April 7, 2010

Ms. Barbara Jakub
Alameda County Health Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California, 94502

RE: CORRECTIVE ACTION PLAN
76 Service Station No. 0843/2349
1629 Webster Street
Alameda, California

Dear Ms. Jakub:

DELTA

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) is submitting this *Corrective Action Plan* for 76 Station No. 0843/2349 in Alameda, California.

Please contact James Barnard at (916) 503-1279 if you have questions.

Sincerely,

DELTA CONSULTANTS

James Barnard
Project Manager

Enclosure

cc: Mr. Terry Grayson – COP (electronic copy only)

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CORRECTIVE ACTION PLAN

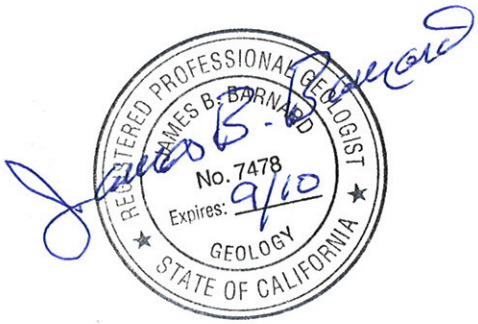
76 SERVICE STATION NO. 0843/2349
1629 WEBSTER STREET
ALAMEDA, CA

April 7, 2010

Prepared for
ConocoPhillips Company
76 Broadway
Sacramento, California

The material and data in this report were prepared under the supervision and direction of the undersigned.
Delta Consultants

Alan Buehler
Staff Geologist



James B. Barnard, P.G.
California Registered Professional Geologist No. 7478

1.0 INTRODUCTION

On behalf of ConocoPhillips, Delta has prepared this report for the 76 Service Station No. 0843/2349 (site) located at 1629 Webster Street, Alameda, California (Figure 1). The purpose of this report is to provide a summary of site data and to propose a plan for corrective action.

2.0 SITE BACKGROUND

2.1 PREVIOUS ENVIRONMENTAL WORK

June 1998 - Tosco Marketing Company (Tosco, now ConocoPhillips) exhumed and removed two 10,000-gallon gasoline underground storage tanks (USTs), one 550-gallon used oil UST, product lines, and fuel dispensers. Two holes approximately ¾-inch in diameter were observed in the used oil tank during removal. Approximately 338 tons of hydrocarbon impacted soil and backfill were removed from beneath the former USTs, fuel dispensers, and product lines during the UST removal activities.

March 1999 – Four soil borings (B1 through B4) were advanced at the site and converted to monitor wells MW-1 through MW-4. Groundwater was encountered from 8 to 15 feet below ground surface (bgs). Static groundwater was observed at depths ranging from 4 and 6 feet bgs subsequent to well installation.

December 1999 – Two off-site soil borings (B5 and B6) were advanced and subsequently converted to monitor wells MW-5 and MW-6. Groundwater was initially present at approximately 10 feet bgs. Static groundwater was observed at a depth of approximately 7 feet bgs subsequent to well installation.

March 2001 - An underground utility survey was conducted to identify and locate underground utilities beneath and in the vicinity of the site that could provide potential preferential pathways for groundwater flow.

May 2001 - Five direct-push soil borings (GP-1 through GP-5) were advanced to evaluate whether underground utilities in the vicinity of the site are providing preferential pathways for groundwater flow and the migration of dissolved phase hydrocarbons. The results of the investigation indicated insufficient evidence that underground utility lines were providing preferential pathways for the off-site migration of dissolved phase hydrocarbons.

December 2001 - Twelve direct-push soil borings (GP-6 through GP-17) were advanced to further assess the extent of residual hydrocarbons in the vadose zone beneath the site. The results of the investigation indicated that the extent of the residual hydrocarbon impact reported in the previous investigations was limited.

December 2002 - One on-site monitoring well (MW-2) was destroyed during remedial excavation of hydrocarbon-impacted soil. Prior to destruction, monitoring

well MW-2 was located near the former eastern dispenser island. During the remedial excavation, monitoring well MW-2 was replaced with on-site backfill monitoring well MW-2A. Approximately 292 tons of hydrocarbon-impacted soil was removed from beneath the former eastern dispenser island.

September 2003 - A *Request and Work Plan for Closure* prepared by ERI was submitted to the Alameda County Health Care Services Agency (ACHCSA), dated September 10, 2003. The report summarized why no further action is needed for the site; the report also included plans to destroy the existing wells upon regulatory acceptance for no further action. Closure was not granted.

June 2004 – A work plan was submitted for the installation of two additional monitor wells down-gradient of MW-5.

May 2005 – A work plan titled *Work Plan Addendum – Site Assessment Activity* dated May 17, 2005 was prepared by ATC Associates Inc. (ATC) for the installation of two off-site monitor wells.

September 2005 – A work plan was prepared by ATC titled *Work Plan Subsurface Investigation*, for the installation of one on-site monitor well.

September 2005 – Site environmental consulting responsibilities were transferred to Delta.

January 2007 - Delta submitted a work plan to the ACHCSA recommending the advancement of one soil boring and the installation of three ozone injection wells at the site.

August 2008 - Gregg Drilling under the supervision of a Delta field geologist advanced one soil boring to a depth of 55 feet bgs. The details of this investigation are described in the *Site Investigation Report* dated October 29, 2008.

In May 2009, as proposed in Delta's Work Plan *Site Investigation and Well Installations*, dated March 16, 2009, a total of seven groundwater monitoring wells (MW-1AR, MW-1BR, MW-7, MW-8, MW-9, MW-10, MW-11) and one ozone injection point well (TSP-1) were installed at the site. One onsite monitoring well (MW-2A) was abandoned. Results of this investigation are presented in the *Site Investigation and Well Installation Report*, dated July 9, 2009.

A site map with current monitoring and sparge wells is included as Figure 2, and a site map with historical sampling locations is included as Figure 3.

2.2 SENSITIVE RECEPTORS

June/July 2002 - A groundwater receptor survey was conducted. Three irrigation wells were located within a one-half mile radius of the site. The wells are located

approximately 1,980 feet west and 2,245 feet southwest of the site, cross-gradient and up-gradient of the site.

November 2006 – A survey entailing a visit to the DWR office in Sacramento was conducted to examine well log records and to identify domestic wells within the survey area. The DWR survey provided 15 potential receptors within one mile of the site; one domestic well located 0.5 miles southwest of the site; one domestic/irrigation well located 0.7 miles southeast of the site; 11 irrigation wells with three located 0.1 miles northwest, west, and southeast of the site; and two industrial wells located 0.3 miles southwest and 0.9 miles northeast of the site.

2.3 SITE GEOLOGY

The subject site is located on an island in the eastern portion of the San Francisco Bay and is underlain by interbedded Holocene age marine beach and near shore deposits. These deposits are composed of unconsolidated sands and semi-consolidated deposits of well-graded to poorly-graded sand, silty sand/sandy silt, silt, and clayey sand.

Previous site investigations indicate that the subsurface lithology onsite is consistent with that described above (sand, silty sand/sandy silt, silt) to the maximum depth explored.

Historical boring logs are included as Appendix A, and historical geologic cross sections are included as Appendix B.

2.4 SITE HYDROGEOLOGY

Field boring data indicate that first water encountered was at depths between 9.5 feet below ground surface (bgs) (MW-7) to 19 feet bgs (MW-10). First water could not be determined in borings MW-1AR, MW-1BR, MW-10, and TSP-1. This was due to a quickly rising column of sand up the annular space of the auger at depths of 17.5 feet bgs to 20.5 feet bgs. This type of sand rising under pressure is called heaving sands. Heaving sands are indicative of a pressurized, confined aquifer. The confinement layer appears to be very silty sand or clayey sand with compacted pore spaces that essentially traps this pressurized aquifer within a defined zone. These heaving sands have not been documented in any previous boring investigation at this site.

Data from the quarterly groundwater monitoring conducted at the site indicate that static depth to groundwater varies from approximately 4.5 to 9.5 feet bgs. The groundwater flow direction is generally to the north-northeast with infrequent variations to the northwest.

Quarterly groundwater monitoring and sampling was initiated in March 1999. During the most recent (first quarter 2010) groundwater monitoring and sampling event conducted by TRC on February 5, 2010, depth to groundwater ranged from

5.38 feet (MW-5) to 8.50 (MW-7) below top of casing (TOC). The groundwater flow direction was interpreted to be to the northeast at a gradient of 0.025 foot per foot (ft/ft), as compared to the previous quarterly sampling event when the groundwater flow direction was interpreted to be to the east with a gradient of 0.003 ft/ft (11/13/09). A historical groundwater flow direction (rose) diagram is included as Figure 4.

3.0 CORRECTIVE ACTION PLAN

3.1 SITE CHARACTERIZATION

3.1.1 Extent of Petroleum Hydrocarbon-Impacted Soil

The extent of the petroleum hydrocarbon impacted soil has been evaluated. The extent of the impacted soil appears to be limited to the site, and appears to be concentrated around the location of the former eastern dispenser island. A review of historical soil analytical results indicate the highest soil concentrations were at approximately 5 to 10 feet bgs, in the vicinity of MW-7.

Historical soil analytical results are included as Table 1, historical boring logs are included as Appendix A, historical geologic cross sections are included as Appendix B, and a site map with soil concentrations above ESLs is included as Figure 5.

3.1.2 Extent of Petroleum Hydrocarbon-Impacted Groundwater

The extent of the petroleum hydrocarbon impact to groundwater appears to be assessed down-gradient. Based on first quarter 2010 quarterly monitoring data, TPHg and MTBE concentrations extend down-gradient to MW-6 (off-site), but are not present in MW-5, further down gradient.

Groundwater samples are analyzed semi-annually for the presence of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethyl-benzene, and total xylenes (collectively BTEX compounds), and fuel oxygenates [methyl tert butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), tert-butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol] by Environmental Protection Agency (EPA) Method 8260B. All wells are also analyzed for dissolved oxygen (DO) and oxygen reducing potential (ORP).

Results indicate highest concentrations of TPHg, and MTBE in groundwater in the eastern portion of the property in the vicinity of wells MW-1, MW-7, MW-8, and MW-11. Lab results from the most recent sampling event (February 5, 2010) indicate that TPHg does not exhibit a "gasoline" pattern. TPHg is entirely due to MTBE.

Historical groundwater monitoring and sampling analytical results are included as Appendix C, first quarter 2010 groundwater elevation and constituent concentration isocontours are included as Appendix D, historical grab groundwater analytical results are included as Table 2, and a site map with historical grab groundwater concentrations above ESLs is included as Figure 6.

3.1.3 Groundwater Concentration Trends

Although fluctuations have occurred, TPHg, and MTBE concentrations in the historically impacted wells (MW-1, MW-1AR, MW-1BR, MW-2, MW-3, MW-7, MW-8, MW-9, MW-10, and MW-11) have decreased throughout the course of monitoring. Though wells MW-1, MW-7, MW-8, and MW-11 are currently the most impacted wells, their concentrations have decreased significantly over the course of monitoring and sampling. However, MW-7 through MW-11 have only been monitored and sampled for the past 4 events (second quarter 2009 through First Quarter 2010), so trends are inconclusive.

Historical concentration versus time graphs for identified primary constituents of concern (COCs) are included as Appendix E.

3.2 CONSTITUENTS OF CONCERN

MTBE is the primary COC at this site, with very high levels observed in MW-11 (13,000 ug/L), MW-7 (12,000 ug/L), MW-8 (6,300 ug/L), and MW-1 (3,400 ug/L) as well as some of the surrounding wells. TPHg is also a primary COC with high levels in MW-11 (4,500 ug/L), MW-7 (4,300 ug/L), MW-8 (2,400 ug/L), and MW-1 (1,600 ug/L) as well as some of the surrounding wells. However, lab results from the most recent sampling event (February 5, 2010) indicate that TPHg does not exhibit a "gasoline" pattern. TPHg is entirely due to MTBE.

An unauthorized release was reported at the Shell service station to the south (up-gradient) of the site. This caused increased concentrations in onsite wells. Based on generally decreasing concentrations since 2007, it appears that natural attenuation has been occurring.

3.3 CORRECTIVE ACTION PLAN OBJECTIVES

The Corrective Action Plan (CAP) objectives are consistent with those specified in the applicable regulations (California Code of Regulations [CCR] Title 23, Division 3, Chapter 16), and are as follows:

- Investigate and analyze the potential effects of previously reported release of petroleum hydrocarbons in soil and groundwater at the site.

- Propose a cost-effective plan to adequately protect human health and the environment.

- Protect current and potential beneficial uses of water.

- Propose a means to evaluate the effectiveness of the plan upon implementation.

3.4 PROPOSED CLEANUP LEVELS

The target soil cleanup levels are based on Commercial Environmental Screening Levels (ESLs) for soils greater than 3 meters bgs where groundwater is a current or potential source of drinking water. Commercial ESLs for TPHg, benzene, and MTBE in soils are 83 mg/kg, 0.044 mg/kg, and 0.023 mg/kg, respectively. Target groundwater cleanup goals are based on Groundwater ESLs where groundwater is a current or potential source of drinking water. Groundwater ESLs for TPHg, benzene, and MTBE are 100 ug/L, 1.0 ug/L, and 5 ug/L, respectively.

Historical soil concentrations are above the listed ESL levels only in soil samples taken from MW-7. Current groundwater concentrations are above the above listed ESL levels in wells MW-1, MW-1AR, MW-1BR, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11.

Groundwater elevation and constituent concentration isocontours from first quarter 2010 monitoring and sampling are included as Appendix D.

3.5 REMEDIAL ALTERNATIVE EVALUATION

As mentioned above, the highest soil impacts were observed in the vicinity of MW-7.

The highest concentrations of hydrocarbons in groundwater observed during the first quarter 2010 monitoring and sampling event were in the vicinity of MW-1, MW-7, MW-8, and MW-11, while wells MW-1, MW-1AR, MW-1BR, MW-9, and MW-10 are impacted to a lesser extent. Wells MW-3, MW-4, and MW-5 show little to no impact.

The remedial alternatives evaluated to address the impacted soil and groundwater at the site includes monitored natural attenuation, hydrogen peroxide injection, enhanced bioremediation, ozone/oxygen injection, and excavation.

3.5.1 Monitored Natural Attenuation

Natural attenuation involves the mitigation of contaminate concentrations through natural, non-destructive processes, e.g. biodegradation, hydrolysis, etc. Biodegradation is a process by which petroleum hydrocarbons are broken down by naturally occurring microbes present in the subsurface as a direct or indirect function of the metabolic process.

With monitored natural attenuation (MNA), groundwater monitoring and sampling would be used to continuously evaluate contaminant concentrations and document when cleanup levels have been achieved. This is a long-term remedial approach with costs ranging from approximately $45,000 to $80,000 or more, depending on the time necessary to achieve cleanup goals.

The advantages of MNA are (1) contaminates are transformed into innocuous by-products, not just transferred to another phase of location in the environment; (2) it is non-intrusive, allowing the continued use of the infrastructure during the remedial process; and (3) initial capital investment costs are low.

Potential disadvantages of MNA are (1) the time-frame for remediation may result in long-term monitoring costs; and (2) natural attenuation is subject to natural and anthropogenic changes in local hydrogeological and geochemical conditions.

While current groundwater concentrations at the subject site are above commercial ESLs, MNA is not a technically viable remedial solution as it great extends time to possible closure.

3.5.2 Hydrogen Peroxide Injection

Hydrogen peroxide injection is a remedial method in which hydrogen peroxide (H_2O_2) is injected into the subsurface. Hydrocarbons are destroyed by a process of chemical oxidation.

Commercially available H_2O_2 has a concentration of 35% weight per volume (w/v). Generally, concentrations of H_2O_2 used in water quality applications range 4%-20%. Peroxide reactions are exothermic; strong solutions of H_2O_2 (>10%) may promote volatilization and mobilization of contaminants. A H_2O_2 solution concentration of approximately 8% provides the necessary oxidation strength to decompose contaminants and, through generation of heat, may enhance desorption and dissolution of sorbed hydrocarbons.

With hydrogen peroxide injection, groundwater monitoring and sampling would be used to continuously evaluate contaminant concentrations and document when cleanup levels have been achieved. This is a long-term remedial approach with costs ranging from approximately $150,000 to $200,00 or more, depending on the time necessary to achieve cleanup goals

The advantages of hydrogen peroxide injection are: (1) a reduced time to achieve site closure; (2) it is effective at reducing MTBE concentrations, the primary COC at the site; (3) injection can increase dissolved oxygen levels, potentially enhancing natural biodegradation; (4) no waste is generated, therefore no treatment and/or disposal costs are incurred, (4) a reduced time to achieve site closure.

Potential disadvantages of hydrogen peroxide injection are (1) it requires the installation and maintenance of additional injection points; (2) continued regular

injection of hydrogen peroxide; (3) effectiveness can be limited by other constituents present in the subsurface, such as natural organic matter and ferrous iron, which may deplete the peroxide prior to reaction with the petroleum hydrocarbons; (4) high levels of iron at this site might cause a violent exothermic reaction with the hydrogen peroxide, which could pose a health and safety risk to onsite personnel during application; (5) hydrogen peroxide is naturally caustic, and onsite personnel would be required to wear level C personal protective equipment while handling it; (6) hydrogen peroxide can degrade underground equipment such as tanks and piping.

Current groundwater concentrations of ferrous iron at the subject site remain high. Reaction between the hydrogen peroxide and subsurface iron could deplete peroxide before it is able to react with present hydrocarbons, and could pose a possible safety issue for onsite personnel during application, so hydrogen peroxide injection is not considered a technically viable remedial solution.

3.5.3 Enhanced Bioremediation

Enhanced bioremediation consists of application of magnesium sulfate ($MgSO_4$) into hydrocarbon impacted groundwater and soil. $MgSO_4$ application is a form of enhanced microbial biodegradation, which is a process by which magnesium sulfate compounds are gravity-fed into impacted monitoring wells in order to jump-start biodegradation in anaerobic subsurface environments.

Delta has recently been awarded a patent for the application of sulfate with respect to accelerated cleanup of soil and groundwater. With microbes and dissolved iron (ferrous iron) present, the introduction of $MgSO_4$ solution into hydrocarbon-impacted groundwater, yields the following reaction:

Petroleum Hydrocarbon + $MgSO_4$ + Dissolved Iron → Iron Sulfide + H_2O + $MgCO_3$ + CO_2

In anaerobic conditions, microbes utilize sulfate as a terminal electron acceptor in the process of hydrocarbon biodegradation in groundwater. Although other terminal-electron accepting processes (TEAPs) may occur simultaneously during hydrocarbon degradation (with the utilization of nitrates/nitrites, manganese, iron, and oxygen), data suggests that sulfate reduction may be the most important TEAP in the active reduction of hydrocarbons (Van Stempvoort, Armstrong, and Mayer, 2007).

Situations where dissolved BTEX plumes show significantly depleted concentrations of sulfate (<10 mg/L) within the plume core, as well as slightly depleted sulfate on the plume fringe, and more abundant sulfate (consistent with background concentrations) in uncontaminated areas just beyond the plume edge, suggest that anaerobic sulfate reduction is occurring (Bruce, Cuthbertson, Kolhatkar, Ziegler, and Graves, 2007).

The approximate costs for magnesium sulfate application would range from $150,000 to $250,000.

The advantages of $MgSO_4$ application are (1) a reduced time to achieve cleanup goals and site closure; (2) $MgSO_4$ boosts sulfate levels which in-turn boosts microbial growth, which in-turn boosts biodegradation; (3) it is non-intrusive, in that no new wells need to be installed, and it allows the continued use of infrastructure during the remedial process; (4) initial capital investment costs are low as no new subsurface equipment needs to be installed; (5) $MgSO_4$ application will not cause oxidation of existing chromium into hexavalent chromium; (6) $MgSO_4$ material is chemically non-hazardous by itself (essentially it is Epsom salt).

Potential disadvantages of $MgSO_4$ application are (1) sulfate application is a slower remedial process when compared to processes like ozone injection; (2) it relies on bioremediation rather than active destruction of hydrocarbons as happens with chemical oxidation; (3) potentially moderate to long term monitoring and sampling costs; (4) DO and ORP levels are high, which indicates that the site is not anaerobic, and sulfate levels are not depleted, which indicates magnesium sulfate would not be effective at this site.

Current groundwater concentrations of dissolved oxygen and sulfates at the subject site remain high. The presence of these compounds in the subsurface defeat the purpose of magnesium sulfate application, so enhanced bioremediation is not considered a technically viable remedial solution.

3.5.4 Ozone/Oxygen Injection

Ozone/oxygen injection is a remedial method in which an air/ozone mixture or oxygen is injected into the groundwater using microporous injection points. Ozone is a highly reactive chemical that has shown to be effective in destroying (via oxidation) a wide variety of organic chemicals including petroleum hydrocarbons and oxygenates with the by-products being carbon dioxide and water. The following generalized equation shows the reaction of ozone on hydrocarbons:

$$C_6H_{12}\ (\text{Petroleum Hydrocarbon}) + 6O_3 \rightarrow 6CO_2 + 6H_2O$$

In addition, the injection of ozone into the subsurface can enhance the natural biodegradation of organic chemicals through increased dissolved oxygen concentrations since ozone rapidly decomposes to oxygen. Significant reductions in contaminant concentrations in groundwater have been observed in as little as a few weeks to a few months with ozone injection. A pilot test would be required to evaluate the potential effectiveness of ozone injection.

The approximate cost for installation of the ozone/oxygen injection points (~$30,000) and periodic injection for a 3-6 month period would range from $10,000 to $100,000.

The advantages of ozone injection are (1) a reduced time to achieve site closure; (2) ozone is effective at reducing TPHg/MTBE concentrations, the primary COC at the site; (3) ozone injection can increase dissolved oxygen levels, potentially enhancing natural aerobic biodegradation; (4) no waste is generated, therefore no treatment and/or disposal costs are incurred; (5) ozone has already been proven to be effective in a pilot test; (6) during the pilot test, it did not appear that oxidation of existing chromium into hexavalent chromium was an issue.

Potential disadvantages of ozone injection are (1) it requires the installation and maintenance of additional injection points; (2) continued regular injection of ozone or oxygen; (3) effectiveness can be limited by other constituents present in the subsurface, such as natural organic matter and ferrous iron, with which ozone may react prior to reaction with the petroleum hydrocarbons; (4) ozone can oxidize existing trivalent chromium [Cr(III)], tetravalent chromium [Cr(IV)], and pentavalent chromium [Cr(V)] into more hazardous hexavalent chromium [Cr(VI)], (5) ozone can degrade underground equipment such as tanks and piping.

Current groundwater concentrations are above commercial ESLs so ozone/oxygen injection is considered a technically viable remedial solution.

3.5.5 Assessment & Excavation of Impacted Soil

Excavation is a method of remediation that involves physically removing the contaminated soil from the site.

Soil samples obtained during the installation of MW-7 indicate high concentrations of weathered gas from approximately 5 feet bgs to 12 feet bgs. Prior to excavation, direct-push technology will be used to assess the immediate area around MW-7 to determine the radius of the impacted soil.

The advantages of excavation are (1) decreased time to remediate soil impact by the actual removal of contamination, rather than relying on attenuation.

Possible disadvantages of excavation are (1) cost of excavation and removal of contaminated soil; (2) while impacted soil is removed, impacted groundwater remains.

Current soil concentrations are above commercial ESLs in an isolated area around monitoring well MW-7 so assessment and excavation is considered a technically viable remedial solution for shallow impacted soils.

3.6 RECOMMENED CORRECTIVE ACTION

3.6.1 Alternative Remedial Approach

Of the remaining remedial methods evaluated, **Ozone/Oxygen Injection and Excavation** appear to be the best-available, most cost-effective approaches to

corrective action. With the success of the ozone injection pilot test, this method has already been shown to be effective at this site. Additional assessment may be necessary to evaluate if excavation will be a viable option.

Delta also proposes a limited assessment and excavation of impacted soil in the immediate vicinity of MW-7 (Figure 5), in addition to the use of ozone/oxygen injection.

A work plan detailing ozone/oxygen injection and assessment/excavation specifics will be submitted under separate cover upon agency approval of the recommended corrective actions.

3.6.2 Radius of Influence

Over a 4 week period, from August 10, 2009 to September 4, 2009, Integral Engineering Services, Inc. (Integral), with over sight by Delta, performed daily ozone injection feasibility testing. During the course of this testing, it was established that the radius of influence appears to be 10 to 40 feet based upon the DO analyzes from TRC.

3.6.3 Biodegradation Parameters

A DO containing environment is the key factor to the effectiveness of ozone, as it causes subsurface microbial activity to degrade the petroleum hydrocarbons in an aerobic environment.

The ORP of groundwater is a measure of the relative tendency of a solution to accept or donate electrons. ORP is usually measured in terms of Eh values. A positive Eh value indicated the solution is oxidizing and a negative value indicated the solution is reducing. If the ORP measured outside the plume is higher than ORP measured in the plume, it is an indication that the biodegradation may be occurring. DO and ORP should be in agreement.

In situations where DO has been consumed, anaerobic processes will dominate. In the absence or near absence of DO, nitrate (NO_3), manganese (Mn^{+4}), sulfate (SO_4^{-2}), or carbon dioxide (CO_2) may serve, if present, as electron acceptors in the order listed. Changes in concentrations of these compounds or their by-products (Mn^{+2}, methane, etc.) can be used as an indicator of biodegradation.

Heterotrophic plate counts (HPCs) may be used to quantify the number of bacteria able to grow on a specific set of nutrients. HPC analyses are reported as a number of CFU/ml. Low CFU/ML may indicate generally toxic conditions of microbes or a lack of appropriate nutrients, oxygen, etc.

Groundwater temperature affects the rate of many biological and chemical reactions. Temperature can indicate biological activity is occurring and helps determine of the sample collected is representative of the aquifer being monitored.

Effective biodegradation generally occurs within a temperature range of 5 to 45 degrees Celsius (°C). Ideally groundwater temperature should be above 15 °C. Extreme temperatures (either hot or cold) prohibit microbial growth. Additionally, oxygen solubility is dependent on groundwater temperature, and an increase in biological activity can increase the temperature within the solute plume.

The pH of groundwater has an effect on the presence and activity of microbial populations in groundwater. Groundwater pH in the range of 6-8 is generally more conducive to the activity and presence of microbes capable of degrading petroleum hydrocarbons. Also differences in pH between contaminated and uncontaminated groundwater may indicate bioactivity is occurring.

Specific conductivity is a measurement of an aqueous solution's ability to conduct an electric current. Specific conductivity can be used as an indicator to determine that samples collected from separate sampling points are from the same aquifer.

Alkalinity measures the acid neutralizing or buffering capacity of water and primarily includes carbonate (CO_3^{-2}) bicarbonate (HCO_3^-) and hydroxide (OH^-). An increase in alkalinity is potentially an indication of microbial activity. A zone of increased alkalinity indicates dissolution of carbonate from the soil, or production of CO_2. Alkalinity is important in the maintenance of groundwater pH because it buffers acid produced during the aerobic and anaerobic biodegradation process.

Analytical results for the above bioremediation parameters will be reported in the quarterly monitoring and sampling reports. A discussion of the ongoing effectiveness of the bioremediation process will be discussed in the quarterly status report. When a complete hydrologic cycle (one year) has passed, an assessment of the attenuation progress will be completed and a status report submitted to ACHCSA.

3.6.4 Quarterly Monitoring

Continued quarterly monitoring will be conducted on site wells to evaluate concentrations in groundwater and when cleanup goals have been achieved.

Currently, the well network at this site is monitored and sampled quarterly. Wells MW-1, MW-3, MW-4, MW-5, and MW-6 are monitored and sampled semi-annually during first and third quarters, and wells MW-1A, MW-1B, MW-7, MW-8, MW-9, MW-10, and MW-11 are monitored and sampled quarterly. Samples collected during monitoring and sampling are analyzed for TPHg, BTEX, MTBE, and oxygenates [tert butyl alcohol (TBA), ethylene dibromide (EDB), 1,2 Dichloroethane (1,2-DCA), diisopropyl ether (DIPE), ethyl tert butyl ether (ETBE), tert amyl methyl ether (TAME), and ethanol] by Environmental Protection Agency (EPA) Method 8260B. Additionally, samples are analyzed for DO and ORP.

Following agency approval, testing for bioremediation parameters will be conducted during quarterly monitoring and sampling. Initially, each of the above parameters

will be tested for monitoring wells MW-1, MW-1AR, MW-1BR, MW-3, MW-4, MW-5 MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11. Monitoring wells MW-1, MW-1AR, MW-1BR, MW-6, MW-7, MW-8, MW9, MW-10, and MW-11 will be used to evaluate bioremediation parameters in wells with detected petroleum hydrocarbons. Monitoring wells MW-3, MW-4, and MW-5 will be used to monitor bioremediation parameters in wells with no detected petroleum hydrocarbons (background samples). The results of this testing will be used to evaluate the effectiveness of the remediation process occurring at the site. Testing for bioremediation parameters, with the exception of heterotrophic plate counts, will be completed on groundwater samples from the above wells during subsequent quarterly sampling events.

Historical concentration versus time graphs for identified COCs are included as Appendix E.

3.6.5 Remaining Mass Calculations

Groundwater impact plume areas are based on constituent isocontours from first quarter 2010 monitoring and sampling (Appendix D). For groundwater, TPHg plume 1 area is in the vicinity of MW-1, MW-7, and MW-8 from 5 to 10 feet bgs. TPHg plume 2 area surrounds plume 1 area, and is in the vicinity of MW-1AR, MW-1BR, MW-6, MW-9, and MW-10 from 5 to 10 feet bgs. However, lab results from the most recent sampling event (February 5, 2010) indicate that TPHg does not exhibit a "gasoline" pattern. TPHg is entirely due to MTBE. MTBE plume 1 area is in the vicinity of MW-7 and MW-11 from 5 to 10 feet bgs. MTBE plume 2 area surrounds plume 1 area, and is in the vicinity of MW-1 and MW-8 from 5 to 10 feet bgs. MTBE plume 3 area surrounds plume 2 area, and is in the vicinity of MW-1AR, MW-1BR, MW-6, MW-9, and MW-10 from 5 to 10 feet bgs.

Soil impact plumes are based on historical soil concentrations above ESLs (Figure 5). Plume 1 area is in the immediate vicinity of MW-7. This is the only historical boring that showed concentrations above ESLs.

The total remaining contaminant mass in groundwater is 4.48 lbs. The total remaining contaminant mass in soil is 21.1 lbs. The total overall remaining contaminant mass in soil and groundwater is 25.58 lbs.

Mass calculations of remaining petroleum hydrocarbons in soil and groundwater are included in Appendix F.

3.6.6 Proposed Cleanup Time

Current COC concentrations may be reduced to within cleanup levels in as little as 1 to 3 months. Time to cleanup is dependent on the effectiveness of the proposed remedial action. Dissolved-phase concentrations of TPHg and MTBE will be used to evaluate the effectiveness of the remediation.

3.7 REGULATORY CLOSURE

Case closure will be requested when COC concentrations have met cleanup goals as approved by the agencies, and remaining dissolved-phase COC concentrations can be demonstrated to not pose a risk to human health or the environment.

After approval of closure and no further action by the ACHCSA, the site monitoring wells will be abandoned after obtaining the necessary permits.

5.0 REQUEST AND LIMITATONS

In order to move the process along quickly, Delta respectfully requests agency comment/approval by no later than Friday, April 23, 2010.

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

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FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Plan with Current Monitoring and Sparge Wells
Figure 3 – Site Plan with Historical Sampling Locations
Figure 4 – Historical Groundwater Flow Direction (Rose) Diagram
Figure 5 – Site Map with Historical Soil Concentrations above ESLs
Figure 6 - Site Map with Historical Grab groundwater Concentrations above ESLs

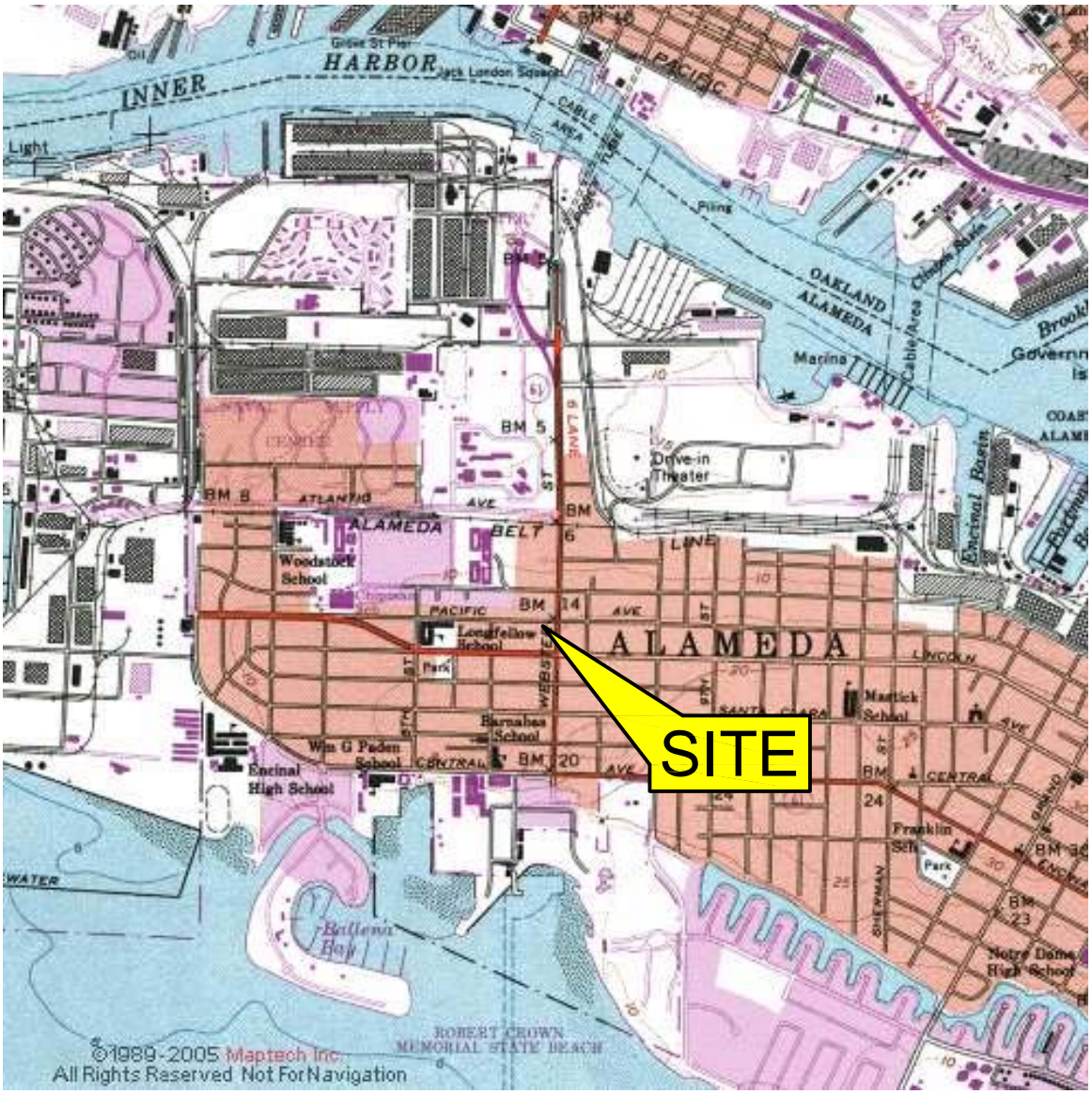
TABLES

Table 1 – Historical Soil Analytical Results
Table 2 – Historical Grab Groundwater Analytical Results

APPENDICES

Appendix A – Historical Boring Logs
Appendix B – Historical Geologic Cross Sections
Appendix C – Historical Groundwater Monitoring and Sampling Analytical Results
Appendix D – 1st Quarter 2010 Groundwater Elevation and Constituent Isocontours
Appendix E – Historical Concentration versus Time Graphs
Appendix F – Mass Calculations of Remaining Petroleum Hybrocarbons in Soil and Groundwater

FIGURES



0 1000 FT 2000 FT

SCALE: 1 : 24,000

North

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST QUADRANGLE, 1996

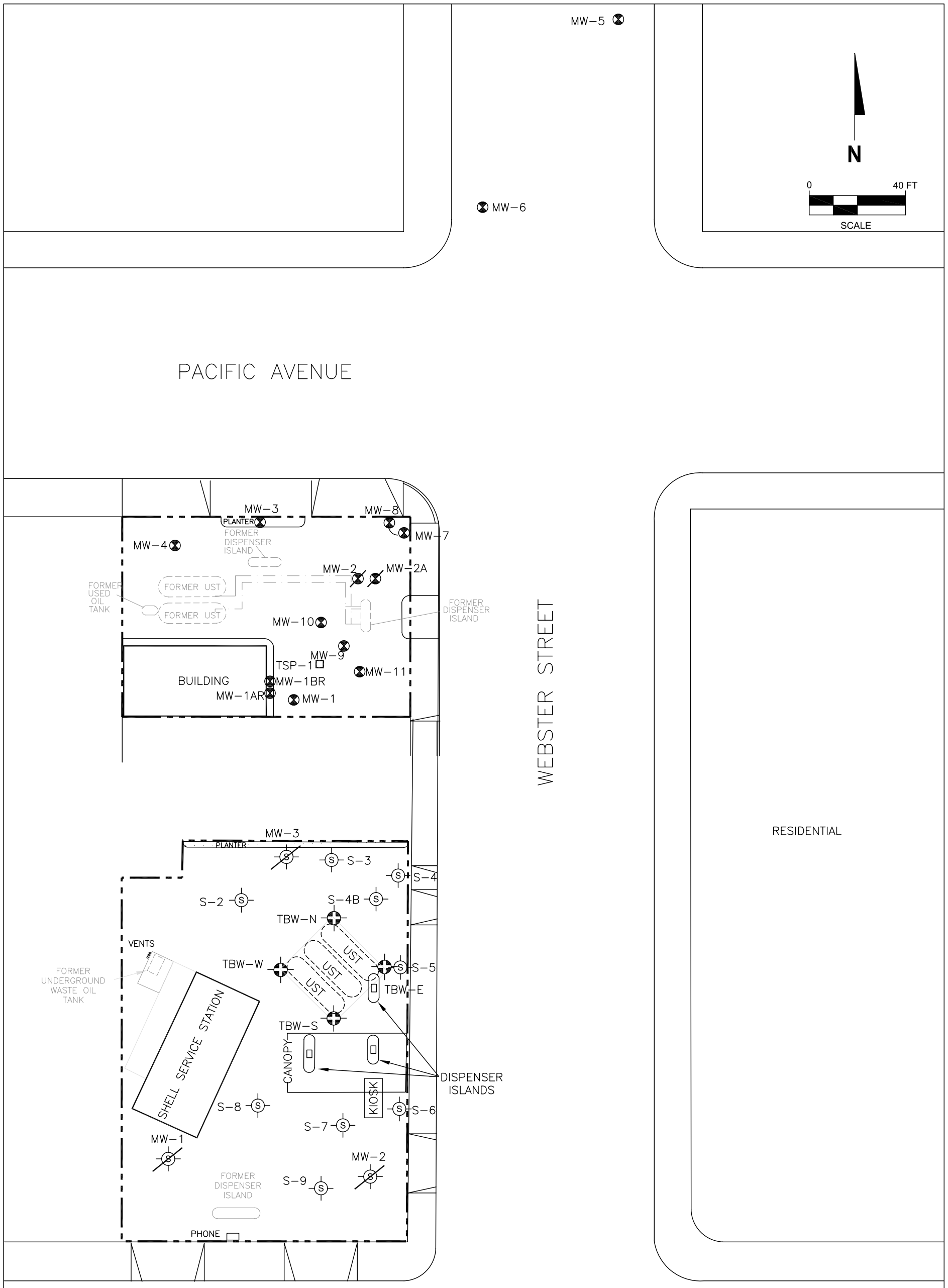
FIGURE 1

SITE LOCATION MAP

76 STATION NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 03/18/09
FILE NO. Site Locator 0843	PREPARED BY CM
REVISION NO. 2	REVIEWED BY JM

DELTA®



LEGEND:

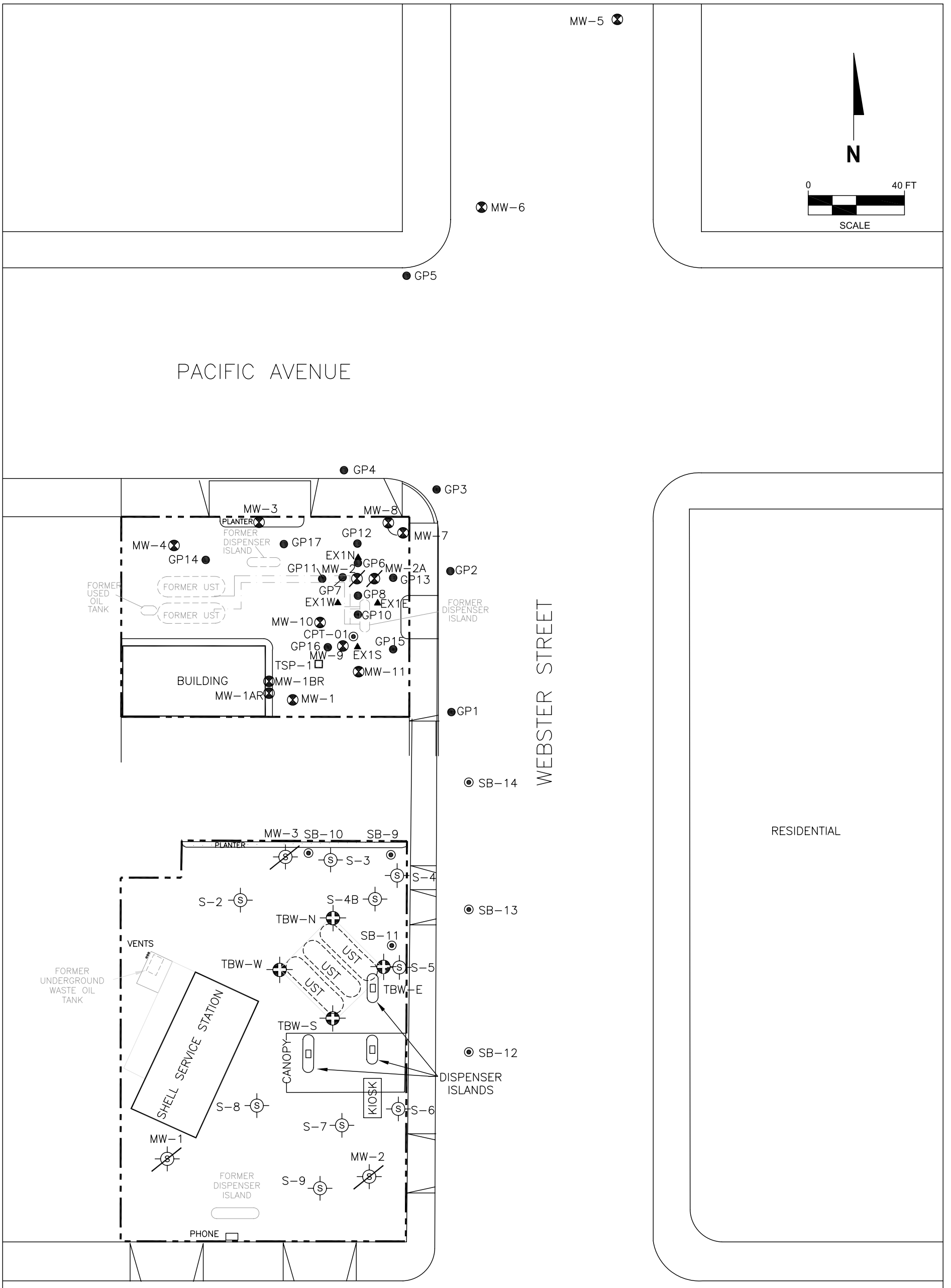
- PROPERTY BOUNDARY
- FORMER PRODUCT LINE
- CURRENT 76 MONITORING WELL
- ABANDONED/DESTROYED 76 MONITORING WELL
- SHELL MONITORING WELL
- DESTROYED SHELL MONITORING WELL
- TANK BACKFILL WELL
- CURRENT SPARGE POINT

PLAN ADAPTED FROM A DRAWING DATED 9/18/08
TITLED "SITE PLAN" PREPARED BY TRC.

FIGURE 2
SITE PLAN WITH CURRENT MONITORING WELL AND SPARGE POINT LOCATIONS
FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	AB	JH
DATE	REVIEWED BY	FILE NAME
04/05/10	JW	76-0843

DELTA®



LEGEND:

- PROPERTY BOUNDARY
- FORMER PRODUCT LINE
- CURRENT 76 MONITORING WELL
- ABANDONED/DESTROYED 76 MONITORING WELL
- SHELL MONITORING WELL
- DESTROYED SHELL MONITORING WELL
- TANK BACKFILL WELL
- DIRECT-PUSH SOIL BORING
- CPT SOIL BORING
- CURRENT SPARGE POINT
- SOIL SAMPLE LOCATION

PLAN ADAPTED FROM A DRAWING DATED 9/18/08
TITLED "SITE PLAN" PREPARED BY TRC.

FIGURE 3
SITE PLAN WITH HISTORICAL SAMPLING LOCATIONS

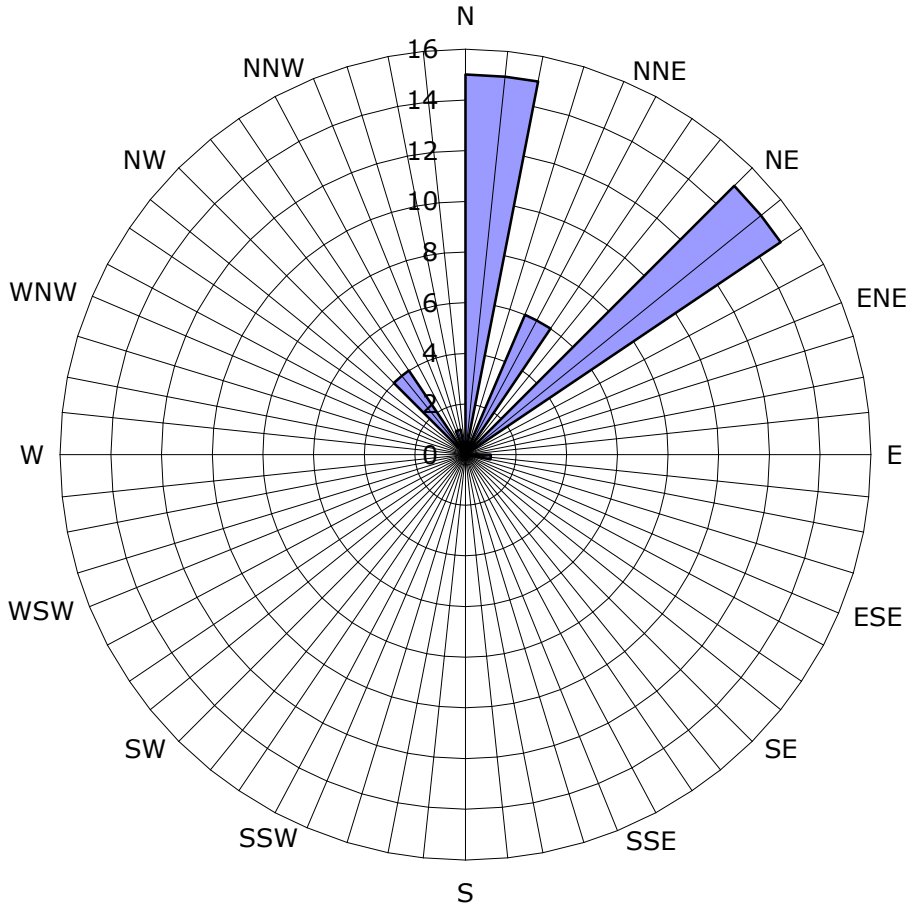
FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	AB	JH
DATE	REVIEWED BY	FILE NAME
04/05/10	JW	76-0843

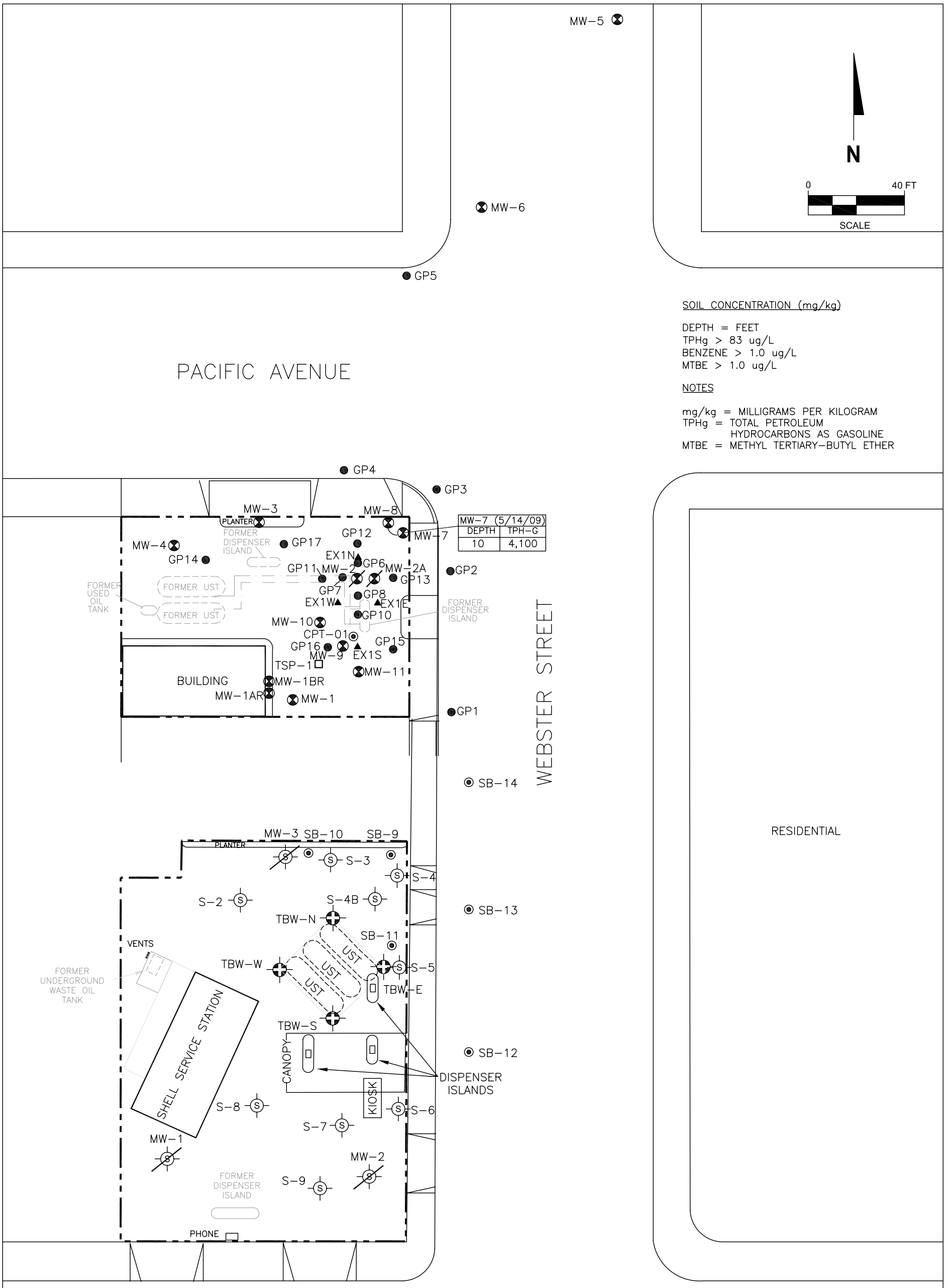
DELTA®

FIGURE 4

Historic Groundwater Flow Directions
ConocoPhillips Site No. 0843
1629 Webster Street
Alameda, California



Legend
Concentric circles represent quarterly monitoring events.
First Quarter 1999 through First Quarter 2010.
42 data points shown.



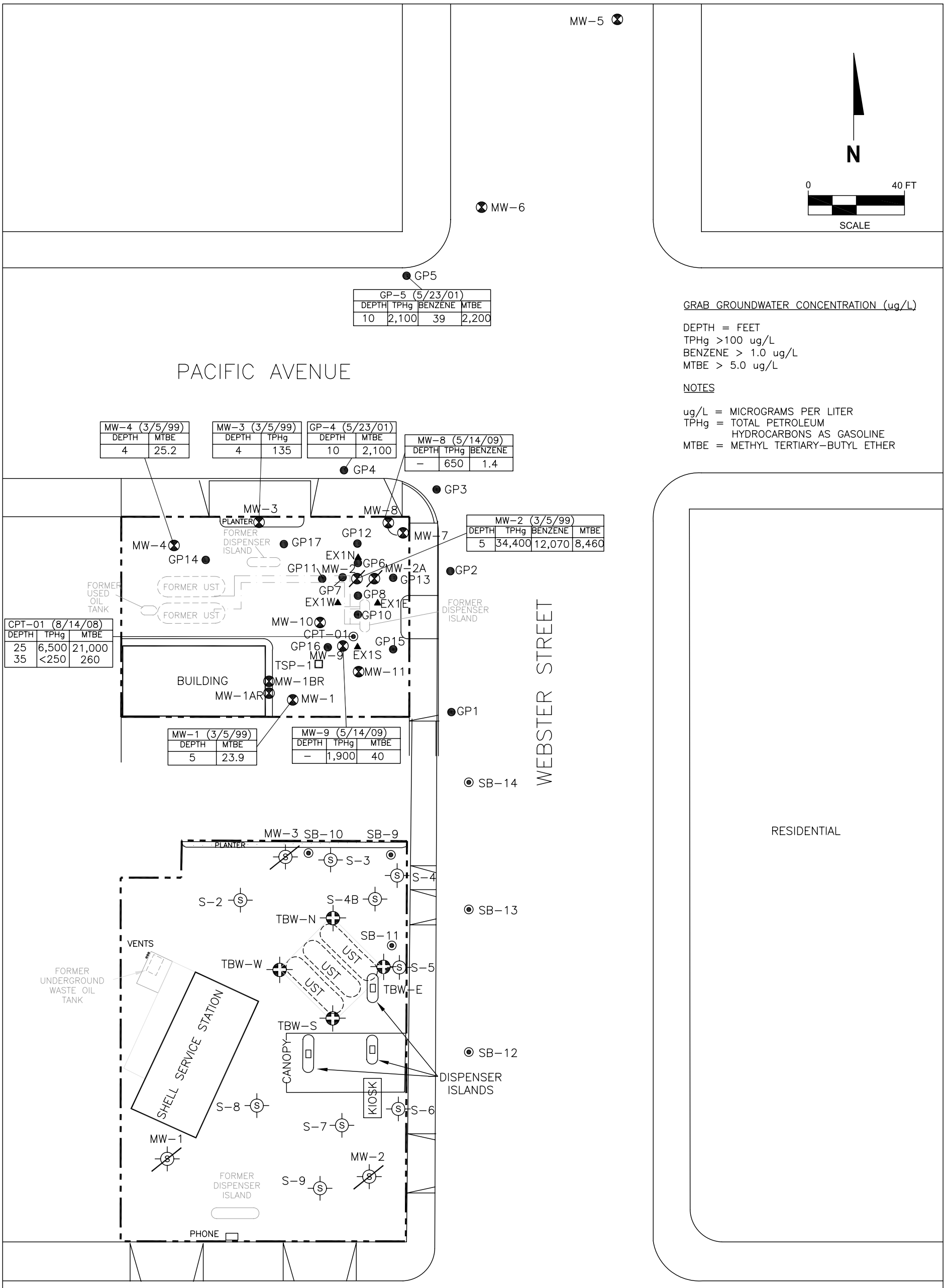
PLAN ADAPTED FROM A DRAWING DATED 9/18/08
TITLED "SITE PLAN" PREPARED BY TRC.

FIGURE 5
SITE PLAN WITH HISTORICAL SOIL CONCENTRATIONS ABOVE ESLs

FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	AB	JH
DATE	REVIEWED BY	FILE NAME
04/05/10	JW	76-0843

DELTA®



GRAB GROUNDWATER CONCENTRATION (ug/L)

DEPTH = FEET
TPHg >100 ug/L
BENZENE > 1.0 ug/L
MTBE > 5.0 ug/L

NOTES

ug/L = MICROGRAMS PER LITER
TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE = METHYL TERTIARY-BUTYL ETHER

LEGEND:

- PROPERTY BOUNDARY
- FORMER PRODUCT LINE
- CURRENT 76 MONITORING WELL
- ABANDONED/DESTROYED 76 MONITORING WELL
- SHELL MONITORING WELL
- DESTROYED SHELL MONITORING WELL
- TANK BACKFILL WELL
- DIRECT-PUSH SOIL BORING
- CPT SOIL BORING
- CURRENT SPARGE POINT
- SOIL SAMPLE LOCATION

PLAN ADAPTED FROM A DRAWING DATED 9/18/08
TITLED "SITE PLAN" PREPARED BY TRC.

FIGURE 6
SITE PLAN WITH HISTORICAL GRAB GROUNDWATER CONCENTRATIONS ABOVE ESLs
FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	AB	JH
DATE	REVIEWED BY	FILE NAME
04/05/10	JW	76-0843

DELTA®

TABLES

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
76 Service Station No. 0843/2349
1629 Webster St
Alameda, California

Sample ID	Depth	Date	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	Ethanol (mg/kg)	Sulfate (mg/kg)	Manganese (mg/kg)
S-10.5-B-1	10.5	3/2/1999	<0.40	<0.010	<0.0020	<0.0020	<0.0020	<0.010	--	--	--	--	--	--	--	--	--
S-10.5-B-2	10.5	3/2/1999	<2.0	**0.0295**	**0.0658**	**0.0359**	**0.119**	**0.561**	--	--	--	--	--	--	--	--	--
S-10.5-B-3	10.5	3/2/1999	<0.40	<0.010	<0.0020	<0.0020	<0.0020	<0.010	--	--	--	--	--	--	--	--	--
S-10.5-B-4	10.5	3/2/1999	<0.40	<0.010	<0.0020	<0.0020	<0.0020	**0.109**	--	--	--	--	--	--	--	--	--
S-4-GP1	4	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-5-GP-2	5	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-10-GP2	10	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-5-GP3	5	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	**0.011**	<0.050	--	--	--	--	--	--	--	--	--
S-5-GP4	5	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-4-GP5	4	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-10-GP5	10	5/23/2001	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	**0.18**	--	--	--	--	--	--	--	--	--
S-6.5-GP6	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6.5-GP7	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6-GP8	6	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6-GP9	6	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6.5-GP10	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6.5-GP11	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6-GP12	6	12/4/2001	<1.0	<0.0050	<0.0050	<0.010	**0.015**	<0.050	--	--	--	--	--	--	--	--	--
S-12-GP12	12	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6.5-GP13	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-12-GP13	12	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-7-GP14	7	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6-GP15	6	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-16-GP-15	16	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6.5-GP-16	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-12-GP16	12	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-6.5-GP17	6.5	12/4/2001	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	--
S-10-EX1N	10	12/4/2002	<50	<0.25	<0.25	**0.73**	**4.9**	<0.25	--	--	--	--	--	--	--	--	--
S-10-EX1S	10	12/4/2002	<1.0	<0.0050	<0.0050	<0.0053	<0.10	<0.0050	--	--	--	--	--	--	--	--	--
S-10-EX1W	10	12/4/2002	<1000	<0.25	**4.1**	**20**	**120**	<0.25	--	--	--	--	--	--	--	--	--
S-10-EX1E	10	12/4/2002	<50	<0.25	**1.2**	**0.34**	**0.82**	**0.36**	--	--	--	--	--	--	--	--	--
MW-1	7	8/14/2008	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
CPT-1	7	8/14/2008	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
MW-1AR	20	5/14/2009	**0.26**	<0.0050	<0.0050	<0.0050	<0.010	**0.25**	<0.050	<0.0050	<0.0050	<0.0050	--	<0.0050	<1.0	**15**	**160**
MW-1BR	20	5/14/2009	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	**0.15**	<0.050	<0.0050	<0.0050	<0.0050	--	<0.0050	<1.0	**15**	**150**
MW-7	10	5/14/2009	**4,100**	<0.50	<0.50	**38**	**770**	<0.50	<5.0	<0.50	<0.50	<0.50	--	<0.50	<100	**16**	**110**
MW-8	15	5/14/2009	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	--	<0.0050	<1.0	**10**	**120**
MW-9	10	5/14/2009	**46**	<0.12	<0.12	**2**	**9.5**	**<1.2**	<1.2	<0.12	<0.12	<0.12	--	<0.12	<25	<10	**190**
MW-10	10	5/14/2009	**0.4**	<0.0050	<0.0050	<0.0050	<0.010	<0.0081	<0.050	<0.0050	<0.0050	<0.0050	--	<0.0050	<1.0	<10	**180**
MW-11	10	5/14/2009	**0.4**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	--	<0.0050	<1.0	**51**	**190**
TSP-1	20	5/14/2009	**0.24**	<0.0050	<0.0050	<0.0050	<0.010	**0.23**	<0.050	<0.0050	<0.0050	<0.0050	--	<0.0050	<1.0	**18**	**140**

TPHg = Total Petroleum Hydrocarbons as Gasoline MTBE = methyl tert butyl ether TBA = tert butyl alcohol ETBE = ethyl tert butyl ether DIPE = diisopropyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 Dichloroethane
bold = above laboratory indicated reporting limit

TABLE 2
HISTORICAL GRAB GROUNDWATER ANALYTICAL RESULTS
76 Service Station No. 0843/2349
1629 Webster St
Alameda, California

Sample ID	Depth	Date	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	ETBE (ug/L)	TAME (ug/L)	DIPE (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)	Ethanol (ug/L)	Sulfate (ug/L)	Manganese (ug/L)	Total Recoverable Manganese (ug/L)	Iron (ug/L)	DO (ug/L)	Non-Volatile Organic Carbon (ug/L)
W-5-MW-1	5	3/5/1999	**86.6**	<2.0	**2.04**	<2.0	**4.06**	**23.9**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-5-MW-2	5	3/5/1999	**34,400**	**2,070**	**7,710**	**2,340**	**8,240**	**8,460**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4-MW-3	4	3/5/1999	**135**	<2.0	<2.0	<2.0	**4.84**	**2.46**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4-MW-4	4	3/5/1999	<50	<2.0	<2.0	<2.0	**2.44**	**25.2**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-10-GP1	10	5/23/2001	<50	<0.50	<0.50	<0.50	<0.50	**3.7**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-10-GP2	10	5/23/2001	<50	**1.1**	**0.67**	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	--	--	--	--	--
W-9-GP3	9	5/23/2001	<50	**1.2**	<0.50	**0.55**	**3.9**	<2.5	--	--	--	--	--	--	--	--	--	--	--	--	--
W-6-GP4	6	5/23/2001	<50	**0.7**	<0.50	<0.50	<0.50	**96**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-10-GP5	10	5/23/2001	**2,100**	**39**	**16**	<5.0	**17**	**2,200**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-7-GP-14	7	12/14/2001	<50	<0.50	<0.50	<0.50	<0.50	**6.4**	--	--	--	--	--	--	--	--	--	--	--	--	--
W-7-GP15	7	12/14/2001	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	--	--	--	--	--
W-7-GP16	7	12/14/2001	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	--	--	--	--	--
CPT-1-25	25	8/14/2008	**6,500**	<5.0	<5.0	<5.0	<10	**21,000**	<100	<5.0	**17**	<5.0	<5.0	<5.0	--	--	--	--	--	--	--
CPT-1-35	35	8/14/2008	<250	<2.5	<2.5	<2.5	<5.0	**260**	<50	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	--	--	--	--	--
CPT-1-45	45	8/14/2008	<50	<0.50	<0.50	<0.50	<1.0	**1**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
CPT-1-55	55	8/14/2008	<50	<0.50	<0.50	<0.50	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
MW-1AR	--	5/14/2009	<50	<0.50	<0.50	<0.50	**<1.0**	**2.4**	<10	<0.50	<0.50	<0.50	--	<0.50	<250	**33**	**59**	**67**	**330**	**9.8**	**2.1**
MW-8	--	5/14/2009	**650**	**1.4**	<0.50	**11**	**6.2**	**4.4**	<10	<0.50	<0.50	<0.50	--	<0.50	<250	**23**	**900**	**1,200**	<100	**7**	**3.6**
MW-9	--	5/14/2009	**1,900**	<0.50	<0.50	**74**	**250**	**40**	<10	<0.50	<0.50	<0.50	--	<0.50	<250	**38**	**180**	**240**	**230**	**3.5**	**2.2**
TSP-1	--	5/14/2009	<50	<0.50	<0.50	<0.50	<1.0	**7.1**	<10	<0.50	<0.50	<0.50	--	<0.50	<250	**46**	**24**	**330**	**170**	**7.6**	**4.2**

TPHg = Total Petroleum Hydrocarbons as Gasoline MTBE = methyl tert butyl ether TBA = tert butyl alcohol ETBE = ethyl tert butyl ether DIPE = diisopropyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 Dichloroethane
bold = above laboratory indicated reporting limit

APPENDIX A
Historical Boring Logs

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: B1/MW1 Plate: APPENDIX
Site: Former Tosco 76 Service Station 0843 Date: 3/2/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: South End of Site Approximately 50 Feet West of Southern Driveway Registration: R.G. 4412
Logged by: Dylan Crouse

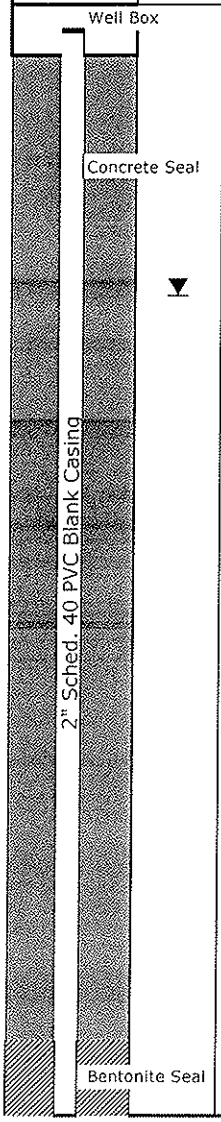
DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						3" asphalt	
					SP	Sand, trace of silt, yellowish brown, moist	
5	5	0					
						Sands, trace of silt and some clay, brown, moist, some plasticity	
10	38	0			SC		
						Sand, trace of silt, light yellowish brown, wet	
15	35	0			SP		
						sand, trace of silt, olive, wet	
20	40	0					
						Total depth at 20.5 feet. Groundwater encountered at 12 feet. Static groundwater encountered at 5.8 feet.	

Casing Diameter: 2" Slot Size: 0.020 , Sand Size: #3 , Grout: Portland I,II

FN: 2248B001

Delta Consultants

Project No: C102349210	Client: **ConocoPhillips**	Well No: **MW-1AR**
Logged By: Alan Buehler	Location: **1629 Webster Street**	Date Drilled: 5/13/09
Driller: **RSI Drilling**	**Alameda, California**	Page **1** of **2**
Drilling Method: Hollow Stem Auger	Hole Diameter: 8"	▽ = First Water
Sampling Method: Split Spoon	Hole Depth: 35'	▼ = Static Groundwater
Casing Type: Sched. 40 PVC	Well Diameter: 2"	
Slot Size: 0.02	Well Depth: 30.5'	
Gravel Pack: Filter Sand	First Water Depth: N/A	
Elevation	Northing	Easting



Depth (feet)	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
1–4				Air-Knife				Silty sand; trace clay with gravel.
5	moist	0.0					SM	Silty sand; light brown.
7							SM	Same as above.
9							SM	Same as above.
10	moist	0.1					SM	Silty sand with gravel; dark brown.
12							SM	Silty sand; light brown
15	wet	1.3					SM	Same as above.
20	sat.	2.9		11:23 @ 20'			SM	Encountered heaving sands to total depth of boring.

Delta
Consultants

Project No:	C102349210	Client: **ConocoPhillips**	Well No: **MW-1AR**
Logged By:	Alan Buehler	Location: **1629 Webster Street** Alameda, California	Date Drilled: 5/13/09
Driller: **RSI Drilling**			Page **2** of **2**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	30'
Casing Type:	Sched. 40 PVC	Well Diameter:	2"
Slot Size:	0.02	Well Depth:	30.5'
Gravel Pack:	Filter Sand	First Water Depth:	N/A

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Filter Sand			N/A		23–30			SM	Encountered heaving sands to total depth of boring.
					31				**Total Depth of Boring = 30.5 Feet Below Ground Surface (bgs)**
					32–44				

Delta
Consultants

Project No:	C102349210	Client: **ConocoPhillips**	Well No: **MW-1BR**
Logged By:	Alan Buehler	Location: **1629 Webster Street**	Date Drilled: 5/15/09
Driller: **RSI Drilling**		**Alameda, California**	Page **1** of **2**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	35'
Casing Type:	Sched. 40 PVC	Well Diameter:	2"
Slot Size:	0.02	Well Depth:	34.5'
Gravel Pack:	Filter Sand	First Water Depth:	N/A
Elevation		Northing	Easting

▽ = First Water

▼ = Static Groundwater

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Well Box; Concrete Seal; 2" Sched. 40 PVC Blank Casing	▼				Air-Knife	1–5				Silty sand; trace clay with gravel.
		moist				5			SM	Silty sand; light brown.
		damp				7			SM	Same as above.
		damp				9			SM	Same as above.
		moist	0.2			10			SM	Silty sand with gravel; dark brown.
						12			SM	Silty sand; light brown
		moist	0.2			15			SM	Same as above.
		moist	0.6		13:41 @ 20'	20			SM	Encountered heaving sands to total depth of boring.

Delta
Consultants

Project No:	C102349210	Client: **ConocoPhillips**	Well No: **MW-1BR**
Logged By:	Alan Buehler	Location: **1629 Webster Street** Alameda, California	Date Drilled: 5/15/09
Driller:	**RSI Drilling**		Page **2** of **2**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	35'
Casing Type:	Sched. 40 PVC	Well Diameter:	2"
Slot Size:	0.02	Well Depth:	34.5'
Gravel Pack:	Filter Sand	First Water Depth:	N/A
Elevation		Northing	Easting

▽ = First Water

▼ = Static Groundwater

Well Completion: Backfill	Well Completion: Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
						23				
						24				
						25				Continuation of heaving sands to total depth of boring.
						26				
	Bentonite Seal					27				
						28				
	Filter Sand					29				
						30				
						31				
						32				
						33				
						34				
						35				**Total Depth of Boring = 35 Feet Below Ground Surface (bgs)**
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Project No.: 2248 Boring: B2/MW2 Plate: APPENDIX
Site: Former Tosco 76 Service Station 0843 Date: 3/2/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: Northeast Corner of Site Approximately 10 Feet North of East Dispenser Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						Sand, fine-grained, trace of silt, yellowish brown, very moist	
5	2	0					
					SP	sand, trace of silt, olive gray, very moist	
10	27	1023				sand, trace of silt, dark yellowish brown, wet	
15	43	46				sand, trace of silt, light olive yellow, wet	
20	86	9					
						Total depth at 20.5 feet. Groundwater encountered at 8.5 feet. Static groundwater encountered at 5.3 feet.	

Casing Diameter: 2" Slot Size: 0.020 , Sand Size: #3 , Grout: Portland I/II

FN: 2248B002

Project No.: 2248 Boring: B3/MW3 Plate: APPENDIX
Site: Former Tosco 76 Service Station 0843 Date: 3/2/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: North Center in the Planter Approximately 1 Foot South of the Sidewalk Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						3" planter soil	
						Silt, trace of sand and clay, fine-grained, dark yellowish brown, very moist, some plasticity	
5	5	0			ML		
10	35	0					
15	20	1				silt, trace of sand, fine-grained, dark yellowish brown, wet, no plasticity	
20	37	7				very moist	
						Total depth at 20.5 feet. Groundwater encountered at 12 feet. Static groundwater encountred at 4.9 feet.	

Casing Diameter: 2" Slot Size: 0.020 , Sand Size: #3 , Grout: Portland I,II

FN: 2248B0C3

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: B4/MW4 Plate: APPENDIX
Site: Former Tosco 76 Service Station 0843 Date: 3/2/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: Northeast Corner of Site Approximately 13 Feet South of Driveway Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						3" asphalt at top	
5	10	▽ 0			ML	silt, trace of sands, fine-grained, gravel and clay 0.5", dark yellowish brown, moist, some plasticity	
10	50	5				olive, very moist	
15	33	0 ▼				light olive brown, wet, no plasticity	
20	35	0				Total depth at 20.5 feet. Groundwater encountered at 15 feet. Static groundwater encountered at 4.7 feet.	

Casing Diameter: 2" Slot Size: 0.020 , Sand Size: #3 , Grout: Portland 1 II

FN: 2248B004

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: MW5 Plate: APPENDIX

Site: Former Tosco 76 Service Station 0843 Date: 12/8/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon Geologist: MARK S. BOCKUM

Drill Rig: B57 Bore Hole Diameter: 8" Signature:

Location: 6.3 Feet from Curb 215 North and 95 Feet East of Northeast Site Boundary Registration: R.G. 4412

Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						1' asphalt Fill, sand	
5	9	0			CL	*Sand with some clay, olive gray, moist, slight plasticity, (25% clay, 75% sand), very fine-grained	
10	26	0			SM	Sand with some silt, yellowish orange, (25% silt, 75% sand), very fine-grained, wet, red staining	
15	36	0				same as above	
20	50	0				same as above	

Total depth at 21.5 feet.
First encountered groundwater at 10 feet.
Static groundwater at 6.9 feet.

*Soil description modified following field work.
Original field log available upon request from ERI.

Casing Diameter: 2" Slot Size: .010 , Sand Size: 2/12 , Grout: Portland I/II

FN: 2248B006

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: MW6 Plate: APPENDIX

Site: Former Tosco 76 Service St. on 0843 Date: 12/8/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon Geologist: MARK S. DOCKUM

Drill Rig: B57 Bore Hole Diameter: 8" Signature: Mark S. Dockum

Location: 6.5 Feet from Curb 130 Feet North and 18 Feet East of Northeast Site Boundary Registration: R.G. 4412

Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" asphalt, 6" concrete	
						Fill, sand with some gravel	
5	8					no recovery	
						Sand with some silt, yellowish orange, (25% silt, 75% sand), very fine-grained, wet	
10	21	▼ 5			SM	same as above	
15	19	28				same as above	
20	80	3				same as above	
						Total depth at 21.5 feet. First encountered groundwater at 9.8 feet.	

Casing Diameter: 2" Slot Size: 0.010 , Sand Size: 2/12 , Grout: Portland I,II

FN: 22480006

Delta
Consultants

Project No:	C102349210	Client:	**ConocoPhillips**	Well No:	**MW-7**
Logged By:	Alan Buehler	Location:	**1629 Webster Street**	Date Drilled:	5/14/09
Driller:	**RSI Drilling**		**Alameda, California**	Page	**1** of **2**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"		
Sampling Method:	Split Spoon	Hole Depth:	30'		
Casing Type:	Sched. 40 PVC	Well Diameter:	2"		
Slot Size:	0.02	Well Depth:	29.7'		
Gravel Pack:	Filter Sand	First Water Depth:	9.5'		
Elevation		Northing		Easting	

▽ = First Water

▼ = Static Groundwater

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Well Box; Concrete Seal; 2"Sched. 40PVC Blank Casing	▼				Air-Knife	1–4				Silty sand with gravel; presence of non-native fill material (i.e. brick and railroad ties.)
		damp	14.0			5			SM	Silty sand with gravel; continued presence of non-native fill described above.
						6			SC	Clayey Sand; green to gray; slight odor.
			1530			8			SC	Same as above. Increased strong odor.
	▽	wet				9				
			1530		16:45 @ 10'	10			SC	Same as above.
						12			SC	Same as above. Less odor.
			72.0			15			SC	Same as above.
						17			SC	Same as above. Brown mottling noticed.
			9.5			20			SC	Same as above; no odor.
Bentonite Seal						22				

Delta
Consultants

Project No: C102349210
Logged By: Caitlin Morgan
Driller: **RSI Drilling**
Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Casing Type: Sched. 40 PVC
Slot Size: 0.02
Gravel Pack: Filter Sand

Client: **ConocoPhillips**
Location: **1629 Webster Street**
Alameda, California
Hole Diameter: 8"
Hole Depth: 30'
Well Diameter: 2"
Well Depth: 29.7'
First Water Depth: 9.5'

Well No: **MW-7**
Date Drilled: 5/14/09

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Filter Sand		Sat.	8.3		25			SC	Clayey sand; green to gray.
		Sat.	8.0		30			SC	Clayey sand; green to gray.
									Total Depth of Boring = 30 Feet Below Ground Surface (bgs)

23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44

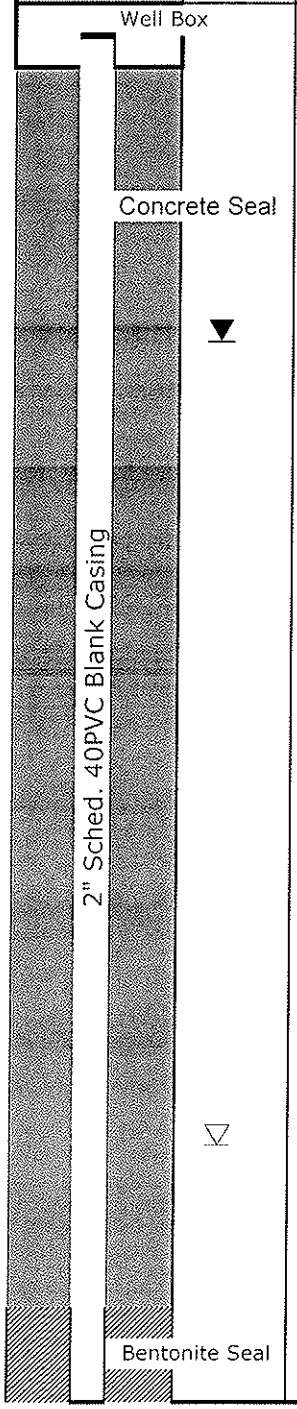
Delta
Consultants

Project No:	C102349210	Client:	**ConocoPhillips**
Logged By:	Caitlin Morgan	Location:	**1629 Webster Street**
Driller:	**RSI Drilling**		**Alameda, CA**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	30'
Casing Type:	Sched. 40 PVC	Well Diameter:	2"
Slot Size:	0.02	Well Depth:	29.5'
Gravel Pack:	Filter Sand	First Water Depth:	18'

Well No: **MW-8**
Date Drilled: 5/14/09

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting



Backfill / Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Depth (feet)	Recovery	Interval	Soil Type	LITHOLOGY / DESCRIPTION
					Air-Knife	1–4			SW	Well graded sand with clay and gravel, trace roots.
	▼	moist	0.2			5–7			SW	Well graded sand with clay and gravel, trace roots; dark brown.
		moist	0.2			8–9			SW-SM	Well graded sand with silt, trace clay. More moist than above.
		moist	0.2			10–14			SW-SM	Same as above. Slight odor.
		wet	3.1		12:36 @ 15'	15–16			SC	Clayey sand, trace roots; gray; more moist than above; slight odor.
						17			SC	Same as above. Some brown mottling; less clay.
	▽	sat.				18–19			SW-SM	Well graded sand with silt, trace clay.
		sat.	0.5			20–22			SW-SM	Same as above. Less mottling.

Delta
Consultants

Project No: C102349210
Logged By: Caitlin Morgan
Driller: **RSI Drilling**
Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Casing Type: Sched. 40 PVC
Slot Size: 0.02
Gravel Pack: Filter Sand

Client: **ConocoPhillips**
Location: **1629 Webster Street**
Alameda, California
Hole Diameter: 8"
Hole Depth: 30'
Well Diameter: 2"
Well Depth: 29.5'
First Water Depth: 18'

Well No: **MW-8**
Date Drilled: 5/14/09

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Filter Sand		sat.	0.4		25			SW-SM	Same as above.
		sat.	0.4		29			SW-SM	Same as above.
					30				**Total Depth of Boring = 30 Feet Below Ground Surface (bgs)**
					23, 24, 26, 27, 28, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44				

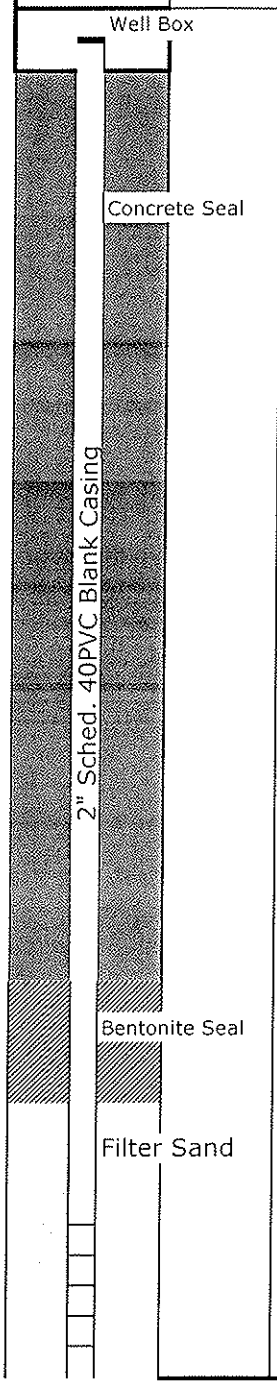
Delta
Consultants

Project No:	C102349210	Client:	**ConocoPhillips**	Well No:	**MW-9**
Logged By:	Caitlin Morgan	Location:	**1629 Webster Street**	Date Drilled:	5/13/09
Driller:	**RSI Drilling**		**Alameda, California**	Page	**1** of **2**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"		
Sampling Method:	Split Spoon	Hole Depth:	25'		
Casing Type:	Sched. 40PVC	Well Diameter:	8"		
Slot Size:	0.02	Well Depth:	24.8'		
Gravel Pack:	Filter Sand	First Water Depth:	N/A		

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting



Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
			Air-Knife	1–4			SW-SM	Well graded sand with silt and gravel; brown.
moist	18			5–9			SW-SM	Well graded sand with silt and gravel, trace clay, trace wood chips; brown to light brown.
moist	2105		MW-9 @10' 14:40	10–14			SW-SC	Same as above; more clay. Greenish gray; strong petroleum hydrocarbon odor.
moist	520			15–18			SW-SC	Same as above; brown w/ some greenish gray; less odor from the sample itself however at this point drillers note strong petroleum hydrocarbon odor coming from borehole. PID of 12.0 was obtained from above the open borehole/auger.
sat.	183			19–22			SW-SM	Well graded sand with silt, trace clay; brown to light brown; moist; low odors.

Delta
Consultants

Project No: C102349210
Logged By: Caitlin Morgan
Driller: **RSI Drilling**
Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Casing Sched. 40PVC
Slot Size: 0.02
Gravel Pack: Filter Sand

Client: **ConocoPhillips**
Location: **1629 Webster Street**
Alameda, California
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 24.8'
First Water Depth: N/A

Well No: **MW-9**
Date Drilled: 5/13/09

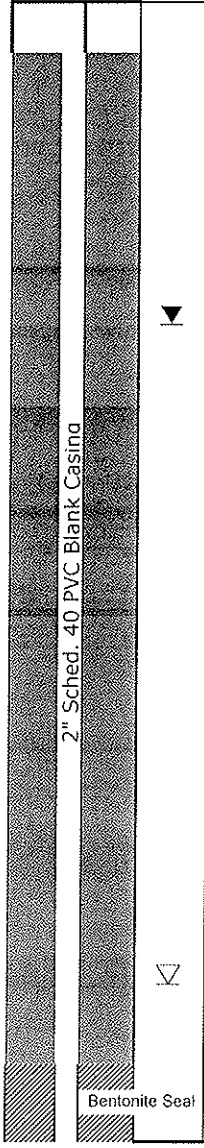
▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
		sat.			23			**SW-SM**	Well graded sand with silt, trace clay; brown to light brown; moist; low odors.
					24				
					25				**Total Depth of Boring = 25 Feet Below Ground Surface (bgs)**
					26				
					27				
					28				
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta Consultants

Project No:	C102349210	Client: **ConocoPhillips**	Well No: **MW-10**
Logged By:	Caitlin Morgan	Location: **1629 Webster Steet**	Date Drilled: 5/20/09
Driller: **RSI Drilling**		**Alameda, California**	Page **1** of **2**
Drilling Method:	Geoprobe	Hole Diameter: 8"	
Sampling Method:	Direct Push	Hole Depth: 30'	▽ = First Water
Casing Type:	Sched. 40 PVC	Well Diameter: 2"	▼ = Static Groundwater
Slot Size:	0.02	Well Depth: 30'	
Gravel Pack:	Filter Sand	First Water Depth: 19'	
Elevation		Northing	Easting



Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
				Air-Knife	1				Silty sand; trace clay and gravel.
					2				
					3				
					4				
	moist	23.0			5				**SC** Clayey sand; brown; fine to medium fine; medium plasticity; firm; slight odor.
▼					6				
					7				
					8				**SP-SC** Poorly graded sand with clay; brown with some gray; medium plasticity; soft; slight odor.
					9				
	moist	57.4		9:23 @ 10'	10				**SP-SM** Poorly graded sand with silt; fine grained; low plasticity; soft; odor more prevalent.
					11				
					12				
					13				
					14				**SP-SC** Same as at 8-feet.
	damp	0			15				**SP-SM** Same as at 10-feet. More moisture; no odor.
					16				
					17				*** Drillers indicate presence of heaving sands.
					18				
					19				
▽					20				
	sat.	3			21				**SM** Silty sand; brown.
					22				

Delta
Consultants

Project No:	C102349210	Client: **ConocoPhillips**	Well No: **MW-10**
Logged By:	Caitlin Morgan	Location: **1629 Webster Street**	Date Drilled: 5/20/2009
Driller: **RSI Drilling**		**Alameda, California**	Page **2** of **2**
Drilling Method:	Geoprobe	Hole Diameter: 8"	
Sampling Method:	Direct Push	Hole Depth: 30"	▽ = First Water
Casing Type:	PVC	Well Diameter: 2"	▼ = Static Groundwater
Slot Size:	0.02	Well Depth: 30'	
Gravel Pack:	Filter Sand	First Water Depth: 19'	
Elevation		Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
		Sat.	2.9		24			SM	Continued heaving sands.
		Sat.	2.3		29			SM	Same as above.
					30				**Total Depth of Boring= 30 Feet Below Ground Surface (bgs)**
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

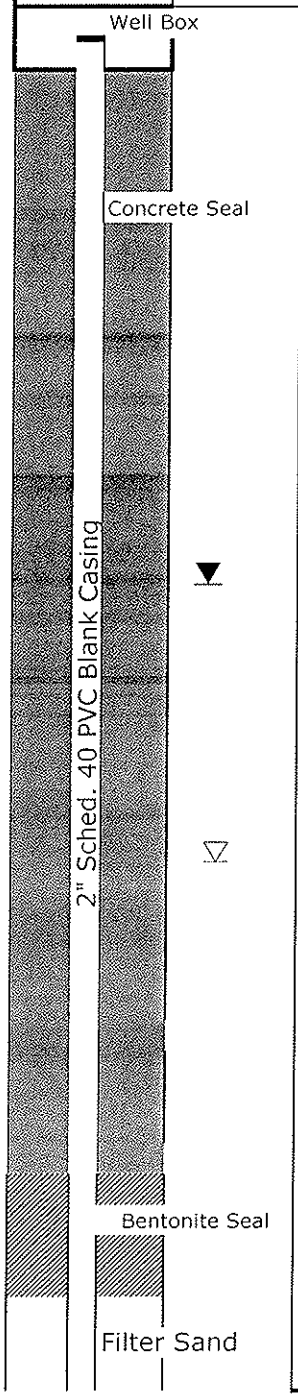
Delta
Consultants

Project No:	C102349210	Client:	**ConocoPhillips**
Logged By:	Caitlin Morgan	Location:	**1620 Webster Street**
Driller:	**RSI Drilling**		**Alameda, California**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	28'
Casing Type:	Sched. 40 PVC	Well Diameter:	2"
Slot Size:	0.02	Well Depth:	28.0'
Gravel Pack:	Filter Sand	First Water Depth:	14'
Elevation		Northing	Easting

Well No: **MW-11**
Date Drilled: 5/15/09

▽ = First Water

▼ = Static Groundwater



Depth (feet)	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Recovery	Interval	Soil Type	LITHOLOGY / DESCRIPTION
1–5				Air-Knife			SW-SM	Sandy clay, trace silt; brown to light brown; trace organics, also debris/fill including ceramic kitchenware.
5	dry	0.0					SC	Clayey sand with gravel; light brown, trace roots.
7	moist	0.0					SW-SM	Well graded sand with silt and gravel; brown.
10	moist	18.3		9:15 @ 10'			SC	Clayey sand with silt; gray; slight odor.
15	damp	3.4					SC	Same as above.
17							SC	Same as above; slight petroleum hydrocarbon odor.
20	sat.	1.5					SC	Same as above.

Delta
Consultants

Project No:	C102349210	Client: **ConocoPhillips**	Well No: **MW-11**
Logged By:	Caitlin Morgan	Location: **1629 Webster Street** Alameda, California	Date Drilled: 5/15/09
Driller: **RSI Drilling**			Page **2** of **2**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	25'
Casing Type:	Sched. 40 PVC	Well Diameter:	2"
Slot Size:	0.02	Well Depth:	28"
Gravel Pack:	Filter Sand	First Water Depth:	14'

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

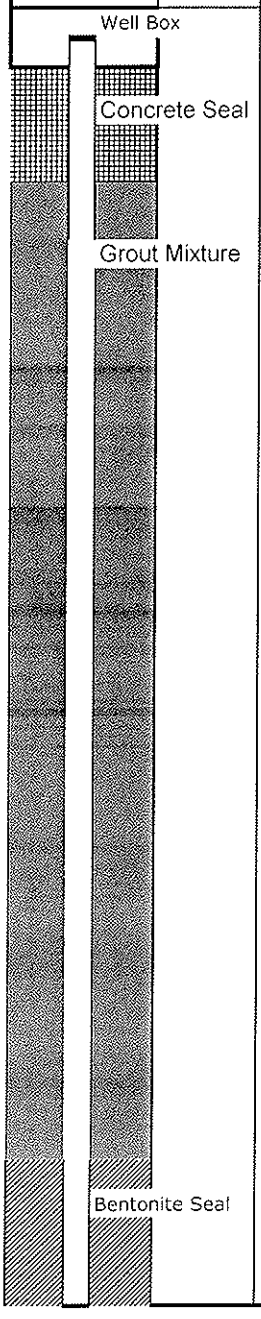
Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
		sat.	1.3		23–27			SC	Sandy clay with silt; gray; slight odor.
					28				**Total Depth of Boring = 28 Feet Below Ground Surface (bgs)**
					29–44				

Delta
Consultants

Project No:	C102349210	Client:	**ConocoPhillips**
Logged By:	Alan Buehler	Location:	**1629 Webster Street**
Driller:	**RSI Drilling**		**Alameda, California**
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	30.5' bgs
Casing Type:	Sched. 40 PVC	Well Diameter:	3/4"
Slot Size:	0.020	Well Depth:	30'
Gravel Pack:	Filter Pack	First Water Depth:	N/A
Elevation		Northing	Easting

Well No: **TSP-1**
Date Drilled: 5/14/2009

▽ = First Water
▼ = Static Groundwater



Depth (feet)	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Sample Identification	Recovery	Interval	Soil Type	LITHOLOGY / DESCRIPTION
1–4				Air-Knife				
5	moist	0.4					SW	Well graded sand, trace fine gravel; brown.
8–9	moist						SW-SM	Fine to medium sand, with trace silt; light brown.
10–11		0.3					SW-SM	Same as above; trace clay.
12	wet						SM	Silty sand; medium firmness.
15		0.5					SM	Same as above.
20	sat.	3.2	9:10 @ 20'				SM	Same as above.
22								*** Encountered heaving sands to total depth explored.

Delta
Consultants

Project No:	C102349210	Client: **ConocoPhillips**	
Logged By:	Alan Buehler	Location: 1629 Webster Street	
Driller: **RSI Drilling**		**Alameda, California**	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8"
Sampling Method:	Split Spoon	Hole Depth:	30.5'
Casing Type:	Sched. 40 PVC	Well Diameter:	3/4"
Slot Size:	0.020	Well Depth:	30'
Gravel Pack:	Filter Sand	First Water Depth:	N/A

Well No: **TSP-1**
Date Drilled: 5/14/09

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Well Completion: Backfill	Well Completion: Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
						23				
						24				
						25				*** Encountered heaving sands to total depth explored.
						26				
						27				
						28				
						29				
						30				
						31				**Total depth of boring= 30.5' bgs**
						32				
						33				
						34				
						35				
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Sugar Sand

Project No.: 224803 Boring: GP1 Plate: 1 OF 1
Site: Former Tosco 76 Service Station 0843 Date: 5/23/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct-Push Geologist: John B. Bobbitt
Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature:
Location: Western side of Webster Street on southern property line Registration: R.G. 4313
Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
5		0			SP	Sand, medium-grained, brown, well sorted, trace of silt, wet at 4 feet	
10							
						Total depth at 12 feet bgs.	
						Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A , Sand Size: N/A , Grout: Portland I, II

FN: 2248gp1

Project No.: 224803 Boring: GP2 Plate: 1 OF 1
Site: Former Tosco 76 Service Station 0843 Date: 5/23/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct-Push Geologist: John B. Bobbitt
Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature:
Location: Approximately 60 feet north of GP1 Registration: R.G. 4313
Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
					SP		
5		0 ▽				Sand medium-grained, brown, well sorted, trace of silt, wet at 5 feet	
						6 to 8 feet slightly stained blue-green	
						Same, brown	
10		0					
						Total depth at 12 feet bgs.	
						Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A , Sand Size: N/A , Grout: Portland I/II

FN: 2248gw2

Project No.: 224803 Boring: GP3 Plate: 1 OF 1

Site: Former Tosco 76 Service Station 0843 Date: 5/23/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct-Push Geologist: John B. Bobbitt

Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature:

Location: Adjacent to curb on Southwest corner of Webster Street and Pacific Avenue Registration: R.G. 4313

Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
					SP		
5		0 ▽				Sand, medium-grained, brown, well sorted, trace of silt, wet at 5 feet	
						At 6 feet blue-green color	
10						Unable to get soil from sampler	
						Total Depth 12 feet	
						Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A , Sand Size: N/A , Grout: Portland I/II

FN: 2248gp3

Project No.: 224803 Boring: GP4 Plate: 1 OF 1
Site: Former Tosco 76 Service Station 0843 Date: 5/23/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct-Push Geologist: John R. Robbitt
Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature:
Location: Adjacent to th curb on southern side of Pacific Avenue Registration: R.G. 4313
Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6 inch asphalt	
					SP		
5		0 ▽				Sand, medium-grained, well-sorted, trace of silt, wet at 5 feet, at 6 feet green color	
						Same, at 8 feet brown color	
10		124				Same	
						Total depth at 12 feet bgs.	
						Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A , Sand Size: N/A , Grout: Portland I/II

FN: 8248gp4

Project No.: 224803 Boring: GP5 Plate: 1 OF 1
Site: Former Tosco 76 Service Station 0843 Date: 5/23/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct-Push Geologist: John P. Bobbitt
Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature:
Location: Adjacent to curb on northern side of Pacific Avenue Registration: R.G. 4313
Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
					SP		
5		0 ▽				Sand, medium-grained, brown, well-sorted, trace of silt, wet at 5 feet	
						Bluish-green at 6 feet, strong odor	
10		106					
						Total depth at 12 feet bgs.	
						Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A , Sand Size: N/A , Grout: Portland I/II

FN: 2248gp5

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP6 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 7' South of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (PPM)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
					FL	Fill to 3'	
5	▽				SP	Sand: fine grained, brown, damp, sub-rounded poorly graded wet at 7' blueish gray from 7' to 8'	
10						Total depth: 8 feet	

Casing Diameter: NA Slot Size: NA, Sand Size: NA, Grout: Portland I,II

FN: 2248GP6

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP7 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 7' West of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5		0			SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded	
	▽	0				wet	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I/II

FN: 2248GP7

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP8 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 7' North of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						Sand: fine grained, brown, damp, sub-rounded, poorly graded	
		0			SP		
5							
	▽	0				wet at 6.5'	
						blueish green from 7' to 8'	
						Total depth = 8 feet	
10							

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I,II

FN: 2248GP8

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP9 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Babbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 7' East of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5	▽				SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded wet at 6.5' blueish green from 7' to 8'	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I,II

FN: 2248GP9

Project No.: 2248 Boring: GP10 Plate: 1 OF 1

Site: Former Tosco Service Station 0843 Date: 12/4/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt

Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:

Location: 15' South of MW2 Registration: R.G. 4313

Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
					FL	Fill to 3'	
		0				Sand: fine grained, brown, damp sub-rounded poorly graded	
5					SP		
	▽	0				wet at 7' slight blue-green staining from 7' to 8'	
						Total depth = 8 feet	
10							

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I/II

FN: 2248GP10

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP11 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 15' West of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
					SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded	
5		0					
	▽	0				wet at 7' slight blue-green staining from 7' to 8'	
						Total depth = 8 feet	
10							

Casing Diameter: NA Slot Size: NA, Sand Size: NA, Grout: Portland I,II

FN: 2248GP11

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP12 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Babbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 15' North of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0						Sand: fine grained, brown, damp, sub-rounded, poorly graded	
5	▽				SP	wet at 6.5' blueish green at 7'	
10							
15						brown at 15'	
						Total depth = 16 feet	

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I,II

FN: 2248GP12

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP13 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 15' East of MW2 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5	▽				SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded wet at 7' slight blueish green from 7' to 8'	
10						Total depth = 8 feet	
15							

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I,II

FN: 2248GP13

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP14 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Babbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 10' Southeast of MW4 Registration: R.G. 4313
Logged by: Rob A. Saur

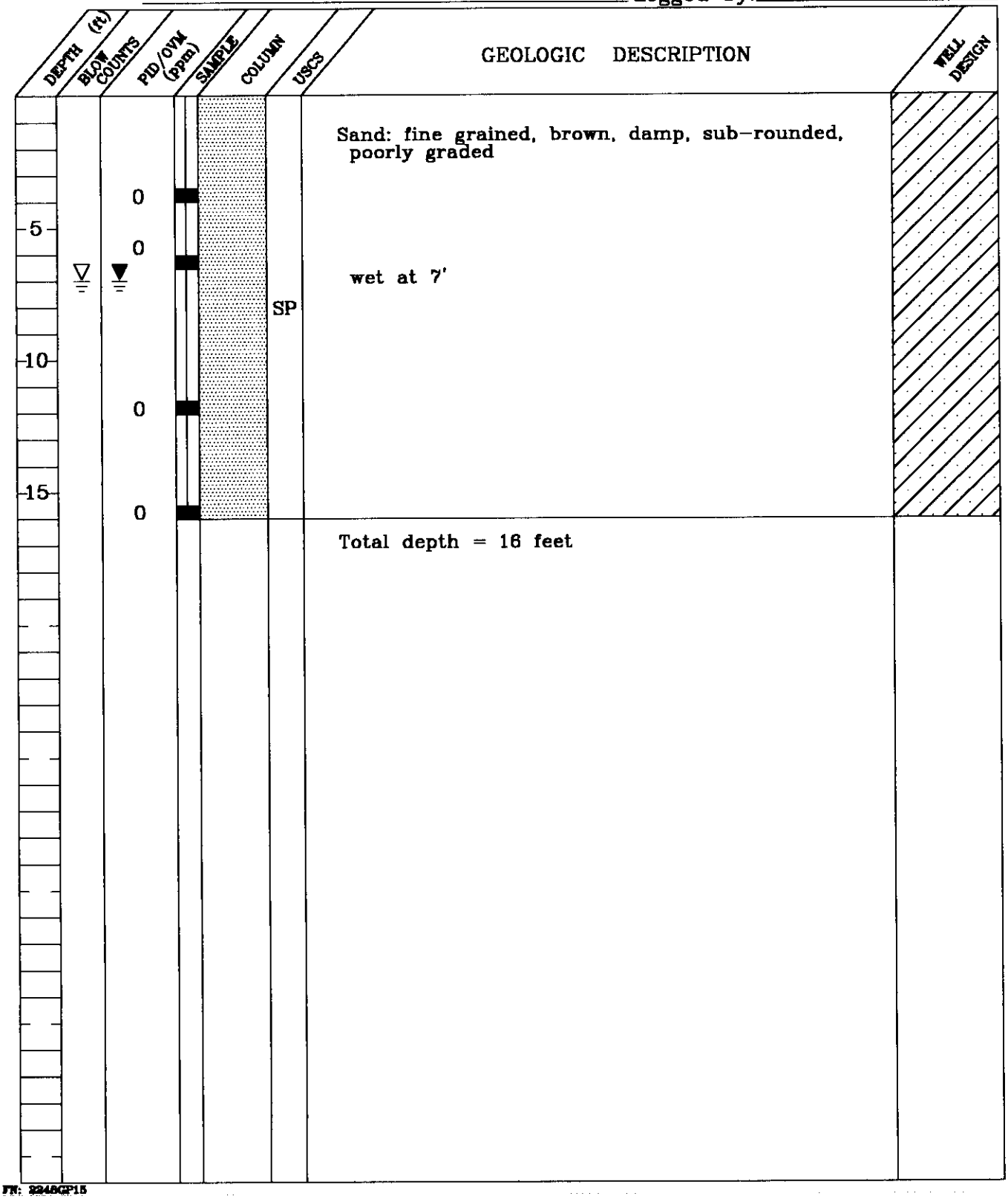
DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5		0			SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded	
	▽	▼0				wet at 7.5'	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I,II

FN: 2248GP14

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP15 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Robbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 30' Southeast of MW4 Registration: R.G. 4313
Logged by: Rob A. Saur



Casing Diameter: NA Slot Size: NA, Sand Size: NA, Grout: Portland I,II

FN: 2248GP15

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP16 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 30' Southwest of MW1 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
		0			SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded	
5	▽	0				wet at 7'	
10		0				very slight blueish-green tint from 10' to 11' brown	
15		0				Total depth = 16 feet	

Casing Diameter: NA Slot Size: NA , Sand Size: NA , Grout: Portland I,II

FN: 2248GP16

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: GP17 Plate: 1 OF 1
Site: Former Tosco Service Station 0843 Date: 12/4/01
Drill Contractor: Gregg Drilling & Testing, Inc.
Sample Method: Direct Push Geologist: John B. Bobbitt
Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature:
Location: 10' Southeast of MW3 Registration: R.G. 4313
Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (Ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5	▽				SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded wet at 7'	
10						Total depth = 8 feet	

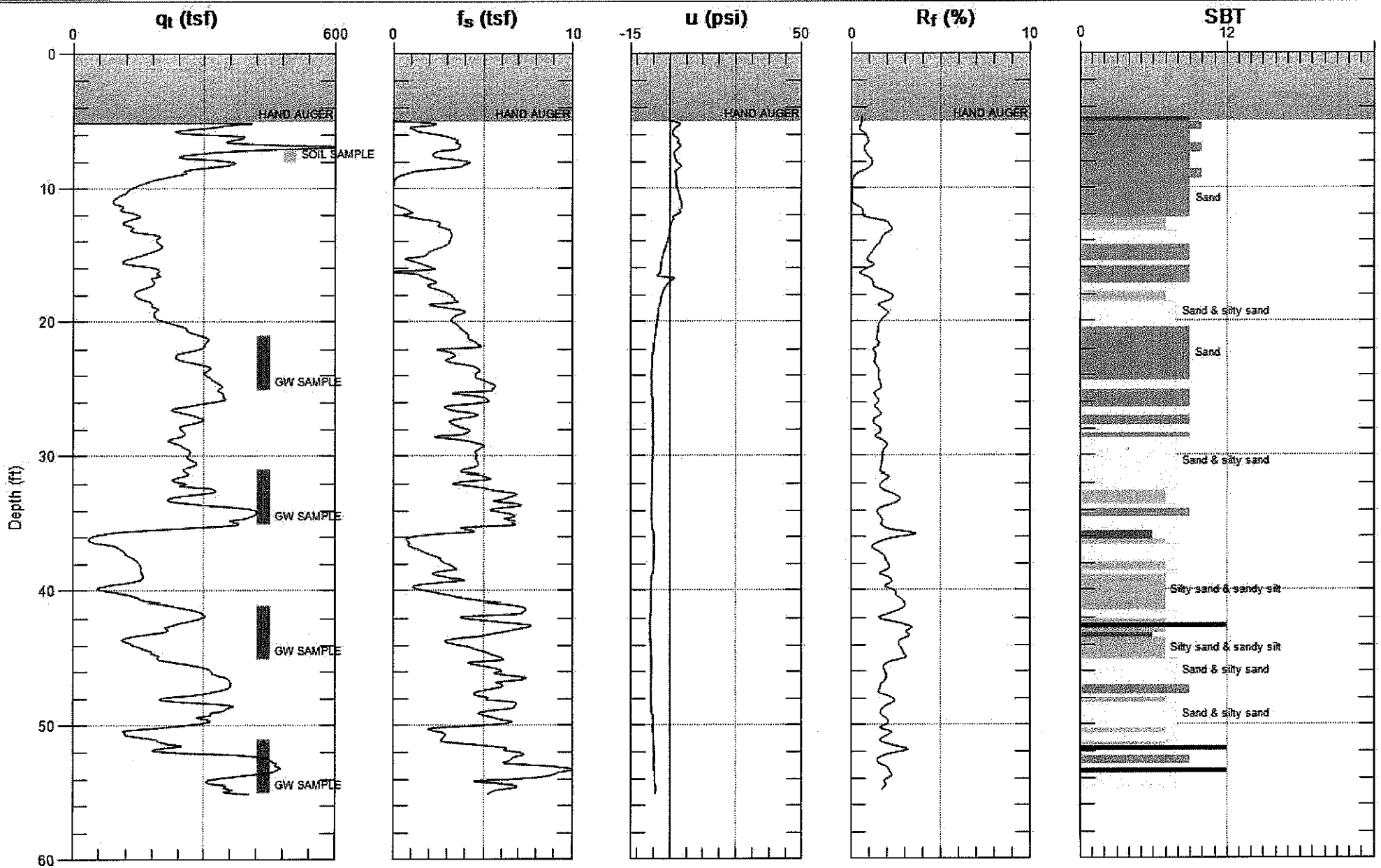
Casing Diameter: NA Slot Size: NA, Sand Size: NA, Grout: Portland I,II

FN: 2248GP17

DELTA CONSULTANTS

Site: 0843 ALAMEDA
Sounding: CPT-01

Engineer: J.WELSH
Date: 8/14/2008 08:21



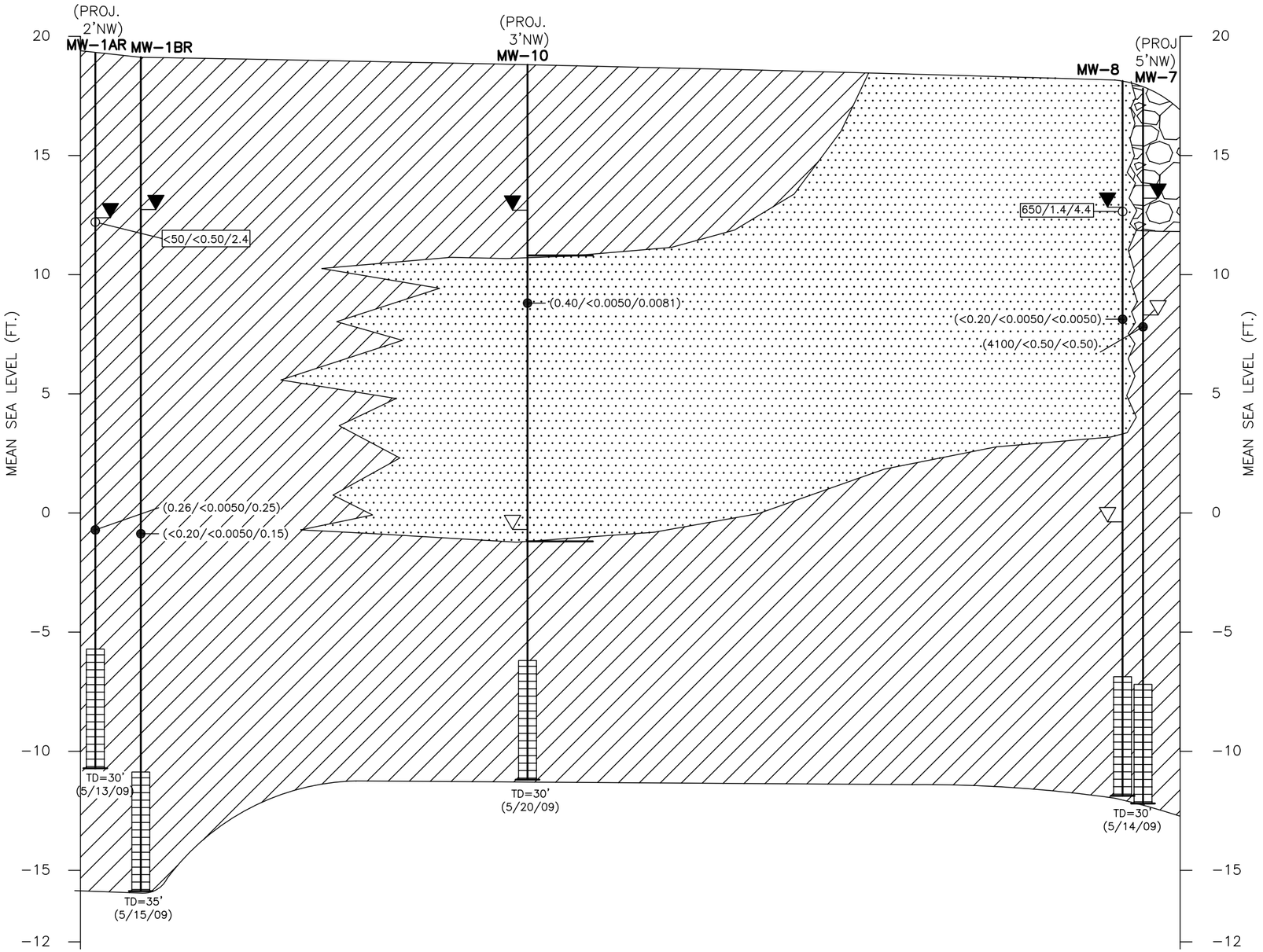
Max. Depth: 55.118 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX B

Historical Geologic Cross Sections

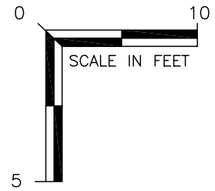
SOUTHWEST A — NORTHEAST A'

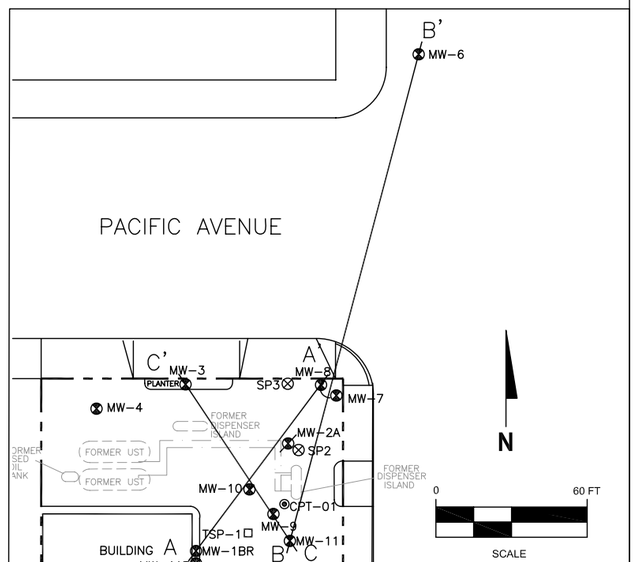


NOTES:

1) <0.50=NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
TPPH=TOTAL PURGEABLE PETROLEUM HYDROCARBONS
MTBE=METHYL TERT BUTYL ETHER
ug/L=MICROGRAMS PER LITER
mg/kg=MILLIGRAMS PER KILOGRAM

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.





LEGEND

- MW-1 — BORING/MONITORING WELL NAME
- EXPLORATORY BORING/WELL CASING
- SOIL SAMPLE LOCATION
- WELL SCREEN
- TD=30' (5/13/09) — TOTAL DEPTH / DRILLING DATE
- DEPTH TO STATIC GROUNDWATER
- DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING
- (0.26/<0.0050/0.25) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (mg/kg)
- <50/<0.50/2.4 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (ug/L)
- FILL
- MEDIUM PERMEABILITY (SM, SC)
- HIGH PERMEABILITY (SW, SW-SM, SW-SC, SP, SP-SC, SP-SM)
- APPROXIMATE STRATIGRAPHIC BOUNDARY

FIGURE 3
GEOLOGIC CROSS SECTION A-A'

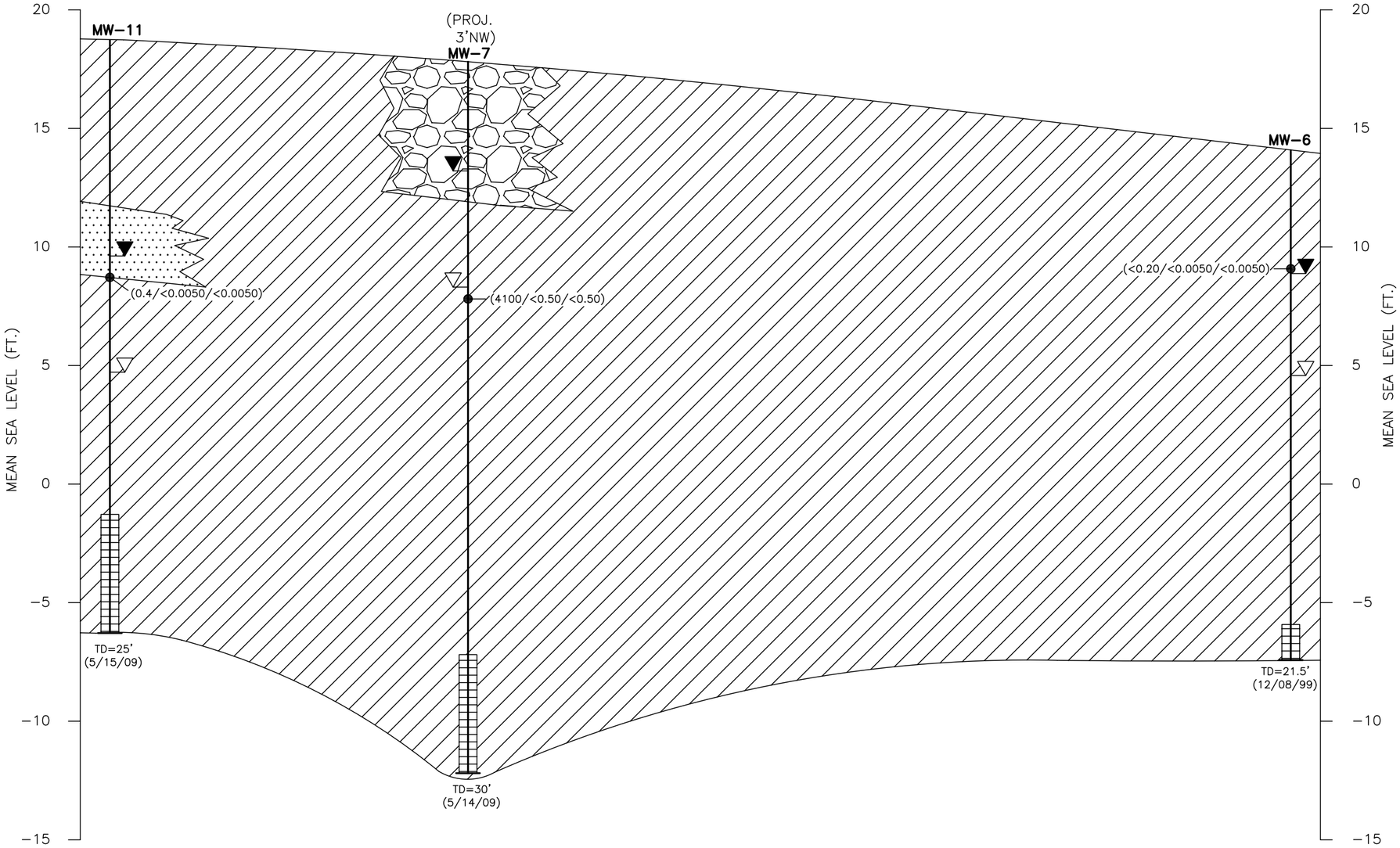
FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	CM	JH
DATE	REVIEWED BY	FILE NAME
06/10/09	JB	76-0843

DELTA®

SOUTH B

NORTH B'

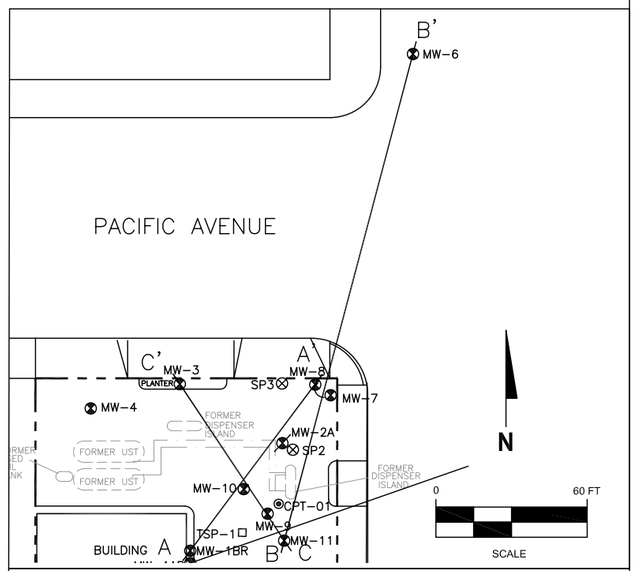


NOTES:

1) <0.50=NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
NA=NOT ANALYZED
TPPH=TOTAL PURGEABLE PETROLEUM HYDROCARBONS
MTBE=METHYL TERT BUTYL ETHER
ug/L=MICROGRAMS PER LITER
mg/kg=MILLIGRAMS PER KILOGRAM

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

0 20
SCALE IN FEET
5



LEGEND

MW−1
TD=30'
(5/13/09)
BORING/MONITORING WELL NAME
EXPLORATORY BORING/WELL CASING
SOIL SAMPLE LOCATION
WELL SCREEN
TOTAL DEPTH
DRILLING DATE

DEPTH TO STATIC GROUNDWATER
DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING

(0.26/<0.0050/0.25)
SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (mg/kg)

<50/<0.50/2.4
GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (ug/L)

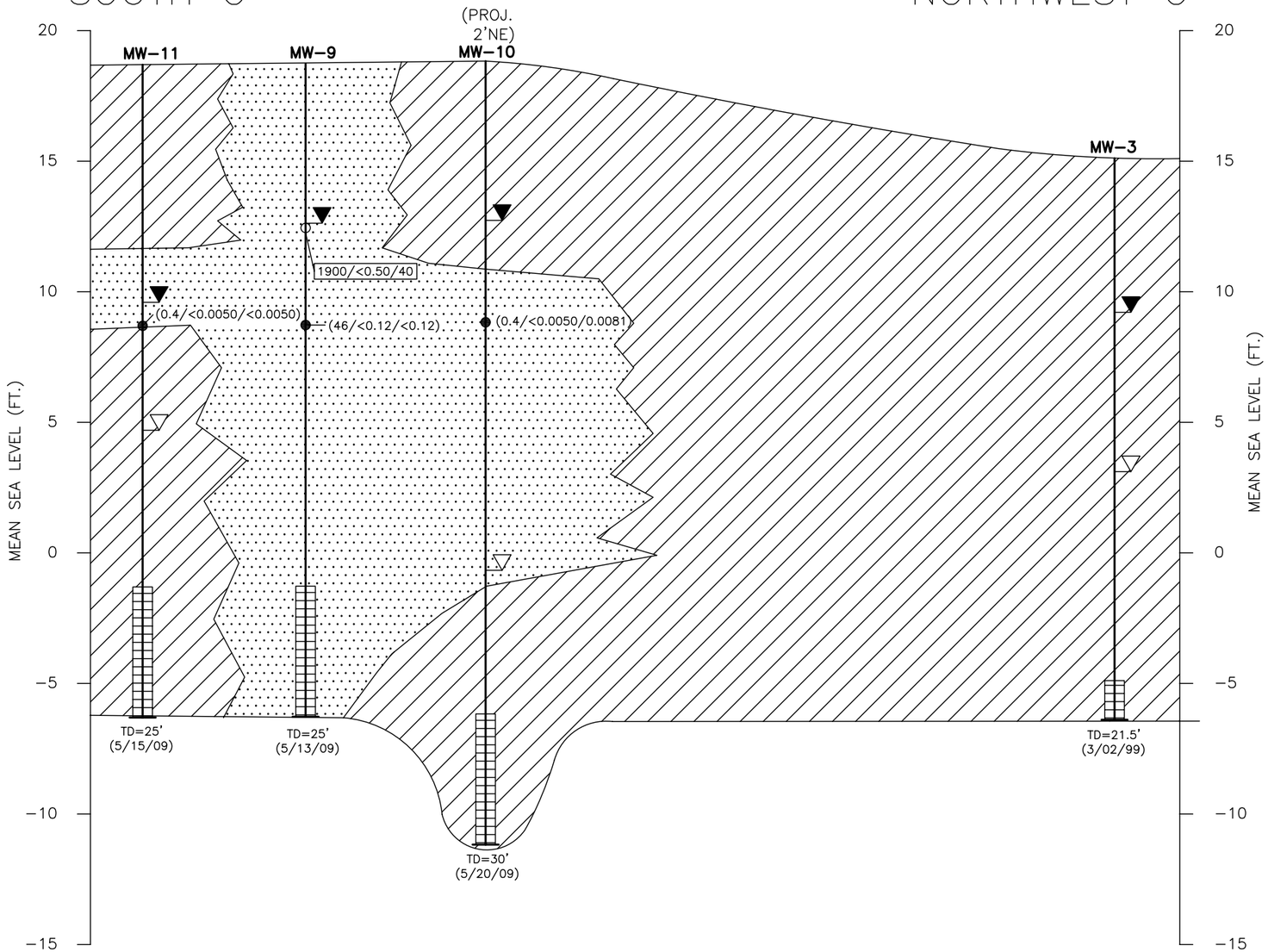
FILL
MEDIUM PERMEABILITY (SM, SC)
HIGH PERMEABILITY (SW, SW−SM, SW−SC, SP, SP−SC, SP−SM)
APPROXIMATE STRATIGRAPHIC BOUNDARY

FIGURE 9A
GEOLOGIC CROSS SECTION B−B'

FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	CM	JH
DATE	REVIEWED BY	FILE NAME
07/06/09	JB	76−0843

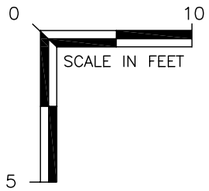
DELTA®

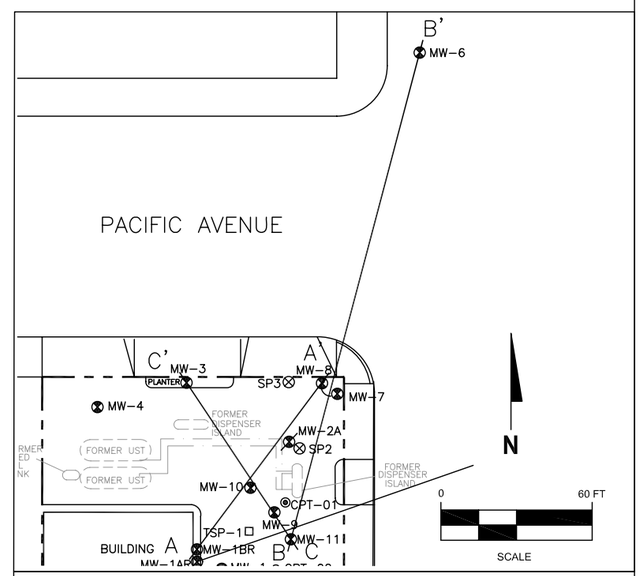


NOTES:

1) <0.50=NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
NA=NOT ANALYZED
TPPH=TOTAL PURGEABLE PETROLEUM HYDROCARBONS
MTBE=METHYL TERT BUTYL ETHER
ug/L=MICROGRAMS PER LITER
mg/kg=MILLIGRAMS PER KILOGRAM

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.





LEGEND

MW-1 — BORING/MONITORING WELL NAME

EXPLORATORY BORING/WELL CASING

SOIL SAMPLE LOCATION

WELL SCREEN

TD=30' (5/13/09) — TOTAL DEPTH DRILLING DATE

DEPTH TO STATIC GROUNDWATER

DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING

(0.26/<0.0050/0.25) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (mg/kg)

<50/<0.50/2.4 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (ug/L)

MEDIUM PERMEABILITY (SM, SC)

HIGH PERMEABILITY (SW, SW-SM, SW-SC, SP, SP-SC, SP-SM)

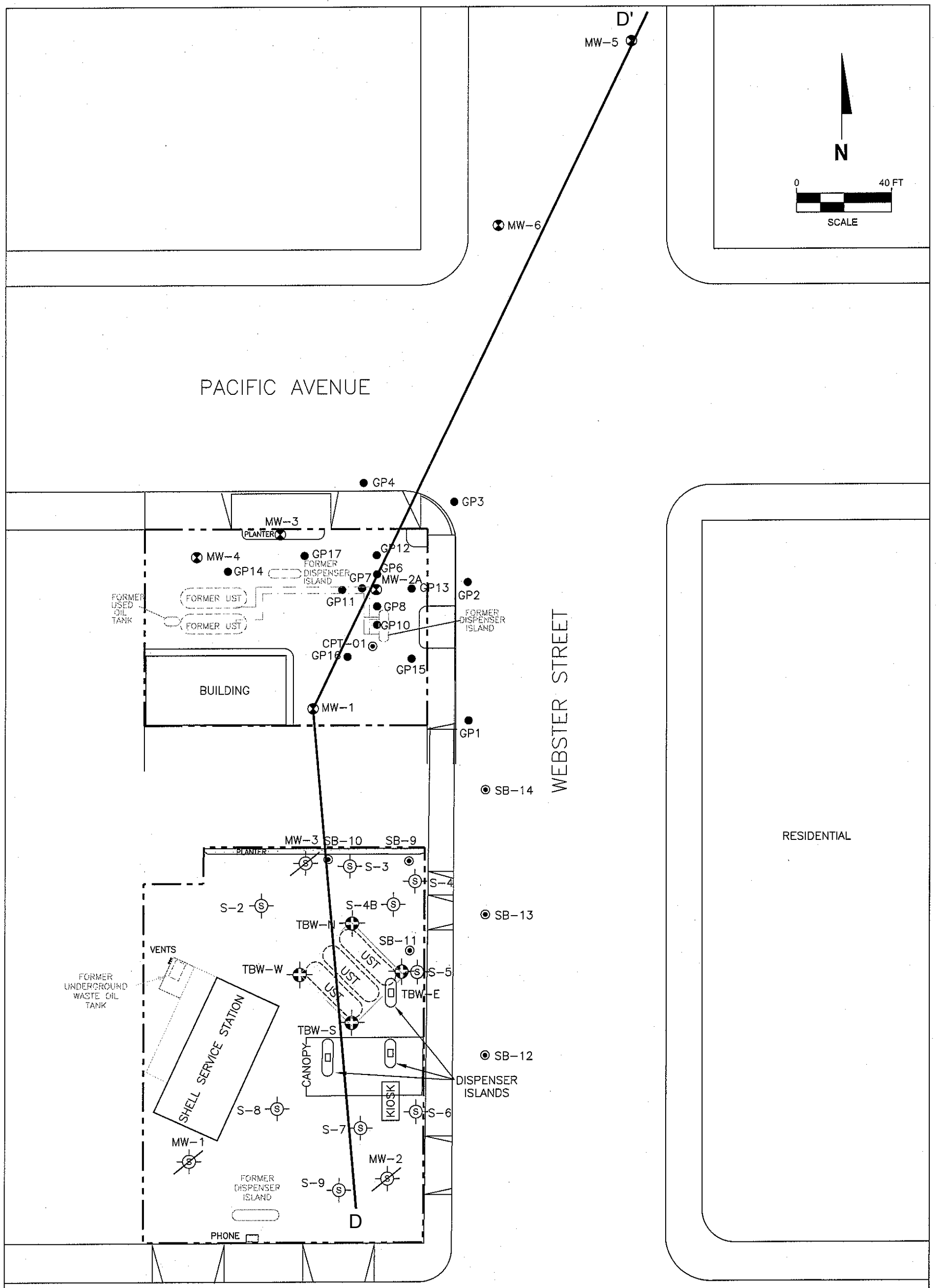
APPROXIMATE STRATIGRAPHIC BOUNDARY

FIGURE 9B
GEOLOGIC CROSS SECTION C-C'

FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	CM	JH
DATE	REVIEWED BY	FILE NAME
07/06/09	JB	76-0843

DELTA®



LEGEND:

- PROPERTY BOUNDARY
- FORMER PRODUCT LINE
- FORMER 76 MONITORING WELL
- SHELL MONITORING WELL
- DESTROYED SHELL MONITORING WELL
- TANK BACKFILL WELL
- DIRECT–PUSH SOIL BORING
- CPT SOIL BORING

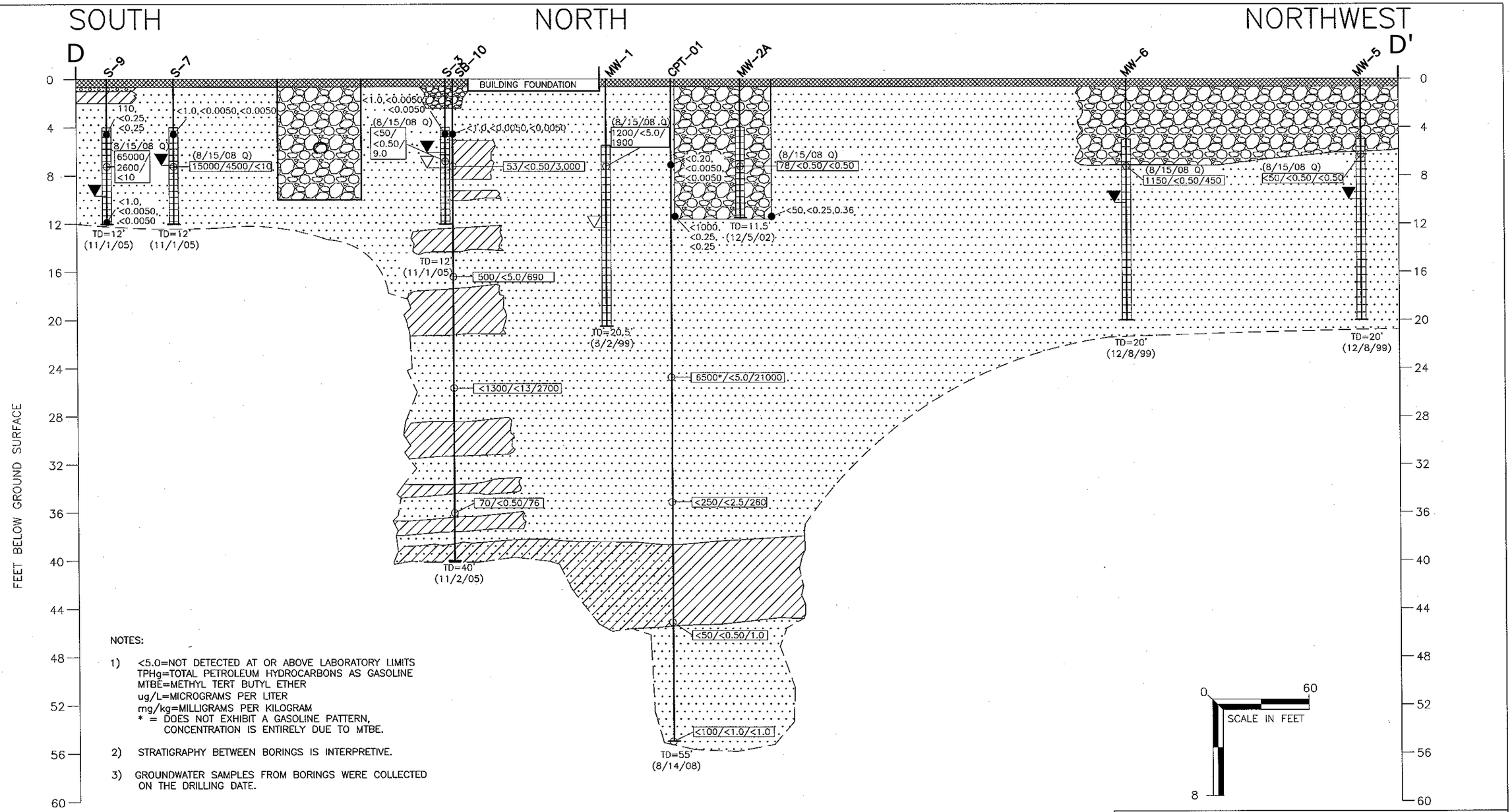
PLAN ADAPTED FROM A DRAWING DATED 9/18/08
TITLED "SITE PLAN" PREPARED BY TRC.

FIGURE 2
SITE PLAN

FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	DD	JH
DATE	REVIEWED BY	FILE NAME
10/22/08	DD	76–0843

DELTA®



NOTES:

1) <5.0=NOT DETECTED AT OR ABOVE LABORATORY LIMITS
TPHg=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE=METHYL TERT BUTYL ETHER
ug/L=MICROGRAMS PER LITER
mg/kg=MILLIGRAMS PER KILOGRAM
* = DOES NOT EXHIBIT A GASOLINE PATTERN, CONCENTRATION IS ENTIRELY DUE TO MTBE.

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS WERE COLLECTED ON THE DRILLING DATE.

LEGEND

MW-7
TD=41.5' (11/30/06)
MONITORING WELL/BORING NAME

WELL CASING/EXPLORATORY BORING

SOIL SAMPLE LOCATION

WELL SCREEN

TOTAL DEPTH (DRILLING DATE)

DEPTH TO STATIC GROUNDWATER

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

<5.0,<0.5,<0.5 ● SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (mg/kg)

<50/<5.0/<5.0 GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (ug/L)

(8/15/08 Q) MONITORING WELL GROUNDWATER SAMPLE DATE

ASPHALT

FILL/ROAD BASE

GRAVEL

FINE GRAINED (SILT AND/OR CLAY)

SAND

APPROXIMATE STRATIGRAPHIC BOUNDARY

FIGURE 3
CROSS SECTION D-D'

FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C100843	DD	JH
DATE	REVIEWED BY	FILE NAME
10/22/08	DD	0843-CrossA

DELTA®

APPENDIX C

Historical Groundwater Monitoring and Sampling Analytical Results

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

March 1999 Through February 2010

Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1			**(Screen Interval in feet: 4.5-20.5)**											
3/5/99	16.18	--	--	--	--	86.6	--	ND	2.04	ND	4.06	--	23.9	
6/3/99	16.18	6.24	0.00	9.94	--	ND	--	ND	ND	ND	ND	ND	ND	
9/2/99	16.18	7.19	0.00	8.99	-0.95	ND	--	ND	ND	ND	ND	ND	ND	
12/14/99	16.18	8.07	0.00	8.11	-0.88	ND	--	ND	ND	ND	ND	ND	--	
3/14/00	16.18	5.47	0.00	10.71	2.60	ND	--	ND	ND	ND	ND	ND	--	
5/31/00	16.18	6.22	0.00	9.96	-0.75	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	16.18	6.82	0.00	9.36	-0.60	ND	--	ND	ND	ND	ND	ND	--	
12/1/00	16.18	7.54	0.00	8.64	-0.72	ND	--	ND	ND	ND	ND	ND	--	
3/17/01	16.18	5.73	0.00	10.45	1.81	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	16.18	6.43	0.00	9.75	-0.70	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	16.18	7.12	0.00	9.06	-0.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	16.18	6.89	0.00	9.29	0.23	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/02	16.18	5.61	0.00	10.57	1.28	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	16.18	5.71	0.00	10.47	-0.10	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
9/3/02	16.18	--	--	--	--	--	--	--	--	--	--	--	--	Not monitored/sampled
12/12/02	16.18	7.80	0.00	8.38	--	--	--	--	--	--	--	--	--	No longer sampled
3/13/03	16.18	5.94	0.00	10.24	1.86	--	--	--	--	--	--	--	--	
6/12/03	16.18	6.10	0.00	10.08	-0.16	--	--	--	--	--	--	--	--	
9/12/03	16.18	6.65	0.00	9.53	-0.55	--	--	--	--	--	--	--	--	
12/31/03	16.18	5.74	0.00	10.44	0.91	--	--	--	--	--	--	--	--	Monitored only
2/12/04	16.18	6.02	0.00	10.16	-0.28	--	--	--	--	--	--	--	--	Monitored only
6/7/04	16.18	6.61	0.00	9.57	-0.59	--	--	--	--	--	--	--	--	Monitored only

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1 continued														
9/17/04	16.18	7.58	0.00	8.60	-0.97	--	--	--	--	--	--	--	--	Sampled Q1 only
12/11/04	16.18	6.49	0.00	9.69	1.09	--	--	--	--	--	--	--	--	Sampled Q1 only
3/15/05	16.18	5.28	0.00	10.90	1.21	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	
5/17/05	16.18	5.83	0.00	10.35	-0.55	--	--	--	--	--	--	--	--	Sampled Q1 only
7/27/05	16.18	6.52	0.00	9.66	-0.69	--	--	--	--	--	--	--	--	Sampled Q1 only
11/23/05	16.18	7.28	0.00	8.90	-0.76	--	--	--	--	--	--	--	--	Sampled Q1 only
2/24/06	16.18	6.60	0.00	9.58	0.68	--	910	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5100	
5/30/06	16.18	6.48	0.00	9.70	0.12	--	--	--	--	--	--	--	--	Sampled Q1 only
8/30/06	16.18	9.51	0.00	6.67	-3.03	--	--	--	--	--	--	--	--	Sampled Q1 only
11/22/06	16.18	7.05	0.00	9.13	2.46	--	220	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	420	
2/23/07	16.18	6.40	0.00	9.78	0.65	--	1300	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	1700	
5/18/07	16.18	6.65	0.00	9.53	-0.25	--	2300	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	3300	
8/10/07	16.18	7.26	0.00	8.92	-0.61	--	4100	ND<25	ND<25	ND<25	ND<25	--	4300	
11/9/07	16.18	7.40	0.00	8.78	-0.14	--	5700	ND<25	ND<25	ND<25	ND<25	--	5400	
2/8/08	16.18	6.09	0.00	10.09	1.31	--	2600	ND<5.0	ND<5.0	ND<5.0	ND<10	--	4100	
5/16/08	16.18	6.87	0.00	9.31	-0.78	--	1800	ND<12	ND<12	ND<12	42	--	3500	
8/15/08	16.18	7.78	0.00	8.40	-0.91	--	1200	ND<5.0	ND<5.0	ND<5.0	ND<10	--	1900	
11/26/08	16.18	8.65	0.00	7.53	-0.87	--	720	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2400	
2/24/09	19.13	6.73	0.00	12.40	4.87	--	630	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2300	
5/28/09	19.13	6.46	0.00	12.67	0.27	--	1000	ND<10	ND<10	ND<10	ND<20	--	4100	
9/14/09	19.13	7.60	0.00	11.53	-1.14	--	1700	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2100	
11/13/09	19.13	7.83	0.00	11.30	-0.23	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
2/5/10	19.13	6.72	0.00	12.41	1.11	--	1600	ND<12	ND<12	ND<12	ND<25	--	3400	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1AR			**(Screen Interval in feet: 25-30)**											
5/28/09	19.29	7.25	0.00	12.04	--	--	380	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	930	
9/14/09	19.29	7.83	0.00	11.46	-0.58	--	480	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	890	
11/13/09	19.29	8.07	0.00	11.22	-0.24	--	290	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	580	
2/5/10	19.29	7.15	0.00	12.14	0.92	--	140	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	350	
MW-1BR			**(Screen Interval in feet: 30-35)**											
5/28/09	19.13	6.70	0.00	12.43	--	--	290	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	810	
9/14/09	19.13	7.80	0.00	11.33	-1.10	--	450	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	680	
11/13/09	19.13	7.88	0.00	11.25	-0.08	--	270	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	490	
2/5/10	19.13	7.84	0.00	11.29	0.04	--	130	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	280	
MW-2			**(Screen Interval in feet: 4.5-20.5)**											
3/5/99	15.57	--	0.00	--	--	34400	--	2070	7710	2340	8240	--	8460	
6/3/99	15.57	5.96	0.00	9.61	--	51200	--	1820	7570	2510	7320	6460	8800	
9/2/99	15.57	6.85	0.00	8.72	-0.89	17000	--	1000	3100	1400	3700	4000	3720	
12/14/99	15.57	7.65	0.00	7.92	-0.80	83000	--	3000	22000	4500	17000	9100	11000	
3/14/00	15.57	5.26	0.00	10.31	2.39	31000	--	1600	4600	2300	7300	5700	8700	
5/31/00	15.57	5.60	0.00	9.97	-0.34	9970	--	598	1030	487	2060	2500	1670	
8/29/00	15.57	6.35	0.00	9.22	-0.75	7900	--	390	1500	280	1900	1800	1300	
12/1/00	15.57	7.06	0.00	8.51	-0.71	87500	--	1860	17400	5590	19400	6220	3790	
3/17/01	15.57	5.98	0.00	9.59	1.08	4310	--	371	59.0	280	682	321	433	
5/23/01	15.57	6.97	0.00	8.60	-0.99	45400	--	374	4490	2790	10900	ND	406	
9/24/01	15.57	7.56	0.00	8.01	-0.59	76000	--	430	13000	4700	18000	ND<2000	480	
12/10/01	15.57	6.52	0.00	9.05	1.04	82000	--	320	9100	4400	16000	ND<2500	270	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-2 continued														
3/11/02	15.57	5.51	0.00	10.06	1.01	14000	--	75	1400	1100	3600	ND<250	150	
6/7/02	15.57	5.73	0.00	9.84	-0.22	14000	--	120	1200	1400	4700	540	200	
9/3/02	15.57	6.81	0.00	8.76	-1.08	10000	--	150	1200	610	2800	510	460	
12/12/02	15.57	--	--	--	--	--	--	--	--	--	--	--	--	Destroyed; Replaced with MW-2A
MW-2a			**(Screen Interval in feet: 5-11.5)**											
12/12/02	15.56	7.45	0.00	8.11	--	3400	--	80	260	210	1000	380	400	
3/13/03	--	5.85	0.00	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	1.8	2.4	2.4	
6/12/03	--	6.08	0.00	--	--	ND<50	--	0.59	0.69	ND<0.50	1.2	6.0	4.7	
9/12/03	15.56	6.54	0.00	9.02	--	--	120	1.8	4.2	6.1	20	--	6.6	
12/31/03	15.56	5.63	0.00	9.93	0.91	88	--	0.79	1.8	3.6	14	ND<5.0	2.9	
2/12/04	15.56	5.68	0.00	9.88	-0.05	160	--	2.6	4.8	13	48	7.2	7.9	
6/7/04	15.56	6.21	0.00	9.35	-0.53	94	--	0.80	1.2	2.1	9.1	4.5	3.7	
9/17/04	15.56	7.16	0.00	8.40	-0.95	--	230	3.5	6.1	13	41	--	83	
12/11/04	15.56	5.84	0.00	9.72	1.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	
3/15/05	15.56	5.52	0.00	10.04	0.32	--	92	0.84	1.7	2.4	9.8	--	ND<10	
5/17/05	15.56	5.55	0.00	10.01	-0.03	--	54	2.1	1.7	1.9	7.0	--	2.9	
7/27/05	15.56	6.16	0.00	9.40	-0.61	--	ND<50	0.66	1.1	1.3	4.2	--	3.7	
11/23/05	15.56	6.88	0.00	8.68	-0.72	--	120	1.3	2.8	7.8	30	--	10	
2/24/06	15.56	5.79	0.00	9.77	1.09	--	84	0.51	1.2	4.2	16	--	7.2	
5/30/06	15.56	5.62	0.00	9.94	0.17	--	69	0.90	2.2	3.7	14	--	4.1	
8/30/06	15.56	6.38	0.00	9.18	-0.76	--	77	ND<0.50	0.50	1.0	3.3	--	2.5	
11/22/06	15.56	6.60	0.00	8.96	-0.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	2.2	--	0.59	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-2A continued														
2/23/07	15.56	6.05	0.00	9.51	0.55	--	ND<50	ND<0.50	0.66	ND<0.50	1.1	--	0.72	
5/18/07	15.56	6.29	0.00	9.27	-0.24	--	ND<50	ND<0.50	ND<0.50	0.68	1.6	--	0.81	
8/10/07	15.56	6.90	0.00	8.66	-0.61	--	ND<50	ND<0.50	ND<0.50	1.6	3.9	--	ND<0.50	
11/9/07	15.56	6.96	0.00	8.60	-0.06	--	ND<50	ND<0.50	ND<0.50	2.4	4.4	--	ND<0.50	
2/8/08	15.56	5.76	0.00	9.80	1.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/16/08	15.56	6.50	0.00	9.06	-0.74	--	ND<50	ND<0.50	ND<0.50	0.56	1.2	--	ND<0.50	
8/15/08	15.56	7.35	0.00	8.21	-0.85	--	78	ND<0.50	0.79	2.9	6.5	--	ND<0.50	
11/26/08	15.56	8.12	0.00	7.44	-0.77	--	120	0.56	0.66	4.6	6.0	--	1.8	
2/24/09	18.51	6.19	0.00	12.32	4.88	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-3			**(Screen Interval in feet: 5.0-20.0)**											
3/5/99	15.11	--	0.00	--	--	135	--	ND	ND	ND	4.84	--	2.46	
6/3/99	15.11	5.57	0.00	9.54	--	ND	--	ND	ND	ND	ND	5.23	12.7	
9/2/99	15.11	6.50	0.00	8.61	-0.93	ND	--	ND	ND	ND	ND	13	11	
12/14/99	15.11	7.28	0.00	7.83	-0.78	ND	--	ND	ND	ND	ND	ND	--	
3/14/00	15.11	4.87	0.00	10.24	2.41	ND	--	ND	ND	ND	ND	7.2	6.3	
5/31/00	15.11	5.58	0.00	9.53	-0.71	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	15.11	6.06	0.00	9.05	-0.48	ND	--	ND	ND	ND	ND	ND	ND	
12/1/00	15.11	6.76	0.00	8.35	-0.70	ND	--	ND	ND	ND	ND	ND	--	
3/17/01	15.11	5.09	0.00	10.02	1.67	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	15.11	5.72	0.00	9.39	-0.63	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	15.11	6.34	0.00	8.77	-0.62	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	15.11	6.31	0.00	8.80	0.03	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/02	15.11	5.15	0.00	9.96	1.16	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-3 continued														
6/7/02	15.11	5.45	0.00	9.66	-0.30	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
12/12/02	15.11	7.15	0.00	7.96	-1.70	--	--	--	--	--	--	--	--	No longer sampled
3/13/03	15.11	5.37	0.00	9.74	1.78	--	--	--	--	--	--	--	--	
6/12/03	15.11	5.51	0.00	9.60	-0.14	--	--	--	--	--	--	--	--	
9/12/03	15.11	6.03	0.00	9.08	-0.52	--	--	--	--	--	--	--	--	
12/31/03	15.11	5.62	0.00	9.49	0.41	--	--	--	--	--	--	--	--	Monitored only
2/12/04	15.11	5.51	0.00	9.60	0.11	--	--	--	--	--	--	--	--	Monitored only
6/7/04	15.11	5.92	0.00	9.19	-0.41	--	--	--	--	--	--	--	--	Monitored only
9/17/04	15.11	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate
12/11/04	15.11	5.94	0.00	9.17	--	--	--	--	--	--	--	--	--	Sampled annually
3/11/05	15.11	4.76	0.00	10.35	1.18	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/05	15.11	5.23	0.00	9.88	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/05	15.11	5.81	0.00	9.30	-0.58	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/05	15.11	6.60	0.00	8.51	-0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
2/24/06	15.11	5.37	0.00	9.74	1.23	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.2	
5/30/06	15.11	5.08	0.00	10.03	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.92	
8/30/06	15.11	5.52	0.00	9.59	-0.44	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.51	
11/22/06	15.11	6.38	0.00	8.73	-0.86	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.94	
2/23/07	15.11	5.72	0.00	9.39	0.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.61	
5/18/07	15.11	5.94	0.00	9.17	-0.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.1	
8/10/07	15.11	7.64	0.00	7.47	-1.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/9/07	15.11	6.75	0.00	8.36	0.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.1	
2/8/08	15.11	5.39	0.00	9.72	1.36	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-3 continued														
5/16/08	15.11	6.17	0.00	8.94	-0.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	
8/15/08	15.11	7.01	0.00	8.10	-0.84	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.3	
11/26/08	15.11	7.73	0.00	7.38	-0.72	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.8	
2/24/09	18.05	5.98	0.00	12.07	4.69	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.9	
5/28/09	18.05	5.64	0.00	12.41	0.34	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
9/14/09	18.05	6.88	0.00	11.17	-1.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/13/09	18.05	7.02	0.00	11.03	-0.14	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
2/5/10	18.05	6.02	0.00	12.03	1.00	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.9	
MW-4			**(Screen Interval in feet: 5.0-20.5)**											
3/5/99	15.17	--	0.00	--	--	ND	--	ND	ND	ND	2.44	--	25.2	
6/3/99	15.17	5.45	0.00	9.72	--	ND	--	ND	ND	ND	ND	ND	3.96	
9/2/99	15.17	6.48	0.00	8.69	-1.03	ND	--	ND	ND	ND	ND	23	27	
12/14/99	15.17	7.27	0.00	7.90	-0.79	ND	--	ND	ND	ND	ND	200	270	
3/14/00	15.17	4.67	0.00	10.50	2.60	ND	--	ND	ND	ND	ND	46	49	
5/31/00	15.17	5.48	0.00	9.69	-0.81	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	15.17	6.10	0.00	9.07	-0.62	ND	--	ND	ND	ND	ND	6.1	3.2	
12/1/00	15.17	6.79	0.00	8.38	-0.69	ND	--	ND	ND	ND	ND	152	101	
3/17/01	15.17	5.01	0.00	10.16	1.78	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	15.17	5.78	0.00	9.39	-0.77	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	15.17	6.42	0.00	8.75	-0.64	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	15.17	6.41	0.00	8.76	0.01	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1700	1300	
3/11/02	15.17	5.05	0.00	10.12	1.36	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	15.17	5.42	0.00	9.75	-0.37	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-4 continued														
9/3/02	15.17	6.50	0.00	8.67	-1.08	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
12/12/02	15.17	7.18	0.00	7.99	-0.68	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.9	3.3	
3/13/03	15.17	5.42	0.00	9.75	1.76	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
6/12/03	15.17	5.60	0.00	9.57	-0.18	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
9/12/03	15.17	6.07	0.00	9.10	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/31/03	15.17	5.63	0.00	9.54	0.44	750	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	790	--	
2/12/04	15.17	5.26	0.00	9.91	0.37	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/04	15.17	5.82	0.00	9.35	-0.56	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
9/17/04	15.17	6.86	0.00	8.31	-1.04	--	56	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
12/11/04	15.17	6.01	0.00	9.16	0.85	--	350	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	380	
3/11/05	15.17	4.61	0.00	10.56	1.40	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/05	15.17	4.93	0.00	10.24	-0.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/05	15.17	5.74	0.00	9.43	-0.81	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/05	15.17	6.59	0.00	8.58	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	23	
2/24/06	15.17	5.19	0.00	9.98	1.40	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.7	
5/30/06	15.17	5.07	0.00	10.10	0.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
8/30/06	15.17	6.02	0.00	9.15	-0.95	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/22/06	15.17	6.37	0.00	8.80	-0.35	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	16	
2/23/07	15.17	5.61	0.00	9.56	0.76	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
5/18/07	15.17	5.87	0.00	9.30	-0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
8/10/07	15.17	7.49	0.00	7.68	-1.62	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/9/07	15.17	6.77	0.00	8.40	0.72	--	50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	39	
2/8/08	15.17	5.10	0.00	10.07	1.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-4 continued														
5/16/08	15.17	6.06	0.00	9.11	-0.96	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
8/15/08	15.17	6.91	0.00	8.26	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	1.1	--	ND<0.50	
11/26/08	15.17	7.71	0.00	7.46	-0.80	--	55	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	11	
2/24/09	18.14	5.96	0.00	12.18	4.72	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.8	
5/28/09	18.14	5.70	0.00	12.44	0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
9/14/09	18.14	6.76	0.00	11.38	-1.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/13/09	18.14	6.97	0.00	11.17	-0.21	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
2/5/10	18.14	5.55	0.00	12.59	1.42	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.91	
MW-5			**(Screen Interval in feet: 5-20)**											
12/14/99	13.34	6.45	0.00	6.89	--	ND	--	ND	ND	ND	ND	3.5	3.8	
3/14/00	13.34	4.46	0.00	8.88	1.99	ND	--	ND	ND	ND	ND	ND	--	
5/31/00	13.34	5.18	0.00	8.16	-0.72	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	13.34	5.46	0.00	7.88	-0.28	ND	--	ND	ND	ND	ND	ND	--	
12/1/00	13.34	5.95	0.00	7.39	-0.49	ND	--	ND	ND	ND	ND	ND	--	
3/17/01	13.34	5.36	0.00	7.98	0.59	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	13.34	5.09	0.00	8.25	0.27	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	13.34	5.58	0.00	7.76	-0.49	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	13.34	5.51	0.00	7.83	0.07	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/02	13.34	4.70	0.00	8.64	0.81	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
9/3/02	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
12/12/02	13.34	6.42	0.00	6.92	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
3/13/03	13.34	5.12	0.00	8.22	1.30	ND<50	--	ND<0.50	0.54	ND<0.50	ND<0.50	ND<2.0	--	

Table 2
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March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-5 continued														
6/12/03	13.34	5.24	0.00	8.10	-0.12	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
9/12/03	13.34	5.53	0.00	7.81	-0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/31/03	13.34	5.11	0.00	8.23	0.42	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
2/12/04	13.34	5.02	0.00	8.32	0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/04	13.34	5.35	0.00	7.99	-0.33	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
9/17/04	13.34	6.10	0.00	7.24	-0.75	--	--	--	--	--	--	--	--	Sampled annually
12/11/04	13.34	5.53	0.00	7.81	0.57	--	--	--	--	--	--	--	--	Sampled annually
3/11/05	13.34	4.96	0.00	8.38	0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/05	13.34	5.04	0.00	8.30	-0.08	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/05	13.34	5.31	0.00	8.03	-0.27	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/05	13.34	5.86	0.00	7.48	-0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
2/24/06	13.34	5.08	0.00	8.26	0.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/30/06	13.34	5.01	0.00	8.33	0.07	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
8/30/06	13.34	5.65	0.00	7.69	-0.64	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/22/06	13.34	5.82	0.00	7.52	-0.17	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
2/23/07	13.34	4.47	0.00	8.87	1.35	--	ND<50	ND<0.50	ND<0.50	ND<0.50	0.53	--	ND<0.50	
5/18/07	13.34	5.51	0.00	7.83	-1.04	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
8/10/07	13.34	6.05	0.00	7.29	-0.54	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/9/07	13.34	6.10	0.00	7.24	-0.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
2/8/08	13.34	5.06	0.00	8.28	1.04	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/16/08	13.34	5.69	0.00	7.65	-0.63	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
8/15/08	13.34	6.35	0.00	6.99	-0.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/26/08	13.34	6.82	0.00	6.52	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-5 continued														
2/24/09	16.45	5.10	0.00	11.35	4.83	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/28/09	16.45	5.12	0.00	11.33	-0.02	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
9/14/09	16.45	6.29	0.00	10.16	-1.17	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/13/09	16.45	6.23	0.00	10.22	0.06	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
2/5/10	16.45	5.38	0.00	11.07	0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-6			**(Screen Interval in feet: 5-20)**											
12/14/99	14.08	6.64	0.00	7.44	--	ND	--	ND	ND	ND	ND	11000	18000	
3/14/00	14.08	4.72	0.00	9.36	1.92	ND	--	ND	ND	ND	ND	19000	21000	
5/31/00	14.08	5.28	0.00	8.80	-0.56	ND	--	ND	ND	ND	ND	13200	--	
8/29/00	14.08	5.39	0.00	8.69	-0.11	ND	--	ND	ND	ND	ND	270	400	
12/1/00	14.08	6.11	0.00	7.97	-0.72	ND	--	ND	ND	ND	ND	6330	3640	
3/17/01	14.08	6.02	0.00	8.06	0.09	18700	--	2950	989	1040	3000	10200	11500	
5/23/01	14.08	5.82	0.00	8.26	0.20	ND	--	ND	ND	ND	ND	4660	--	
9/24/01	14.08	6.59	0.00	7.49	-0.77	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	160	190	
12/10/01	14.08	6.50	0.00	7.58	0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3200	2400	
3/11/02	14.08	4.81	0.00	9.27	1.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	92	120	
6/7/02	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
9/3/02	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
12/12/02	14.08	6.51	0.00	7.57	--	590	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1500	6200	
3/13/03	14.08	5.20	0.00	8.88	1.31	1600	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	4900	4100	
D 3/13/03	14.08	5.20	0.00	8.88	1.31	--	--	--	--	--	--	--	5100	
6/12/03	14.08	5.38	0.00	8.70	-0.18	1600	--	ND<10	ND<10	ND<10	ND<10	5200	3700	
9/12/03	14.08	6.29	0.00	7.79	-0.91	--	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	310	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-6 continued														
12/31/03	14.08	5.38	0.00	8.70	0.91	3300	--	ND<25	ND<25	ND<25	ND<25	3800	--	
2/12/04	14.08	5.06	0.00	9.02	0.32	1100	--	ND<10	ND<10	ND<10	ND<10	1900	2800	
6/7/04	14.08	5.45	0.00	8.63	-0.39	2500	--	ND<3	ND<3	ND<3	ND<6	3200	2900	
9/17/04	14.08	6.20	0.00	7.88	-0.75	--	1300	ND<10	ND<10	ND<10	ND<20	--	2000	
12/11/04	14.08	5.60	0.00	8.48	0.60	--	1800	ND<10	ND<10	ND<10	ND<20	--	2700	
3/11/05	14.08	4.71	0.00	9.37	0.89	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	2500	
5/17/05	14.08	4.98	0.00	9.10	-0.27	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2200	
7/27/05	14.08	5.48	0.00	8.60	-0.50	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1100	
11/23/05	14.08	6.01	0.00	8.07	-0.53	--	590	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1700	
2/24/06	14.08	5.12	0.00	8.96	0.89	--	400	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	990	
5/30/06	14.08	5.04	0.00	9.04	0.08	--	ND<1200	ND<12	ND<12	ND<12	ND<25	--	560	
8/30/06	14.08	7.01	0.00	7.07	-1.97	--	930	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	820	
11/22/06	14.08	6.16	0.00	7.92	0.85	--	690	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	620	
2/23/07	14.08	5.44	0.00	8.64	0.72	--	190	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	410	
5/18/07	14.08	5.63	0.00	8.45	-0.19	--	390	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	620	
8/10/07	14.08	6.71	0.00	7.37	-1.08	--	390	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	660	
11/9/07	14.08	6.17	0.00	7.91	0.54	--	580	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	820	
2/8/08	14.08	5.20	0.00	8.88	0.97	--	360	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	570	
5/16/08	14.08	5.70	0.00	8.38	-0.50	--	200	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	480	
8/15/08	14.08	6.46	0.00	7.62	-0.76	--	160	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	450	
11/26/08	14.08	7.01	0.00	7.07	-0.55	--	300	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	400	
2/24/09	16.97	5.20	0.00	11.77	4.70	--	250	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	450	
5/28/09	16.97	5.26	0.00	11.71	-0.06	--	74	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	290	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-6 continued														
9/14/09	16.97	6.30	0.00	10.67	-1.04	--	230	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	310	
11/13/09	16.97	6.40	0.00	10.57	-0.10	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
2/5/10	16.97	5.89	0.00	11.08	0.51	--	130	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	310	
MW-7			**(Screen Interval in feet: 25-30)**											
5/28/09	17.81	8.29	0.00	9.52	--	--	1100	ND<0.50	ND<0.50	1.4	7.1	--	15000	
9/14/09	17.81	6.77	0.00	11.04	1.52	--	7900	ND<25	ND<25	ND<25	ND<50	--	15000	
11/13/09	17.81	6.78	0.00	11.03	-0.01	--	5700	ND<10	ND<10	ND<10	ND<20	--	13000	
2/5/10	17.81	8.50	0.00	9.31	-1.72	--	4300	ND<12	ND<12	ND<12	ND<25	--	12000	
MW-8			**(Screen Interval in feet: 25-30)**											
5/28/09	18.13	7.42	0.00	10.71	--	--	850	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	12000	
9/14/09	18.13	6.97	0.00	11.16	0.45	--	3500	ND<25	ND<25	ND<25	ND<50	--	5600	
11/13/09	18.13	7.11	0.00	11.02	-0.14	--	3200	ND<5.0	ND<5.0	ND<5.0	ND<10	--	6700	
2/5/10	18.13	7.38	0.00	10.75	-0.27	--	2400	ND<10	ND<10	ND<10	ND<20	--	6300	
MW-9			**(Screen Interval in feet: 20-25)**											
5/28/09	18.75	6.24	0.00	12.51	--	--	1200	ND<0.50	ND<0.50	0.75	15	--	13000	
9/14/09	18.75	7.36	0.00	11.39	-1.12	--	280	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	390	
11/13/09	18.75	7.56	0.00	11.19	-0.20	--	170	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	280	
2/5/10	18.75	6.70	0.00	12.05	0.86	--	100	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	190	
MW-10			**(Screen Interval in feet: 25-30)**											
5/28/09	18.84	6.69	0.00	12.15	--	--	700	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3500	
9/14/09	18.84	7.50	0.00	11.34	-0.81	--	3300	ND<6.2	ND<6.2	ND<6.2	ND<12	--	4900	
11/13/09	18.84	7.70	0.00	11.14	-0.20	--	1500	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	3300	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 1999 Through February 2010
Former 76 Station 0843

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-10 continued														
2/5/10	18.84	6.66	0.00	12.18	1.04	--	110	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	260	
MW-11			**(Screen Interval in feet: 25-30)**											
5/28/09	18.72	6.18	0.00	12.54	--	--	920	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	15000	
9/14/09	18.72	7.45	0.00	11.27	-1.27	--	11000	ND<25	ND<25	ND<25	ND<50	--	18000	
11/13/09	18.72	7.51	0.00	11.21	-0.06	--	6200	ND<10	ND<10	ND<10	ND<20	--	13000	
2/5/10	18.72	7.50	0.00	11.22	0.01	--	4500	ND<12	ND<12	ND<12	ND<25	--	13000	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-1												
9/2/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
3/15/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/06	62	ND<250	--	--	ND<0.50	ND<0.50	5.5	--	--	--	--	--
11/22/06	74	ND<250	--	--	ND<0.50	ND<0.50	0.51	--	--	--	--	--
2/23/07	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
5/18/07	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
8/10/07	ND<500	ND<12000	--	--	ND<25	ND<25	ND<25	--	--	--	--	--
11/9/07	ND<500	ND<12000	--	--	ND<25	ND<25	ND<25	--	--	--	--	--
2/8/08	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
5/16/08	ND<250	ND<6200	--	--	ND<12	ND<12	ND<12	--	--	--	--	--
8/15/08	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	2.5	1.3	--	--	ND<100	ND<1.0
5/28/09	ND<200	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	1.8	2.0	87	ND<500	2.4
9/14/09	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	1.4	2.2	220	ND<100	3.7
2/5/10	ND<250	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	--	--	--	--	--
MW-1AR												
5/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.6	--	--	--	--	--
9/14/09	110	ND<500	--	--	ND<1.0	ND<1.0	ND<1.0	4.5	ND<2.0	170	2500	570
11/13/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/5/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-1BR												
5/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.0	--	--	--	--	--
9/14/09	33	ND<500	--	--	ND<1.0	ND<1.0	1.9	3.7	ND<2.0	250	ND<500	230

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-1BR continued												
11/13/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.2	--	--	--	--	--
2/5/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-2												
9/2/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
12/14/99	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
3/14/00	1300	ND	ND	ND	ND	ND	ND	--	--	--	--	--
5/31/00	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
8/29/00	250	ND	ND	ND	ND	ND	ND	--	--	--	--	--
12/1/00	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
3/17/01	ND	ND	ND	ND	14.8	ND	ND	--	--	--	--	--
5/23/01	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
9/24/01	ND<5000	ND<50000000	ND<100	ND<100	ND<100	ND<100	ND<100	--	--	--	--	--
12/10/01	ND<500	ND<12000000	ND<25	ND<25	ND<25	ND<25	ND<25	--	--	--	--	--
3/11/02	ND<1000	ND<5000000	ND<20	ND<20	ND<20	ND<20	ND<20	--	--	--	--	--
6/7/02	ND<1000	ND<2000000	ND<25	ND<25	ND<25	ND<25	ND<25	--	--	--	--	--
9/3/02	ND<1000	ND<5000000	ND<20	ND<20	ND<20	ND<20	ND<20	--	--	--	--	--
MW-2a												
12/12/02	ND<100	ND<500000	ND<2.0	2.3	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
3/13/03	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
6/12/03	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
9/12/03	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
12/31/03	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
2/12/04	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
6/7/04	ND<12	ND<800	ND<0.5	ND<0.5	ND<1	ND<1	ND<1	--	--	--	--	--
9/17/04	6.7	ND<50	--	--	ND<1.0	ND<0.50	ND<0.50	--	--	--	--	--

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-2A continued												
12/11/04	ND<5.0	ND<50	--	--	ND<1.0	ND<0.50	ND<0.50	--	--	--	--	--
3/15/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
7/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/9/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/8/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	17	--	--	110	ND<1.0
MW-3												
9/2/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
3/11/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
7/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-3 continued												
5/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/9/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/8/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	3.2	--	--	ND<100	ND<1.0
5/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
9/14/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/5/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-4												
9/2/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
12/10/01	ND<290	ND<7100000	ND<14	ND<14	ND<14	ND<14	ND<14	--	--	--	--	--
12/12/02	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
9/12/03	--	ND<500	--	--	--	--	--	--	--	--	--	--
9/17/04	ND<5.0	ND<50	--	--	ND<1.0	ND<0.50	ND<0.50	--	--	--	--	--
12/11/04	ND<25	ND<250	--	--	ND<5.0	ND<2.5	ND<2.5	--	--	--	--	--
3/11/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
7/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-4 continued												
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/9/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/8/08	ND<10	290	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	1.7	--	--	ND<100	3.1
5/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
9/14/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/5/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-5												
9/12/03	--	ND<500	--	--	--	--	--	--	--	--	--	--
3/11/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
7/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/06	59	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-5 continued												
8/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/9/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/8/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	4.5	--	--	ND<100	ND<1.0
5/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
9/14/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/5/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-6												
3/17/01	ND	ND	ND	219	ND	ND	ND	--	--	--	--	--
9/24/01	ND<100	ND<1000000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
12/10/01	ND<500	ND<12000000	ND<25	ND<25	ND<25	ND<25	ND<25	--	--	--	--	--
3/11/02	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
12/12/02	ND<10000	ND<50000000	ND<200	ND<200	ND<200	ND<200	ND<200	--	--	--	--	--
3/13/03	ND<5000	ND<25000000	ND<100	ND<100	ND<100	ND<100	ND<100	--	--	--	--	--
6/12/03	ND<2000	ND<10000000	ND<40	ND<40	ND<40	ND<40	ND<40	--	--	--	--	--
9/12/03	--	ND<2500	--	--	--	--	--	--	--	--	--	--
2/12/04	ND<2000	ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40	--	--	--	--	--
6/7/04	ND<200	ND<8000	ND<5	ND<5	ND<10	ND<10	ND<10	--	--	--	--	--

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-6 continued												
9/17/04	ND<100	ND<1000	--	--	ND<20	ND<10	ND<10	--	--	--	--	--
12/11/04	ND<100	ND<1000	--	--	ND<20	ND<10	ND<10	--	--	--	--	--
3/11/05	ND<100	ND<1000	--	--	ND<10	ND<10	ND<10	--	--	--	--	--
5/17/05	ND<100	ND<1000	--	--	ND<10	ND<10	ND<10	--	--	--	--	--
7/27/05	ND<100	ND<1000	--	--	ND<10	ND<10	ND<10	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	1.0	--	--	--	--	--
2/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	0.68	--	--	--	--	--
5/30/06	ND<250	ND<6200	--	--	ND<12	ND<12	ND<12	--	--	--	--	--
8/30/06	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
11/22/06	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
2/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/9/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	0.52	--	--	--	--	--
2/8/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
5/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
8/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	2.7	--	--	ND<100	1.2
5/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
9/14/09	23	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/5/10	41	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-7												
5/28/09	150	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	11	--	--	--	--	--
9/14/09	680	ND<12000	--	--	ND<25	ND<25	ND<25	9.8	ND<2.0	76	3200	2000

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
MW-7 continued												
11/13/09	ND<200	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	--	--	--	--	--
2/5/10	1600	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	--	--	--	--	--
MW-8												
5/28/09	36	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.7	9.9	ND<2.0	140	ND<1000	280
9/14/09	ND<500	ND<12000	--	--	ND<25	ND<25	ND<25	14	ND<2.0	60	480	1000
11/13/09	ND<100	ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
2/5/10	960	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	--	--	--	--	--
MW-9												
5/28/09	40	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	11	--	--	--	--	--
9/14/09	24	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	3.0	ND<2.0	520	ND<1000	180
11/13/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
2/5/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-10												
5/28/09	39	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.6	2.4	2.0	ND<10	150	280
9/14/09	240	ND<3100	--	--	ND<6.2	ND<6.2	ND<6.2	2.7	ND<2.0	24	210	280
11/13/09	ND<50	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	--	--	--	--	--
2/5/10	35	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
MW-11												
5/28/09	140	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.4	--	--	--	--	--
9/14/09	850	ND<12000	--	--	ND<25	ND<25	ND<25	3.3	ND<2.0	14	310	570
11/13/09	ND<200	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	--	--	--	--	--
2/5/10	1600	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	--	--	--	--	--

Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	Manganese (total) (µg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Con-ductance (µmhos)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-1										
2/24/09	500	--	18	--	--	--	4.63	3.22	57	59
5/28/09	550	9.9	25	8.6	130	463	0.80	2.95	119	171
9/14/09	1600	11	25	6.8	204	429	1.93	3.81	233	146
2/5/10	--	--	--	--	--	--	0.83	1.42	66	71
MW-1AR										
5/28/09	--	--	--	--	--	--	1.72	0.95	144	177
9/14/09	830	17	39	7.0	205	655	1.68	1.83	235	187
11/13/09	--	--	--	--	--	--	3.13	2.98	174	16
2/5/10	--	--	--	--	--	--	0.37	0.94	79	75
MW-1BR										
5/28/09	--	--	--	--	--	--	0.61	1.37	145	165
9/14/09	930	17	59	6.7	207	673	0.46	1.02	228	143
11/13/09	--	--	--	--	--	--	5.74	4.59	151	107
2/5/10	--	--	--	--	--	--	0.38	0.82	85	79
MW-2A										
2/24/09	130	--	87	--	--	--	3.38	4.44	50	34
MW-3										
2/24/09	1100	--	130	--	--	--	5.01	2.30	46	49
5/28/09	--	--	--	--	--	--	0.61	4.03	141	85
9/14/09	--	--	--	6.6	196	658	0.49	2.02	146	119
2/5/10	--	--	--	--	--	--	1.04	2.64	338	71
MW-4										
2/24/09	250	--	130	--	--	--	6.15	4.27	61	64
5/28/09	--	--	--	--	--	--	3.68	3.76	141	55

Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	Manganese (total) (µg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Con-ductance (µmhos)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-4 continued										
9/14/09	--	--	--	7.1	195	1020	2.16	2.78	142	63
2/5/10	--	--	--	--	--	--	8.59	7.70	309	326
MW-5										
2/24/09	720	--	64	--	--	--	5.65	2.58	27	34
5/28/09	--	--	--	--	--	--	1.71	4.32	138	94
9/14/09	--	--	--	4.0	204	609	0.64	2.08	147	115
2/5/10	--	--	--	--	--	--	2.08	2.59	295	71
MW-6										
2/24/09	2300	--	85	--	--	--	3.40	1.29	68	67
5/28/09	--	--	--	--	--	--	1.06	1.85	142	56
9/14/09	--	--	--	7.1	205	595	0.46	1.07	154	118
2/5/10	--	--	--	--	--	--	2.96	2.73	314	135
MW-7										
5/28/09	--	--	--	--	--	--	1.24	0.63	160	124
9/14/09	2200	4.2	180	6.9	217	1030	0.26	1.35	-13	-53
11/13/09	--	--	--	--	--	--	--	0.76	1	-24
2/5/10	--	--	--	--	--	--	1.46	0.69	-10	-7
MW-8										
5/28/09	830	12	130	9.0	124	923	2.22	1.38	146	68
9/14/09	1300	7.7	260	6.2	407	1100	0.28	1.11	151	92
11/13/09	--	--	--	--	--	--	3.51	0.84	111	72
2/5/10	--	--	--	--	--	--	1.17	0.58	88	63
MW-9										
9/14/09	4700	5.0	68	7.3	204	580	3.58	4.16	236	171

Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 0843

Date Sampled	Manganese (total) (µg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Con-ductance (µmhos)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-9 continued										
11/13/09	--	--	--	--	--	--	5.06	4.22	81	105
2/5/10	--	--	--	--	--	--	0.93	1.25	102	102
MW-10										
5/28/09	350	9.1	30	7.1	139	661	0.30	1.76	151	156
9/14/09	380	6.3	33	6.1	205	675	2.19	0.67	235	114
11/13/09	--	--	--	--	--	--	1.20	1.58	95	77
2/5/10	--	--	--	--	--	--	0.83	0.98	87	87
MW-11										
5/28/09	--	--	--	--	--	--	0.22	0.80	1.56	147
9/14/09	740	0.73	37	6.7	192	780	0.81	0.82	224	49
11/13/09	--	--	--	--	--	--	0.35	1.52	53	23
2/5/10	--	--	--	--	--	--	1.33	1.56	280	126

APPENDIX D

1st Quarter 2010 Groundwater Elevation and Constituent Isocontours

LEGEND

MW-11 Former 76 Monitoring Well with Groundwater Elevation (feet)

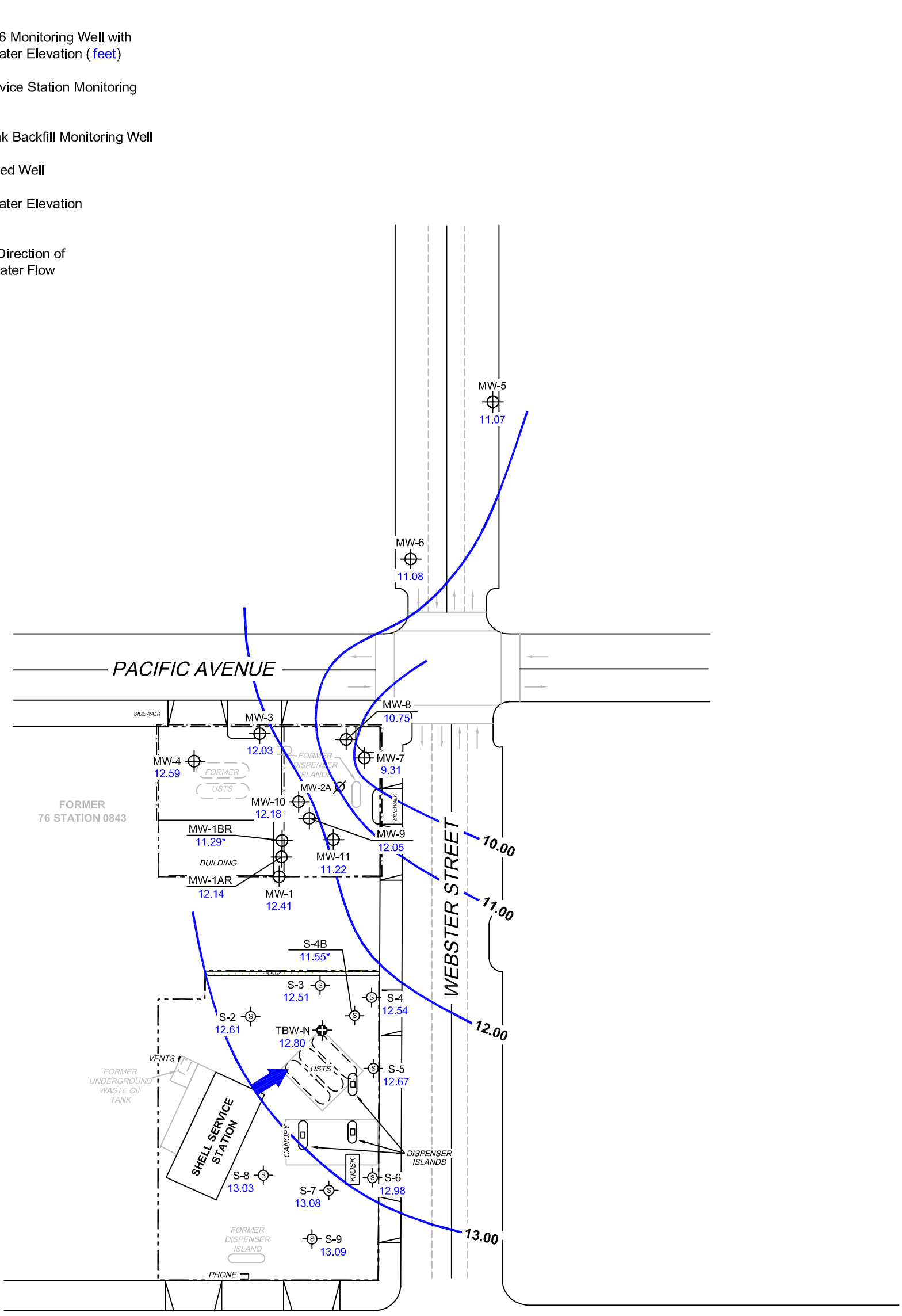
S-9 Shell Service Station Monitoring Well

TBW-N Shell Tank Backfill Monitoring Well

MW-2A Abandoned Well

13.00 Groundwater Elevation Contour

General Direction of Groundwater Flow



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. * = not included in groundwater contour interpretation. UST = underground storage tank. Shell Service Station data provided by CRA.

SCALE (FEET)

0 60

TRC

PROJECT: 173845

FACILITY:
FORMER 76 STATION 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
February 5, 2010

FIGURE 2

LEGEND

MW-11 Former 76 Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (µg/l)

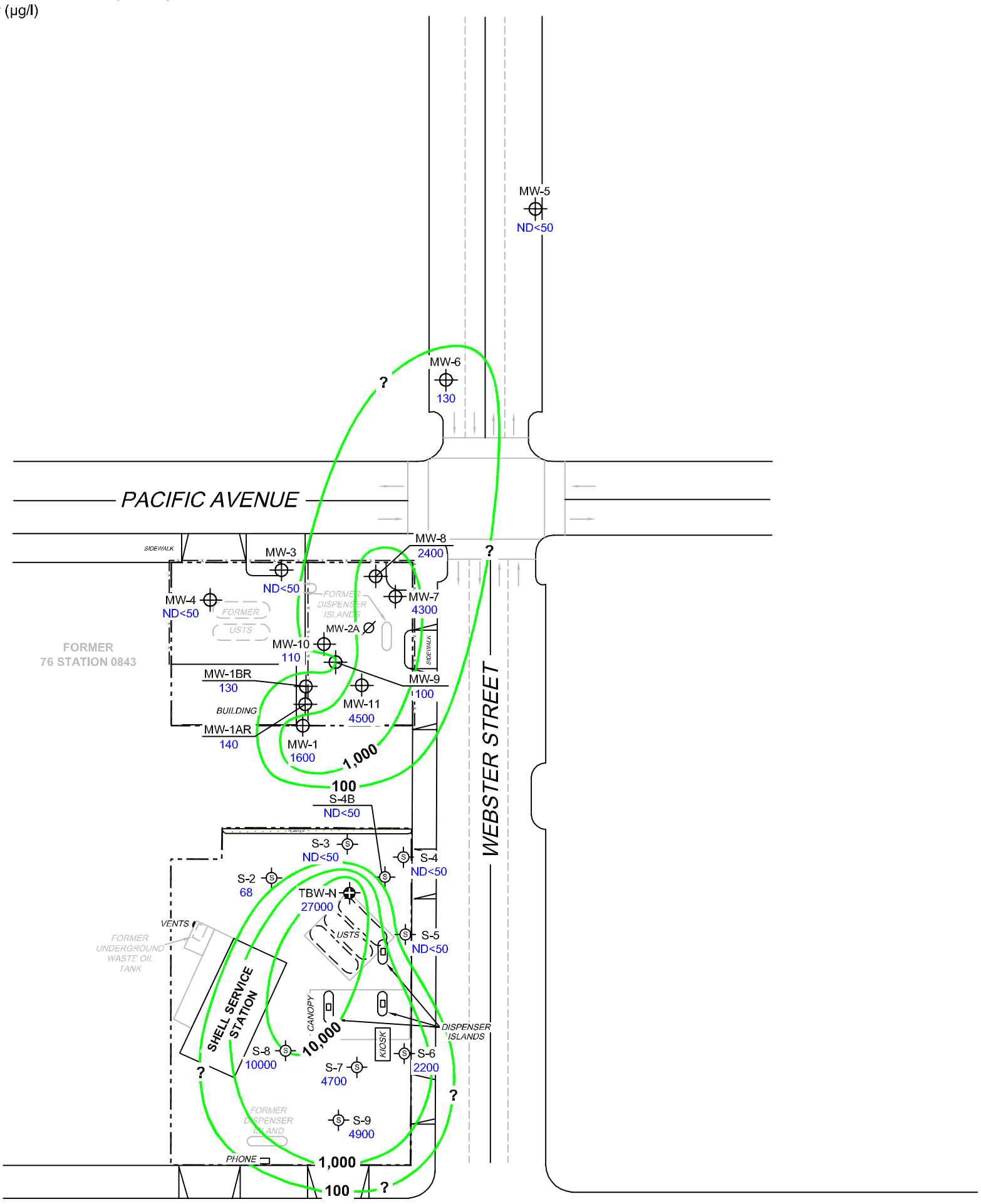
S-9 Shell Service Station Monitoring Well

TBW-N Shell Tank Backfill Monitoring Well

MW-2A Abandoned Well

10,000 Dissolved-Phase TPH-G (GC/MS) Contour (µg/l)

N



NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.
TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B.
µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report.
UST = underground storage tank. Shell Service Station data provided by CRA.

SCALE (FEET)
0 60

TRC

PROJECT: 173845

FACILITY:
FORMER 76 STATION 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

DISSOLVED-PHASE TPH-G (GC/MS) CONCENTRATION MAP
February 5, 2010

FIGURE 3

LEGEND

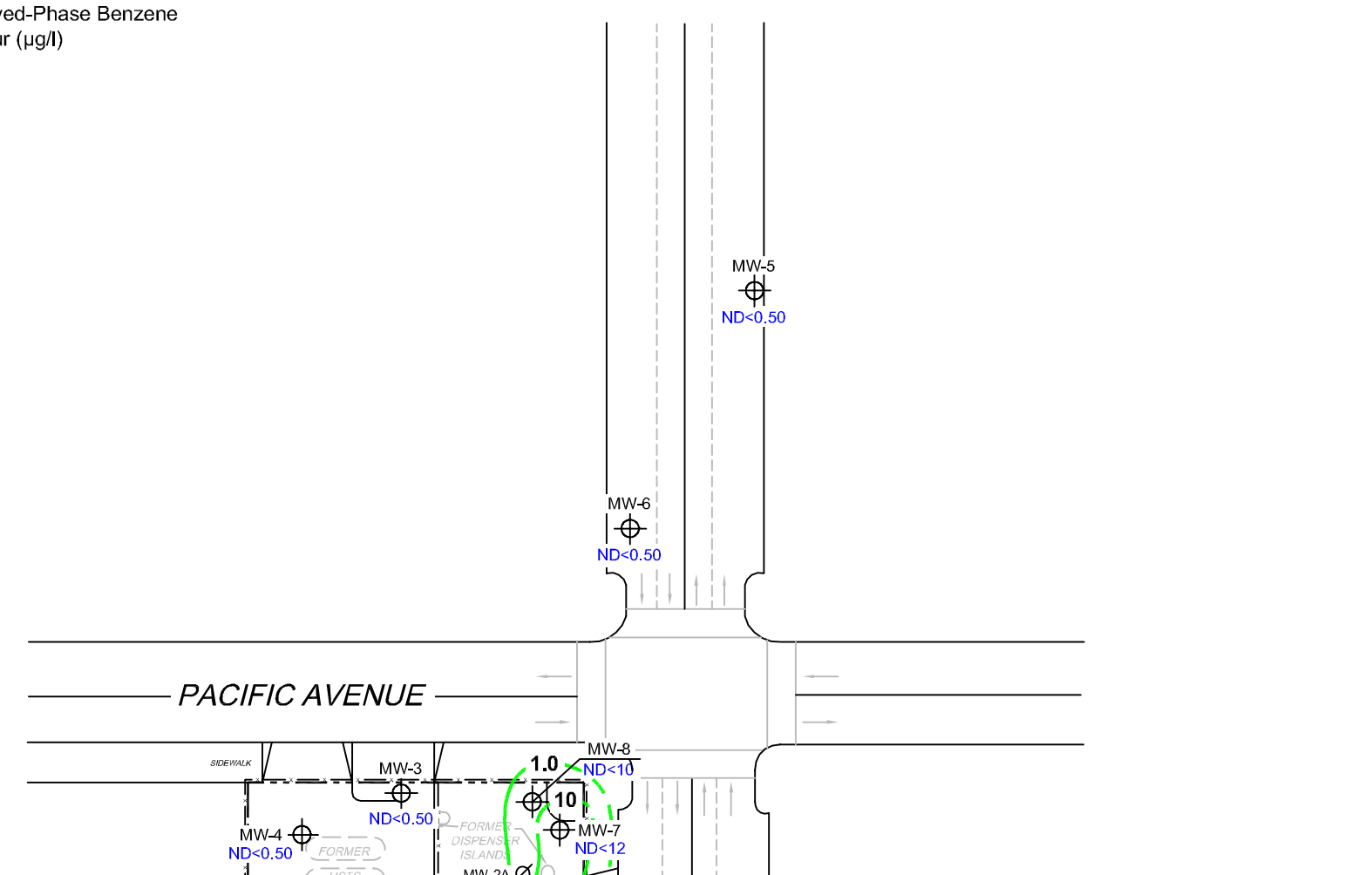
MW-11 Former 76 Monitoring Well with Dissolved-Phase Benzene Concentration (µg/l)

S-9 Shell Service Station Monitoring Well

TBW-N Shell Tank Backfill Monitoring Well

MW-2A Abandoned Well

1,000 Dissolved-Phase Benzene Contour (µg/l)



NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Dashes indicate contour based on non-detect at elevated detection limit. UST = underground storage tank. Shell Service Station data provided by CRA.

SCALE (FEET)

0 60

TRC

PROJECT: 173845

FACILITY:
FORMER 76 STATION 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

DISSOLVED-PHASE BENZENE CONCENTRATION MAP
February 5, 2010

FIGURE 4

LEGEND

MW-11 Former 76 Monitoring Well with Dissolved-Phase MTBE Concentration (µg/l)

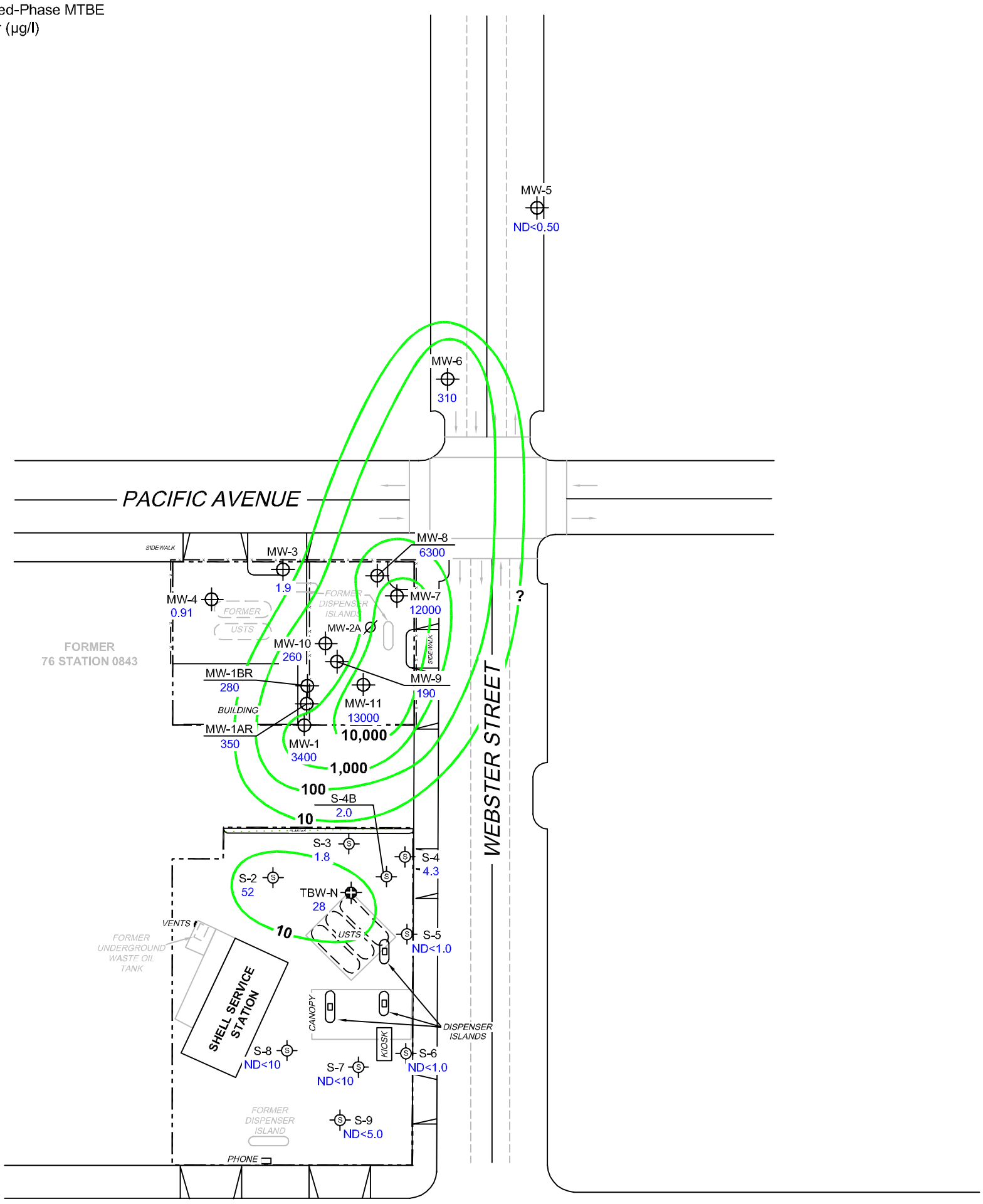
S-9 Shell Service Station Monitoring Well

TBW-N Shell Tank Backfill Monitoring Well

MW-2A Abandoned Well

10,000 Dissolved-Phase MTBE Contour (µg/l)

N



NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. Shell Service Station data provided by CRA. Results obtained using EPA Method 8260B.

SCALE (FEET)

0 60

TRC

PROJECT: 173845

FACILITY:
FORMER 76 STATION 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

DISSOLVED-PHASE MTBE CONCENTRATION MAP
February 5, 2010

FIGURE 5

LEGEND

MW-11 Former 76 Monitoring Well with Dissolved-Phase TBA Concentration (µg/l)

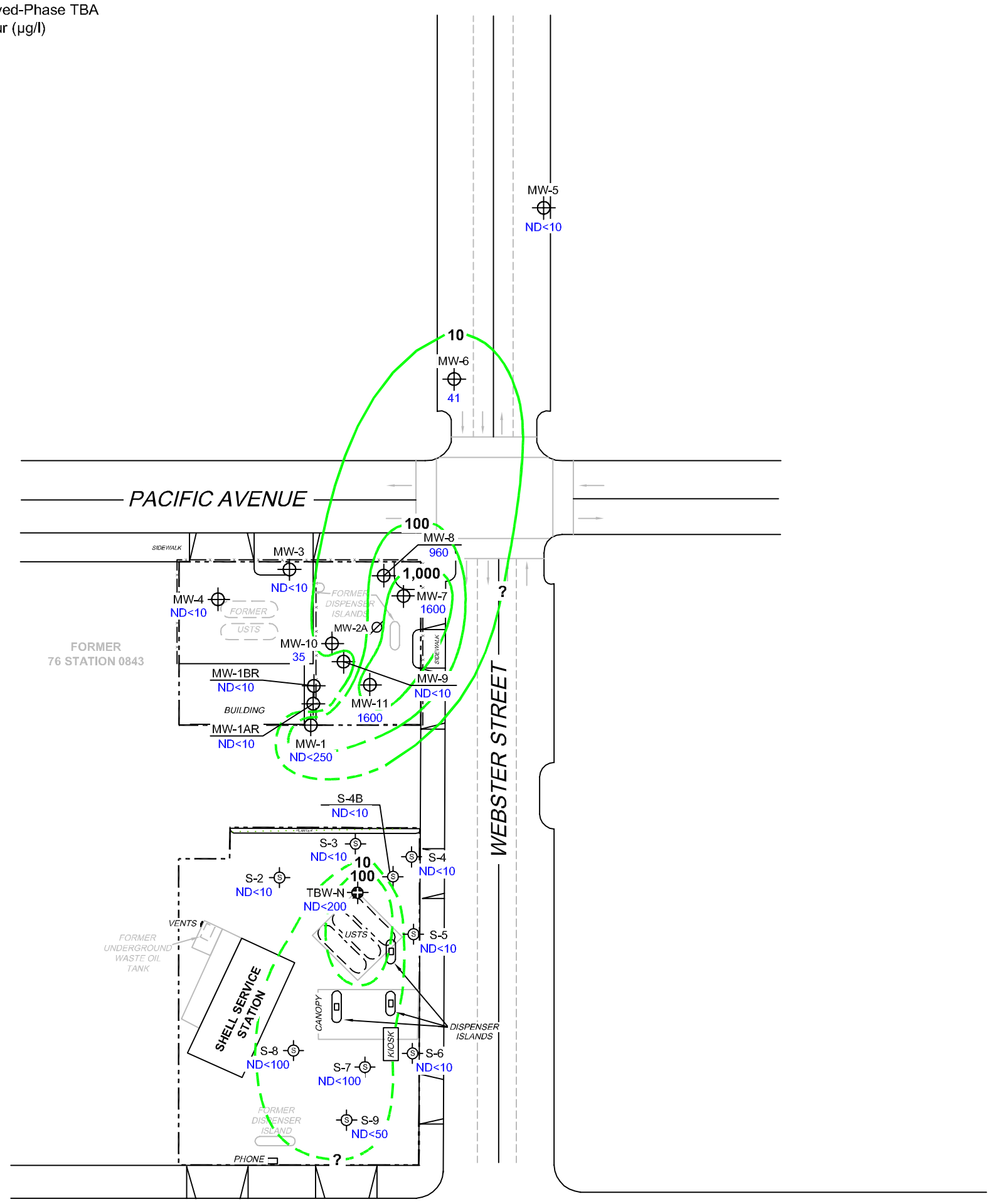
S-9 Shell Service Station Monitoring Well

TBW-N Shell Tank Backfill Monitoring Well

MW-2A Abandoned Well

1,000 Dissolved-Phase TBA Contour (µg/l)

N



NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. TBA = tertiary butyl alcohol. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Dashes indicate contour based on non-detect at elevated detection limit. UST = underground storage tank. Shell Service Station data provided by CRA. Results obtained using EPA Method 8260B.

SCALE (FEET)
0 60

TRC

PROJECT: 173845

FACILITY:
FORMER 76 STATION 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

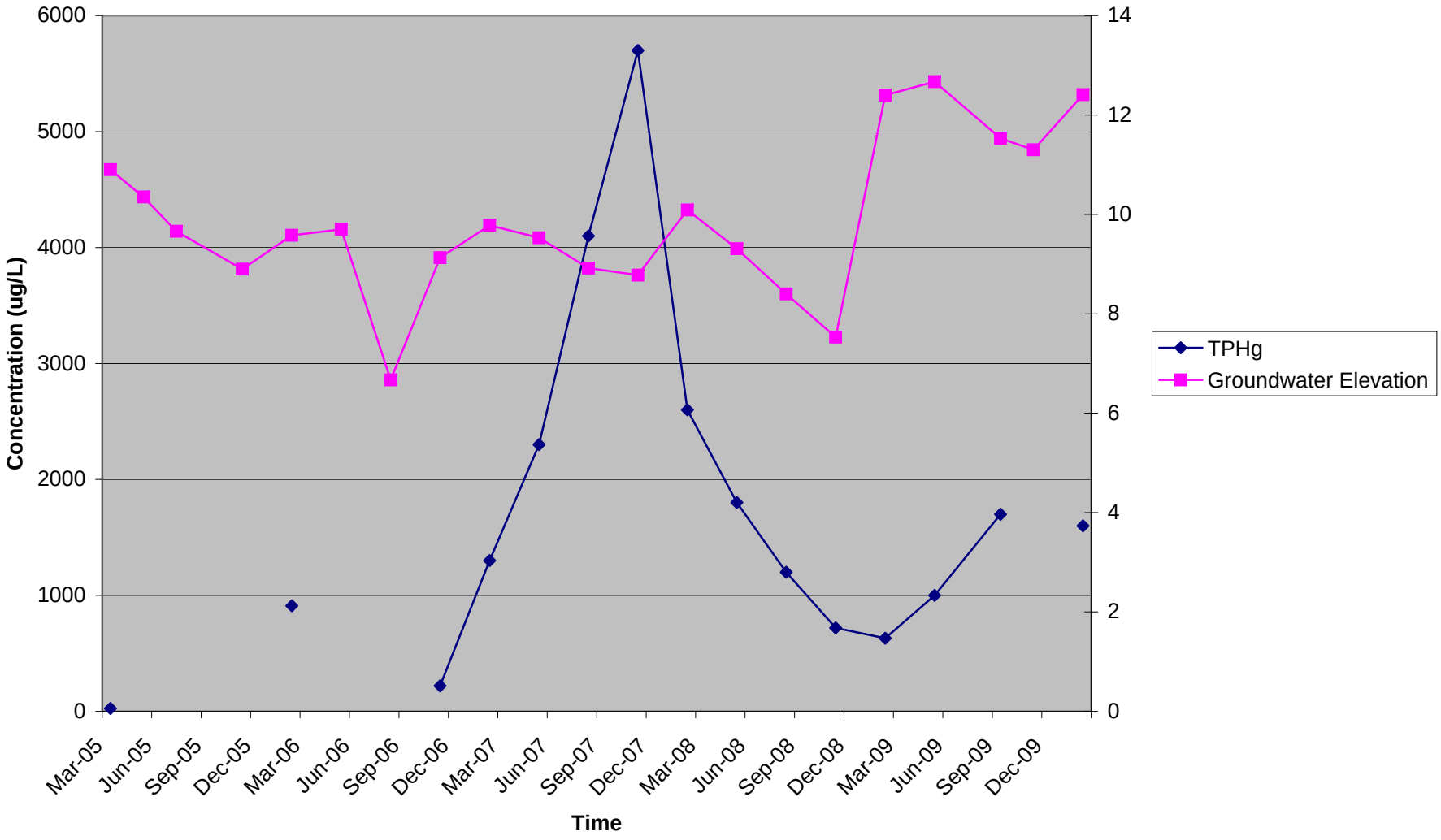
DISSOLVED-PHASE TBA CONCENTRATION MAP
February 5, 2010

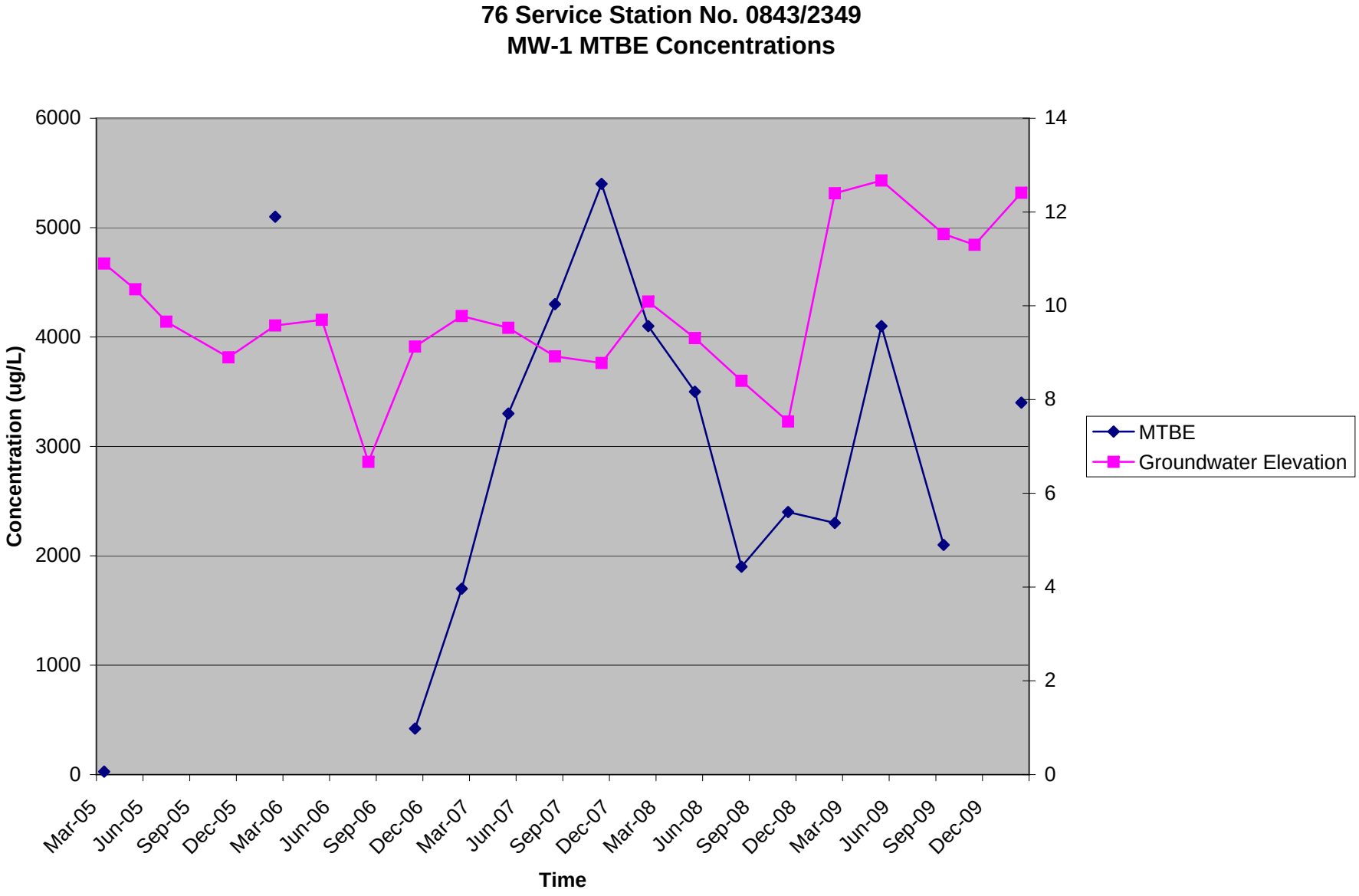
FIGURE 6

APPENDIX E

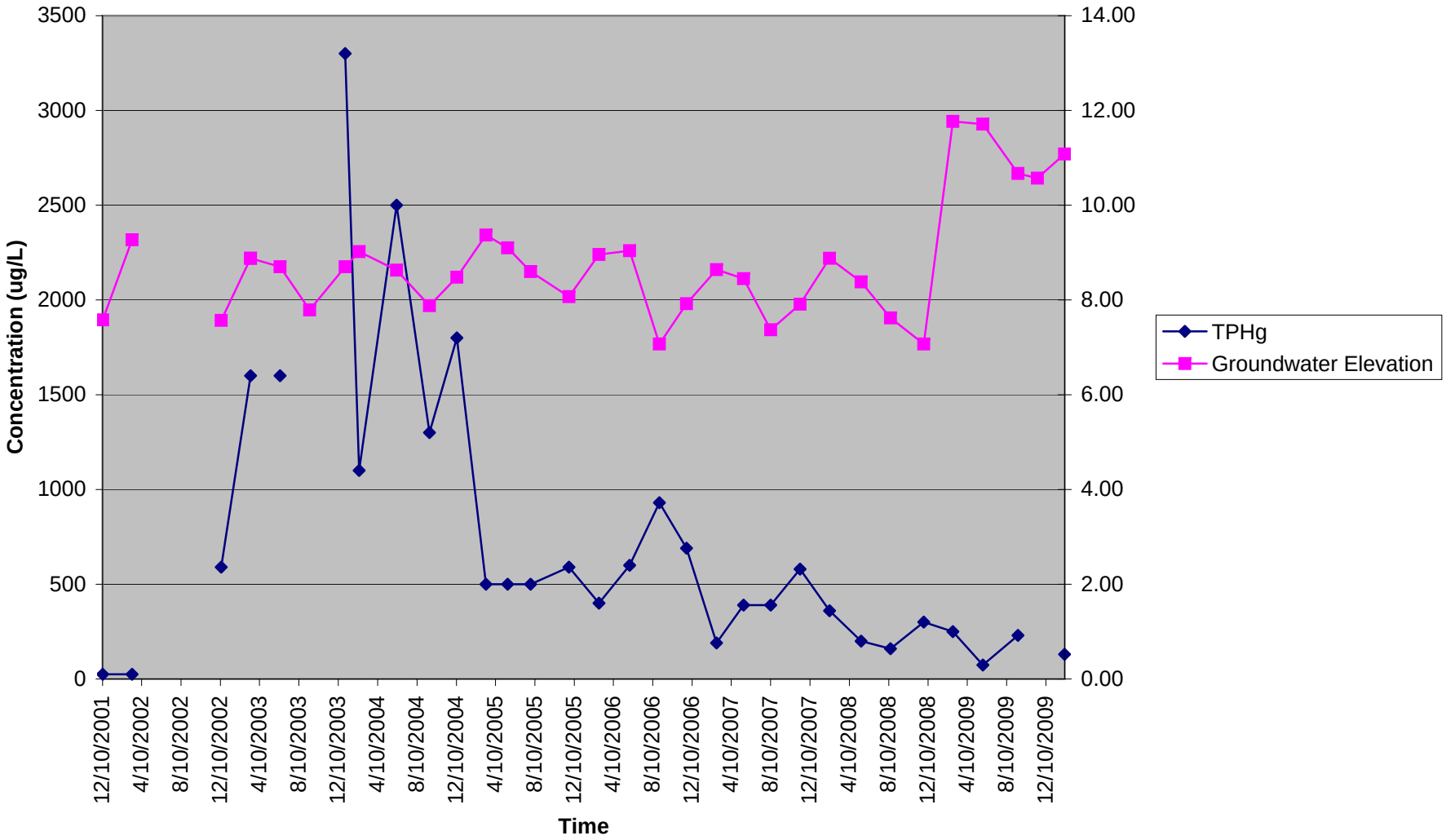
Historical Concentration versus Time Graphs

76 Service Station No. 0843/2349
MW-1 TPHg Concentrations

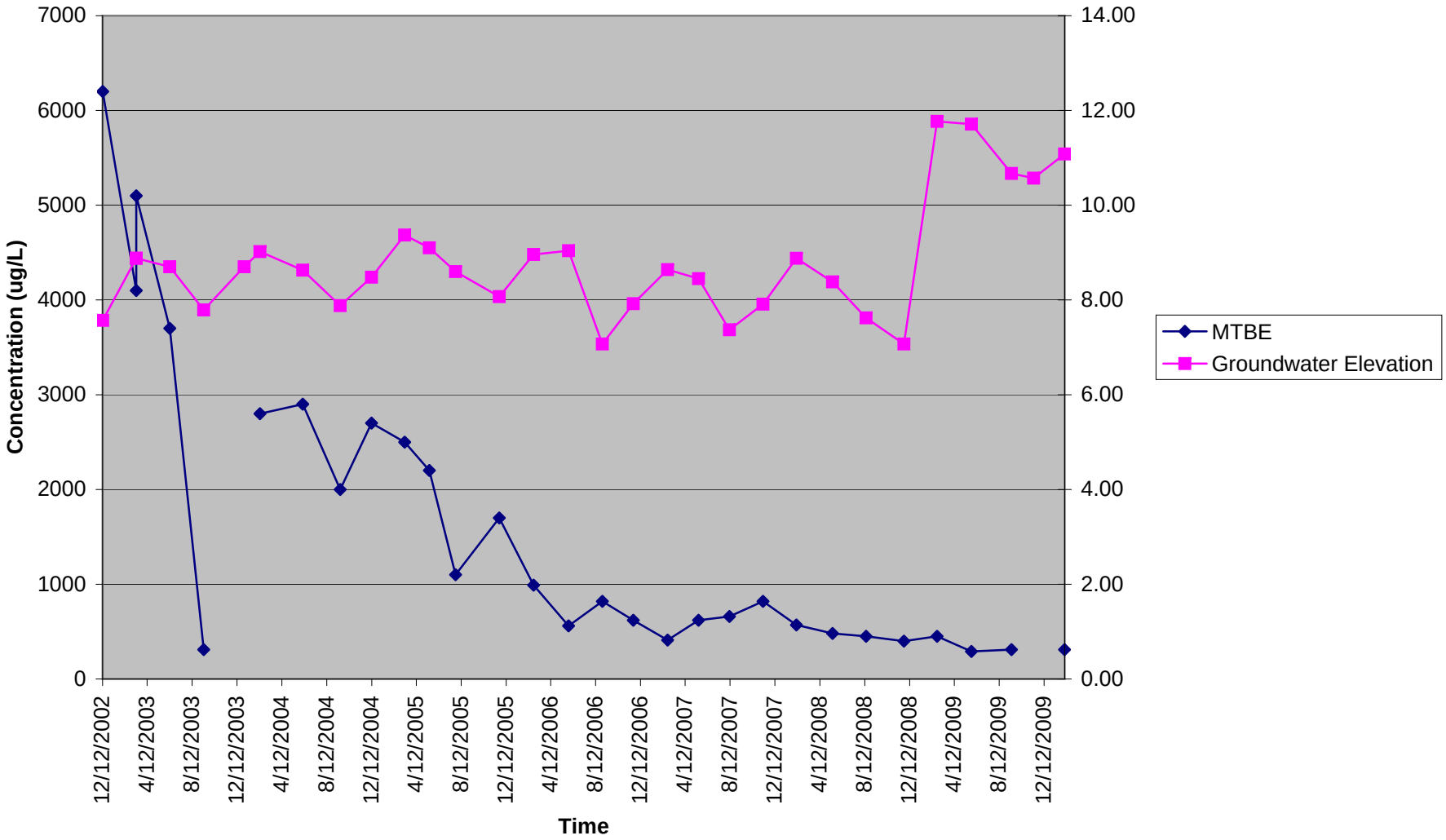


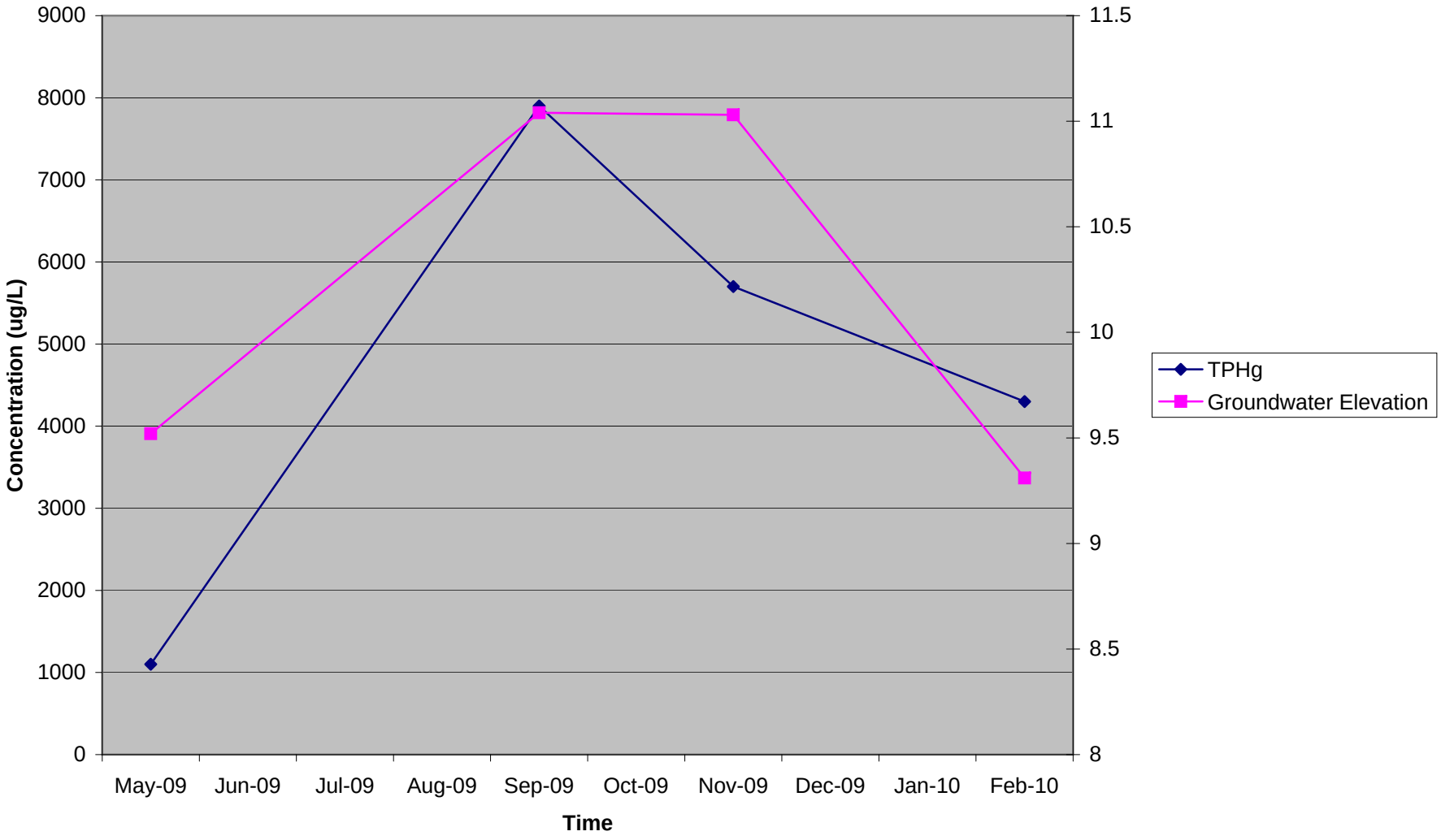

76 Service Station No. 0843/2349
MW-1 MTBE Concentrations
Concentration (ug/L)
6000
5000
4000
3000
2000
1000
0
14
12
10
8
6
4
2
0
Mar-05
Jun-05
Sep-05
Dec-05
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Time
MTBE
Groundwater Elevation

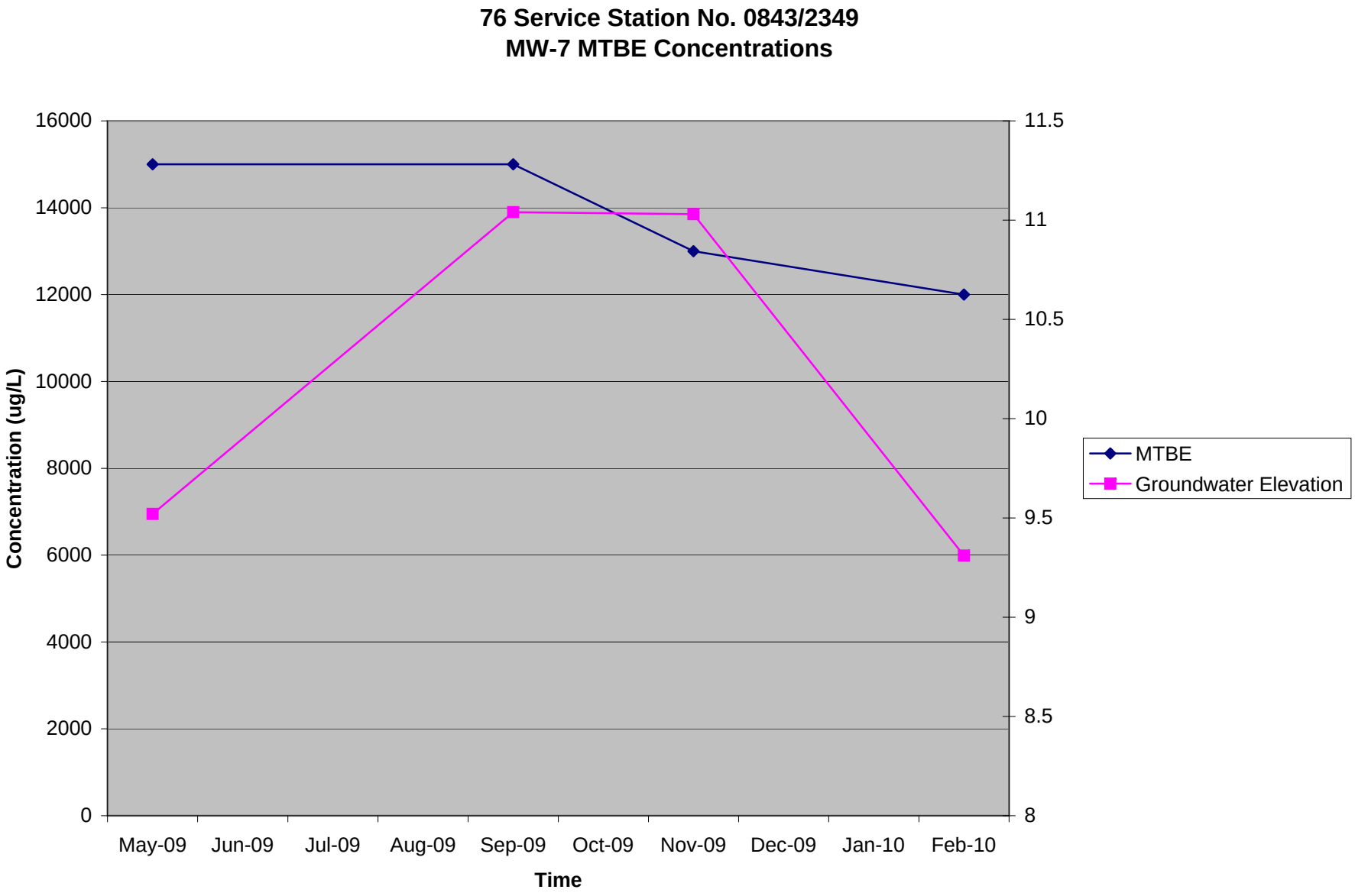
76 Service Station No. 0843/2349
MW-6 TPHg Concentrations

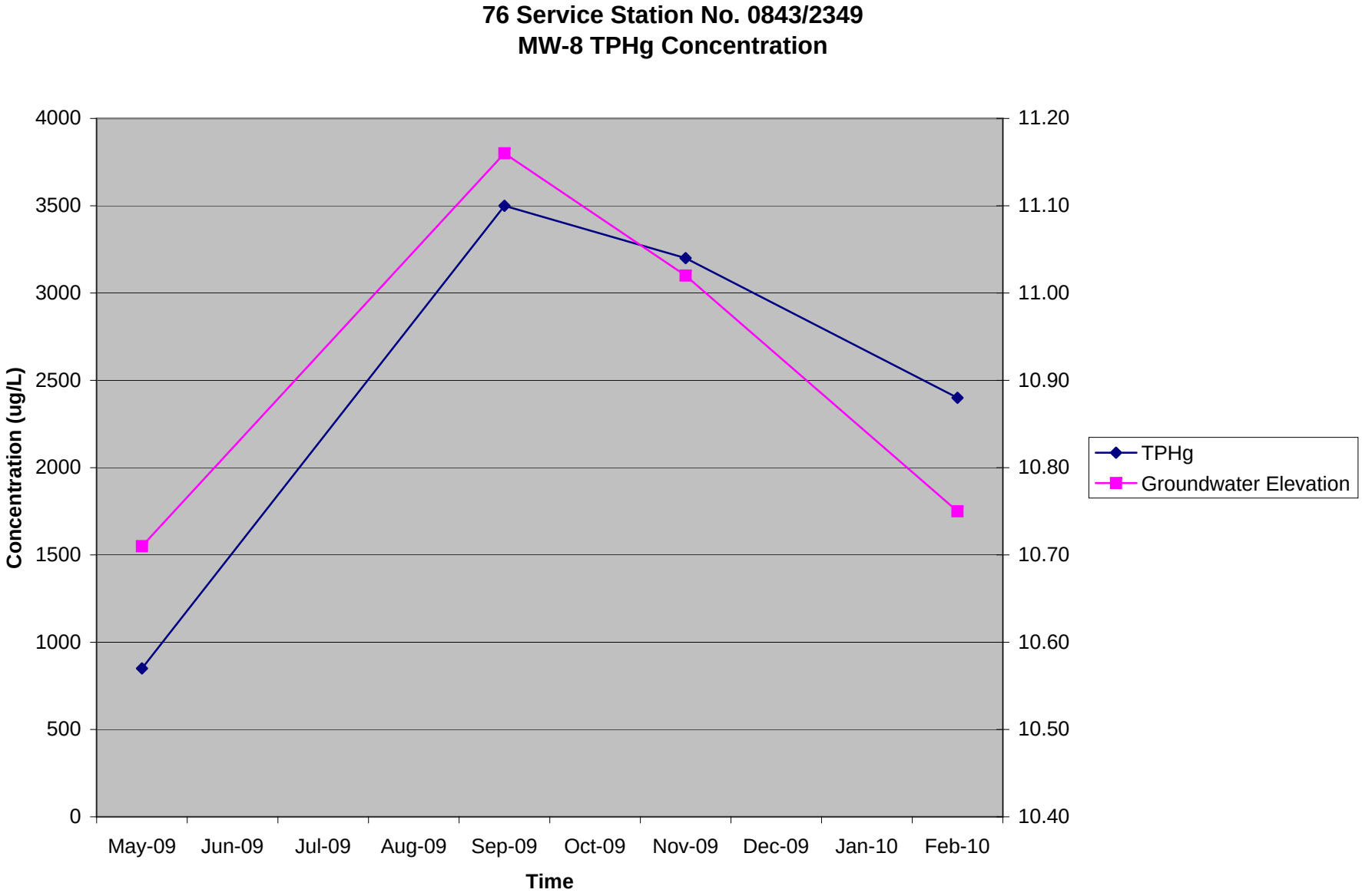


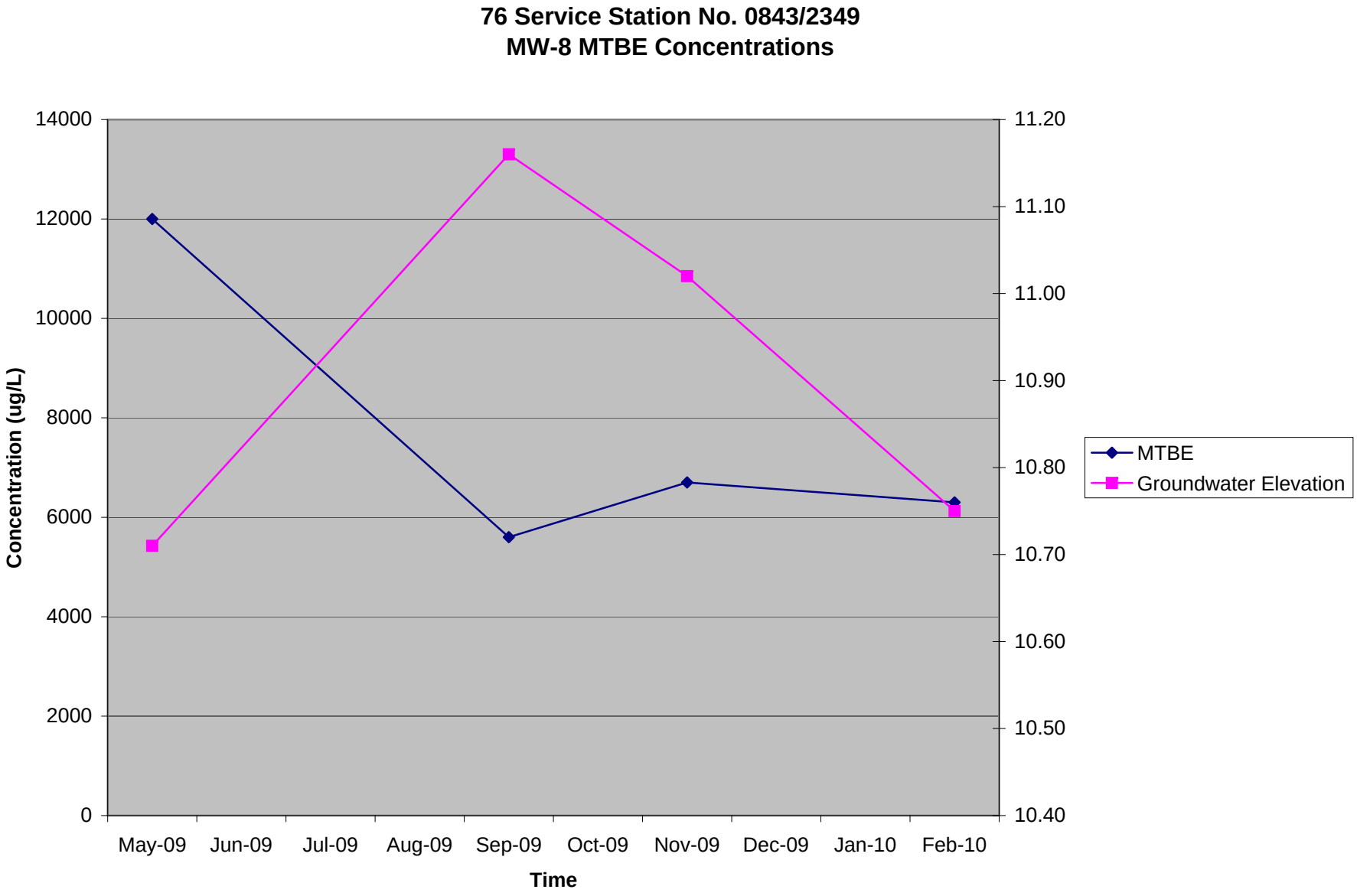
76 Service Station No. 0843/2349
MW-6 MTBE Concentration



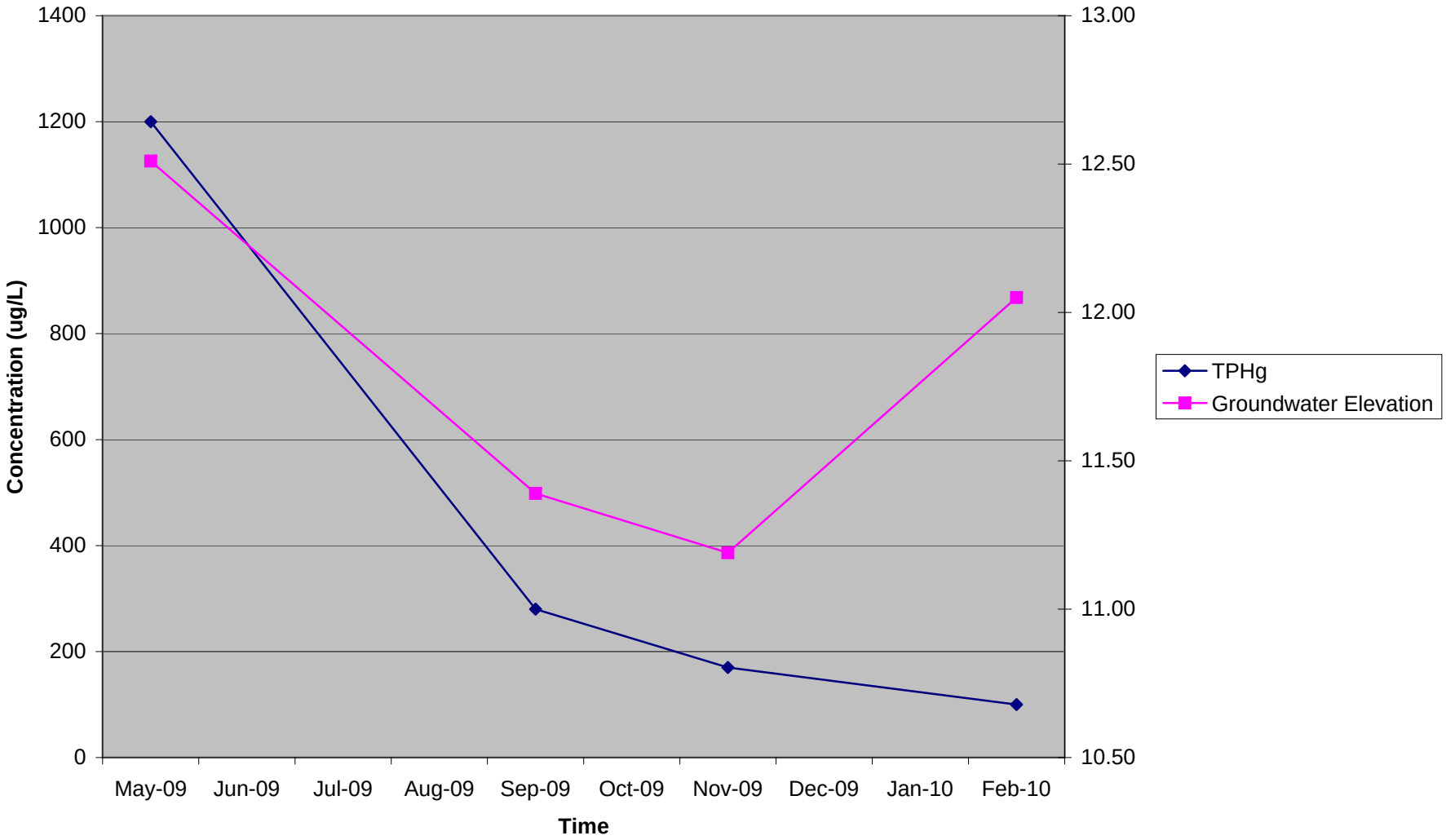

76 Service Station No. 0843/2349
MW-7 TPHg Concentrations
Concentration (ug/L)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
11.5
11
10.5
10
9.5
9
8.5
8
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Time
TPHg
Groundwater Elevation


76 Service Station No. 0843/2349
MW-7 MTBE Concentrations
Concentration (ug/L)
16000
14000
12000
10000
8000
6000
4000
2000
0
11.5
11
10.5
10
9.5
9
8.5
8
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Time
MTBE
Groundwater Elevation

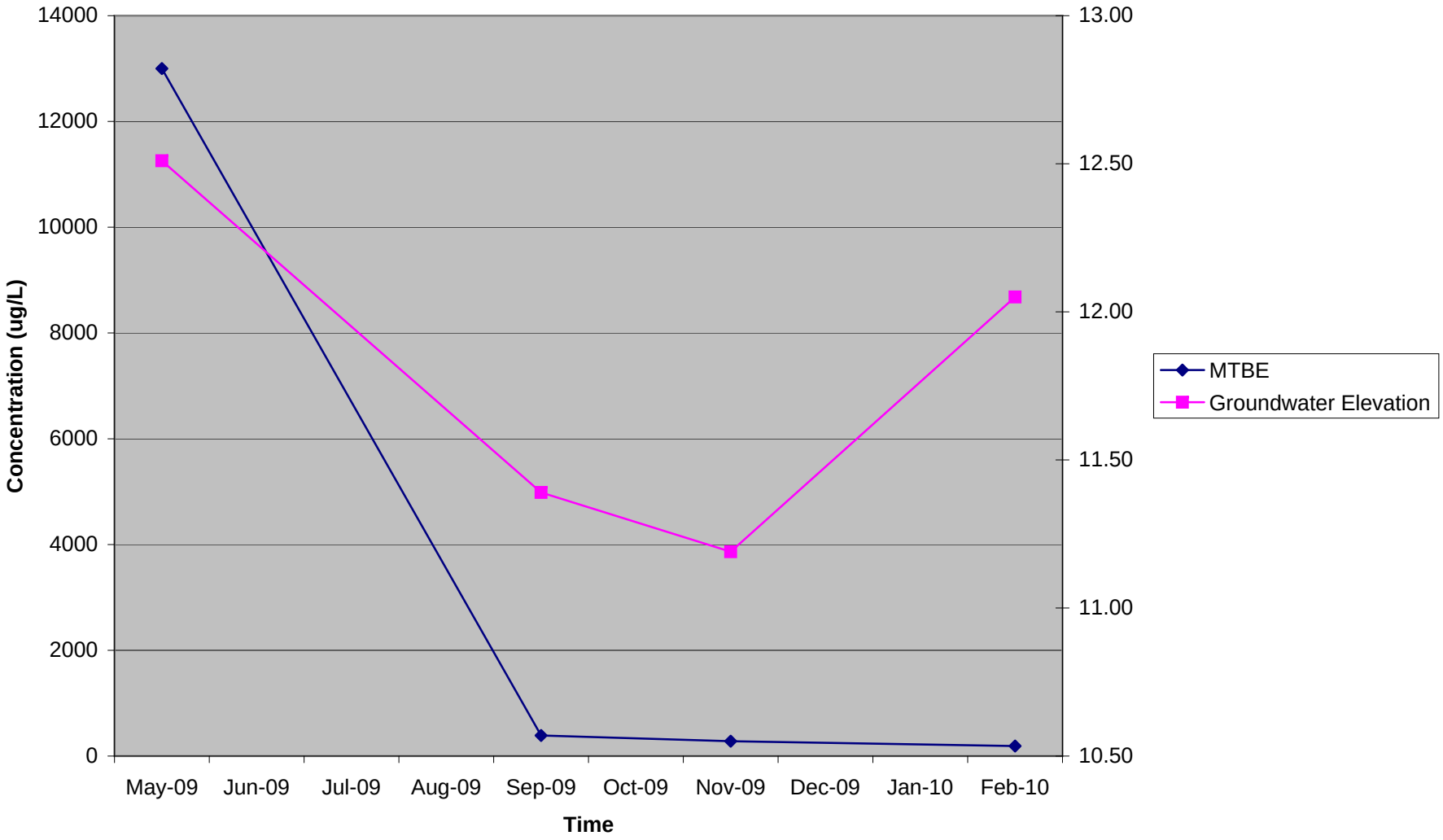

76 Service Station No. 0843/2349
MW-8 TPHg Concentration
Concentration (ug/L)
4000
3500
3000
2500
2000
1500
1000
500
0
11.20
11.10
11.00
10.90
10.80
10.70
10.60
10.50
10.40
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Time
TPHg
Groundwater Elevation

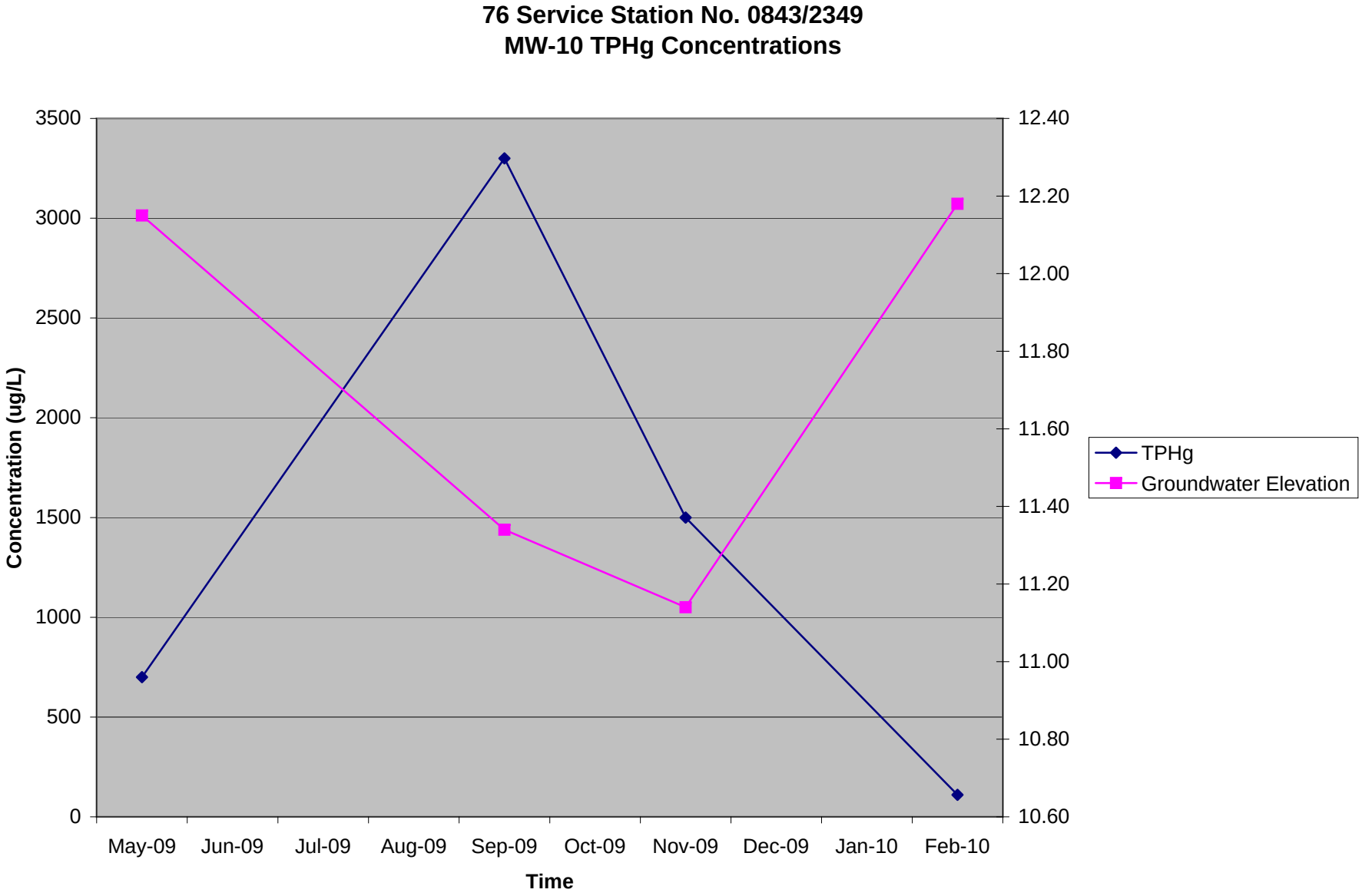

76 Service Station No. 0843/2349
MW-8 MTBE Concentrations
Concentration (ug/L)
14000
12000
10000
8000
6000
4000
2000
0
11.20
11.10
11.00
10.90
10.80
10.70
10.60
10.50
10.40
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Time
MTBE
Groundwater Elevation

76 Service Station No. 0843/2349
MW-9 TPHg Concentration

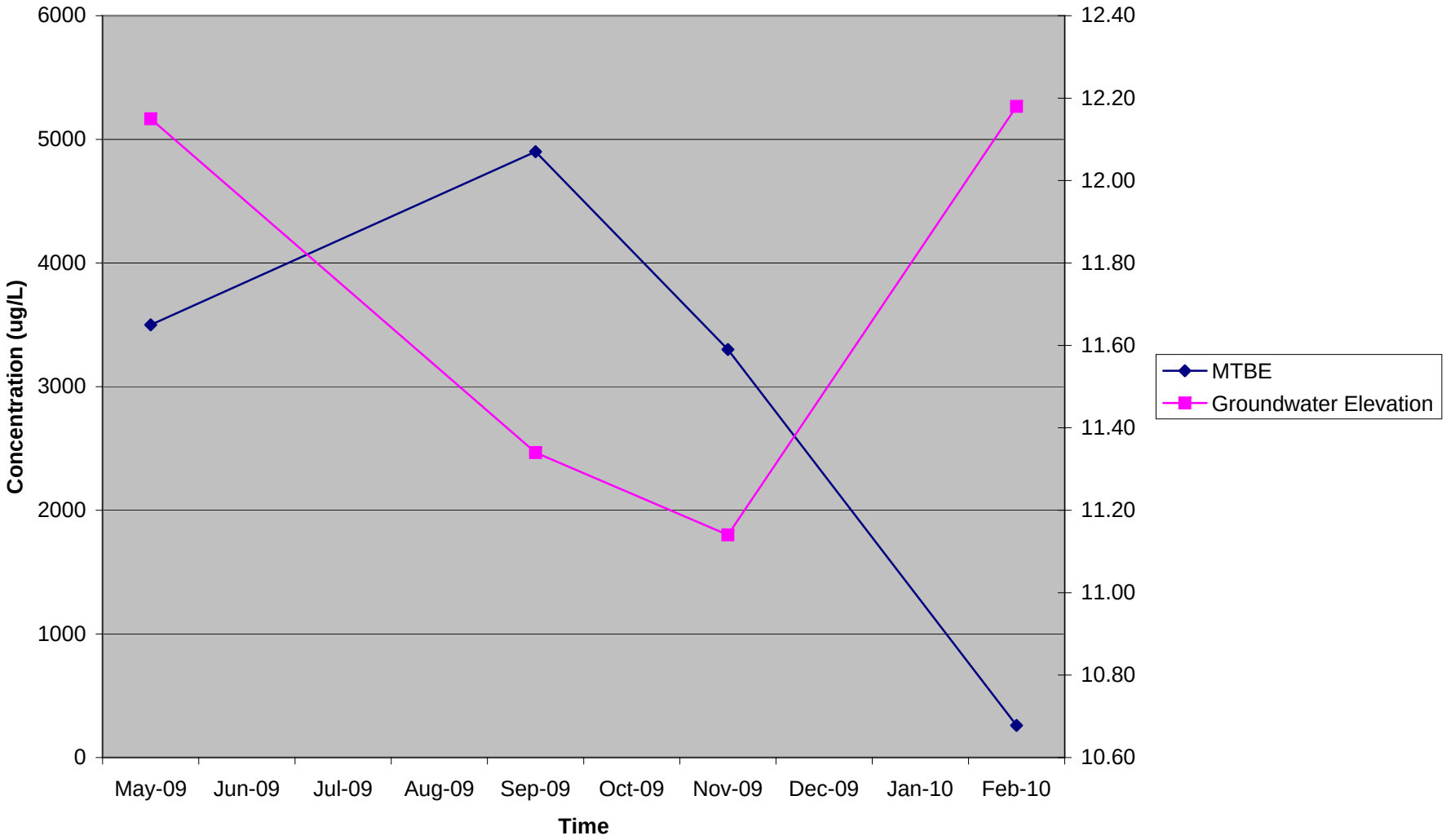


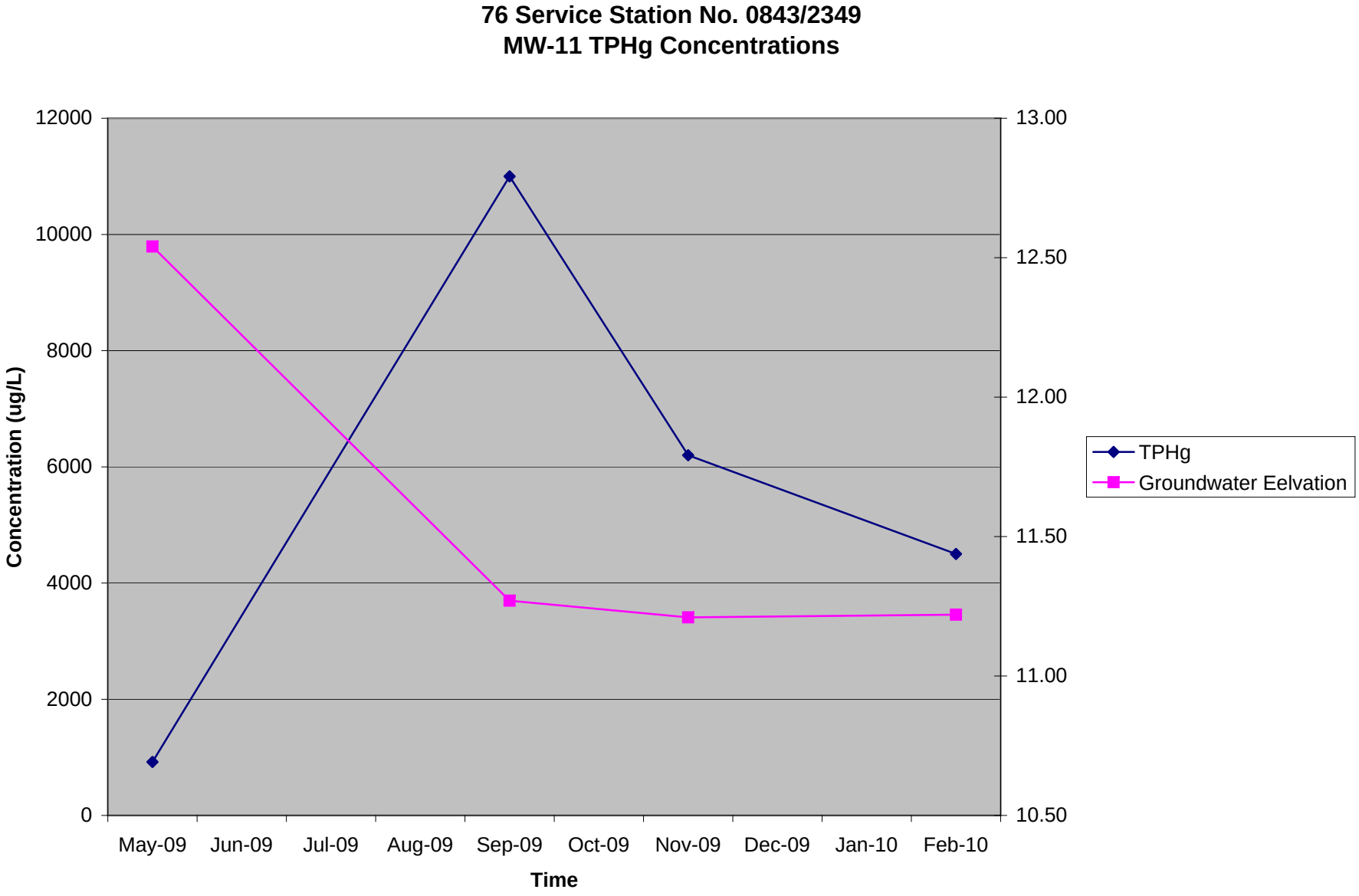
76 Service Station No. 0843/2349
MW-9 MTBE Concetntrations



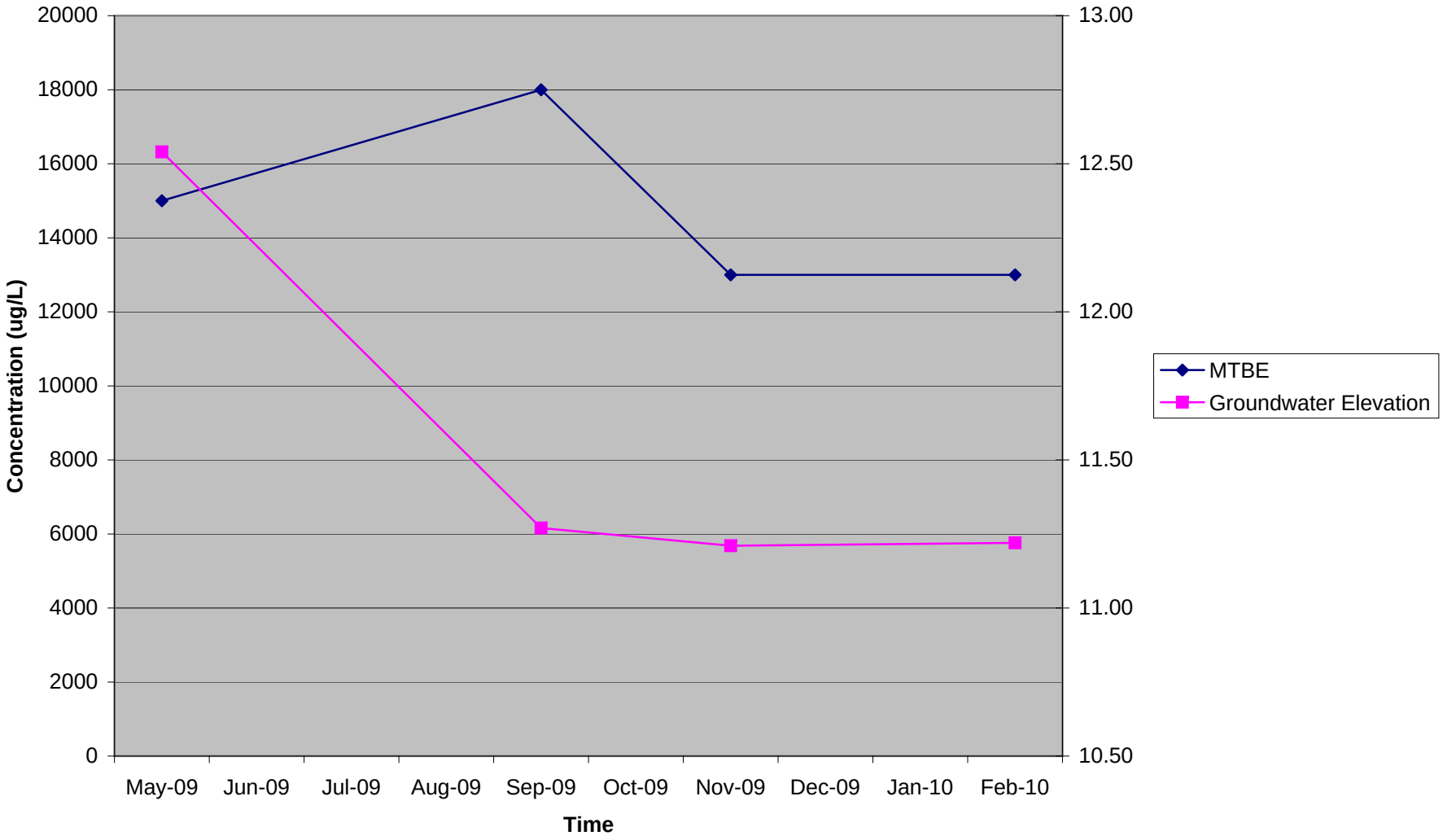

76 Service Station No. 0843/2349
MW-10 TPHg Concentrations
Concentration (ug/L)
3500
3000
2500
2000
1500
1000
500
0
12.40
12.20
12.00
11.80
11.60
11.40
11.20
11.00
10.80
10.60
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Time
TPHg
Groundwater Elevation

76 Service Station No. 0843/2349
MW-10 MTBE Concentrations




76 Service Station No. 0843/2349
MW-11 TPHg Concentrations
12000
10000
8000
6000
4000
2000
0
Concentration (ug/L)
13.00
12.50
12.00
11.50
11.00
10.50
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Time
TPHg
Groundwater Eelvation

76 Service Station No. 0843/2349
MW-11 MTBE Concentrations



APPENDIX F

Mass Calculations of Remaining Petroleum Hybrocarbons in Soil and Groundwater

76 Station 0843/2349

Volume Calculations and Mass Calculations for Groundwater

Water data	plumes	Area (ft^2)	Thickness of layer (feet)	Porosity (%)	Volume (ft^3)	liters	TPH-g Avg (ug/L)	mass (lbs)
at 5 to 10 feet bgs	1	2898	5	30	4,347	123,093	3,200	0.87
at 5 to 10 feet bgs	2	11486	5	30	12,882	364,777	122	0.10

total TPH-g mass in water **0.97 lb**

Water data	plumes	Area (ft^2)	Thickness of layer (feet)	Porosity (%)	Volume (ft^3)	liters	MTBE Avg (ug/L)	mass (lbs)
at 5 to 10 feet bgs	1	1,590	5	30	2,385	67,535	12,500	1.86
at 5 to 10 feet bgs	2	3,181	5	30	4,771	135,099	4,850	1.44
at 5 to 10 feet bgs	3	7,599	5	30	11,398	322,755	300	0.21

total MTBE mass in water **3.51 lbs**

total contaminant mass in water **4.48 lbs**

Soil concentrations based on maximum historical concentrations.
Volume is based on area of concern*depth of region of concern*porosity of region
Liters to feet^3 is approximately 28.2744 liters per feet^3
Average soil porosity is estimated at 30%.
Average soil density is estimated as 105 lb/ft^3.
105 lb/ft^3 = 1.72 g/cm^3.
16.38 cm^3/in^3 and 1728 in^3/ft^3
mass= Volume* density
mass= (volume*(1728 in^3/ft^3)*(16.38 cm^3/in^3))*(concentration*(1kg/10^6 mg))* density*(1 lb/454 grams)
Soil and Groundwater plumes are based on analytical values above ESLs
Soil and plumes are based on historical soil concentrations above ESLs.
Groundwater plumes are based on 1st Quarter 2010 constituent isocontours.

76 Station 0843/2349
Volume Calculations and Mass Calculations Soil

Soil data	plumes	Area (ft^2)	Thickness of layer (feet)	Porosity (%)	Volume (ft^3)	Density (g/cm^3)	TPH-g Avg (mg/kg)	mass (lbs)
at 9 to 11 feet bgs	1	80	2	30	48	1.72	4,100	21.1

total TPH-g mass in soil	**21.1 lbs**
total overall TPH-g mass in soil and groundwater	**22.07 lbs**
total overall contaminant mass in soil and groundwater	**25.58 lbs**

Soil concentrations based on maximum historical concentrations.
Volume is based on area of concern*depth of region of concern*porosity of region
Liters to feet^3 is approximately 28.2744 liters per feet^3
Average soil porosity is estimated at 30%.
Average soil density is estimated as 105 lb/ft^3.
105 lb/ft^3 = 1.72 g/cm^3.
16.38 cm^3/in^3 and 1728 in^3/ft^3
mass= Volume* density
mass= (volume*(1728 in^3/ft^3)*(16.38 cm^3/in^3))*(concentration*(1kg/10^6 mg))* density*(1 lb/454 grams)
Soil and plumes are based on historical soil concentrations above ESLs.
Groundwater plumes are based on 1st Quarter 2010 constituent isocontours.