742.351	414.6779	36633.96
2250	2173.887932	264503.06	3108.0625	-861.3	-3.608571	0	-3.608571	0.0270905	7165.5259	253.04858	38318.063
2300	2222.196553	258752.99	3612.01	-880.44	-4.102506	0	-4.102506	0.0165312	4277.4983	151.05868	40040.01
2350	2270.505174	253247.61	4153.8025	-899.58	-4.617491	0	-4.617491	0.0098775	2501.4655	88.338565	41799.803
2400	2318.813794	247971.61	4733.44	-918.72	-5.152212	0	-5.152212	0.0057866	1434.9105	50.673471	43597.44
2450	2367.122415	242910.97	5350.9225	-937.86	-5.70546	0	-5.70546	0.0033277	808.34626	28.546526	45432.923
2500	2415.431036	238052.75	6006.25	-957	-6.276123	0	-6.276123	0.0018807	447.7004	15.810417	47306.25
2550	2463.739657	233385.05	6699.4225	-976.14	-6.863178	0	-6.863178	0.0010456	244.02411	8.6176441	49217.423
2600	2512.048277	228896.87	7430.44	-995.28	-7.465678	0	-7.465678	0.0005724	131.01985	4.62693	51166.44
2650	2560.356898	224578.07	8199.3025	-1014.42	-8.082749	0	-8.082749	0.0003088	69.354387	2.4492311	53153.302
2700	2608.665519	220419.21	9006.01	-1033.56	-8.713582	0	-8.713582	0.0001643	36.223365	1.2792182	55178.01
2750	2656.974139	216411.59	9850.5625	-1052.7	-9.357426	0	-9.357426	8.632E-05	18.68108	0.6597172	57240.563
2800	2705.28276	212547.1	10732.96	-1071.84	-10.01358	0	-10.01358	4.479E-05	9.519428	0.336176	59340.96
2850	2753.591381	208818.2	11653.203	-1090.98	-10.68141	0	-10.68141	2.297E-05	4.7961394	0.1693743	61479.203
2900	2801.900002	205217.89	12611.29	-1110.12	-11.36029	0	-11.36029	1.165E-05	2.3905732	0.0844224	63655.29
2950	2850.208622	201739.62	13607.223	-1129.26	-12.04968	0	-12.04968	5.846E-06	1.1794549	0.0416521	65869.223
3000	2898.517243	198377.29	14641	-1148.4	-12.74904	0	-12.74904	2.905E-06	0.5763062	0.0203521	68121
3050	2946.825864	195125.2	15712.623	-1167.54	-13.45789	0	-13.45789	1.43E-06	0.2790146	0.0098533	70410.623
3100	2995.134484	191978.02	16822.09	-1186.68	-14.17576	0	-14.17576	6.975E-07	0.1339052	0.0047288	72738.09
3150	3043.443105	188930.75	17969.403	-1205.82	-14.90223	0	-14.90223	3.373E-07	0.0637306	0.0022506	75103.403
3200	3091.751726	185978.71	19154.56	-1224.96	-15.63689	0	-15.63689	1.618E-07	0.0300919	0.0010627	77506.56
3250	3140.060347	183117.5	20377.563	-1244.1	-16.37936	0	-16.37936	7.701E-08	0.0141015	0.000498	79947.563
3300	3188.368967	180342.99	21638.41	-1263.24	-17.12929	0	-17.12929	3.638E-08	0.0065606	0.0002317	82426.41
3350	3236.677588	177651.31	22937.103	-1282.38	-17.88635	0	-17.88635	1.706E-08	0.0030313	0.000107	84943.103
3400	3284.986209	175038.79	24273.64	-1301.52	-18.65022	0	-18.65022	7.949E-09	0.0013914	4.914E-05	87497.64
3450	3333.29483	172501.99	25648.023	-1320.66	-19.42061	0	-19.42061	3.679E-09	0.0006346	2.241E-05	90090.023
3500	3381.60345	170037.68	27060.25	-1339.8	-20.19723	0	-20.19723	1.692E-09	0.0002877	1.016E-05	92720.25
3550	3429.912071	167642.78	28510.323	-1358.94	-20.97982	0	-20.97982	7.737E-10	0.0001297	4.581E-06	95388.323
3600	3478.220692	165314.41	29998.24	-1378.08	-21.76814	0	-21.76814	3.517E-10	5.815E-05	2.053E-06	98094.24
3650	3526.529312	163049.83	31524.003	-1397.22	-22.56195	0	-22.56195	1.59E-10	2.593E-05	9.157E-07	100838
3700	3574.837933	160846.45	33087.61	-1416.36	-23.36102	0	-23.36102	7.152E-11	1.15E-05	4.063E-07	103619.61

3750	3623.146554	158701.83	34689.063	-1435.5	-24.16514	0	-24.16514	3.2E-11	5.079E-06	1.794E-07	106439.06
3800	3671.455175	156613.65	36328.36	-1454.64	-24.97412	0	-24.97412	1.425E-11	2.232E-06	7.882E-08	109296.36
3850	3719.763795	154579.71	38005.503	-1473.78	-25.78777	0	-25.78777	6.317E-12	9.765E-07	3.448E-08	112191.5
3900	3768.072416	152597.92	39720.49	-1492.92	-26.60591	0	-26.60591	2.787E-12	4.254E-07	1.502E-08	115124.49
3950	3816.381037	150666.3	41473.323	-1512.06	-27.42836	0	-27.42836	1.225E-12	1.845E-07	6.516E-09	118095.32
4000	3864.689657	148782.97	43264	-1531.2	-28.25496	0	-28.25496	5.358E-13	7.972E-08	2.815E-09	121104
4050	3912.998278	146946.14	45092.523	-1550.34	-29.08557	0	-29.08557	2.335E-13	3.431E-08	1.212E-09	124150.52
4100	3961.306899	145154.12	46958.89	-1569.48	-29.92003	0	-29.92003	1.014E-13	1.471E-08	5.196E-10	127234.89
4150	4009.61552	143405.27	48863.103	-1588.62	-30.75821	0	-30.75821	4.384E-14	6.287E-09	2.22E-10	130357.1
4200	4057.92414	141698.07	50805.16	-1607.76	-31.59997	0	-31.59997	1.889E-14	2.677E-09	9.454E-11	133517.16
4250	4106.232761	140031.03	52785.063	-1626.9	-32.44518	0	-32.44518	8.114E-15	1.136E-09	4.013E-11	136715.06
4300	4154.541382	138402.76	54802.81	-1646.04	-33.29373	0	-33.29373	3.473E-15	4.807E-10	1.698E-11	139950.81
4350	4202.850002	136811.93	56858.403	-1665.18	-34.1455	0	-34.1455	1.482E-15	2.027E-10	7.159E-12	143224.4
4400	4251.158623	135257.24	58951.84	-1684.32	-35.00038	0	-35.00038	6.303E-16	8.525E-11	3.011E-12	146535.84
4450	4299.467244	133737.5	61083.123	-1703.46	-35.85827	0	-35.85827	2.673E-16	3.574E-11	1.262E-12	149885.12
4500	4347.775865	132251.53	63252.25	-1722.6	-36.71906	0	-36.71906	1.13E-16	1.495E-11	5.278E-13	153272.25
4550	4396.084485	130798.21	65459.223	-1741.74	-37.58266	0	-37.58266	4.765E-17	6.232E-12	2.201E-13	156697.22
4600	4444.393106	129376.49	67704.04	-1760.88	-38.44898	0	-38.44898	2.004E-17	2.592E-12	9.154E-14	160160.04
4650	4492.701727	127985.35	69986.703	-1780.02	-39.31793	0	-39.31793	8.403E-18	1.075E-12	3.798E-14	163660.7
4700	4541.010347	126623.8	72307.21	-1799.16	-40.18943	0	-40.18943	3.515E-18	4.451E-13	1.572E-14	167199.21
4750	4589.318968	125290.92	74665.563	-1818.3	-41.06339	0	-41.06339	1.467E-18	1.838E-13	6.49E-15	170775.56
4800	4637.627589	123985.81	77061.76	-1837.44	-41.93974	0	-41.93974	6.107E-19	7.571E-14	2.674E-15	174389.76
4850	4685.93621	122707.6	79495.803	-1856.58	-42.81841	0	-42.81841	2.536E-19	3.112E-14	1.099E-15	178041.8
4900	4734.24483	121455.48	81967.69	-1875.72	-43.69932	0	-43.69932	1.051E-19	1.277E-14	4.508E-16	181731.69
4950	4782.553451	120228.66	84477.423	-1894.86	-44.58241	0	-44.58241	4.346E-20	5.225E-15	1.845E-16	185459.42
5000	4830.862072	119026.37	87025	-1914	-45.46761	0	-45.46761	1.793E-20	2.135E-15	7.538E-17	189225
5100	4927.479313	116692.52	92233.69	-1952.28	-47.24409	0	-47.24409	3.035E-21	3.542E-16	1.251E-17	196869.69
5200	5024.096555	114448.44	97593.76	-1990.56	-49.02829	0	-49.02829	5.097E-22	5.833E-17	2.06E-18	204665.76
5300	5120.713796	112289.03	103105.21	-2028.84	-50.81978	0	-50.81978	8.497E-23	9.541E-18	3.369E-19	212613.21
5400	5217.331038	110209.61	108768.04	-2067.12	-52.61815	0	-52.61815	1.407E-23	1.55E-18	5.475E-20	220712.04
5500	5313.948279	108205.8	114582.25	-2105.4	-54.42303	0	-54.42303	2.314E-24	2.504E-19	8.843E-21	228962.25
5600	5410.56552	106273.55	120547.84	-2143.68	-56.23406	0	-56.23406	3.783E-25	4.021E-20	1.42E-21	237363.84
5700	5507.182762	104409.1	126664.81	-2181.96	-58.05093	0	-58.05093	6.149E-26	6.42E-21	2.267E-22	245916.81
5800	5603.800003	102608.94	132933.16	-2220.24	-59.87333	0	-59.87333	9.939E-27	1.02E-21	3.602E-23	254621.16
5900	5700.417245	100869.81	139352.89	-2258.52	-61.70098	0	-61.70098	1.598E-27	1.612E-22	5.693E-24	263476.89
6000	5797.034486	99188.646	145924	-2296.8	-63.53361	0	-63.53361	2.557E-28	2.536E-23	8.956E-25	272484
6100	5893.651728	97562.602	152646.49	-2335.08	-65.37099	0	-65.37099	4.071E-29	3.972E-24	1.403E-25	281642.49
6200	5990.268969	95989.012	159520.36	-2373.36	-67.21288	0	-67.21288	6.454E-30	6.195E-25	2.188E-26	290952.36
6300	6086.88621	94465.377	166545.61	-2411.64	-69.05907	0	-69.05907	1.019E-30	9.623E-26	3.398E-27	300413.61
6400	6183.503452	92989.355	173722.24	-2449.92	-70.90935	0	-70.90935	1.601E-31	1.489E-26	5.258E-28	310026.24
6500	6280.120693	91558.75	181050.25	-2488.2	-72.76354	0	-72.76354	2.507E-32	2.296E-27	8.107E-29	319790.25
6600	6376.737935	90171.496	188529.64	-2526.48	-74.62147	0	-74.62147	3.911E-33	3.527E-28	1.245E-29	329705.64
6700	6473.355176	88825.653	196160.41	-2564.76	-76.48295	0	-76.48295	6.08E-34	5.4E-29	1.907E-30	339772.41
6800	6569.972418	87519.393	203942.56	-2603.04	-78.34784	0	-78.34784	9.418E-35	8.243E-30	2.911E-31	349990.56
6900	6666.589659	86250.996	211876.09	-2641.32	-80.21599	0	-80.21599	1.454E-35	1.254E-30	4.43E-32	360360.09
7000	6763.2069	85018.839	219961	-2679.6	-82.08725	0	-82.08725	2.239E-36	1.903E-31	6.721E-33	370881
7100	6859.824142	83821.391	228197.29	-2717.88	-83.9615	0	-83.9615	3.435E-37	2.88E-32	1.017E-33	381553.29
7200	6956.441383	82657.205	236584.96	-2756.16	-85.83862	0	-85.83862	5.257E-38	4.346E-33	1.535E-34	392376.96
7300	7053.058625	81524.914	245124.01	-2794.44	-87.71847	0	-87.71847	8.023E-39	6.541E-34	2.31E-35	403352.01
7400	7149.675866	80423.226	253814.44	-2832.72	-89.60096	0	-89.60096	1.221E-39	9.821E-35	3.468E-36	414478.44
7500	7246.293108	79350.917	262656.25	-2871	-91.48598	0	-91.48598	1.854E-40	1.471E-35	5.196E-37	425756.25
7600	7342.910349	78306.826	271649.44	-2909.28	-93.37343	0	-93.37343	2.808E-41	2.199E-36	7.766E-38	437185.44
7700	7439.527591	77289.854	280794.01	-2947.56	-95.2632	0	-95.2632	4.243E-42	3.28E-37	1.158E-38	448766.01
7800	7536.144832	76298.958	290089.96	-2985.84	-97.15523	0	-97.15523	6.398E-43	4.881E-38	1.724E-39	460497.96
7900	7632.762073	75333.149	299537.29	-3024.12	-99.04941	0	-99.04941	9.625E-44	7.251E-39	2.561E-40	472381.29
8000	7729.379315	74391.484	309136	-3062.4	-100.9457	0	-100.9457	1.445E-44	1.075E-39	3.796E-41	484416
8100	7825.996556	73473.071	318886.09	-3100.68	-102.8439	0	-102.8439	2.165E-45	1.591E-40	5.617E-42	496602.09
8200	7922.613798	72577.058	328787.56	-3138.96	-104.7441	0	-104.7441	3.238E-46	2.35E-41	8.298E-43	508939.56
8300	8019.231039	71702.635	338840.41	-3177.24	-106.6461	0	-106.6461	4.832E-47	3.465E-42	1.224E-43	521428.41
8400	8115.848281	70849.033	349044.64	-3215.52	-108.55	0	-108.55	7.2E-48	5.101E-43	1.801E-44	534068.64
8500	8212.465522	70015.515	359400.25	-3253.8	-110.4555	0	-110.4555	1.071E-48	7.498E-44	2.648E-45	546860.25
8600	8309.082763	69201.381	369907.24	-3292.08	-112.3628	0	-112.3628	1.59E-49	1.1E-44	3.886E-46	559803.24
8700	8405.700005	68405.963	380565.61	-3330.36	-114.2716	0	-114.2716	2.358E-50	1.613E-45	5.695E-47	572897.61
8800	8502.317246	67628.622	391375.36	-3368.64	-116.182	0	-116.182	3.49E-51	2.36E-46	8.335E-48	586143.36
8900	8598.934488	66868.75	402336.49	-3406.92	-118.0939	0	-118.0939	5.158E-52	3.449E-47	1.218E-48	599540.49
9000	8695.551729	66125.764	413449	-3445.2	-120.0073	0	-120.0073	7.612E-53	5.034E-48	1.778E-49	613089
9100	8792.168971	65399.107	424712.89	-3483.48	-121.922	0	-121.922	1.122E-53	7.337E-49	2.591E-50	626788.89
9200	8888.786212	64688.247	436128.16	-3521.76	-123.8381	0	-123.8381	1.651E-54	1.068E-49	3.772E-51	640640.16
9300	8985.403453	63992.675	447694.81	-3560.04	-125.7556	0	-125.7556	2.427E-55	1.553E-50	5.485E-52	654642.81
9400	9082.020695	63311.902	459412.84	-3598.32	-127.6743	0	-127.6743	3.563E-56	2.256E-51	7.966E-53	668796.84

9500	9178.637936	62645.46	471282.25	-3636.6	-129.5942	0	-129.5942	5.223E-57	3.272E-52	1.156E-53	683102.25
9600	9275.255178	61992.904	483303.04	-3674.88	-131.5153	0	-131.5153	7.649E-58	4.742E-53	1.675E-54	697559.04
9700	9371.872419	61353.801	495475.21	-3713.16	-133.4376	0	-133.4376	1.119E-58	6.865E-54	2.424E-55	712167.21
9800	9468.489661	60727.742	507798.76	-3751.44	-135.361	0	-135.361	1.635E-59	9.928E-55	3.506E-56	726926.76
9900	9565.106902	60114.331	520273.69	-3789.72	-137.2855	0	-137.2855	2.386E-60	1.434E-55	5.065E-57	741837.69
10000	9661.724144	59513.187	532900	-3828	-139.2111	0	-139.2111	3.479E-61	2.07E-56	7.311E-58	756900
10500	10144.81035	56679.226	598302.25	-4019.4	-148.8536	0	-148.8536	2.258E-65	1.28E-60	4.519E-62	834482.25
11000	10627.89656	54102.898	667489	-4210.8	-158.5183	0	-158.5183	1.433E-69	7.755E-65	2.739E-66	915849
11500	11110.98277	51750.598	740460.25	-4402.2	-168.2023	0	-168.2023	8.926E-74	4.619E-69	1.631E-70	1001000.3
12000	11594.06897	49594.323	817216	-4593.6	-177.9032	0	-177.9032	5.466E-78	2.711E-73	9.572E-75	1089936
12500	12077.15518	47610.55	897756.25	-4785	-187.6189	0	-187.6189	3.297E-82	1.57E-77	5.544E-79	1182656.3
13000	12560.24139	45779.375	982081	-4976.4	-197.3477	0	-197.3477	1.963E-86	8.988E-82	3.174E-83	1279161
13500	13043.32759	44083.843	1070190.3	-5167.8	-207.0882	0	-207.0882	1.155E-90	5.094E-86	1.799E-87	1379450.3
14000	13526.4138	42509.42	1162084	-5359.2	-216.8391	0	-216.8391	6.73E-95	2.861E-90	1.01E-91	1483524
14500	14009.50001	41043.578	1257762.3	-5550.6	-226.5993	0	-226.5993	3.88E-99	1.594E-94	5.628E-96	1591382.3
15000	14492.58622	39675.458	1357225	-5742	-236.368	0	-236.368	2.22E-103	8.81E-99	3.11E-100	1703025
15500	14975.67242	38395.605	1460472.3	-5933.4	-246.1442	0	-246.1442	1.26E-107	4.84E-103	1.71E-104	1818452.3
16000	15458.75863	37195.742	1567504	-6124.8	-255.9274	0	-255.9274	7.11E-112	2.65E-107	9.35E-109	1937664
16500	15941.84484	36068.598	1678320.3	-6316.2	-265.7168	0	-265.7168	3.99E-116	1.44E-111	5.08E-113	2060660.3
17000	16424.93104	35007.757	1792921	-6507.6	-275.5119	0	-275.5119	2.22E-120	7.78E-116	2.75E-117	2187441
17500	16908.01725	34007.536	1911306.3	-6699	-285.3122	0	-285.3122	1.23E-124	4.19E-120	1.48E-121	2318006.3
18000	17391.10346	33062.882	2033476	-6890.4	-295.1173	0	-295.1173	6.8E-129	2.25E-124	7.93E-126	2452356
18500	17874.18967	32169.291	2159430.3	-7081.8	-304.9267	0	-304.9267	3.73E-133	1.2E-128	4.24E-130	2590490.3
19000	18357.27587	31322.73	2289169	-7273.2	-314.7403	0	-314.7403	2.04E-137	6.4E-133	2.26E-134	2732409
19500	18840.36208	30519.583	2422692.3	-7464.6	-324.5575	0	-324.5575	1.11E-141	3.4E-137	1.2E-138	2878112.3
20000	19323.44829	29756.594	2560000	-7656	-334.3783	0	-334.3783	6.04E-146	1.8E-141	6.35E-143	3027600
20500	19806.53449	29030.823	2701092.3	-7847.4	-344.2022	0	-344.2022	3.27E-150	9.5E-146	3.36E-147	3180872.3
21000	20289.6207	28339.613	2845969	-8038.8	-354.0291	0	-354.0291	1.77E-154	5.01E-150	1.77E-151	3337929
21500	20772.70691	27680.552	2994630.3	-8230.2	-363.8587	0	-363.8587	9.51E-159	2.63E-154	9.3E-156	3498770.3
22000	21255.79312	27051.449	3147076	-8421.6	-373.691	0	-373.691	5.11E-163	1.38E-158	4.88E-160	3663396
22500	21738.87932	26450.306	3303306.3	-8613	-383.5256	0	-383.5256	2.73E-167	7.23E-163	2.55E-164	3831806.3
23000	22221.96553	25875.299	3463321	-8804.4	-393.3625	0	-393.3625	1.46E-171	3.78E-167	1.34E-168	4004001
23500	22705.05174	25324.761	3627120.3	-8995.8	-403.2015	0	-403.2015	7.79E-176	1.97E-171	6.97E-173	4179980.3
24000	23188.13794	24797.161	3794704	-9187.2	-413.0425	0	-413.0425	4.15E-180	1.03E-175	3.63E-177	4359744
24500	23671.22415	24291.097	3966072.3	-9378.6	-422.8853	0	-422.8853	2.2E-184	5.35E-180	1.89E-181	4543292.3
25000	24154.31036	23805.275	4141225	-9570	-432.7299	0	-432.7299	1.17E-188	2.78E-184	9.83E-186	4730625
25500	24637.39657	23338.505	4320162.3	-9761.4	-442.5761	0	-442.5761	6.19E-193	1.44E-188	5.1E-190	4921742.3
26000	25120.48277	22889.687	4502884	-9952.8	-452.4238	0	-452.4238	3.27E-197	7.49E-193	2.64E-194	5116644
26500	25603.56898	22457.807	4689390.3	-10144.2	-462.273	0	-462.273	1.73E-201	3.88E-197	1.37E-198	5315330.3
27000	26086.65519	22041.921	4879681	-10335.6	-472.1236	0	-472.1236	9.11E-206	2.01E-201	7.09E-203	5517801
27500	26569.74139	21641.159	5073756.3	-10527	-481.9755	0	-481.9755	4.79E-210	1.04E-205	3.66E-207	5724056.3
28000	27052.8276	21254.71	5271616	-10718.4	-491.8286	0	-491.8286	2.52E-214	5.36E-210	1.89E-211	5934096
28500	27535.91381	20881.82	5473260.3	-10909.8	-501.6829	0	-501.6829	1.32E-218	2.76E-214	9.76E-216	6147920.3
29000	28019.00002	20521.789	5678689	-11101.2	-511.5383	0	-511.5383	6.95E-223	1.43E-218	5.03E-220	6365529
29500	28502.08622	20173.962	5887902.3	-11292.6	-521.3947	0	-521.3947	3.64E-227	7.34E-223	2.59E-224	6586922.3
30000	28985.17243	19837.729	6100900	-11484	-531.2522	0	-531.2522	1.91E-231	3.78E-227	1.34E-228	6812100
30500	29468.25864	19512.52	6317682.3	-11675.4	-541.1106	0	-541.1106	9.97E-236	1.95E-231	6.87E-233	7041062.3
31000	29951.34484	19197.802	6538249	-11866.8	-550.9698	0	-550.9698	5.21E-240	1E-235	3.53E-237	7273809
31500	30434.43105	18893.075	6762600.3	-12058.2	-560.83	0	-560.83	2.72E-244	5.14E-240	1.82E-241	7510340.3
32000	30917.51726	18597.871	6990736	-12249.6	-570.691	0	-570.691	1.42E-248	2.64E-244	9.32E-246	7750656
32500	31400.60347	18311.75	7222656.3	-12441	-580.5527	0	-580.5527	7.4E-253	1.35E-248	4.78E-250	7994756.3
33000	31883.68967	18034.299	7458361	-12632.4	-590.4152	0	-590.4152	3.85E-257	6.95E-253	2.45E-254	8242641
33500	32366.77588	17765.131	7697850.3	-12823.8	-600.2784	0	-600.2784	2.01E-261	3.56E-257	1.26E-258	8494310.3
34000	32849.86209	17503.879	7941124	-13015.2	-610.1423	0	-610.1423	1.04E-265	1.83E-261	6.45E-263	8749764
34500	33332.9483	17250.199	8188182.3	-13206.6	-620.0068	0	-620.0068	5.43E-270	9.36E-266	3.31E-267	9009002.3
35000	33816.0345	17003.768	8439025	-13398	-629.872	0	-629.872	2.82E-274	4.79E-270	1.69E-271	9272025
35500	34299.12071	16764.278	8693652.3	-13589.4	-639.7378	0	-639.7378	1.46E-278	2.45E-274	8.66E-276	9538832.3
36000	34782.20692	16531.441	8952064	-13780.8	-649.6041	0	-649.6041	7.6E-283	1.26E-278	4.43E-280	9809424
36500	35265.29312	16304.983	9214260.3	-13972.2	-659.471	0	-659.471	3.94E-287	6.42E-283	2.27E-284	10083800
37000	35748.37933	16084.645	9480241	-14163.6	-669.3384	0	-669.3384	2.04E-291	3.28E-287	1.16E-288	10361961
37500	36231.46554	15870.183	9750006.3	-14355	-679.2063	0	-679.2063	1.06E-295	1.68E-291	5.93E-293	10643906
38000	36714.55175	15661.365	10023556	-14546.4	-689.0747	0	-689.0747	5.48E-300	8.58E-296	3.03E-297	10929636
38500	37197.63795	15457.971	10300890	-14737.8	-698.9435	0	-698.9435	2.84E-304	4.38E-300	1.55E-301	11219150
39000	37680.72416	15259.792	10582009	-14929.2	-708.8129	0	-708.8129	0	2.24E-304	7.91E-306	11512449
39500	38163.81037	15066.63	10866912	-15120.6	-718.6826	0	-718.6826	0	0	0	11809532
40000	38646.89657	14878.297	11155600	-15312	-728.5528	0	-728.5528	0	0	0	12110400
40500	39129.98278	14694.614	11448072	-15503.4	-738.4233	0	-738.4233	0	0	0	12415052
41000	39613.06899	14515.412	11744329	-15694.8	-748.2943	0	-748.2943	0	0	0	12723489
41500	40096.1552	14340.527	12044370	-15886.2	-758.1656	0	-758.1656	0	0	0	13035710
42000	40579.2414	14169.807	12348196	-16077.6	-768.0373	0	-768.0373	0	0	0	13351716

42500	41062.32761	14003.103	12655806	-16269	-777.9093	0	-777.9093	0	0	0	13671506
43000	41545.41382	13840.276	12967201	-16460.4	-787.7816	0	-787.7816	0	0	0	13995081
43500	42028.50002	13681.193	13282380	-16651.8	-797.6543	0	-797.6543	0	0	0	14322440
44000	42511.58623	13525.724	13601344	-16843.2	-807.5273	0	-807.5273	0	0	0	14653584
44500	42994.67244	13373.75	13924092	-17034.6	-817.4006	0	-817.4006	0	0	0	14988512
45000	43477.75865	13225.153	14250625	-17226	-827.2742	0	-827.2742	0	0	0	15327225
45500	43960.84485	13079.821	14580942	-17417.4	-837.148	0	-837.148	0	0	0	15669722
46000	44443.93106	12937.649	14915044	-17608.8	-847.0222	0	-847.0222	0	0	0	16016004
46500	44927.01727	12798.535	15252930	-17800.2	-856.8966	0	-856.8966	0	0	0	16366070
47000	45410.10347	12662.38	15594601	-17991.6	-866.7712	0	-866.7712	0	0	0	16719921
47500	45893.18968	12529.092	15940056	-18183	-876.6461	0	-876.6461	0	0	0	17077556
48000	46376.27589	12398.581	16289296	-18374.4	-886.5212	0	-886.5212	0	0	0	17438976
48500	46859.3621	12270.76	16642320	-18565.8	-896.3966	0	-896.3966	0	0	0	17804180
49000	47342.4483	12145.548	16999129	-18757.2	-906.2722	0	-906.2722	0	0	0	18173169
49500	47825.53451	12022.866	17359722	-18948.6	-916.148	0	-916.148	0	0	0	18545942
50000	48308.62072	11902.637	17724100	-19140	-926.024	0	-926.024	0	0	0	18922500
50500	48791.70692	11784.79	18092262	-19331.4	-935.9003	0	-935.9003	0	0	0	19302842
51000	49274.79313	11669.252	18464209	-19522.8	-945.7767	0	-945.7767	0	0	0	19686969
51500	49757.87934	11555.959	18839940	-19714.2	-955.6533	0	-955.6533	0	0	0	20074880
52000	50240.96555	11444.844	19219456	-19905.6	-965.5301	0	-965.5301	0	0	0	20466576
52500	50724.05175	11335.845	19602756	-20097	-975.4071	0	-975.4071	0	0	0	20862056
53000	51207.13796	11228.903	19989841	-20288.4	-985.2843	0	-985.2843	0	0	0	21261321
53500	51690.22417	11123.96	20380710	-20479.8	-995.1616	0	-995.1616	0	0	0	21664370
54000	52173.31038	11020.961	20775364	-20671.2	-1005.039	0	-1005.039	0	0	0	22071204
54500	52656.39658	10919.851	21173802	-20862.6	-1014.917	0	-1014.917	0	0	0	22481822
55000	53139.48279	10820.58	21576025	-21054	-1024.795	0	-1024.795	0	0	0	22896225
55500	53622.569	10723.097	21982032	-21245.4	-1034.673	0	-1034.673	0	0	0	23314412
56000	54105.6552	10627.355	22391824	-21436.8	-1044.551	0	-1044.551	0	0	0	23736384
56500	54588.74141	10533.308	22805400	-21628.2	-1054.429	0	-1054.429	0	0	0	24162140
57000	55071.82762	10440.91	23222761	-21819.6	-1064.307	0	-1064.307	0	0	0	24591681
57500	55554.91383	10350.12	23643906	-22011	-1074.186	0	-1074.186	0	0	0	25025006
58000	56038.00003	10260.894	24068836	-22202.4	-1084.065	0	-1084.065	0	0	0	25462116
58500	56521.08624	10173.194	24497550	-22393.8	-1093.943	0	-1093.943	0	0	0	25903010
59000	57004.17245	10086.981	24930049	-22585.2	-1103.822	0	-1103.822	0	0	0	26347689
59500	57487.25865	10002.216	25366332	-22776.6	-1113.701	0	-1113.701	0	0	0	26796152
60000	57970.34486	9918.8646	25806400	-22968	-1123.581	0	-1123.581	0	0	0	27248400
60500	58453.43107	9836.8905	26250252	-23159.4	-1133.46	0	-1133.46	0	0	0	27704432
61000	58936.51728	9756.2602	26697889	-23350.8	-1143.339	0	-1143.339	0	0	0	28164249
61500	59419.60348	9676.941	27149310	-23542.2	-1153.219	0	-1153.219	0	0	0	28627850
62000	59902.68969	9598.9012	27604516	-23733.6	-1163.099	0	-1163.099	0	0	0	29095236
62500	60385.7759	9522.11	28063506	-23925	-1172.978	0	-1172.978	0	0	0	29566406
63000	60868.8621	9446.5377	28526281	-24116.4	-1182.858	0	-1182.858	0	0	0	30041361
63500	61351.94831	9372.1555	28992840	-24307.8	-1192.738	0	-1192.738	0	0	0	30520100
64000	61835.03452	9298.9355	29463184	-24499.2	-1202.618	0	-1202.618	0	0	0	31002624
64500	62318.12073	9226.8508	29937312	-24690.6	-1212.498	0	-1212.498	0	0	0	31488932
65000	62801.20693	9155.875	30415225	-24882	-1222.379	0	-1222.379	0	0	0	31979025
65500	63284.29314	9085.9828	30896922	-25073.4	-1232.259	0	-1232.259	0	0	0	32472902
66000	63767.37935	9017.1496	31382404	-25264.8	-1242.139	0	-1242.139	0	0	0	32970564
66500	64250.46555	8949.3515	31871670	-25456.2	-1252.02	0	-1252.02	0	0	0	33472010
67000	64733.55176	8882.5653	32364721	-25647.6	-1261.901	0	-1261.901	0	0	0	33977241
67500	65216.63797	8816.7685	32861556	-25839	-1271.781	0	-1271.781	0	0	0	34486256
68000	65699.72418	8751.9393	33362176	-26030.4	-1281.662	0	-1281.662	0	0	0	34999056
68500	66182.81038	8688.0566	33866580	-26221.8	-1291.543	0	-1291.543	0	0	0	35515640
69000	66665.89659	8625.0996	34374769	-26413.2	-1301.424	0	-1301.424	0	0	0	36036009
69500	67148.9828	8563.0486	34886742	-26604.6	-1311.305	0	-1311.305	0	0	0	36560162
70000	67632.069	8501.8839	35402500	-26796	-1321.186	0	-1321.186	0	0	0	37088100
70500	68115.15521	8441.5869	35922042	-26987.4	-1331.067	0	-1331.067	0	0	0	37619822
71000	68598.24142	8382.1391	36445369	-27178.8	-1340.948	0	-1340.948	0	0	0	38155329
71500	69081.32763	8323.5227	36972480	-27370.2	-1350.83	0	-1350.83	0	0	0	38694620
72000	69564.41383	8265.7205	37503376	-27561.6	-1360.711	0	-1360.711	0	0	0	39237696
72500	70047.50004	8208.7155	38038056	-27753	-1370.593	0	-1370.593	0	0	0	39784556
73000	70530.58625	8152.4914	38576521	-27944.4	-1380.474	0	-1380.474	0	0	0	40335201

R/K	Y_2^2/-4D,ut	S+T	exp[U]	C_2 (ug/ft^3)	C_2 (ug/L)	$(X_3\text{-ut})^2$	Y/K	Y_3^2/-4D,ut	Z+AA	exp[AB]	C_3 (ug/ft^3)
-0.395455	0	-0.395455	0.6733739	20037313	707612.205	6750955	-881786.2	0	-881786.2	0	0
-0.790909	0	-0.790909	0.4534324	6746301.8	238243.7918	6741916.1	-440302.8	0	-440302.8	0	0
-1.186364	0	-1.186364	0.3053295	3028522.3	106951.4327	6732883.2	-293141.9	0	-293141.9	0	0
-1.581818	0	-1.581818	0.2056009	1529495.9	54013.72674	6723856.4	-219561.7	0	-219561.7	0	0
-1.977273	0	-1.977273	0.1384463	823938.08	29097.14666	6714835.7	-175413.7	0	-175413.7	0	0
-2.372727	0	-2.372727	0.0932261	462348.66	16327.71571	6705821	-145981.8	0	-145981.8	0	0
-2.768182	0	-2.768182	0.062776	266857.3	9423.992102	6696812.4	-124959.2	0	-124959.2	0	0
-3.163636	0	-3.163636	0.0422717	157232.9	5552.636449	6687809.8	-109192.3	0	-109192.3	0	0
-3.559091	0	-3.559091	0.0284647	94112.468	3323.555919	6678813.2	-96929.25	0	-96929.25	0	0
-3.954545	0	-3.954545	0.0191674	57035.591	2014.196202	6669822.8	-87118.9	0	-87118.9	0	0
-4.35	0	-4.35	0.0129068	34914.798	1233.006484	6660838.3	-79092.31	0	-79092.31	0	0
-4.745455	0	-4.745455	0.0086911	21551.487	761.0848425	6651860	-72403.56	0	-72403.56	0	0
-5.140909	0	-5.140909	0.0058524	13395.885	473.0719952	6642887.7	-66743.91	0	-66743.91	0	0
-5.536364	0	-5.536364	0.0039408	8376.1222	295.8004493	6633921.4	-61892.83	0	-61892.83	0	0
-5.931818	0	-5.931818	0.0026537	5264.2445	185.9053461	6624961.2	-57688.62	0	-57688.62	0	0
-6.327273	0	-6.327273	0.0017869	3323.2545	117.3598183	6616007.1	-54009.98	0	-54009.98	0	0
-6.722727	0	-6.722727	0.0012033	2106.1579	74.37838819	6607059	-50764.18	0	-50764.18	0	0
-7.118182	0	-7.118182	0.0008102	1339.4411	47.30199437	6598116.9	-47879.06	0	-47879.06	0	0
-7.513636	0	-7.513636	0.0005456	854.4739	30.17551072	6589181	-45297.67	0	-45297.67	0	0
-7.909091	0	-7.909091	0.0003674	546.6114	19.30343101	6580251	-42974.47	0	-42974.47	0	0
-8.304545	0	-8.304545	0.0002474	350.54652	12.37945375	6571327.2	-40872.56	0	-40872.56	0	0
-8.7	0	-8.7	0.0001666	225.31938	7.957091803	6562409.4	-38961.77	0	-38961.77	0	0
-9.095455	0	-9.095455	0.0001122	145.12748	5.125137089	6553497.6	-37217.17	0	-37217.17	0	0
-9.490909	0	-9.490909	7.554E-05	93.65318	3.307336272	6544591.9	-35617.99	0	-35617.99	0	0
-9.886364	0	-9.886364	5.086E-05	60.541062	2.137990937	6535692.3	-34146.77	0	-34146.77	0	0
-10.28182	0	-10.28182	3.425E-05	39.198818	1.384295457	6526798.7	-32788.76	0	-32788.76	0	0
-10.67727	0	-10.67727	2.306E-05	25.417851	0.897624402	6517911.1	-31531.36	0	-31531.36	0	0
-11.07273	0	-11.07273	1.553E-05	16.504441	0.582849806	6509029.6	-30363.81	0	-30363.81	0	0
-11.46818	0	-11.46818	1.046E-05	10.73043	0.378942192	6500154.2	-29276.81	0	-29276.81	0	0
-11.86364	0	-11.86364	7.042E-06	6.9847385	0.246664119	6491284.8	-28262.3	0	-28262.3	0	0
-12.25909	0	-12.25909	4.742E-06	4.5516199	0.160739204	6482421.5	-27313.27	0	-27313.27	0	0
-12.65455	0	-12.65455	3.193E-06	2.9691626	0.104855159	6473564.3	-26423.57	0	-26423.57	0	0
-13.05	0	-13.05	2.15E-06	1.93877	0.068467128	6464713.1	-25587.83	0	-25587.83	0	0
-13.44545	0	-13.44545	1.448E-06	1.2671195	0.044747977	6455867.9	-24801.26	0	-24801.26	0	0
-13.84091	0	-13.84091	9.749E-07	0.8288668	0.029271202	6447028.8	-24059.67	0	-24059.67	0	0
-14.23636	0	-14.23636	6.565E-07	0.5426334	0.01916295	6438195.8	-23359.3	0	-23359.3	0	0
-14.63182	0	-14.63182	4.421E-07	0.3555196	0.012555078	6429368.8	-22696.8	0	-22696.8	0	0
-15.02727	0	-15.02727	2.977E-07	0.2330977	0.008231781	6420547.9	-22069.2	0	-22069.2	0	0
-15.42273	0	-15.42273	2.004E-07	0.1529372	0.005400937	6411733	-21473.8	0	-21473.8	0	0
-15.81818	0	-15.81818	1.35E-07	0.1004093	0.003545928	6402924.2	-20908.19	0	-20908.19	0	0
-16.21364	0	-16.21364	9.089E-08	0.0659639	0.002329498	6394121.4	-20370.19	0	-20370.19	0	0
-16.60909	0	-16.60909	6.12E-08	0.0433608	0.001531275	6385324.7	-19857.83	0	-19857.83	0	0
-17.00455	0	-17.00455	4.121E-08	0.028519	0.001007141	6376534	-19369.32	0	-19369.32	0	0
-17.4	0	-17.4	2.775E-08	0.0187675	0.000662769	6367749.4	-18903.03	0	-18903.03	0	0
-17.79545	0	-17.79545	1.869E-08	0.0123567	0.000436374	6358970.9	-18457.48	0	-18457.48	0	0
-18.19091	0	-18.19091	1.258E-08	0.0081398	0.000287455	6350198.4	-18031.32	0	-18031.32	0	0
-18.58636	0	-18.58636	8.473E-09	0.0053645	0.000189446	6341432	-17623.31	0	-17623.31	0	0
-18.98182	0	-18.98182	5.706E-09	0.0035371	0.00012491	6332671.6	-17232.32	0	-17232.32	0	0
-19.37727	0	-19.37727	3.842E-09	0.0023332	8.23949E-05	6323917.3	-16857.31	0	-16857.31	0	0
-19.77273	0	-19.77273	2.587E-09	0.0015397	5.43729E-05	6315169	-16497.31	0	-16497.31	0	0
-20.16818	0	-20.16818	1.742E-09	0.0010164	3.58954E-05	6306426.8	-16151.44	0	-16151.44	0	0
-20.95909	0	-20.95909	7.899E-10	0.0004435	1.56619E-05	6288960.5	-15498.91	0	-15498.91	0	0
-21.35455	0	-21.35455	5.319E-10	0.0002931	1.0351E-05	6280236.5	-15190.79	0	-15190.79	0	0
-21.75	0	-21.75	3.582E-10	0.0001938	6.84339E-06	6271518.5	-14893.89	0	-14893.89	0	0
-22.14545	0	-22.14545	2.412E-10	0.0001282	4.52587E-06	6262806.6	-14607.61	0	-14607.61	0	0
-22.54091	0	-22.54091	1.624E-10	8.478E-05	2.99414E-06	6254100.7	-14331.38	0	-14331.38	0	0
-22.93636	0	-22.93636	1.094E-10	5.611E-05	1.98141E-06	6245400.8	-14064.7	0	-14064.7	0	0
-23.33182	0	-23.33182	7.364E-11	3.714E-05	1.31162E-06	6236707.1	-13807.07	0	-13807.07	0	0
-23.72727	0	-23.72727	4.959E-11	2.459E-05	8.68489E-07	6228019.4	-13558.04	0	-13558.04	0	0
-24.12273	0	-24.12273	3.339E-11	1.629E-05	5.7523E-07	6219337.7	-13317.18	0	-13317.18	0	0
-24.51818	0	-24.51818	2.248E-11	1.079E-05	3.81098E-07	6210662.1	-13084.11	0	-13084.11	0	0
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-73.15909	0	-73.15909	1.688E-32	2.715E-27	9.5891E-29	5189739.6	-3664.139	0	-3664.139	0	0

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-85.02273	0	-85.02273	1.189E-37	1.645E-32	5.81031E-34	4954630.8	-3010.031	0	-3010.031	0	0
-86.01136	0	-86.01136	4.423E-38	6.052E-33	2.13707E-34	4935284.4	-2963.814	0	-2963.814	0	0
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-87.98864	0	-87.98864	6.124E-39	8.19E-34	2.89221E-35	4896705.1	-2874.564	0	-2874.564	0	0
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-89.96591	0	-89.96591	8.478E-40	1.109E-34	3.91615E-36	4858277.2	-2789.324	0	-2789.324	0	0
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-93.92045	0	-93.92045	1.625E-41	2.036E-36	7.19019E-38	4781875.6	-2629.861	0	-2629.861	0	0
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-95.89773	0	-95.89773	2.25E-42	2.761E-37	9.7493E-39	4743901.8	-2555.183	0	-2555.183	0	0
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-116.6591	0	-116.6591	2.166E-51	2.185E-46	7.71467E-48	4354316.9	-1927.951	0	-1927.951	0	0
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-158.1818	0	-158.1818	2.007E-69	1.493E-64	5.27216E-66	3625216	-1183.783	0	-1183.783	0	0
-160.1591	0	-160.1591	2.778E-70	2.041E-65	7.20899E-67	3592162.1	-1158.508	0	-1158.508	0	0
-162.1364	0	-162.1364	3.847E-71	2.792E-66	9.85887E-68	3559259.6	-1133.898	0	-1133.898	0	0
-164.1136	0	-164.1136	5.325E-72	3.818E-67	1.34848E-68	3526508.4	-1109.928	0	-1109.928	0	0
-166.0909	0	-166.0909	7.373E-73	5.224E-68	1.84469E-69	3493908.6	-1086.577	0	-1086.577	0	0
-168.0682	0	-168.0682	1.021E-73	7.147E-69	2.52387E-70	3461460.3	-1063.821	0	-1063.821	0	0
-170.0455	0	-170.0455	1.413E-74	9.779E-70	3.45357E-71	3429163.2	-1041.64	0	-1041.64	0	0
-172.0227	0	-172.0227	1.956E-75	1.338E-70	4.72638E-72	3397017.6	-1020.015	0	-1020.015	0	0
-174	0	-174	2.709E-76	1.832E-71	6.46914E-73	3365023.4	-998.9264	0	-998.9264	0	0
-175.9773	0	-175.9773	3.75E-77	2.508E-72	8.85565E-74	3333180.5	-978.356	0	-978.356	0	0
-177.9545	0	-177.9545	5.192E-78	3.433E-73	1.21241E-74	3301489	-958.2866	0	-958.2866	0	0
-179.9318	0	-179.9318	7.188E-79	4.701E-74	1.66009E-75	3269948.9	-938.7018	0	-938.7018	0	0
-181.9091	0	-181.9091	9.951E-80	6.437E-75	2.27335E-76	3238560.2	-919.5857	0	-919.5857	0	0
-183.8864	0	-183.8864	1.378E-80	8.817E-76	3.11353E-77	3207322.8	-900.9233	0	-900.9233	0	0
-185.8636	0	-185.8636	1.907E-81	1.208E-76	4.26471E-78	3176236.8	-882.6999	0	-882.6999	0	0

-187.8409	0	-187.8409	2.641E-82	1.654E-77	5.84218E-79	3145302.3	-864.9019	0	-864.9019	0	0
-189.8182	0	-189.8182	3.656E-83	2.266E-78	8.00403E-80	3114519	-847.5158	0	-847.5158	0	0
-191.7955	0	-191.7955	5.062E-84	3.106E-79	1.0967E-80	3083887.2	-830.529	0	-830.529	0	0
-193.7727	0	-193.7727	7.008E-85	4.256E-80	1.50285E-81	3053406.8	-813.9293	0	-813.9293	0	0
-195.75	0	-195.75	9.702E-86	5.832E-81	2.05963E-82	3023077.7	-797.7048	0	-797.7048	0	0
-197.7273	0	-197.7273	1.343E-86	7.994E-82	2.82297E-83	2992900	-781.8443	0	-781.8443	0	0
-207.6136	0	-207.6136	6.832E-91	3.872E-86	1.36749E-87	2844282.3	-707.6385	0	-707.6385	4.75E-308	2.69E-303
-217.5	0	-217.5	3.475E-95	1.88E-90	6.63936E-92	2699449	-641.0775	0	-641.0775	3.83E-279	2.07E-274
-227.3864	0	-227.3864	1.77E-99	9.147E-95	3.23019E-96	2558400.3	-581.164	0	-581.164	4.01E-253	2.08E-248
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-257.0455	0	-257.0455	2.33E-112	1.06E-107	3.7601E-109	2157961	-433.639	0	-433.639	4.71E-189	2.16E-184
-266.9318	0	-266.9318	1.18E-116	5.22E-112	1.8417E-113	2032050.3	-393.2138	0	-393.2138	1.7E-171	7.48E-167
-276.8182	0	-276.8182	6.02E-121	2.56E-116	9.033E-118	1909924	-356.3823	0	-356.3823	1.68E-155	7.14E-151
-286.7045	0	-286.7045	3.06E-125	1.26E-120	4.4361E-122	1791582.3	-322.7727	0	-322.7727	6.63E-141	2.72E-136
-296.5909	0	-296.5909	1.56E-129	6.18E-125	2.1811E-126	1677025	-292.0629	0	-292.0629	1.44E-127	5.72E-123
-306.4773	0	-306.4773	7.92E-134	3.04E-129	1.0736E-130	1566252.3	-263.9721	0	-263.9721	2.28E-115	8.76E-111
-316.3636	0	-316.3636	4.03E-138	1.5E-133	5.2901E-135	1459264	-238.255	0	-238.255	3.37E-104	1.25E-99
-326.25	0	-326.25	2.05E-142	7.39E-138	2.6092E-139	1356060.3	-214.6956	0	-214.6956	5.74E-94	2.07E-89
-336.1364	0	-336.1364	1.04E-146	3.65E-142	1.2881E-143	1256641	-193.1036	0	-193.1036	1.368E-84	4.79E-80
-346.0227	0	-346.0227	5.3E-151	1.8E-146	6.3646E-148	1161006.3	-173.3104	0	-173.3104	5.398E-76	1.836E-71
-355.9091	0	-355.9091	2.7E-155	8.91E-151	3.1473E-152	1069156	-155.166	0	-155.166	4.095E-68	1.354E-63
-365.7955	0	-365.7955	1.37E-159	4.41E-155	1.5576E-156	981090.25	-138.5368	0	-138.5368	6.827E-61	2.196E-56
-375.6818	0	-375.6818	6.97E-164	2.18E-159	7.7139E-161	896809	-123.3032	0	-123.3032	2.819E-54	8.83E-50
-385.5682	0	-385.5682	3.55E-168	1.08E-163	3.823E-165	816312.25	-109.3578	0	-109.3578	3.21E-48	9.797E-44
-395.4545	0	-395.4545	1.8E-172	5.37E-168	1.8959E-169	739600	-96.60397	0	-96.60397	1.11E-42	3.304E-38
-405.3409	0	-405.3409	9.18E-177	2.66E-172	9.408E-174	666672.25	-84.95454	0	-84.95454	1.273E-37	3.695E-33
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-425.1136	0	-425.1136	2.37E-185	6.57E-181	2.3207E-182	532170.25	-64.66067	0	-64.66067	8.284E-29	2.293E-24
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-474.5455	0	-474.5455	8.08E-207	2E-202	7.0776E-204	262144	-28.53361	0	-28.53361	4.055E-13	1.006E-08
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-494.3182	0	-494.3182	2.09E-215	4.98E-211	1.7578E-212	180625	-18.87409	0	-18.87409	6.355E-09	0.0001513
-504.2045	0	-504.2045	1.06E-219	2.48E-215	8.7655E-217	145542.25	-14.90998	0	-14.90998	3.347E-07	0.0078118
-514.0909	0	-514.0909	5.41E-224	1.24E-219	4.3727E-221	114244	-11.47858	0	-11.47858	1.035E-05	0.2368953
-523.9773	0	-523.9773	2.75E-228	6.18E-224	2.1822E-225	86730.25	-8.549738	0	-8.549738	0.0001936	4.3477383
-533.8636	0	-533.8636	1.4E-232	3.08E-228	1.0894E-229	63001	-6.095534	0	-6.095534	0.0022529	49.658399
-543.75	0	-543.75	7.12E-237	1.54E-232	5.4402E-234	43056.25	-4.090078	0	-4.090078	0.0167379	362.2282
-553.6364	0	-553.6364	3.62E-241	7.7E-237	2.7176E-238	26896	-2.50933	0	-2.50933	0.0813227	1728.491
-563.5227	0	-563.5227	1.84E-245	3.85E-241	1.358E-242	14520.25	-1.330936	0	-1.330936	0.2642297	5517.5975
-573.4091	0	-573.4091	9.37E-250	1.92E-245	6.7884E-247	5929	-0.534086	0	-0.534086	0.5862046	12029.967
-583.2955	0	-583.2955	4.76E-254	9.61E-250	3.3943E-251	1122.25	-0.099379	0	-0.099379	0.9053993	18265.491
-593.1818	0	-593.1818	2.42E-258	4.81E-254	1.6977E-255	100	-0.008708	0	-0.008708	0.99133	19665.737
-603.0682	0	-603.0682	1.23E-262	2.41E-258	8.4935E-260	2862.25	-0.245152	0	-0.245152	0.7825854	15270.214
-612.9545	0	-612.9545	6.27E-267	1.2E-262	4.2504E-264	9409	-0.792884	0	-0.792884	0.4525376	8687.7281
-622.8409	0	-622.8409	3.19E-271	6.02E-267	2.1276E-268	19740.25	-1.637081	0	-1.637081	0.1945471	3675.593
-632.7273	0	-632.7273	1.62E-275	3.02E-271	1.0653E-272	33856	-2.763845	0	-2.763845	0.0630489	1172.5745
-642.6136	0	-642.6136	8.25E-280	1.51E-275	5.3349E-277	51756.25	-4.160136	0	-4.160136	0.0156054	285.76288
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-672.2727	0	-672.2727	1.09E-292	1.9E-288	6.7105E-290	128164	-9.847256	0	-9.847256	5.289E-05	0.9258179
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-701.9318	0	-701.9318	1.43E-305	2.39E-301	8.4572E-303	238632.25	-17.56018	0	-17.56018	2.364E-08	0.0003964
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-751.3636	0	-751.3636	0	0	0	498436	-34.26525	0	-34.26525	1.315E-15	2.059E-11
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-790.9091	0	-790.9091	0	0	0	774400	-50.57471	0	-50.57471	1.086E-22	1.615E-18
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-820.5682	0	-820.5682	0	0	0	1021110.3	-64.27656	0	-64.27656	1.216E-28	1.744E-24
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-840.3409	0	-840.3409	0	0	0	1204506.3	-74.0369	0	-74.0369	7.018E-33	9.827E-29
-850.2273	0	-850.2273	0	0	0	1301881	-79.0917	0	-79.0917	4.476E-35	6.195E-31
-860.1136	0	-860.1136	0	0	0	1403040.3	-84.25757	0	-84.25757	2.555E-37	3.496E-33
-870	0	-870	0	0	0	1507984	-89.53073	0	-89.53073	1.31E-39	1.772E-35
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-929.3182	0	-929.3182	0	0	0	2217121	-123.2309	0	-123.2309	3.03E-54	3.837E-50
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-1038.068	0	-1038.068	0	0	0	3871056.3	-192.6186	0	-192.6186	2.222E-84	2.519E-80
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-1166.591	0	-1166.591	0	0	0	6416089	-284.0838	0	-284.0838	4.21E-124	4.24E-120
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-1225.909	0	-1225.909	0	0	0	7806436	-328.9192	0	-328.9192	1.42E-143	1.36E-139
-1235.795	0	-1235.795	0	0	0	8051406.3	-336.5269	0	-336.5269	7.05E-147	6.71E-143
-1245.682	0	-1245.682	0	0	0	8300161	-344.1708	0	-344.1708	3.38E-150	3.19E-146
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-1275.341	0	-1275.341	0	0	0	9069132.3	-367.3111	0	-367.3111	3.01E-160	2.78E-156
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-1324.773	0	-1324.773	0	0	0	10426441	-406.527	0	-406.527	2.8E-177	2.49E-173
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-1344.545	0	-1344.545	0	0	0	10995856	-422.4236	0	-422.4236	3.5E-184	3.06E-180
-1354.432	0	-1354.432	0	0	0	11286240	-430.4144	0	-430.4144	1.18E-187	1.03E-183
-1364.318	0	-1364.318	0	0	0	11580409	-438.4326	0	-438.4326	3.9E-191	3.36E-187
-1374.205	0	-1374.205	0	0	0	11878362	-446.4778	0	-446.4778	1.25E-194	1.07E-190
-1384.091	0	-1384.091	0	0	0	12180100	-454.5492	0	-454.5492	3.91E-198	3.32E-194
-1393.977	0	-1393.977	0	0	0	12485622	-462.6464	0	-462.6464	1.19E-201	1E-197
-1403.864	0	-1403.864	0	0	0	12794929	-470.7687	0	-470.7687	3.53E-205	2.96E-201
-1413.75	0	-1413.75	0	0	0	13108020	-478.9158	0	-478.9158	1.02E-208	8.51E-205
-1423.636	0	-1423.636	0	0	0	13424896	-487.087	0	-487.087	2.89E-212	2.39E-208
-1433.523	0	-1433.523	0	0	0	13745556	-495.2818	0	-495.2818	7.98E-216	6.55E-212
-1443.409	0	-1443.409	0	0	0	14070001	-503.4998	0	-503.4998	2.15E-219	1.75E-215

C_1 (ug/L)	Time (> 5 ug/L)	Time (Peak)	Max Conc
0			694.49008
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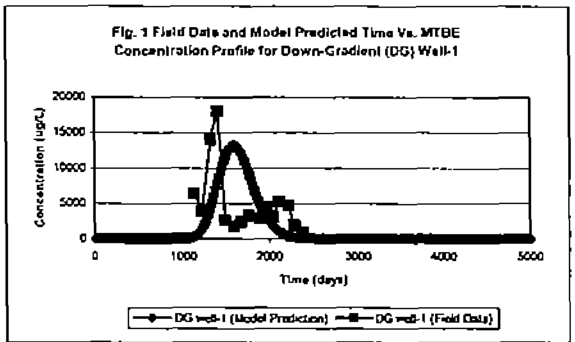

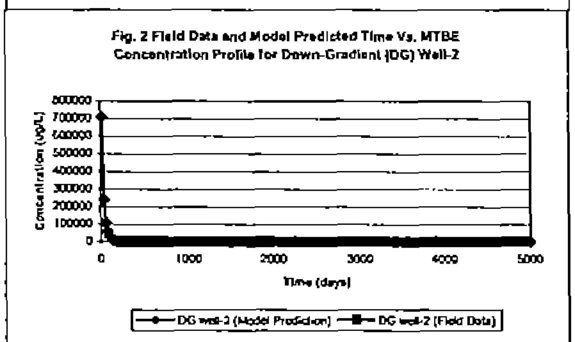

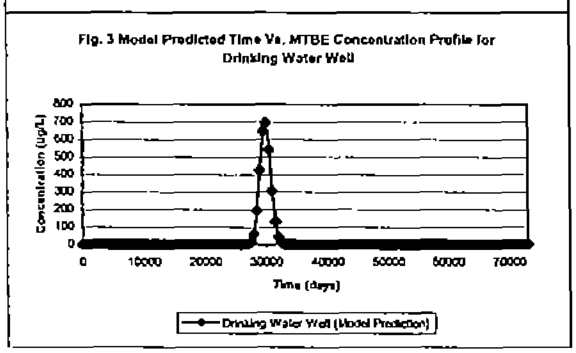

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9.5034E-305		
7.3244E-276		
7.3374E-250		
2.1928E-226		
3.9283E-205		
7.614E-186		
2.6403E-168		
2.521E-152		
9.6115E-138		
2.0192E-124		
3.0945E-112		
4.4221E-101		
7.31101E-91		
1.69158E-81		
6.48318E-73		
4.78131E-65		
7.7554E-58		
3.11822E-51		
3.45975E-45		
1.16672E-39		
1.30475E-34		
5.23565E-30		
8.09764E-26		
5.15141E-22		
1.43021E-18		
1.82924E-15		
1.13247E-12		
3.55114E-10		
5.88008E-08		
5.34217E-06		
0.000275872		
0.008365891		
0.153539182		
1.753672711		
12.79198918	27500	
61.04118307	28000	
194.8524366	28500	
424.8349729	29000	
645.0407717	29500	
694.4900815	30000	30000
539.2634061	30500	
306.8047266	31000	
129.8025557	31500	
41.4091461	32000	
10.09163738	32500	
1.901939571		
0.280415095		
0.032695003		
0.003045577		
0.000228847		
1.39976E-05		
7.02939E-07		
2.92186E-08		
1.013E-09		
2.95066E-11		
7.27072E-13		
1.52551E-14		
2.74231E-16		
4.24848E-18		
5.70414E-20		
6.6725E-22		
6.83469E-24		
6.1598E-26		
4.90702E-28		

3.47028E-30
2.18782E-32
1.23447E-34
6.25769E-37
2.8601E-39
1.18272E-41
4.43965E-44
1.51759E-46
4.73817E-49
1.3551E-51
3.55996E-54
8.61354E-57
1.92436E-59
3.97944E-62
7.63494E-65
1.36211E-67
2.26456E-70
3.51575E-73
5.10721E-76
6.95527E-79
8.8963E-82
1.07063E-84
1.21437E-87
1.30034E-90
1.31657E-93
1.26234E-96
1.1479E-99
9.9133E-103
8.1421E-106
6.3683E-109
4.7494E-112
3.3816E-115
2.3013E-118
1.4986E-121
9.3495E-125
5.5937E-128
3.2128E-131
1.7733E-134
9.415E-138
4.8128E-141
2.3709E-144
1.1265E-147
5.1673E-151
2.29E-154
9.8132E-158
4.0693E-161
1.6341E-164
6.3596E-168
2.4003E-171
8.7918E-175
3.1273E-178
1.081E-181
3.6331E-185
1.1881E-188
3.7823E-192
1.1729E-195
3.545E-199
1.0448E-202
3.0046E-206
8.4345E-210
2.3124E-213
6.195E-217

Following is the process used to find a best fit curve for field data using a model. 1. The centroids with respect to the y-axis were made equal by adjusting the x- and y- axis dispersivity in the model. 2. The areas underneath the field data and model curves were made equal by adjusting the groundwater velocity in the model. 3. The centroids with respect to the x-axis of each of the curves were alligned by adjusting the start time for the field data.

Using Rectangular Analysis to find the Area Underneath the Field Data Curve

Distance Left of the Point	Distance Right of the Point	Width of rectangle	Value of x, Starting at Zero	Y Value	Area (Width*Y)	Cxn	An * Cxn	Cyn	An * Cyn
25	46.5	71.5	0	6400	457600	10.75	5.E+06	3200	1.46E+09
46.5	48	94.5	93	3900	368550	93.75	3.E+07	1950	7.19E+08
48	42.5	90.5	189	14000	1267000	186.25	2.E+08	7000	8.87E+09
42.5	45.5	88	274	18000	1584000	275.5	4.E+08	9000	1.43E+10
45.5	46.5	92	365	2600	239200	365.5	9.E+07	1300	3.11E+08
46.5	43.5	90	458	1800	162000	456.5	7.E+07	900	1.46E+08
43.5	47.5	91	545	2400	218400	547	1.E+08	1200	2.62E+08
47.5	58	105.5	640	3300	348150	645.25	2.E+08	1650	5.74E+08
58	44.5	102.5	756	2900	297250	749.25	2.E+08	1450	4.31E+08
44.5	35.5	80	845	4500	360000	840.5	3.E+08	2250	8.1E+08
35.5	33.5	69	916	3100	213900	915	2.E+08	1550	3.32E+08
33.5	53	86.5	983	5300	458450	992.75	5.E+08	2650	1.21E+09
53	34.5	87.5	1089	4700	411250	1079.75	4.E+08	2350	9.66E+08
34.5	42	76.5	1158	1900	145350	1161.75	2.E+08	950	1.38E+08
42	25	67	1242	940	62980	1233.5	8.E+07	470	29600600

Sum of the areas	6,594,080		
Sum of An*Cxn	3,006,377,550	Sum of An*Cyn	30,522,850,600
Cx = Sum of An*Cxn / Sum An	456	Cy = Sum of An*Cyn / Sum An	4629
With the Cx of each curve being equal, the starting time for the field data becomes			1124

Using Rectangular Analysis to find the Area Underneath the Model Curve

Time	C1(ug/L)	Area	An*Cyn	Time	C1(ug/L)	Area	An*Cyn	Time	C1(ug/L)	Area	An*Cyn
760	0.0002	0.00393	3.9E-07	1380	7175	143497	5.1E+08	1980	2688.986	53779.7	7E+07
780	0.0007	0.01452	5.3E-06	1400	8091	161824	6.5E+08	2000	2321.593	61255.8	9E+07
800	0.0025	0.0492	6.1E-05	1420	8991	179824	8.1E+08	2050	1573.552	78677.6	6E+07
820	0.0077	0.15396	0.00059	1440	9851	197026	9.7E+08	2100	1035.908	51795.4	3E+07
840	0.0224	0.44757	0.00501	1460	10649	212973	1.1E+09	2150	663.7357	33186.8	1E+07
860	0.0607	1.21486	0.0369	1480	11362	227243	1.3E+09	2200	414.6779	20733.9	4E+06
880	0.1547	3.09347	0.23924	1500	11973	239468	1.4E+09	2250	253.0486	12652.4	2E+06
900	0.3711	7.42118	1.37685	1520	12467	249350	1.6E+09	2300	151.0587	7552.93	570468
920	0.8419	16.8384	7.08827	1540	12834	256673	1.6E+09	2350	88.33856	4416.93	195093
940	1.8132	36.2641	32.877	1560	13065	261308	1.7E+09	2400	50.67347	2533.67	64195
960	3.7187	74.3741	138.288	1580	13161	263214	1.7E+09	2450	28.54653	1427.33	20373
980	7.2847	145.693	530.665	1600	13122	262437	1.7E+09	2500	15.81042	790.521	6249.2
1000	13.668	273.357	1868.11	1620	12955	259099	1.7E+09	2550	8.617644	430.882	1856.6
1020	24.625	492.491	6063.69	1640	12669	253388	1.6E+09	2600	4.62693	231.347	535.21
1060	71.423	1428.46	51012.7	1660	12277	245549	1.5E+09	2650	2.449231	122.462	149.97
1080	115.47	2309.34	133326	1680	11793	235866	1.4E+09	2700	1.279218	63.9609	40.91
1100	180.76	3615.17	326736	1700	11232	224647	1.3E+09	2750	0.659717	32.9859	10.881
1120	274.48	5489.64	753403	1720	10611	212214	1.1E+09	2800	0.336176	16.8088	2.8254
1140	404.95	8098.99	1639840	1740	9944	198889	9.9E+08	2850	0.169374	8.46872	0.7172
1160	581.31	11626.3	3379257	1760	9249	184981	8.6E+08	2900	0.084422	4.22112	0.1782
1180	813.11	16262.2	6611482	1780	8539	170779	7.3E+08	2950	0.041652	2.08261	0.0434
1200	1109.6	22192.8	1.2E+07	1800	7827	156547	6.1E+08	3000	0.020352	1.0176	0.0104
1220	1479.2	29584.8	2.2E+07	1820	7126	142514	5.1E+08	3050	0.009853	0.49267	0.0024
1240	1928.5	38569.4	3.7E+07	1840	6444	128875	4.2E+08	3100	0.004729	0.23644	0.0006
1260	2461.3	49226.3	6.1E+07	1860	5790	115792	3.4E+08	3150	0.002251	0.11253	0.0001
1280	3078.5	61569.5	9.5E+07	1880	5169	103388	2.7E+08	3200	0.001063	0.05313	3E-05
1300	3776.8	75536.2	1.4E+08	1900	4588	91757	2.1E+08	3250	0.000498	0.0249	6E-06
1320	4549	90980.6	2.1E+08	1920	4048	80958	1.6E+08	3300	0.000232	0.01158	1E-06
1340	5383.6	107673	2.9E+08	1940	3551	71025	1.3E+08	3350	0.000107	0.00535	3E-07
1360	6265.2	125304	3.9E+08	1960	3098	61969	9.6E+07				

Sum of the Areas	6,593,309	
Sum of An*Cyn	30,591,113,627	
Cy = Sum of An*Cyn/Sum of An	4639.72	
Assuming the Model Parabola is balanced at the peak, then Cx is	1580	at the peak of 13,161

H

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-2	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
VFH	3,600	64	100	10,000	17,000	7,200	18,000	3,300	8,900	2,900	
COMPARE w/ 1	3,600	-1	-1	1	1	1	1	-1	1	-1	1
COMPARE w/ 2	64		1	1	1	1	1	1	1	1	8
COMPARE w/ 3	100			1	1	1	1	1	1	1	7
COMPARE w/ 4	10,000				1	-1	1	-1	-1	-1	-2
COMPARE w/ 5	17,000					-1	1	-1	-1	-1	-3
COMPARE w/ 6	7,200						1	-1	1	-1	0
COMPARE w/ 7	18,000							-1	-1	-1	-3
COMPARE w/ 8	3,300								1	-1	0
COMPARE w/ 9	8,900									-1	-1
	2,900										

Mann-Kendall Statistic (S) 7

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	7,106	
Standard Deviation	σ	6,094	
Coefficient of Variation	CV	0.86	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-3	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
VFH	7,500	5,300	4,800	6,200	4,800	3,100	1,600	4,300	7,600	12,000	
COMPARE w/ 1	7,500	-1	-1	-1	-1	-1	-1	-1	1	1	-5
COMPARE w/ 2	5,300		-1	1	-1	-1	-1	-1	1	1	-2
COMPARE w/ 3	4,800			1	0	-1	-1	-1	1	1	0
COMPARE w/ 4	6,200				-1	-1	-1	-1	1	1	-2
COMPARE w/ 5	4,800					-1	-1	-1	1	1	-1
COMPARE w/ 6	3,100						-1	1	1	1	2
COMPARE w/ 7	1,600							1	1	1	3
COMPARE w/ 8	4,300								1	1	2
COMPARE w/ 9	7,600									1	1
	12,000										

Mann-Kendall Statistic (S) -2

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	5,720	
Standard Deviation	σ	2,722	
Coefficient of Variation	CV	0.48	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
W-4	4th Q '01	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05		
VFH	7,300	1,300	5,500	290	880	400	1,700	1,400	2,200		
COMPARE w/ 1	7,300	-1	-1	-1	-1	-1	-1	-1	-1		-8
COMPARE w/ 2	1,300		1	-1	-1	-1	1	1	1		1
COMPARE w/ 3	5,500			-1	-1	-1	-1	-1	-1		-6
COMPARE w/ 4	290				1	1	1	1	1		5
COMPARE w/ 5	880					-1	1	1	1		2
COMPARE w/ 6	400						1	1	1		3
COMPARE w/ 7	1,700							-1	1		
COMPARE w/ 8	1,400								1		
COMPARE w/ 9	2,200										

Mann-Kendall Statistic (S) -3

Conclusion: *No Conclusion Can Be Drawn At This Time* (Refer to table at end of analysis)

Arithmetic Mean	M	2,330	
Standard Deviation	σ	2,287	
Coefficient of Variation	CV	0.98	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
W-5	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05		
VFH	12,000	5,400	5,000	1,600	2,700	2,100	2,200	3,200	7,500,000		
COMPARE w/ 1	12,000	-1	-1	-1	-1	-1	-1	-1	1		-6
COMPARE w/ 2	5,400		-1	-1	-1	-1	-1	-1	1		-5
COMPARE w/ 3	5,000			-1	-1	-1	-1	-1	1		-4
COMPARE w/ 4	1,600				1	1	1	1	1		5
COMPARE w/ 5	2,700					-1	-1	1	1		0
COMPARE w/ 6	2,100						1	1	1		3
COMPARE w/ 7	2,200							1	1		2
COMPARE w/ 8	3,200								1		1
COMPARE w/ 9	7,500,000										0

Mann-Kendall Statistic (S) -4

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	837,133	
Standard Deviation	σ	2,355,681	
Coefficient of Variation	CV	2.81	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF
W-7	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	ROW
VFH	25	25	25	25	75	25	77	80	57	59	
COMPARE w/ 1	25	0	0	0	1	0	1	1	1	1	5
COMPARE w/ 2	25		0	0	1	0	1	1	1	1	5
COMPARE w/ 3	25			0	1	0	1	1	1	1	5
COMPARE w/ 4	25				1	0	1	1	1	1	5
COMPARE w/ 5	75					-1	1	1	-1	-1	-1
COMPARE w/ 6	25						1	1	1	1	4
COMPARE w/ 7	77							1	-1	-1	-1
COMPARE w/ 8	80								-1	-1	-2
COMPARE w/ 9	57									1	1
	59										

Mann-Kendall Statistic (S) 21

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	47	
Standard Deviation	σ	23	
Coefficient of Variation	CV	0.49	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-8	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
VFH	110	25	210	120	270	60	120	76	25	25	
COMPARE w/ 1	110	-1	1	1	1	-1	1	-1	-1	-1	-1
COMPARE w/ 2	25		1	1	1	1	1	1	0	0	6
COMPARE w/ 3	210			-1	1	-1	-1	-1	-1	-1	-5
COMPARE w/ 4	120				1	-1	0	-1	-1	-1	-3
COMPARE w/ 5	270					-1	-1	-1	-1	-1	-5
COMPARE w/ 6	60						1	1	-1	-1	0
COMPARE w/ 7	120							-1	-1	-1	-3
COMPARE w/ 8	76								-1	-1	-2
COMPARE w/ 9	25									0	0
	25										

Mann-Kendall Statistic (S) -13

Conclusion: Concentrations Are Decreasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	104
Standard Deviation	σ	78
Coefficient of Variation	CV	0.75

CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)

VFH	25 ug/l
Benzene	2.5 ug/l
MTBE	2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-9	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
VFH	470	210	390	350	230	190	410	300	120	91	
COMPARE w/ 1	470	-1	-1	-1	-1	-1	-1	-1	-1	-1	-9
COMPARE w/ 2	210		1	1	1	-1	1	1	-1	-1	2
COMPARE w/ 3	390			-1	-1	-1	1	-1	-1	-1	-5
COMPARE w/ 4	350				-1	-1	1	-1	-1	-1	-4
COMPARE w/ 5	230					-1	1	1	-1	-1	-1
COMPARE w/ 6	190						1	1	-1	-1	0
COMPARE w/ 7	410							-1	-1	-1	-3
COMPARE w/ 8	300								-1	-1	-2
COMPARE w/ 9	120									-1	-1
	91										
Mann-Kendall Statistic (S)											-23

Conclusion: Concentrations Are Decreasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	276	
Standard Deviation	σ	121	
Coefficient of Variation	CV	0.44	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-2	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
BENZENE	660	5	26	3,300	4,700	2,500	4,900	1,400	3,100	550	
COMPARE w/ 1	660	-1	-1	1	1	1	1	1	1	-1	3
COMPARE w/ 2	5		1	1	1	1	1	1	1	1	8
COMPARE w/ 3	26			1	1	1	1	1	1	1	7
COMPARE w/ 4	3,300				1	-1	1	-1	-1	-1	-2
COMPARE w/ 5	4,700					-1	1	-1	-1	-1	-3
COMPARE w/ 6	2,500						1	-1	1	-1	0
COMPARE w/ 7	4,900							-1	-1	-1	-3
COMPARE w/ 8	1,400								1	-1	0
COMPARE w/ 9	3,100									-1	-1
	550										

Mann-Kendall Statistic (S) 9

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	2,114	
Standard Deviation	σ	1,757	
Coefficient of Variation	CV	0.83	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-3	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
BENZENE	330	190	200	400	440	320	180	520	330	220	
COMPARE w/ 1	330	-1	-1	1	1	-1	-1	1	0	-1	-2
COMPARE w/ 2	190		1	1	1	1	-1	1	1	1	6
COMPARE w/ 3	200			1	1	1	-1	1	1	1	5
COMPARE w/ 4	400				1	-1	-1	1	-1	-1	-2
COMPARE w/ 5	440					-1	-1	1	-1	-1	-3
COMPARE w/ 6	320						-1	1	1	-1	0
COMPARE w/ 7	180							1	1	1	3
COMPARE w/ 8	520								-1	-1	-2
COMPARE w/ 9	330									-1	-1
	220										

Mann-Kendall Statistic (S) 4

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	313
Standard Deviation	σ	110
Coefficient of Variation	CV	0.35

CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF
W-4	4th Q '01	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05		ROW
BENZENE	3,400	7.6	150	85	220	130	900	410	1,300		
COMPARE w/ 1	3,400	-1	-1	-1	-1	-1	-1	-1	-1		-8
COMPARE w/ 2	7.6		1	1	1	1	1	1	1		7
COMPARE w/ 3	150			-1	1	-1	1	1	1		2
COMPARE w/ 4	85				1	1	1	1	1		5
COMPARE w/ 5	220					-1	1	1	1		2
COMPARE w/ 6	130						1	1	1		3
COMPARE w/ 7	900							-1	1		
COMPARE w/ 8	410								1		
COMPARE w/ 9	1,300										

Mann-Kendall Statistic (S) 11

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	734	
Standard Deviation	σ	1,026	
Coefficient of Variation	CV	1.40	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-5	2nd Q '02	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
BENZENE	180	290	120	290	230	450	340	370	500	3,600	
COMPARE w/ 1	180	1	-1	1	1	1	1	1	1	1	7
COMPARE w/ 2	290		-1	0	-1	1	1	1	1	1	3
COMPARE w/ 3	120			1	1	1	1	1	1	1	7
COMPARE w/ 4	290				-1	1	1	1	1	1	4
COMPARE w/ 5	230					1	1	1	1	1	5
COMPARE w/ 6	450						-1	-1	1	1	0
COMPARE w/ 7	340							1	1	1	3
COMPARE w/ 8	370								1	1	2
COMPARE w/ 9	500									1	1
	3,600										

Mann-Kendall Statistic (S) 32

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	637	
Standard Deviation	σ	994	
Coefficient of Variation	CV	1.56	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-9	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
BENZENE	140	110	260	120	30	50	54	2.5	2.5	2.5	
COMPARE w/ 1	140	-1	1	-1	-1	-1	-1	-1	-1	-1	-7
COMPARE w/ 2	110		1	1	-1	-1	-1	-1	-1	-1	-4
COMPARE w/ 3	260			-1	-1	-1	-1	-1	-1	-1	-7
COMPARE w/ 4	120				-1	-1	-1	-1	-1	-1	-6
COMPARE w/ 5	30					1	1	-1	-1	-1	-1
COMPARE w/ 6	50						1	-1	-1	-1	-2
COMPARE w/ 7	54							-1	-1	-1	-3
COMPARE w/ 8	2.5								0	0	0
COMPARE w/ 9	2.5									0	0
	2.5										

Mann-Kendall Statistic (S) -23

Conclusion: *Concentrations Are Decreasing Over Time* *(Refer to table at end of analysis)*

Arithmetic Mean	M	77	
Standard Deviation	σ	78	
Coefficient of Variation	CV	1.01	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-2	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
MTBE	2,200	990	840	2,800	7,400	6,000	11,000	4,000	12,000	1,400	
COMPARE w/ 1	2,200	-1	-1	1	1	1	1	1	1	-1	3
COMPARE w/ 2	990		-1	1	1	1	1	1	1	1	6
COMPARE w/ 3	840			1	1	1	1	1	1	1	7
COMPARE w/ 4	2,800				1	1	1	1	1	-1	4
COMPARE w/ 5	7,400					-1	1	-1	1	-1	-1
COMPARE w/ 6	6,000						1	-1	1	-1	0
COMPARE w/ 7	11,000							-1	1	-1	-1
COMPARE w/ 8	4,000								1	-1	0
COMPARE w/ 9	12,000									-1	-1
	1,400										

Mann-Kendall Statistic (S) 17

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	4,863	
Standard Deviation	σ	3,894	
Coefficient of Variation	CV	0.80	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-3	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
MTBE	300	230	260	640	870	730	680	1,900	1,200	400	
COMPARE w/ 1	300	-1	-1	1	1	1	1	1	1	1	5
COMPARE w/ 2	230		1	1	1	1	1	1	1	1	8
COMPARE w/ 3	260			1	1	1	1	1	1	1	7
COMPARE w/ 4	640				1	1	1	1	1	-1	4
COMPARE w/ 5	870					-1	-1	1	1	-1	-1
COMPARE w/ 6	730						-1	1	1	-1	0
COMPARE w/ 7	680							1	1	-1	1
COMPARE w/ 8	1,900								-1	-1	-2
COMPARE w/ 9	1,200									-1	-1
	400										

Mann-Kendall Statistic (S) 21

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	721	
Standard Deviation	σ	488	
Coefficient of Variation	CV	0.68	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
W-4	4th Q '01	3rd Q '03	4th Q '03	1st Q '04	2nd Q '04	3rd Q '04	4th Q '04	1st Q 05	2nd Q 05		
MTBE	8,000	850	1,800	4,400	3,300	2,100	3,200	1,500	2,100		
COMPARE w/ 1	8,000	-1	-1	-1	-1	-1	-1	-1	-1		-8
COMPARE w/ 2	850		1	1	1	1	1	1	1		7
COMPARE w/ 3	1,800			1	1	1	1	-1	1		4
COMPARE w/ 4	4,400				-1	-1	-1	-1	-1		-5
COMPARE w/ 5	3,300					-1	-1	-1	-1		-4
COMPARE w/ 6	2,100						1	-1	0		0
COMPARE w/ 7	3,200							-1	-1		-2
COMPARE w/ 8	1,500								1		1
COMPARE w/ 9	2,100										

Mann-Kendall Statistic (S) -7

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	3,028	
Standard Deviation	σ	2,028	
Coefficient of Variation	CV	0.67	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-5	4th Q '01	1st Q '02	2nd Q '02	2nd Q '03	3rd Q '03	4th Q '03	1st Q '04	2nd Q '04	3rd Q '04	2nd Q 05	
MTBE	150	870	150	630	910	1,100	860	1,200	1,900	580	
COMPARE w/ 1	150	1	0	1	1	1	1	1	1	1	8
COMPARE w/ 2	870		-1	-1	1	1	-1	1	1	-1	0
COMPARE w/ 3	150			1	1	1	1	1	1	1	7
COMPARE w/ 4	630				1	1	1	1	1	-1	4
COMPARE w/ 5	910					1	-1	1	1	-1	1
COMPARE w/ 6	1,100						-1	1	1	-1	0
COMPARE w/ 7	860							1	1	-1	1
COMPARE w/ 8	1,200								1	-1	0
COMPARE w/ 9	1,900									-1	-1
	580										

Mann-Kendall Statistic (S) 20

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	835	
Standard Deviation	σ	489	
Coefficient of Variation	CV	0.59	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-7	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
MTBE	470	200	160	310	400	310	170	250	150	170	
COMPARE w/ 1	470	-1	-1	-1	-1	-1	-1	-1	-1	-1	-9
COMPARE w/ 2	200		-1	1	1	1	-1	1	-1	-1	0
COMPARE w/ 3	160			1	1	1	1	1	-1	1	5
COMPARE w/ 4	310				1	0	-1	-1	-1	-1	-3
COMPARE w/ 5	400					-1	-1	-1	-1	-1	-5
COMPARE w/ 6	310						-1	-1	-1	-1	-4
COMPARE w/ 7	170							1	-1	0	0
COMPARE w/ 8	250								-1	-1	-2
COMPARE w/ 9	150									1	1
	170										

Mann-Kendall Statistic (S) -8

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	259	
Standard Deviation	σ	105	
Coefficient of Variation	CV	0.41	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-9	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
MTBE	1,800	2,400	3,300	2,900	4,500	3,100	5,300	4,700	1,900	940	
COMPARE w/ 1	1,800	1	1	1	1	1	1	1	1	-1	7
COMPARE w/ 2	2,400		1	1	1	1	1	1	-1	-1	4
COMPARE w/ 3	3,300			-1	1	-1	1	1	-1	-1	-1
COMPARE w/ 4	2,900				1	1	1	1	-1	-1	2
COMPARE w/ 5	4,500					-1	1	1	-1	-1	-1
COMPARE w/ 6	3,100						1	1	-1	-1	0
COMPARE w/ 7	5,300							-1	-1	-1	-3
COMPARE w/ 8	4,700								-1	-1	-2
COMPARE w/ 9	1,900									-1	-1
	940										

Mann-Kendall Statistic (S) 5

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	3,084	
Standard Deviation	σ	1,331	
Coefficient of Variation	CV	0.43	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9	10	SUM OF ROW
W-10	1st Q 03	2nd Q 03	3rd Q 03	4th Q 03	1st Q 04	2nd Q 04	3rd Q 04	4th Q 04	1st Q 05	2nd Q 05	
MTBE	390	390	510	610	710	680	1,200	390	670	400	
COMPARE w/ 1	390	0	1	1	1	1	1	0	1	1	7
COMPARE w/ 2	390		1	1	1	1	1	0	1	1	7
COMPARE w/ 3	510			1	1	1	1	-1	1	-1	3
COMPARE w/ 4	610				1	1	1	-1	1	-1	2
COMPARE w/ 5	710					-1	1	-1	-1	-1	-3
COMPARE w/ 6	680						1	-1	-1	-1	-2
COMPARE w/ 7	1,200							-1	-1	-1	-3
COMPARE w/ 8	390								1	1	2
COMPARE w/ 9	670									-1	-1
	400										

Mann-Kendall Statistic (S) 12

Conclusion: Concentrations Are Increasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	595	
Standard Deviation	σ	237	
Coefficient of Variation	CV	0.40	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
MW-13	2nd Q '03	3rd Q '03	4th Q '03	1st Q '04	2nd Q '04	3rd Q '04	4th Q '04	1st Q 05	2nd Q 05		
MTBE	9.8	3	8	6	680	1,400	970	490	6.4		
COMPARE w/ 1	9.8	-1	-1	-1	1	1	1	1	-1		0
COMPARE w/ 2	2.5		1	1	1	1	1	1	1		7
COMPARE w/ 3	7.6			-1	1	1	1	1	-1		2
COMPARE w/ 4	6.1				1	1	1	1	1		5
COMPARE w/ 5	680					1	1	-1	-1		0
COMPARE w/ 6	1,400						-1	-1	-1		-3
COMPARE w/ 7	970							-1	-1		-2
COMPARE w/ 8	490								-1		-1
COMPARE w/ 9	6.4										

Mann-Kendall Statistic (S) 9

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	397	
Standard Deviation	σ	493	
Coefficient of Variation	CV	1.24	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
MW-14	2nd Q '03	3rd Q '03	4th Q '03	1st Q '04	2nd Q '04	3rd Q '04	4th Q '04	1st Q 05	2nd Q 05		
MTBE	1,700	1,300	1,500	1,700	790	1,100	1,300	620	79		
COMPARE w/ 1	1,700	-1	-1	0	-1	-1	-1	-1	-1		-7
COMPARE w/ 2	1,300		1	1	-1	-1	0	-1	-1		-2
COMPARE w/ 3	1,500			1	-1	-1	-1	-1	-1		-4
COMPARE w/ 4	1,700				-1	-1	-1	-1	-1		-5
COMPARE w/ 5	790					1	1	-1	-1		0
COMPARE w/ 6	1,100						1	-1	-1		-1
COMPARE w/ 7	1,300							-1	-1		-2
COMPARE w/ 8	620								-1		
COMPARE w/ 9	79										

Mann-Kendall Statistic (S) -21

Conclusion: Concentrations Are Decreasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	1,121	
Standard Deviation	σ	508	
Coefficient of Variation	CV	0.45	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
MW-15	2nd Q '03	3rd Q '03	4th Q '03	1st Q '04	2nd Q '04	3rd Q '04	4th Q '04	1st Q 05	2nd Q 05		
MTBE	96	1,200	2,200	510	290	190	190	130	480		
COMPARE w/ 1	96	1	1	1	1	1	1	1	1		8
COMPARE w/ 2	1,200		1	-1	-1	-1	-1	-1	-1		-5
COMPARE w/ 3	2,200			-1	-1	-1	-1	-1	-1		-6
COMPARE w/ 4	510				-1	-1	-1	-1	-1		-5
COMPARE w/ 5	290					-1	-1	-1	1		-2
COMPARE w/ 6	190						0	-1	1		0
COMPARE w/ 7	190							-1	1		0
COMPARE w/ 8	130								1		
COMPARE w/ 9	480										

Mann-Kendall Statistic (S) -10

Conclusion: Concentrations Are Decreasing Over Time (Refer to table at end of analysis)

Arithmetic Mean	M	587	
Standard Deviation	σ	654	
Coefficient of Variation	CV	1.11	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

	1	2	3	4	5	6	7	8	9		SUM OF ROW
MW-16	2nd Q '03	3rd Q '03	4th Q '03	1st Q '04	2nd Q '04	3rd Q '04	4th Q '04	1st Q 05	2nd Q 05		
MTBE	50	410	490	380	330	590	87	50	970		
COMPARE w/ 1	50	1	1	1	1	1	1	0	1		7
COMPARE w/ 2	410		1	-1	-1	1	-1	-1	1		-1
COMPARE w/ 3	490			-1	-1	1	-1	-1	1		-2
COMPARE w/ 4	380				-1	1	-1	-1	1		-1
COMPARE w/ 5	330					1	-1	-1	1		0
COMPARE w/ 6	590						-1	-1	1		-1
COMPARE w/ 7	87							-1	1		
COMPARE w/ 8	50								1		
COMPARE w/ 9	970										

Mann-Kendall Statistic (S) 2

Conclusion: No Conclusion Can Be Drawn At This Time (Refer to table at end of analysis)

Arithmetic Mean	M	373	
Standard Deviation	σ	281	
Coefficient of Variation	CV	0.75	CV=σ/M

These values were calculated using all of the results reported in Table 4.

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l

APPENDIX H - G&M STATION 16 SITE CONCEPTUAL MODEL
MANN-KENDALL ANALYSIS
VFH, BENZENE, MTBE CONCENTRATIONS AT INDICATED WELLS

NUMBER OF VALUES	RANGE OF S	DECREASING TREND		INCREASING TREND	
		$\alpha = 0.1$	$\alpha = 0.2$	$\alpha = 0.1$	$\alpha = 0.2$
		S_{max}	S_{max}	S_{min}	S_{min}
4	-6 to +6	-6	-4	6	4
5	-10 to +10	-7	-5	7	5
6	-15 to +15	-8	-6	8	6
7	-21 to +21	-10	-7	10	7
8	-28 to +28	-11	-8	11	8
9	-36 to +36	-14	-10	14	10
10	-45 to +45	-16	-11	16	11

α = level of significance An α of 0.2 is generally considered acceptable.

REFERENCE: Wisconsin Department of Natural Resources, 1999, Interim Guidance on Natural Attenuation for Petroleum Releases, PUB-RR-614

NOTES:
1. All concentrations are in ug/l.
2. The following values were used if compound was reported as "not detected" (ND)
   VFH 25 ug/l
   Benzene 2.5 ug/l
   MTBE 2.5ug/l