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May 23, 2013

RECEIVED
By Alameda County Environmental Health at 3:53 pm, May 23, 2013

Mr. Jerry Wickham
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Low-Threat Closure Request and Conceptual Site Model
1771 First Street, Livermore, California
Fuel Leak Case No.: RO0000436

Dear Mr. Wickham,

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct. The attached Low Threat Closure Request and Conceptual Site Model (CSM) propose there is an off-site source contributing to hydrocarbon-impacts at the subject site.

If you have any questions or need additional information, please contact me at (925) 790-6270 or RKambin@Chevron.com.

Sincerely,

Roya Kambin
Union Oil of California – Project Manager

Attachment
Low-Threat Closure Request and Conceptual Site Model

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Union Oil Company of California

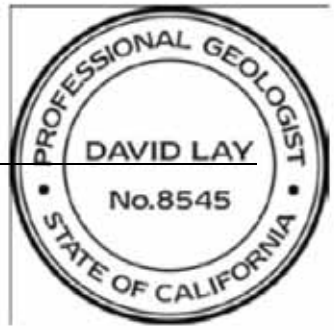
Conceptual Site Model and Closure Request

76 Service Station No. 4186
1771 First Street
Livermore, California
Case No. RO0000436

May 23, 2013

ARCADIS

Katherine Brandt
Certified Project Manager



David W. Lay, P.G., C.P.G
Principal Geologist

Conceptual Site Model and Closure Request

76 Service Station No. 4186
1771 First Street
Livermore, California
Case No. RO0000436

Prepared for:
Union Oil Company of California

Prepared by:
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Our Ref.:
B0047942.2013.00003

Date:
May 23, 2013

ARCADIS

Table of Contents

Appendices

Acronyms and Abbreviations

ACDEH	Alameda County Department of Environmental Health
ACWD	Alameda County Water District
ARCADIS	ARCADIS U.S., Inc.
Arctos	Arctos Environmental
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
btoc	below top of casing
CDWR	California Department of Water Resources
COPC	constituent of potential concern
CPT	cone penetrometer testing
CSM	conceptual site model
cy	cubic yards
Delta	Delta Environmental Consultants
DSP	Downtown Specific Plan
ft/ft	foot per foot
G-R	Gettler-Ryan Inc.
GEIMS	Geotracker Environmental Information Management System
Golder	Golder Associates Inc.
ISCO	in-situ chemical oxidation
Low-Threat Closure Policy	Low-Threat Underground Storage Tank Case Closure Policy
LRL	laboratory reporting limit
LUST	leaking underground storage tank
MCL	Maximum Contaminant Level

mg/kg	milligrams per kilogram
MTBE	methyl tert butyl ether
NAPL	nonaqueous phase liquid
PEG	Pacific Environmental Group, Inc.
request	Conceptual Site Model and Closure Request
SF-RWQCB	San Francisco Bay Regional Water Quality Control Board
site	76 Service Station No. 4186, located at 1771 First Street in Livermore, California
SPH	separate-phase hydrocarbon
Stratus	Stratus Environmental Inc.
SWP	State Water Project
SWRCB	State Water Resources Control Board
TBA	tert-butyl alcohol
TPH-g	total petroleum hydrocarbons as gasoline
UST	underground storage tank
WQO	water quality objective
WRCC	Western Regional Climate Center
°F	degrees Fahrenheit
µg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter

1. Introduction

On behalf of Chevron Environmental Management Company, ARCADIS U.S., Inc. (ARCADIS) prepared this Conceptual Site Model and Closure Request (request) for the 76 Service Station No. 4186, located at 1771 First Street in Livermore, California (site; Figure 1). This request summarizes existing site data that were used to support a request for low-threat case closure. The site qualifies for closure as a low-threat fuel site, as described in the State Water Resources Control Board's (SWRCB's) Low-Threat Underground Storage Tank Case Closure Policy (Low-Threat Closure Policy) adopted by the SWRCB on May 1, 2012 and effective August 17, 2012 (SWRCB 2012a). A completed Low-Threat Closure Checklist is included as Appendix A.

This request includes a comprehensive site assessment and remediation history, regional and site-specific geology and hydrogeology, review of the soil and groundwater conditions at the site (including the distribution of constituents of potential concern [COPCs]), and evaluation of human health exposure from site-related COPCs. Based on the information provided in the following sections, the site meets General and Media-Specific Criteria of the Low-Threat Closure Policy (SWRCB 2012a); therefore, ARCADIS requests that the site be considered for low-threat closure.

2. Site Description

The site is an operating Chevron-branded gas station located at 1771 First Street in Livermore, California (Alameda County Assessor's Parcel # 97-10-1-1; Figure 1). The site currently consists of a station building, four product dispenser islands, and two 10,000-gallon gasoline underground storage tanks (USTs). A site Plan is presented on Figure 2.

The site is bounded to the northwest by First Street, to the east by South N Street, and to the south and west by commercial property. Commercial and residential properties are located further north and south of the site. According to the City of Livermore Zoning Map (City of Livermore 2010a), the site is zoned DSP (Downtown Specific Plan). In addition, according to the Livermore DSP, the site is located in the Downtown Boulevard Gateway district. Mixed residential and commercial property is allowed under this zoning designation.

According to historical aerial photographs (1940 through 2002), the site first appeared as two residential houses from at least 1940 to 1950 and as the service station since at least 1958 (Delta Environmental Consultants [Delta] 2007). A waste oil UST was reportedly removed in June 1993 (Gettler-Ryan Inc. [G-R] 2000). No other documentation regarding the waste oil UST was available.

Sensitive populations include people who may potentially have increased susceptibility to risks resulting from exposure to site-related petroleum hydrocarbons, such as school-age children, medically compromised people, and the elderly. The nearest sensitive receptor is located approximately 1,300 feet southeast of the site. This property and all other sensitive receptors identified within a 0.5-mile radius of the site are located upgradient or crossgradient from the site.

3. Conceptual Site Model

This section summarizes the conceptual site model (CSM), as well as the site geology and hydrogeology, previous work, distribution of fuel hydrocarbons and oxygenates in the subsurface, and an evaluation of risks to human health and the environment.

3.1 Regional Setting

3.1.1 Topography and Site Elevation

The site is situated on relatively flat land in the downtown portion of the City of Livermore (Figure 1). The site is at an approximate elevation of 480 feet above mean sea level (G-R 2000).

3.1.2 Geography

The site is located on the northeast corner of the intersection of First Street and South N Street in Livermore, California. The site is bounded to the northwest by First Street, to the east by South N Street, and to the south and west by commercial property.

3.1.3 Surface-Water Drainage

The Arroyo Valley stream is located approximately 0.5 mile south-southwest (downgradient) from the site.

3.1.4 Climate

According to the Western Regional Climate Center's (WRCC's) Livermore, California (044997) weather station (the closest weather station to the site), the average rainfall for the area is approximately 14.53 inches a year. The average high temperature is 73.3 degrees Fahrenheit (°F) and the average low temperature is 45.5°F (WRCC 2012).

3.1.5 Vegetation

The site is paved with asphalt with several planters. The offsite areas are also paved, except for small areas used for landscaping.

3.2 Regional and Site Geology

Onsite soils include Holocene-age alluvial fan deposits, described by the California Department of Water Resources (CDWR) in Bulletin 118-3 as “unconsolidated, moderately sorted, permeable fine sand and silt, with gravel becoming more abundant toward fan heads with canyons” (CDWR 1974). The site is located approximately 1 mile east of the northwest-trending Livermore Fault (Zone 7 Water Agency [Zone 7] 2005). Holocene alluvial fan deposits comprise semiconsolidated sand and gravel in a clayey sand matrix (Delta 2006).

The site is underlain by sand and gravel to approximately 20 feet below ground surface (bgs). The sand and gravel layer is underlain by a clay layer from approximately 20 to 35 feet bgs. A sandy layer then extends from approximately 35 to 45 feet bgs, followed by another clay layer from approximately 45 feet bgs (Delta 2010). Copies of available boring logs are provided in Appendix B. Geologic cross-sections are included in Appendix C.

3.3 Regional and Site Hydrogeology

The site is located within the Mocho Sub-basin of the Livermore Valley Groundwater Basin. The Mocho Sub-basin is bounded by the Livermore Fault to the west, exposed Livermore Formation to the east, Tassajara Formation and Parks Boundary to the north, and Livermore Uplands to the south (Zone 7 2005).

Water-bearing zones can be found under the entire Livermore Valley Groundwater Basin and portions of the upland areas. Valley fill, the Livermore Formation, and the Tassajara Formation make up the primary water-bearing zones (CDWR 1974). Multiple aquifers are present in the Livermore Valley Groundwater Basin and include unconfined aquifers in the Upper Aquifer Zone and confined aquifers in the Lower Aquifer Zone. The Upper Aquifer Zone exists between surficial clay (at approximately 20 to 40 feet bgs) to approximately 80 to 150 feet bgs. The Lower Aquifer Zone is located below the up to 50-foot-thick clay aquiclude beneath the center of the Upper Aquifer Zone. Water quality within the Mocho Sub-basin is described as fair to excellent quality, with the presence of sodium bicarbonate and magnesium bicarbonate (Zone 7 2005).

The Livermore Valley Groundwater Basin surface waters drain to the Arroyo de la Laguna, which joins Alameda Creek in Sunol Valley, California. Groundwater in the

basin also drains toward the Arroyo de la Laguna. The regional groundwater flow direction is to the west (CDWR 1974).

The City of Livermore is served by both Cal Water Services Company (Cal Water) and Livermore Municipal Water. The site is located with the service area of Cal Water which services approximately 48 percent of the area incorporated by the City of Livermore. Water provided to the City of Livermore by Cal Water, is purchased water from Zone 7 (70 percent) and groundwater (30 percent). Cal Water has 11 active groundwater wells within the Livermore District (Cal Water 2011).

According to Livermore Municipal Water, 100 percent of the city of Livermore's wholesale water comes from Zone 7 (City of Livermore 2010b). Zone 7 imports 90 percent of its supply from the State Water Project (SWP) and from the Byron Bethany Irrigation District. The SWP water originates from Lake Oroville in the Feather River Watershed, flows through the Sacramento-San Joaquin Delta, and is conveyed south via the South Bay Aqueduct. The Byron Bethany Irrigation District diverts water from the Sacramento-San Joaquin Delta. Water is stored in Lake Del Valle, within the Livermore Valley Groundwater Basin, and is also proposed to be stored in the Chain of Lakes, located approximately 2.5 miles west of the site. Zone 7 uses the Livermore Valley Groundwater Basin as a storage facility and does not use the basin for long-term water supply. Only during periods of high demand or during surface-water treatment maintenance and improvements will the agency use groundwater (from Zone 7 wells in Pleasanton) to supplement its surface-water supply (Zone 7 2005, Livermore Municipal Water 2011).

Groundwater was first encountered in borings drilled in 1998 at approximately 23 feet bgs (G-R 1998). Three hydrologic units were discovered (shallow, intermediate, and deep), separated by approximately 15-foot-thick clayey layers (Delta 2006). Fifteen active groundwater monitoring wells are located onsite (Table 1). The groundwater flow direction onsite has varied from the north to the southwest, with dominant flow to the west. The depth to groundwater in onsite wells varies from approximately 21 to 51 feet bgs. Groundwater elevations fluctuate seasonally by approximately 10 feet. The hydraulic gradient during the second semiannual 2012 groundwater monitoring event was approximately 0.004 foot per foot (ft/ft) in the shallow zone, 0.036 ft/ft in the intermediate zone, and 0.014 ft/ft in the deep zone (ARCADIS 2013). The most current groundwater contour maps for each hydrologic unit are presented on Figures 3, 4, and 8.

3.4 Summary of Previous Work

Investigation activities at the site commenced in 1996 during the dispenser and associated product line removal. This section summarizes previous work, including release history, site assessment, and site remediation activities.

3.4.1 Release History

No reported releases have occurred at the site. In addition, impacted soil and groundwater were not observed during the 1996 dispenser and product line removal and replacement (G-R 2000).

3.4.2 Site Assessment History

In June 1996, during the removal and replacement of the dispensers and product line, six soil samples were collected from underneath these features. The soil samples collected had detectable concentrations of total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and total xylenes (BTEX, collectively), that were not detected above their respective laboratory reporting limits (LRLs) (G-R 2000). Soil boring locations and analytical results were not available.

In September 1997, as part of a baseline site assessment due to the property transfer of Unocal Corporation to Tosco, six soil gas probes were advanced near the USTs, product lines, and dispensers. The two soil gas probes near the USTs were advanced to depths of approximately 3 and 15 feet bgs. The four soil gas probes installed near the dispensers and product lines were advanced to a depth of approximately 3 feet bgs. It should be noted that soil gas sampling points were not installed. Instead, the probes were advanced into the soil using pneumatic equipment. After reaching the desired depth, a protective casing was retracted to expose the screened interval. Soil gas was then collected using a vacuum pump.

Results of the soil gas survey indicated that the maximum concentrations of TPH-g (61,000 micrograms per cubic meter [µg/m^3]), BTEX (870, 1,700, 1,500, and 7,500 µg/m^3, respectively), and methyl tert butyl ether (MTBE; 66,000 µg/ m^3) were observed in the product piping and dispenser area. In the UST area, maximum concentrations of TPH-g (4,500,000 µg/m^3), BTEX (110,000, 62,000, 10,000, and 81,000 µg/m^3, respectively), and MTBE (5,800,000 µg/m^3) were observed (Pacific Environmental Group, Inc. [PEG] 1997).

In June 1998, G-R installed three groundwater monitoring wells (U-1, U-2, and U-3) to depths of 34, 33, and 34 feet bgs, respectively, to assess impacts to soil and groundwater based on results from the 1997 soil gas survey conducted by PEG. During well installation, five soil samples and one composite soil sample were collected from the soil cuttings. Concentrations of toluene and benzene were detected in the soil sample collected from U-3 at a depth of approximately 20.5 feet bgs (0.009 and 0.007 milligrams per kilogram [mg/kg], respectively). Total lead was detected at a concentration of 9 mg/kg in the composite soil sample. All other soil samples collected had concentrations of TPH-g, BTEX, and MTBE that were not detected above their respective LRL.

Wells U-1, U-2, and U-3 were developed and purged in July 1998. Depth to water was measured between 23.28 and 23.82 feet below top of casing (btoc). No separate-phase hydrocarbon (SPH) or sheen was observed in any of the wells. TPH-g, BTEX, and MTBE were not detected above their respective LRL in groundwater collected from monitoring well U-1. TPH-g (1,200 micrograms per liter [µg/L]), BTEX (130, 12, 62, and 180 µg/L, respectively), and MTBE (1,100 µg/L) were detected in groundwater collected from monitoring well U-2. TPH-g (70,000 µg/L), BTEX (3,100, 5,500, 2,700, and 16,000 µg/L, respectively), and MTBE (7,500 µg/L) were detected in groundwater collected from monitoring well U-3(G-R 1998).

In February 2001, G-R installed offsite groundwater monitoring wells U-4 and U-5 to a depth of approximately 47 feet bgs to delineate downgradient impacts to soil and groundwater. During well installation, one soil sample was collected from each well just above the water table and one composite soil sample was collected from the soil cuttings. TPH-g, BTEX, and MTBE were not detected above their respective LRLs in any of the soil samples collected from wells U-4 and U-5.Total lead was detected at 5.7 mg/kg in the composite soil sample.

Wells U-4 and U-5 were developed and purged in April 2001. Depth to water was measured between 24.98 and 31.75 feet btoc. No SPH or sheen was observed in any of the wells. MTBE (38.2 µg/L) was detected in groundwater from well U-4. Total xylenes (0.993 µg/L) and MTBE (55.40 µg/L) were detected in groundwater from well U-5. All other constituents analyzed were not detected above their respective LRL.

In December 2001 and January 2002, G-R advanced 10 soil borings, two of which were converted into onsite wells U-6 and U-7 and eight of which were converted to ozone microsparge wells SP-1 through SP-8 to address impacted media at the site. Two soil samples were collected from each monitoring well. Soil samples were

collected from monitoring well U-6 at depths of approximately 25 and 30 feet bgs. Soil samples were collected from monitoring well U-7 at depths of approximately 15 and 25 feet bgs. TPH-g, BTEX, and MTBE were not detected above their respective LRL for all soil samples collected at these well locations.

Wells U-6 and U-7 were developed and purged in January 2002. Depth to water was measured between 23.73 and 36.55 feet btoc. No SPH or sheen was observed in any of the wells. TPH-g (5,000 µg/L), benzene (36 µg/L), ethylbenzene (260 µg/L), and total xylenes (450 µg/L) were detected in groundwater collected from well U-6. TPH-g (3.100 µg/L), benzene (93 µg/L), ethylbenzene (35 µg/L), total xylenes (73 µg/L), MTBE (140 µg/L), and tert-butyl alcohol (TBA; 30 µg/L) were detected in groundwater collected from well U-7. All other constituents analyzed were not detected at concentrations above their respective LRL.

Microsparge wells SP-1 through SP-4 were installed at a depth of 45 feet bgs, SP-6S and SP-7S were installed at a depth of 25 feet bgs, and SP-5, SP-5S, SP-8, and SP-8S are nested sparge points with shallow and deep depths of 25 and 45 feet bgs, respectively. A total of 10 sparge points were installed.

In April 2006, Delta advanced seven soil borings to delineate the plume and the upper and lower contacts of the sand and gravel unit underneath the site. Three boreholes were advanced at each location (one to provide a cone penetrometer testing [CPT] log of subsurface lithology, one to collect soil samples and depth-discrete groundwater samples at approximately 38 to 44 feet bgs, and one to collect depth-discrete groundwater samples at approximately 57 to 65 feet bgs). The CPT assessment determined two hydrologic subsurface units at the site separated by a clay layer. Depths to approximately 43 feet bgs are considered the upper unit, while depths from approximately 55 feet bgs are considered the lower unit.

TPH-g was detected in 14 of the soil samples, ranging in concentration from 0.29 mg/kg (B-1 at 60 feet bgs) to 700 mg/kg (B-7 at 45 feet bgs). Benzene was detected in three of the soil samples at concentrations ranging from 0.015 mg/kg (B-5 at 50 feet bgs) to 1.3 mg/kg (B-7 at 45 feet bgs). Toluene was only detected in the soil sample from B-5 at 50 feet bgs (0.026 mg/kg). Ethylbenzene was detected in five of the soil samples at concentrations ranging from 0.0069 mg/kg (B-3 at 65 feet bgs) to 5.6 mg/kg (B-7 at 45 feet bgs). Total xylenes were detected in eight of the soil samples at concentrations ranging from 0.023 mg/kg (B-4 at 50 feet bgs) to 14 mg/kg (B-7 at 45 feet bgs). MTBE was detected in seven of the soil samples at concentrations ranging from 0.019 mg/kg (B-4 at 40 feet bgs) to 0.29 mg/kg (B-6 at 25 feet bgs).

TPH-g was detected in all seven of the groundwater samples in the upper zone, ranging in concentrations from 930 µg/L (B-2 at 38 feet bgs) to 23,000 µg/L (B-5 at 44 feet bgs). Benzene was detected in five of the groundwater samples in the upper zone, ranging in concentration from 6.5 µg/L (B-7 at 39 feet bgs) to 420 µg/L (B-6 at 43 feet bgs). Toluene was detected in three of the groundwater samples in the upper zone at concentrations ranging from 0.78 µg/L (B-2 at 43 feet bgs) to 11 µg/L (B-5 at 44 feet bgs). Ethylbenzene was detected in six of the groundwater samples in the upper zone at concentrations ranging from 8.2 µg/L (B-5 at 44 feet bgs) to 830 µg/L (B-1 at 41 feet bgs). Total xylenes were detected in all seven of the groundwater samples in the upper zone, ranging in concentration from 1.5 µg/L (B-2 at 38 feet bgs) to 370 µg/L (B-5 at 44 feet bgs). MTBE was detected in four of the groundwater samples in the upper zone, ranging in concentration from 16 µg/L (B-4 at 43 feet bgs) to 1,100 µg/L (B-6 at 43 feet bgs).

TPH-g was detected in all seven of the groundwater samples in the lower zone, ranging in concentration from 100 µg/L (B-1 at 62 feet bgs) to 26,000 µg/L (B-7 at 57 feet bgs). Benzene was detected in six of the groundwater samples in the lower zone, ranging in concentration from 1.4 µg/L (B-1 at 62 feet bgs) to 510 µg/L (B-7 at 57 feet bgs). Toluene was detected in one of the groundwater samples in the lower zone at a concentration of 210 µg/L (B-5 at 65 feet bgs). Ethylbenzene was detected in five of the groundwater samples in the lower zone at concentrations ranging from 1.4 µg/L (B-2 at 61 feet bgs) to 270 µg/L (B-7 at 57 feet bgs). Total xylenes were detected in four of the groundwater samples in the lower zone, ranging in concentration from 5.1 µg/L (B-3 at 62 feet bgs) to 820 µg/L (B-5 at 65 feet bgs). MTBE was detected in six of the groundwater samples in the lower zone, ranging in concentration from 3.2 µg/L (B-5 at 65 feet bgs) to 630 µg/L (B-4 at 63 feet bgs). Based on the results of this site investigation, coarse lithologic units (the upper and lower) provide preferential pathways for petroleum migration at the site (Delta 2006).

In March 2007, to further delineate contaminated soil and groundwater downgradient from the site and to investigate the clay layer located underneath the lower unit, three soil borings were advanced using CPT technology. Borings B-8 and B-9 were advanced onsite adjacent to previously advanced borings B-7 and B-4, respectively. B-10 was advanced offsite, near street parking on the north side of First Street. Three boreholes were advanced at each location (one to provide a CPT log of subsurface lithology and perform pore pressure dissipation tests, one to collect depth-discrete soil samples, and one to collect depth-discrete groundwater samples). Each boring was advanced to the lower clay unit or to a maximum depth of 99 feet bgs.

The CPT assessment determined that in the upper unit, a saturated layer was estimated to be present between 33 and 40 feet bgs in B-8, between 43 and 47 feet bgs in B-9, and between 37 and 40 feet bgs in B-10. A clay lens was identified as separating the lower unit and was encountered in B-8, B-9, and B-10 at depths of 67, 76, and 72 feet bgs, respectively. The lower unit has since been separated into an intermediate zone above and the lower zone below the clay lens at depths of approximately 70 feet bgs. The "new" lower unit extended to a depth of 95 feet bgs in B-8 and 83 feet bgs in B-10. Refusal occurred at 84 feet bgs in B-9.

MTBE was only detected above its LRLs in the soil samples at concentrations of 0.013 mg/kg (B-10 at 35.5 feet bgs) and 0.016 mg/kg (B-10 at 41.5 feet bgs). All other soil samples had concentrations of TPH-g and BTEX that were not detected above their respective LRL. TPH-g was detected in one groundwater sample at a concentration of 200 µg/L (B-8). Benzene was detected in one groundwater sample at a concentration of 0.94 µg/L (B-8). Toluene was detected in one groundwater sample at a concentration of 1.4 µg/L (B-10). Ethylbenzene was detected in one groundwater sample at a concentration of 1 µg/L (B-8). Total xylenes were detected in one groundwater sample at a concentration of 1.6 µg/L (B-8). MTBE was detected in two groundwater samples at concentrations of 0.73 µg/L (B-10) and 7.1 µg/L (B-8). All other soil samples had concentrations that did not exceed LRLs.

In September and October 2008, eight monitoring wells were installed to assess the horizontal and vertical extents of petroleum-impacted groundwater at the site. Monitoring wells U-8 through U-11 were installed to evaluate the intermediate zone (depths of 45 to 50 feet bgs) and monitoring wells U-12 through U-15 were installed to evaluate the lower zone (depths of 55 to 58 feet bgs). Soil samples were only collected from the intermediate zone.

TPH-g was detected in all six of the soil samples at concentrations ranging from 0.45 mg/kg (U-11 at 44 feet bgs) to 1,900 mg/kg (U-9 at 40 feet bgs). Benzene was detected in one soil sample at a concentration of 0.7 mg/kg (U-10 at 48 feet bgs). Toluene was detected in two soil samples at concentrations of 0.0051 (U-8 at 37 mg/kg) and 0.12 mg/kg (U-10 at 48 feet bgs). Ethylbenzene was detected in two soil samples at concentrations of 0.31 mg/kg (U-10 at 48 feet bgs) and 8 mg/kg (U-9 at 40 feet bgs). Total xylenes were detected in four soil samples at concentrations ranging from 0.011 mg/kg (U-8 at 37 feet bgs) to 48 mg/kg (U-9 at 40 feet bgs). MTBE was detected in three soil samples at concentrations ranging from 0.29 mg/kg (U-10 at 48 feet bgs) to 0.54 (U-11 at 30 feet bgs).

Wells U-8 through U-15 were developed and purged in October 2008. Depth to water was measured between 44.91 and 74.95 feet btoc. No SPH or sheen was observed in any of the wells (Delta 2008).

In June 2011, TRC Solutions collected groundwater samples from five monitoring wells (U-3, U-5, U-9, U-10, and U-11), for analysis of the stable carbon and hydrogen isotopic composition of MTBE, and stable carbon isotopic composition of TBA (ARCADIS 2012). Compound specific isotope analysis (CSIA) results indicated that degradation of MTBE is occurring in site groundwater (ARCADIS 2012).

Groundwater monitoring activities were initiated at the site in July 1998. Currently, the monitoring well network consists of 15 groundwater monitoring wells. Wells U-1, U-2, and U-3 are used to monitor the shallow groundwater zone at the site. Wells U-4 through U-10 are used to monitor the intermediate groundwater zone at the site. Wells U-12 through U-15 are used to monitor the deep groundwater zone at the site. The groundwater monitoring wells are sampled semiannually during the first and third quarters (ARCADIS 2013).

3.4.3 Remediation History

Approximately 25 cubic yards (cy) of soil were excavated during dispenser and product piping renovations in 1996 (G-R 2000). Approximately 2.5 tons of soil generated during well installation activities in June 1998 were removed from the site (G-R 1998). Approximately eight 55-gallon drums of soil were generated during installation activities for wells U-4 and U-5 in February 2001 (G-R 2001).

G-R installed a K-V Associates, Inc. “C-SpargeTM” ozone microsparging system as an interim remedial measure. The system began operation in December 2001. The ozone microsparge system was designed to cycle through the sparge points 16 times per day, spending approximately 5 to 15 minutes at each sparge point. The ozone system was shut down in October 2006 to evaluate rebound concentrations in groundwater (Delta 2007). A discussion of rebound concentrations was not available. It appears that the system restarted at an unknown date between 2006 and 2009. In 2009, the ozone system was discontinued due to concerns of oxidizing trivalent chromium into hexavalent chromium (Delta 2010). Approximately 9.87 tons of soil generated during well installation activities were removed from the site (G-R 2002).

Oxygen injection testing was performed in sparge wells SP-5/5S and SP-6S, where approximately 1,000 cubic feet of oxygen were injected into each well. The results of the injection test suggest a radius of influence of 10 to 15 feet at the site (Delta 2007).

In May 2010, a magnesium sulfate application pilot test was performed on the eastern portion of the site to reduce petroleum impacts to soil and groundwater at the site. Monitoring wells U-4 through U-11, which are located in the middle zone of the aquifer, were used during this pilot test due to the higher level of petroleum impacts present in this zone. 110 gallons of 29 percent magnesium sulfate solution (13 percent sulfate) were injected into monitoring well U-11 at a rate of approximately 1 gallon per minute. After completing the pilot test, it was concluded that the effectiveness of sulfate at this site could not be adequately determined. Sulfate appears to be consumed by microorganisms in the subsurface, which supports the thought that microorganisms are present to degrade petroleum hydrocarbons. However, TPH-g appeared to increase in several wells, which may be due to seasonal fluctuations in groundwater, flushing of the capillary fringe during sulfate application, or a surfactant effect associated with increased bio-activity. Continued biodegradation parameter analysis during scheduled semiannual groundwater monitoring was recommended (Delta 2010).

3.5 Offsite Sources

Based on a review of the GeoTracker Environmental Information Management System (GEIMS; http://geotracker.waterboards.ca.gov), multiple current and closed leaking underground storage tank (LUST) cleanup sites are located within 1,000 feet of the site.

3.5.1 Closed Cleanup Sites

Closed cleanup sites are summarized below:

- Depaoli Property located at 1679 First Street, approximately 300 feet southwest of the site, was an LUST cleanup site with waste oil impacts and was closed on January 14, 1991. No further information is available regarding the status of this site.

- Rynck Tire located at 1682 First Street, approximately 300 feet northwest of the site, was an LUST cleanup site with waste oil impacts and was closed on December 30, 1996. No further information is available regarding the status of this site.

- Gerald E. McPeak, located at 1453 First Street (approximately 1,200 feet southwest of the site), was an LUST cleanup site with waste oil impacts and was closed on December 12, 1995. No further information is available regarding the status of this site.

- Groth Bros Oldsmobile, located at 59 L Street (approximately 500 feet northeast of the site), was an LUST cleanup site with gasoline and waste oil impacts. The site is a former automobile sales and repair facility consisting of four buildings including a showroom, offices, and service bays with associated asphalt-paved parking areas. The LUST case (Case No. RO0000217) related to the four former LUSTs was closed on November 5, 2009. All environmental issues related to soil or groundwater contamination in other areas of the site are addressed as part of Cleanup Program Case No. 01S0677.

3.5.2 Open Cleanup Sites

Open cleanup sites are summarized below:

- Beacon #3604, located at 1619 First Street, approximately 500 feet southwest of the site, is an open remediation LUST cleanup site with gasoline impacts. In November 1992, three USTs and associated product piping were removed from this site and soil samples collected below the USTs, on the west end of the unleaded plus and unleaded tanks, contained high TPH-g concentrations. The UST excavation was overexcavated to a depth of 19 feet below grade for installation of the new USTs. The area near the southwest corner of the tank pit was also overexcavated to a depth of 27 feet to remove impacted soil. According to Arctos Environmental (Arctos), a total of 1,200 cy of soil were excavated and disposed of offsite (Arctos 2008). A soil vapor extraction and an oxygen injection system currently operate at the site. During the fourth quarter 2011, Arctos conducted an in-situ chemical oxidation (ISCO) pilot test and will submit a work plan for an expanded (on- and off-site) ISCO pilot test. Current groundwater monitoring results show petroleum hydrocarbon impacts in groundwater extending approximately 350 feet northwest of this site (Arctos 2012).

- Desert Petroleum #795 (B & C Gas Mini Mart) an active gasoline service station and mini mart, located at 2008 First Street (approximately 850 feet northeast of the site), is an open remediation LUST cleanup site. Soil and groundwater beneath this site are impacted with petroleum hydrocarbons. Investigation activities commenced in September 1998 (Stratus Environmental Inc. [Stratus] 2012). Since then,

numerous investigations have been conducted onsite and offsite to delineate the extent of impacts in soil and groundwater. Remedial activities at the source included the removal of USTs, hydraulic lifts, and 725 cy of contaminated soil; and the installation of a new double-walled underground fueling system with automated leak detection. Manual bailing of free-phase liquid hydrocarbons (free product) was also performed at two monitoring wells (MW-2 and MW-5) during the mid-1990s (Stratus 2012). In August 2007, six sparging well clusters and one vapor extraction well were installed and an ozone sparge/vapor extraction test was conducted in 2009 (Golder 2009). Ozone injection has been performed at the site intermittently between late 2007 and the present (Stratus 2012). In August 2012, Stratus proposed the installation of additional vapor extraction wells to supplement the ozone injection remedial activities (Stratus 2012).

3.6 Current and Historical Distribution of Residual Hydrocarbons and Oxygenates

COPCs at the site include TPH-g, BTEX, MTBE, and TBA. The current distribution of residual petroleum hydrocarbons and fuel oxygenates in soil and groundwater are described in the following sections.

3.6.1 Soil

More than 50 soil samples have been collected at the site at depths ranging from 3 to 80.5 feet bgs to characterize concentrations of fuel hydrocarbons and oxygenates in site soils. Soil analytical results are summarized in Table 2. Soil sample locations are provided on Figure 2.

Detectable petroleum hydrocarbon impacts were identified between 37 and 60 feet bgs. Note that soil samples collected below approximately 21 feet bgs represent saturated soil conditions. Previous subsurface investigations indicate that there are three lithologic units (shallow, intermediate, and deep) beneath the site, separated by clayey layers of various thicknesses.

3.6.1.1 Shallow Groundwater Zone Soil

Maximum concentrations of fuel hydrocarbons and oxygenates in shallow soil, from 0 to 21 feet bgs are summarized below:

- TPH-g, BTEX, and MTBE were not detected above LRLs in soil samples collected between 0 and 5 feet bgs.

- Benzene, ethylbenzene, and toluene were not detected above LRLs in the soil sample collected at WO1 at 8.5 feet bgs, below the waste oil tank. Total xylenes (0.0093 mg/kg) were detected in the sample collected at WO1 at 8.5 feet bgs.

- TPH-g, BTEX, and MTBE were not detected above LRLs in soil samples collected between 10 and 21 feet bgs.

Previous investigations did not identify COPC impacts to shallow soil.

3.6.1.2 Intermediate Groundwater Zone Soil

Maximum concentrations of fuel hydrocarbons and oxygenates in intermediate soil from 21 to 50 feet bgs are summarized below:

- TPH-g (1,900 mg/kg), ethylbenzene (8.0 mg/kg), and total xylenes (48 mg/kg) were detected in the soil sample collected at 40 feet bgs at U-9, located northwest of the dispenser islands in the northwest portion of the site.

- Benzene (1.3 mg/kg) was detected in the soil sample collected at 45 feet bgs at B-7, located on the southwest corner of the site.

- Toluene (0.12 mg/kg) was detected in the soil sample collected at U-10 from 48 feet bgs, located immediately north of the USTs and east of the dispenser islands.

- MTBE (0.54 mg/kg) was detected in the soil sample collected at 30 feet bgs at U-11, located immediately south and southwest of the dispenser islands and the USTs.

Concentrations in soil appear greatest in the intermediate unit at depths of approximately 40 to 50 feet bgs. The contaminated media is confined both above and below by layers of clayey silts. The soil concentrations indicate that the source area is within a silty sand and gravel layer in the saturated zone beneath the site. Generally, the highest concentrations of COPCs were reported in boring locations B-1, B-2, B-7, and U-9 located downgradient from the USTs and current site operations.

Concentrations of COPCs in soil are not delineated to the north, south, east, and west of the site within the intermediate unit. There appears to be minimal residual contamination, if any, in the shallow unit. Overall, petroleum hydrocarbon impacts

appear to be confined to capillary fringe and saturated soil near the dispenser islands and USTs.

3.6.1.3 Deep Groundwater Zone Soil

Maximum concentrations of fuel hydrocarbons and oxygenates detected in soil at 50 feet bgs and below are summarized below:

- TPH-g (190 mg/kg) and total xylenes (3.2 mg/kg) were detected in the soil sample collected at 55 feet bgs at B-6, located south of the USTs.

- Benzene (0.015 mg/kg), toluene (0.026 mg/kg), and ethylbenzene (0.07 mg/kg) were detected in the soil sample collected at 50 feet bgs at B-5, located immediately north of the USTs.

- MTBE (0.02 mg/kg) was detected in the soil samples collected at 60 feet bgs at B-4, located immediately north of the dispenser islands, and in the soil sample collected at 50 feet bgs at B-5.

Soil impacts in the deep groundwater zone are very limited in extent.

3.6.2 Nonaqueous Phase Liquid

There is no evidence of nonaqueous phase liquid (NAPL) at the site. In addition, ARCADIS reviewed available site boring logs and found no notes regarding observation of free product.

3.6.3 Groundwater

COPCs in groundwater at the site have been monitored since July 1998. Currently, the monitoring well network consists of 15 groundwater monitoring wells (U-1 through U-15). Monitoring wells U-1, U-2, and U-3 monitor the shallow groundwater zone at the site, wells U-4 through U-10 monitor the intermediate groundwater zone, and wells U-12 through U-15 monitor the deep groundwater zone at the site. Well construction details are presented in Table 1. Current and historical groundwater analytical results are included in Table 3 and Appendix D.

3.6.3.1 Shallow Groundwater Zone

In the shallow unit, concentrations of COPCs in groundwater collected from monitoring wells U-1 and U-2 historically have not been detected above their respective LRLs. COPCs were last detected in monitoring well U-1 on March 24, 2006 (MTBE; 1.6 µg/L), and in monitoring well U-2 on March 23, 2005 (total xylenes; 1.1 µg/L). However, concentrations of TPH-g, BTEX, and MTBE have been detected in monitoring well U-3. Monitoring well U-3 is located downgradient from and adjacent to the onsite USTs. The historical maximum concentrations for TPH-g (70,000 µg/L), toluene (5,500 µg/L), and total xylenes (16,000 µg/L) were detected in U-3 on July 13, 1998. Benzene was detected at a maximum concentration of 5,000 µg/L in U-3 on October 7, 1998. The maximum detected concentrations for ethylbenzene (3,600 µg/L), MTBE (53,000 µg/L), and TBA (66,000 µg/L) were also detected in U-3 on July 19, 1999, January 1, 2000, and April 5, 2002, respectively.

The shallow unit groundwater monitoring wells have had insufficient water to collect samples consistently since the fourth quarter 2007. Samples were not collected from the shallow groundwater zone wells (U-1, U-2, and U-3) during the most recent sampling event (November 2012) due to insufficient water quantity.

3.6.3.2 Intermediate Groundwater Zone

Groundwater concentrations of COPCs in samples collected from the intermediate zone have been detected above LRLs, mainly in onsite monitoring wells U-6 through U-11 (Table 3; Appendix D). These wells are located along the north and west perimeter of the site. Impacted groundwater in the intermediate unit is not delineated to the south, east, or west (crossgradient and upgradient directions). Monitoring wells U-4 and U-5 delineate groundwater downgradient in this unit.

Dissolved-phase concentrations in groundwater samples collected from the intermediate groundwater zone as of November 2012 (ARCADIS 2013) indicate the following:

- *TPH-g.* TPH-g was detected above LRLs in six of the eight monitoring wells sampled located in the intermediate groundwater zone (U-6 through U-11). Detectable concentrations ranged from 340 µg/L (U-11) to 4,000 µg/L (U-10).

- *Benzene.* Benzene was detected above LRLs in five monitoring wells located in the intermediate groundwater zone (U-6 through U-10). Detectable concentrations ranged from 0.78 µg/L (U-7) to 330 µg/L (U-10).

- *Toluene.* Toluene was detected above LRLs in three monitoring wells (U-8, U-9, and U-10) located in the intermediate groundwater zone at concentrations ranging from 0.50 µg/L (U-8) to 7.5 µg/L (U-10).

- *Ethylbenzene*. Ethylbenzene was detected above LRLs in five monitoring wells (U-6 through U10) in the intermediate zone. Detectable concentrations ranged from 0.68 µg/L (U-6) to 370 µg/L (U-10).

- *Total xylenes.* Total xylenes were detected above LRLs in three monitoring wells (U-8, U-9, and U-10) at concentrations ranging from 2.6 µg/L (U-9) to 92 µg/L (U-10).

- *MTBE.* MTBE was detected above LRLs in six monitoring wells (U-4 through U-7, U-10, and U-11) screened in the intermediate groundwater zone. Detectable concentrations ranged from 1.2 µg/L (U-6) to 170 µg/L (U-10).

- *TBA.* TBA was detected above LRLs in three monitoring wells (U-5, U-10, and U-11) in the intermediate groundwater zone. Detectable concentrations ranged from 27 µg/L (U-5) to 4,500 µg/L (U-11).

Isoconcentration maps for TPH-g, benzene, and MTBE are shown on Figures 5, 6, and 7. Estimated plume lengths measured from the most recent isoconcentration maps are discussed in Section 4.2.1

3.6.3.3 Deep Groundwater Zone

Overall, groundwater concentrations of TPH-g and BTEX in the samples collected from the deep groundwater unit have been below LRLs since the wells were installed in 2008. MTBE was detected slightly above LRLs on a couple of occasions in monitoring wells U-13, U-14, and U-15. MTBE was last detected in monitoring well U-15 (0.75 µg/L), on June 15, 2010.

TBA was the only constituent detected in the deep groundwater zone in November 2012. TBA (23 µg/L) was detected in the sample collected from monitoring well U-14,

located west of the dispenser islands. Isoconcentration maps for TPH-g, benzene, and MTBE for the deep groundwater zone are shown on Figures 9, 10, and 11.

3.7 Evidence of Natural Attenuation and Plume Stability

In general, dissolved-phase petroleum constituents tend to migrate in groundwater from the petroleum release source area, resulting in a plume of petroleum constituents. The configuration of a solute plume changes through time. Typically, the plume expands until it reaches a steady state and is considered "stable" when the contribution of petroleum hydrocarbons from the source area is balanced by the rate of natural attenuation. Natural attenuation is a combination of physical, chemical, and biological processes that together result in degradation of petroleum hydrocarbon compounds and decreased dissolved-phase concentrations of COPCs in groundwater. When the rate of natural attenuation processes exceeds the flux of hydrocarbons from the source area, the plume footprint will tend to shrink and the concentrations of individual hydrocarbons within the plume will tend to decrease through time. ARCADIS evaluated concentration trends of COPCs and CSIA data in groundwater to assess the contribution of natural attenuation processes to the observed nature and extent of this plume.

3.8 Linear Regression Analysis

ARCADIS completed a statistical analysis of the historical groundwater monitoring data to assess trends in COPC concentrations with time. The screening process included comparing the historical monitoring data for TPH-g, BTEX, MTBE, and TBA to the water quality objectives (WQOs) summarized below and selecting a list of candidates for linear regression analyses.

COPC	WQO (µg/L)	Source
TPH-g	100	SF-RWQCB
Benzene	1	MCL
Toluene	150	MCL
Ethylbenzene	300	MCL
Xylenes	1,750	MCL
MTBE	13	MCL
TBA	12	SF-RWQCB

Note:
MCL = California Maximum Contaminant Level
SF-RWQCB = San Francisco Bay Regional Water Quality Control Board

The WQOs for benzene, BTEX, and MTBE are the established California Maximum Contaminant Levels (MCLs; California Department of Public Health 2011). MCLs have not been established for TPH-g and TBA. To be conservative, environmental screening levels (ESLs) protective of human health for groundwater that is a current or potential drinking water resource (Table F-1a, San Francisco Bay Regional Water Quality Control Board [SF-RWQCB] 2013) were used as WQOs for this analysis.

Constituents were selected for linear regression analysis if there were more than eight datapoints with a minimum of 75 percent detections in the complete monitoring history and a minimum of 50 percent WQO exceedances in the last 4 years or the most recent 12 datapoints. This screening method allowed selection of:

- Only those monitoring well constituent combinations that had sufficient data to run statistically significant tests.

- Locations where constituents exceeded WQOs for a reasonably significant number of times in the recent past.

Based on these criteria, linear regression analysis was performed for TPH-g and benzene at monitoring wells U-3, U-6, and U-7, for MTBE at monitoring wells U-3, U-5, and U-7, and for TBA at monitoring well U-3, which have historically and more recently exhibited concentrations of these COPCs above their respective WQOs.

3.8.1 Linear Regression Methodology

Linear regression analyses using natural log-normalized concentration data were conducted to estimate trend direction, attenuation rates, and approximate time to achieve WQOs for the selected locations and constituents (United States Environmental Protection Agency [USEPA] 2002). The results of the linear regression analyses, including coefficients of determination (R^2 values), p-values of the correlation, and trend directions, are summarized in Table 4, with the individual analyses included in Appendix E. The R^2 value is a measure of how well the linear regression fits the site data; R^2 values <0.1 indicate weak model fits, 0.1> R^2 <0.5 indicate moderate model fits, and R^2 >0.5 indicate stronger model fits. The p-value of the correlation provides a measure of the level of significance of the statistical test. Correlations were accepted as significant for p-values less than or equal to 0.05 (95 percent confidence level) and not significant for p-values greater than 0.05. The trend direction was defined as decreasing if the slope of the linear regression was negative and increasing if the slope of the regression was positive. For the cases

where concentration trends were decreasing and statistically significant, the year to reach the applicable WQO was estimated.

Where non-detect or qualified values were used in computations, the concentrations were set equal to the LRLs or reported value, where available. Use of the reported LRL for concentrations that were below detection provides a conservative estimate for evaluating the concentration trends through time.

Data were evaluated using two separate methods:

- *U-3 (TPH-g, benzene, and TBA only), U-7 (benzene and MTBE only).* The overall trend for the specified constituents at these wells was stable and/or decreasing from the earliest monitoring data; therefore, the complete, historical petroleum constituent concentration dataset for these well/constituent pairs was evaluated.

- *U-3 (MTBE only), U-5, U-6, U-7 (TPH-g only).* This monitoring well/constituent pairs exhibited stable concentration trends for the specified constituents when monitoring began. This is likely attributable to the approximate time required for the dissolved-phase COPCs to arrive at this monitoring location from the source area. To accurately assess current decreasing trends observed at these locations, restricted datasets were included in the regression analyses.

The results of the linear regression analyses are discussed below for each constituent.

3.8.1.1 Total Petroleum Hydrocarbons as Gasoline

Results of the regression analysis for the TPH-g dataset indicate a statistically significant decreasing concentration trend at monitoring well U-3. This monitoring well location was projected to reach the WQO of 100 µg/L in 2016. A projected date to reach the WQO is not available for U-6 and U-7 because a decreasing but not statistically significant concentration trend was observed at these locations. The trend at both monitoring well locations is considered stable. TPH-g concentrations at monitoring wells U-6 and U-7 have been stable and no more than one order of magnitude above the WQO since September 2005, and January 2002, respectively.

3.8.1.2 Benzene

Results of the regression analysis for the benzene dataset indicate a statistically significant decreasing concentration trend at monitoring wells U-3 and U-7. Monitoring

well U-3 was projected to reach the WQO of 1 µg/L in 2012. The most recent groundwater data at monitoring well U-3 is from 2011. Therefore, the linear regression analysis suggests the benzene concentration has decreased to below the WQO since the last groundwater sampling event, but has not been confirmed. Monitoring well U-7 was projected to reach the WQO of 1 µg/L in 2012. When the most recent groundwater concentrations are below the WQO (as in monitoring well U-7), the linear regression analysis estimates the year to reach the criteria as a date in the past (e.g., 2012). In these instances, the future groundwater concentrations are anticipated to remain below the WQOs. A projected date to reach the WQO is not available for U-6 because the data correlation was too weak (i.e. R^2 value <0.1) to project a date to reach the WQO. Benzene concentrations at monitoring well U-6 have been stable and no more than one order of magnitude above the WQO since September 2005.

3.8.1.3 Methyl Tertiary-butyl Ether

Results of the regression analysis for the MTBE dataset indicate a statistically significant decreasing concentration trend at monitoring wells U-3, U-5, and U-7. These monitoring well locations were projected to reach the WQO of 13 µg/L in 2012 (U-3), 2028 (U-5), and 2014 (U-7). Similar to benzene in monitoring well U-3, the linear regression analysis suggests the MTBE concentration has decreased to below the WQO since the last groundwater sampling event, but has not been confirmed since the most recent MTBE data is from 2011.

3.8.1.4 Tert-butyl Alcohol

Results of the regression analysis for the TBA dataset indicate a statistically significant decreasing concentration trend at monitoring well U-3. This monitoring well location was projected to reach the WQO of 12 µg/L in 2050.

3.9 Compound Specific Isotope Analysis

As previously mentioned in Section 3.4.2, compound-specific CSIA were conducted in June 11, to improve the understanding of MTBE biodegradation at the site and to provide a line of evidence supporting degradation of MTBE as the primary source for concentrations of dissolved TBA (ARCADIS 2012). Samples were collected from monitoring well U-3 screened in the shallow groundwater zone near the source area, and from monitoring wells U-5, U-9, U-10, and U-11 which are screened in the intermediate groundwater zone and are located in, downgradient of, cross-gradient

of, and cross-gradient of the source area, respectively. MTBE and TBA concentration data and TBA/MTBE ratios are summarized in Table 5.

The TBA/MTBE ratios indicated MTBE biodegradation and the formation of TBA in groundwater at four of the five wells (U-3, U-9, U-10 and U-11) because the TBA/MTBE values are greater than 1. Well U-5 appears to have relatively low concentrations of both MTBE and TBA and an MTBE/TBA ratio significantly less than 1. The ratio of TBA to MTBE is increasing at most locations, indicating ongoing degradation of MTBE in site groundwater. The relatively high TBA/MTBE ratios suggest a mature plume that will continue to attenuate with time (ARCADIS 2012).

Geochemical indicator parameters were also used to provide an additional line of evidence to document the presence of groundwater conditions favorable for ongoing attenuation mechanisms and to evaluate the potential biodegradation processes that may be occurring.

Results of the biogeochemical conditions evaluation show that strongly reducing conditions are present in the source (U-3 and U-10) and downgradient (U-9) areas, while mildly reducing to aerobic conditions are present in the cross-gradient area (U-5 and U-11). Groundwater geochemistry data are provided in Table 6.

Carbon ($\delta^{13}C$) versus hydrogen ($\delta^{2}H$) isotope values for MTBE are presented on Figure 12. The stable carbon and hydrogen isotopic composition of MTBE demonstrates enrichment above the expected starting, or benchmark, composition of MTBE in gasoline. The stable carbon isotopic composition indicates that TBA is derived from degradation of MTBE.

3.10 Summary of Linear Regression Analysis and Geochemical Conditions

Results of the linear regression analyses are summarized in Table 4. Results revealed that all of the evaluated concentration-time trends were decreasing. Statistically significantly decreasing trends were observed for TPH-g, benzene, MTBE, and TBA at U-3 and for benzene and MTBE at U-7. MTBE was also observed to be statistically significantly decreasing at U-5. Decreasing concentration trends that were not statistically significant (stable trends) were observed for TPH-g at wells U-6 and U-7. No trend was observed for benzene at U-6 as the linear regression model fit to the benzene site data was weak. Overall, the longest time to reach any WQO was predicted for TBA at U-3 (year 2050). Predictions of time to reach WQOs were not made for decreasing concentration trends that were not statistically significant.

In addition to the decreasing trends in COPCs at the site, based on the CSIA results, TBA/MTBE ratios, and biogeochemical data, degradation of MTBE is occurring in site groundwater (ARCADIS 2012). It is expected that COPC concentrations, particularly MTBE, will continue to decrease in the source area as the strongly reducing conditions prevail and continue moving through the core area of the plume. The geochemical conditions will also help decrease the total flux of COPCs to downgradient groundwater, resulting in a subsequent reduction in the total footprint plume through time.

3.11 Assessment of Impacts of Residual Constituents on Public Health and the Environment

Based on the assessment of data presented in this request, the residual concentrations of COPCs in site environmental media are unlikely to pose adverse effects to human health and the environment. This section summarizes sensitive receptors observed near the site, as well as a water supply well survey, potential exposure pathways, and comparison of residual COPC concentrations in site media to human health risk-based screening levels.

3.11.1 Sensitive Receptors and Water Supply Well Survey

The site is an operating service station surrounded by commercial and residential properties. The closest residences are just offsite to the west and north, approximately 5 feet from the site boundary. Potential receptors were identified based on current and expected future land use(s) at the site. Current and reasonably anticipated future land use of the site is commercial (i.e., continued operation as a gasoline service station). In addition, the site is designated Downtown Boulevard Gateway district in the DSP and could theoretically be redeveloped in the future for residential use. The zoning designations of the site and surrounding areas allow mixed residential and commercial use (City of Livermore 2010a). This is unlikely given the density of commercial businesses in the area. Therefore, if the site is redeveloped as residential property, then it is likely to be for high-density/urban residential use. In addition, if the site is redeveloped in the future, then future onsite receptors may also include construction/ utility workers. Current and future receptors on adjacent properties surrounding the site may include offsite commercial workers and future offsite residents, consistent with Downtown Boulevard Gateway district in the DSP zoning designation (City of Livermore 2010a). The nearest residential property is located approximately 5 feet southwest of the site.

Shallow groundwater beneath the site is not currently used as a potable source and is not expected to be used as a drinking water source in the future. As detailed in Section 3.2, the City of Livermore is served by Livermore Municipal Water (Livermore Municipal Water 2011) and Cal Water (Cal Water 2011). Cal Water currently supplies water to the site and surrounding properties and is expected to provide water to these areas in the future (Cal Water 2011). All water used within Cal Water public water system, which includes drinking water, is imported water supplied by Zone 7 (70 percent) and groundwater from Cal Water wells located in the Livermore Basin (30 percent) (Cal Water 2011). All water used within Zone 7, is imported water supplied by the SWP (90 percent) and from the Byron Bethany Irrigation District. Zone 7 uses groundwater only during periods of high demand or during surface-water treatment maintenance and improvements (Zone 7 2005). Groundwater from 11 active wells within the Livermore District supply Cal Water's remaining requirements (30 percent) (Cal Water 2011).

According to Livermore Municipal Water, 100 percent of the city of Livermore's wholesale water comes from Zone 7 and the city of Livermore does not pump groundwater to meet any water demands of the Livermore Municipal Water service area (City of Livermore 2010b). Although Livermore Municipal Water receives most of its water from the two treatment plants, during 201116.3 percent of the total water received was from Zone 7 wells in Pleasanton (Livermore Municipal Water 2011).

A well survey was completed in 1998 (G-R 2000) at the Zone 7. Two municipal (Cal Water) water supply wells were identified approximately 1,500 and 1,800 feet northwest of the site. In addition, two domestic wells were identified approximately 1,900 and 2,800 feet southwest and west of the site, respectively (G-R 2000).

More recently, in May 2013, ARCADIS performed a well survey by obtaining information from the GeoTracker Groundwater Ambient Monitoring & Assessment (GAMA) Program website and identified five California Water Service-Livermore water supply wells (0110003-005, 0110003-006, 0110003-007, 0110003-009, and 0110003-011) within a 1-mile radius of the site. Locations of water supply wells within GeoTracker GAMA are approximate within 0.5 to 1 mile of their actual locations. The five wells identified are located southeast (i.e., hydraulically upgradient) of the site.

According to recent Zone 7 records, there are no Cal Water municipal wells within a 1,000-foot radius from the site. Cal Water well 0110003-008, the closest well to the site, is located approximately 2,100 feet northwest (i.e., hydraulically crossgradient) of the site (Zone 7 2011).

The Arroyo Valley stream is the nearest surface water and is located more than 0.5 mile south-southwest of the site. The site is devoid of ecological habitat and surface water; therefore, ecological receptors are assumed to be generally absent from the site. It is expected that the site will remain the same in the future. Therefore, given these features at the site, potential exposure pathways for ecological receptors are incomplete.

3.11.2 Potential Transport and Release Mechanisms and Receptors

The site is an active commercial petroleum fueling and service station and is expected to remain an active commercial gasoline service station in the reasonably anticipated future. This section discusses the potential transport and release mechanisms and receptors at the site.

3.11.2.1 Volatilization

A potential release mechanism at the site may include the volatilization of COPCs in subsurface soil or groundwater to indoor air of onsite commercial/industrial buildings, outdoor air, or air within a trench used by a future onsite utility worker.

In general, exposure to petroleum vapors migrating from soil or groundwater to indoor air may pose unacceptable human health risks. However, in many petroleum release cases, potential human exposures to vapors are mitigated by bioattenuation processes as vapors migrate toward the ground surface. Because there is no NAPL in site soil or groundwater and because the depth to groundwater is greater than 10 feet, a criterion set forth in the Low-Threat Closure Policy (SWRCB 2012a), potential vapor migration into onsite or offsite buildings is unlikely and not expected to pose adverse health effects to current and future building occupants. The Low-Threat Closure Policy (SWRCB 2012a) does not require satisfaction of the Media-Specific Criteria for petroleum vapor migration to indoor air at active petroleum fueling facilities. Exposure to historical releases through the indoor air inhalation pathway is considered insignificant when compared with typical volatile petroleum hydrocarbon constituent concentrations found at active fueling stations. Therefore, the pathway for inhalation of indoor air from volatilization of groundwater or soil constituents is considered complete but insignificant for current and future onsite commercial gasoline service station workers.

Ambient air is likely to dissipate potential vapors from groundwater and soil. Moreover, most soil samples collected at the site did not reveal benzene or ethylbenzene

concentrations at any depth that exceed the volatilization to outdoor air levels specified in Table 1 of the Low-Threat Closure Policy (SWRCB 2012a) for commercial/industrial workers. Therefore, the pathway for inhalation of outdoor air from volatilization of groundwater and soil constituents is considered incomplete for current and future onsite and offsite commercial workers, current and future offsite residents, and future onsite utility workers.

It is assumed that utility workers do not spend any time indoors; thus, inhalation of vapors potentially migrating indoors from groundwater and soil is an incomplete pathway for the future onsite utility worker.

The direction of shallow groundwater is from the southwest to northeast, potentially toward the commercial buildings located to the northeast of the site. However, as discussed in Section 3.6.3, groundwater impacts are generally limited to the intermediate groundwater zone. Based on this information inhalation of vapors potentially migrating indoors from groundwater and soil may be a complete pathway, but is considered insignificant for current and future offsite commercial workers.

The closest residence to the site lies approximately 5 feet to the southwest of the site boundary. Based on the groundwater flow direction of shallow groundwater at the site (northeast), the residence is upgradient from the impacted area. Therefore, the pathway for inhalation of indoor air from volatilization of groundwater and soil constituents is incomplete for current and future offsite residents.

3.11.2.2 Leaching to Groundwater

The release of petroleum hydrocarbons from former USTs and associated piping also can leach from soil to groundwater. Distributions of residual petroleum hydrocarbons and fuel oxygenates in groundwater (Sections 3.6.1, 3.6.2, and 3.6.3) indicate that this is not a significant release mechanism and has likely been mitigated through remediation, weathering, and natural attenuation.

3.11.2.3 Direct Contact with Groundwater

As described in Section 3.11.1, the City of Livermore is served by Livermore Municipal Water (Livermore Municipal Water 2011) and Cal Water (Cal Water 2011). A well survey was completed in 1998 (G-R 2000) by the Zone 7 identifying two municipal water supply wells and two domestic wells within ½ mile of the site (G-R 2000). The closest well was identified approximately 1,500 feet northwest of the site. It is unlikely

that the groundwater plume will reach the nearest drinking supply well given the distance of the wells from the site. Potential direct contact exposures to COPCs in groundwater, such as tap water ingestion, dermal contact with tap water, and inhalation of volatile organic compounds released from tap water, are incomplete for current and future onsite and offsite commercial workers and offsite residents.

Typically, utility trenches are located at a depth of no greater than 8 feet bgs. Historically, the depth to groundwater ranged from approximately 21.62 to 50.64 feet bgs, with the shallowest depth to groundwater of 21.62 feet recorded in December 2002. Thus, it is unlikely that future onsite utility workers will be directly exposed to residual petroleum hydrocarbons in groundwater. The direct contact with groundwater pathway is therefore incomplete for future onsite utility workers.

3.11.2.4 Direct Contact with Soil

Because the site and surrounding area are completely covered with buildings, fuel dispensers, concrete and asphalt paving, and perimeter landscaping, it is anticipated that current and future onsite and offsite commercial workers will not be exposed to constituents in soil via direct contact exposure pathways (i.e., incidental ingestion, dermal contact, and inhalation of particulates). Therefore, the pathway for direct contact with surface and subsurface soil for the current and future onsite and offsite commercial worker is incomplete.

Future onsite utility workers may be directly exposed to petroleum hydrocarbon constituents in subsurface soil during intrusive soil activities. Impacted soil appears at depths of approximately 40 to 55 feet bgs. It is unlikely these are depths at which construction, excavation, and utility workers are to encounter. Therefore, future onsite utility workers' potential direct contact exposure to constituents in surface and subsurface soil is considered to be complete but insignificant.

Constituents adhered onto dust particles may migrate from exposed subsurface soil by wind erosion to outdoor air and be breathed by potential onsite and offsite receptors. This transport mechanism is unlikely because redevelopment of the site is not planned and the site is covered by a building, landscaping, concrete, or asphalt pavement, with little soil exposed at the surface and releases occurred in the subsurface.

3.11.2.5 Potential Ecological Receptors

The site is devoid of ecological habitat and surface water; therefore, it is anticipated that ecological receptors are absent from the site. It is expected that the site will remain the same in the future. The nearest surface-water body (the Arroyo Valley Stream) is more than 0.5 mile south-southwest of the site. The possible impacts to the nearest surface-water body are unlikely because the impacted groundwater is located in the intermediate unit (40 to 55 feet bgs), confined by an approximately 15-foot-thick clayey layer above and below. Groundwater appears to be isolated to this unit and will not likely influence surface water given the depth to this hydrologic zone and the distance. Based on this information, potential exposure pathways for ecological receptors are incomplete.

3.12 Summary of Potential Exposure Pathways

Potential human receptors at the site were identified based on current and future land use(s) at and near the site. As discussed previously, current and reasonably anticipated future land use at the site is commercial (i.e., continued operation of the service station). Potential receptors include current and future onsite and offsite commercial workers, current and future offsite residents, and future onsite utility/ construction workers. As described above, no complete and potentially significant exposure pathways were identified. These pathways are also summarized on Figure 13. Potentially complete but insignificant exposure pathways include:

- Current and future onsite and offsite commercial workers: Inhalation of COPCs migrating to indoor air
- Current and future offsite residents: COPCs migrating to indoor air from groundwater
- Future onsite utility workers:
  - Ingestion of surface and subsurface soil
  - Dermal contact with surface and subsurface soil

4. Assessment of Site Conditions Relative to Low-Threat Closure Policy

The Low-Threat Closure Policy (SWRCB 2012a) outlines eight General Criteria to assess whether sites are candidates for low-threat case closure and three categories of Media-Specific Criteria (groundwater, petroleum vapor intrusion to indoor air, and direct contact and outdoor air exposure) that also must be met. This section evaluates current site conditions against the General and Media-Specific Criteria. Based on this evaluation, ARCADIS concludes that the site meets the General and Media-Specific Criteria requirements for low-threat case closure.

4.1 Evaluation of Low-Threat Closure General Criteria

This section evaluates the site conditions related to each of the eight General Criteria.

4.1.1 Criteria A – The unauthorized release is located within the service area of a public water system

The site is located within the Mocho Sub-basin of the Livermore Valley Groundwater Basin and Cal Water public water system. Potable and non-potable water provided by Cal Water is imported water supplied by Zone 7 (70 percent) and Cal Water groundwater wells (30 percent) (Cal Water 2011). As discussed in Section 3.11.1, well survey results of active and inactive wells did not identify any water supply wells within 1,000 feet of the site. The nearest well identified is a municipal water supply well located approximately 1,500 feet northwest of the site.

4.1.2 Criteria B – The unauthorized release consists only of petroleum

Soil and groundwater impacts occurred as a result of undocumented releases from USTs, dispenser islands, and/or product piping. COPCs at the site include TPH-g, BTEX, and fuel oxygenates including MTBE and TBA. There have been no non-petroleum impacts or releases documented at the site.

4.1.3 Criteria C – The unauthorized ("primary") release from the underground storage tank system has been stopped

In June 1996, the dispenser islands and associate product lines were excavated and removed from the site. The unauthorized releases ceased with the removal of this infrastructure. In addition, approximately 25 cy of impacted soil were excavated and removed during the dispenser and product piping removal; 2.5 tons and eight 55-gallon

drums of soil were removed during the well installation activities in 1998 and 2001 (Section 3.4.3). An additional 9.87 tons of soil generated during well installation activities in December 2001 was removed from the site (G-R 2002).

4.1.4 Criteria D – Free product has been removed to the maximum extent practicable

Site monitoring wells have been screened for free-product accumulation during groundwater monitoring events from 1998 to the present. NAPL has never been observed at the site.

4.1.5 Criteria E – A conceptual site model that assesses the nature, extent, and mobility of the release has been developed

Section 3 of this request presents a CSM that includes a comprehensive site assessment and remediation history, regional and site-specific geology and hydrogeology, review of the soil and groundwater conditions at the site, and evaluation of human health exposure from site-related COPCs.

4.1.6 Criteria F – Secondary source has been removed to the extent practicable

Secondary source removal has been achieved to the extent practicable through soil excavation and the operation of the ozone system (Section 3.4.3).

In June 1996, approximately 25 cy of soil were excavated during dispenser and product piping renovations. Between 1998 and 2001, approximately 12.37 tons and eight 55-gallon drums of impacted soil generated during well installation activities were removed from the site (Section 3.4.3).

Operation of an ozone microsparge system began in December 2001. The ozone system was shut down in October 2006 and was restarted sometime between 2006 and 2009, before it was shut down again in 2009. In addition, oxygen injection testing and a magnesium sulfate application pilot test were performed at the site (Section 3.4.3). Secondary sources of impact in the soil and groundwater have been removed to the extent practicable.

4.1.7 Criteria G – Soil and groundwater have been tested for methyl tert butyl ether and results reported in accordance with Health and Safety Code Section 25296.15

MTBE was analyzed in soil samples collected from 1996 to 2008 (Table 2) and in groundwater samples collected during monitoring events from 1998 to the present (Table 3; Appendix D). MTBE was detected at a maximum concentration of 0.54 mg/kg in the soil sample collected at 30 feet bgs from U-11. During the most recent monitoring event, MTBE was detected above the LRLs from 1 µg/L (U-9) to 130 µg/L (U-10).

4.1.8 Criteria H – Nuisance as defined by Water Code Section 13050 does not exist at the site

No nuisance exists at the site, as defined by Water Code Section 13050. Site conditions and the treatment and disposal of site wastes are not injurious to health, are not indecent or offensive to the senses, and do not obstruct free use of property or interfere with the comfortable enjoyment of life or property. Site conditions and the treatment and disposal of site wastes do not affect an entire community or neighborhood or any considerable number of persons. Site impacts are restricted to the subsurface and are present in a limited area that does not adversely affect the community at large.

4.2 Evaluation of Low-Threat Closure: Media-Specific Criteria

This section evaluates the site conditions related to each of the three categories of Media-Specific Criteria.

4.2.1 Groundwater

Groundwater at the site does not currently pose a risk to existing or anticipated future beneficial uses of groundwater and meets the Groundwater-Specific Criteria outlined in the Low-Threat Closure Policy (SWRCB 2012a). The Low-Threat Closure Policy (SWRCB 2012a) states that “the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites.”

4.2.1.1 Plume Stability

According to the Technical Justification for Groundwater Media-Specific Criteria (SWRCB 2012b), plume stability can be demonstrated in two ways:

1. "[R]outinely observed non-detect values for groundwater parameters in down-gradient wells"

2. "[S]table or decreasing concentration levels in down-gradient wells."

Plume stability is discussed in Section 3.8 of this request. The results of the linear regression analyses are summarized in Table 4 and the individual analyses are included in Appendix E. Results of the regression analysis indicate significant attenuation of TPH-g, benzene, MTBE, and TBA in groundwater beneath the site (Section 3.8.1). The longest time to reach any WQO was predicted for TBA at U-3 (year 2050). Evaluation of groundwater monitoring data indicates plume stability at the site as defined by the Technical Justification for Groundwater Media-Specific Criteria (SWRCB 2012b).

4.2.1.2 Additional Groundwater-Specific Criteria

As described in the Low-Threat Closure Policy (SWRCB 2012a), a site can meet the groundwater Media-Specific Criteria through one of five main classes. This site falls into ***Class 2*** as described in detail below.

2a. The contaminant plume that exceeds water quality objectives is less than 250 feet in length

To determine the classification of groundwater impacts, the length of the plume exceeding WQOs for each of the current site COPCs was measured from the most recent isoconcentration maps included on Figures 5, 6, 7, 9, 10, and 11. COPC plume lengths were estimated for the intermediate groundwater zone (Figures 5, 6, and 7) because they have a larger footprint compared to the shallow and deep groundwater zone plumes:

- The TPH-g plume exceeding 100 µg/L is approximately 174 feet long.
- The benzene plume exceeding 1 µg/L is approximately 146 feet long.
- The MTBE plume exceeding 13 µg/L is approximately 68 feet long.

2b. There is no free-product

No free product has been observed in site monitoring wells since monitoring started in 1998, as detailed in General Criteria (d) and Section 3.6.2. Free product is not currently present at the site.

2c. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary

As described in General Criteria (a) and Section 3.11.1, no water supply wells were identified within a 1,000-foot radius from the site. The closest surface-water body, the Arroyo Valley stream, is located more than 0.5 mile south-southwest of the site (Section 3.11.1).

2d. The dissolved concentration of benzene is less than 3,000 µg/L, and the dissolved concentration of MTBE is less than 1,000 µg/L

The maximum dissolved concentration of benzene detected during the most recent groundwater monitoring event was 330 µg/L (U-10). MTBE was detected at a maximum concentration of 170 µg/L (U-10) during the fourth quarter 2012. Thus, concentrations of benzene and MTBE are below the 3,000 and 1,000 µg/L limits.

4.2.2 Petroleum Vapor Intrusion to Indoor Air

As described in the Low-Threat Closure Policy (SWRCB 2012a), satisfaction of the Media-Specific Criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities where there are no site-specific characteristics that would pose an unacceptable health risk. The site is an active commercial petroleum fueling facility with no unacceptable risk characteristics; therefore, the site is exempt from the Media-Specific Criteria.

The benzene plume exceeding 1 µg/L extends only underneath the site and does not extend beneath buildings on other properties. The site is exempt from the vapor intrusion criteria; however, benzene concentrations in groundwater, TPH-g concentrations in soil, and depth to groundwater meet the criteria.

4.2.3 Direct Contact and Outdoor Air Exposure

As described in the Low-Threat Closure Policy (SWRCB 2012a), sites will meet the Media-Specific Criteria for direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air if:

1. The maximum concentrations of COPCs in soil are less than or equal to those listed in Table 1 of the Low-Threat Closure Policy (SWRCB 2012a).

2. A site-specific risk assessment shows that COPCs present in soil will not adversely affect human health.

3. Exposure to COPCs is mitigated through engineering controls.

This site meets the first criteria as summarized below:

- Because the site is completely covered with a building and pavement, there is little or no potential for direct human contact with site soil or for offsite wind dispersion of soils. Therefore, direct contact exposure pathways (i.e., ingestion, dermal contact, and inhalation of particulates) with soil are considered incomplete and are expected to remain the same in the future.

- Historical soil data are included in Table 2. Benzene and ethylbenzene concentrations were evaluated using concentrations for commercial/industrial exposure because the site is not anticipated to be developed for residential use (Table 1 of SWRCB 2012a). Soil samples were not analyzed for naphthalene and other polycyclic aromatic hydrocarbons.

Table B. Comparison of maximum concentrations of benzene and ethylbenzene in soil against the No Significant Risk Values

Chemical	Commercial/Industrial				Utility Worker	
	0 to 5 feet bgs mg/kg		Volatilization to outdoor air (5 to 10 feet bgs) mg/kg		0 to 10 feet bgs mg/kg	
	LTC Policy Table 1	Site Maximum	LTC Policy Table 1	Site Maximum	LTC Policy Table 1	Site Maximum
Benzene	8.2	<0.0050	12	<0.005	14	<0.005
Ethylbenzene	89	<0.0050	134	<0.005	314	<0.005

As shown in Table B above, benzene and ethylbenzene have not been reported above LRLs in soil samples collected from 0 to 10 feet bgs and are therefore below the No Significant Risk Values (Table 1; SWRCB 2012a).

5. Recommendations

Groundwater data presented in this request support a conclusion that impacted groundwater beneath the site is a result of an upgradient source. In addition, groundwater data presented in this request support a conclusion that the site and the impacted groundwater pose no significant threat to human health or the environment.

ARCADIS respectfully requests that the Alameda County Department of Environmental Health (ACDEH) grant low-threat site closure because site conditions meet all General and Media-Specific Criteria established in the Low-Threat Closure Policy (SWRCB 2012a); therefore, the site poses a low threat to human health, safety, and the environment, and satisfies the case closure requirements of Health and Safety Code Section 25296.10. Therefore, effective immediately, ARCADIS will cease groundwater monitoring and sampling activities pending a response and further direction from the ACDEH.

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ARCADIS

Tables

Table 1
Well Construction Details

Conceptual Site Model and Closure Request
Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Monitoring Well ID	Well Installation Date	Well Depth (feet bgs)	Screen Interval (feet bgs)
Shallow Unit			
U-1	8/15/1998	34.5	14 - 34.5
U-2	8/16/1998	34.5	13 - 34.5
U-3	8/16/1998	34	14 - 34
Intermediate Unit			
U-4	2/21/2001	45	35 - 45
U-5	2/21/2001	47	37 - 47
U-6	12/6/2001	45	35 - 45
U-7	12/6/2001	45	35 - 45
U-8	9/8/2008	45	35 -45
U-9	9/10/2008	45	35 -45
U-10	9/11/2008	47	37 - 47
U-11	9/12/2008	45	35 -45
Deep Unit			
U-12	10/7/2008	75	65 - 75
U-13	10/8/2008	72	62 - 72
U-14	10/1/2008	73	65 - 73
U-15	10/8/2008	71	61 - 71

Notes:
bgs = below ground surface

Table 2
Historical Soil Analytical Summary

Conceptual Site Model and Closure Request
Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Boring Sample Name	Location	Date Collected	Depth Collected (feet bgs)	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE[1] (mg/kg)	Lead (mg/kg)
WO1	Below waste oil tank	6/24/1993	8.5	--	<0.005	<0.005	<0.005	**0.0093**	---	--
PL1-3	Product Line	6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
PL2-3		6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
PL3-3		6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
PL4-3		6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
PL5-4		6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
PL6-3		6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
PL7-3		6/6/1996	3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--
U-1-21.5	U-1	6/15/1998	21.5	<1	<0.005	<0.005	<0.005	<0.005	<0.05	--
U-2-10.5	U-2	6/15/1998	10.5	<1	<0.005	<0.005	<0.005	<0.005	<0.05	--
U-2-21		6/15/1998	21	<1	<0.005	<0.005	<0.005	<0.005	<0.05	--
U-3-15.5	U-3	6/15/1998	15.5	<1	<0.005	<0.005	<0.005	<0.005	<0.05	--
U-3-20.5		6/15/1998	20.5	<1	<0.005	<0.005	<0.005	<0.005	<0.05	--
US-1	U-1,-2,-3 composite	6/15/1998	--	<1	<0.005	<0.005	<0.005	<0.005	<0.05	**9**
U4-25	U-4	2/21/2001	25	<1.00	<0.005	<0.005	<0.005	<0.005	<0.05	--
U5-25	U-5	2/21/2001	25	<1.00	<0.005	<0.005	<0.005	<0.005	<0.05	--
SS-1	U-4,-5 composite	2/21/2001	--	<1.00	<0.005	<0.005	<0.005	<0.005	<0.05	**5.7**
U6-25	U-6	12/7/2001	25	<1.00	<0.005	<0.005	<0.005	<0.005	<0.20	--
U6-30		12/7/2001	30	<1.00	<0.005	<0.005	<0.005	<0.005	<0.20	--
U7-15	U-7	12/7/2001	15	<1.00	<0.005	<0.005	<0.005	<0.005	<0.20	--
U7-25		12/7/2001	25	<1.00	<0.005	<0.005	<0.005	<0.005	<0.20	--
B-1@40'	Northwest corner of the site	4/20/2006	40	**2.8**	<0.0046	<0.0046	**0.024**	<0.0092	<0.0046	--
B-1@45'		4/20/2006	45	**450**	<0.95	<0.95	<0.95	**2.1**	<0.95	--
B-1@60'		4/20/2006	60	**0.29**	<0.0045	<0.0045	<0.0045	<0.0091	<0.0045	--
B-2@40'	Northwest corner of the site	4/19/2006	40	**120**	<0.98	<0.98	<0.98	<2.0	<0.98	--
B-2@45'		4/19/2006	45	**180**	<0.86	<0.86	<0.86	<1.7	<0.86	--
B-2@60'		4/19/2006	60	<0.25	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	--
B-3@35'	West of U-2	4/20/2006	35	<0.23	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	--
B-3@40'		4/20/2006	40	**30**	<0.023	<0.023	**0.20**	**0.42**	<0.023	--
B-3@65'		4/20/2006	65	<0.24	<0.0049	<0.0049	**0.0069**	**0.026**	<0.0049	--
B-4@10'	Northeast corner of dispenser islands	4/26/2006	10	--	--	--	--	--	--	**3.9**
B-4@40'		4/26/2006	40	**0.35**	<0.0049	<0.0049	<0.0049	**0.031**	**0.019**	--
B-4@50'		4/26/2006	50	**0.89**	<0.0047	<0.0047	<0.0047	**0.023**	**0.088**	--
B-4@60'		4/26/2006	60	<0.24	<0.0048	<0.0048	<0.0048	<0.0097	**0.02**	--
B-5@40'	North of USTs	4/25/2006	40	<0.24	<0.0047	<0.0047	<0.0047	<0.0094	<0.0047	--
B-5@50'		4/26/2006	50	**4.4**	**0.015**	**0.026**	**0.07**	**0.19**	**0.02**	--
B-5@60'		4/26/2006	60	<0.24	<0.0048	<0.0048	<0.0048	<0.0097	<0.0048	--

Table 2
Historical Soil Analytical Summary

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Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Boring Sample Name	Location	Date Collected	Depth Collected (feet bgs)	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE[1] (mg/kg)	Lead (mg/kg)
B-6@25'	South of USTs	4/25/2006	25	**0.54**	<0.0049	<0.0049	<0.0049	<0.0098	**0.29**	--
B-6@35'		4/25/2006	35	<0.24	<0.0049	<0.0049	<0.0049	<0.0098	**0.24**	--
B-6@46'		4/25/2006	46	**1.2**	**0.069**	<0.0048	<0.0048	<0.0096	**0.093**	--
B-6@55'		4/25/2006	55	**190**	<0.95	<0.95	<0.95	**3.2**	<0.95	--
B-7@35'	Southwest corner of the site	4/21/2006	35	<0.24	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	--
B-7@45'		4/21/2006	45	**700**	**1.3**	<0.89	**5.6**	**14**	<0.89	--
B-7@55'		4/21/2006	55	**1.0**	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	--
B-10@25.5'	South of U-5	3/15/2007	25.5	<0.25	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	**6**
B-10@35.5'		3/15/2007	35.5	<0.25	<0.0050	<0.0050	<0.0050	<0.0099	**0.013**	--
B-10@41.5'		3/15/2007	41.5	<0.25	<0.0049	<0.0049	<0.0049	<0.0099	**0.016**	--
B-10@80.5'		3/16/2007	80.5	<0.021	<0.0043	<0.0043	<0.0043	<0.0086	<0.0043	
U-8 @ 37	U-8	9/8/2008	37	**1.3**	<0.005	**0.0051**	<0.005	**0.011**	<0.005	--
U-9 @ 40	U-9	9/10/2008	40	**1,900**	<0.25	<0.25	**8.0**	**48**	<0.25	--
U-10 @ 39	U-10	9/11/2008	39	**2.4**	<0.005	<0.005	<0.005	<0.01	<0.005	--
U-10 @ 48		9/11/2008	48	**22**	**0.7**	**0.12**	**0.31**	**2.2**	**0.29**	--
U-11 @ 30	U-11	9/12/2008	30	**2.0**	<0.005	<0.005	<0.005	0.017	**0.54**	--
U-11 @ 44		9/12/2008	44	**0.45**	<0.005	<0.005	<0.005	<0.01	**0.34**	--
WD-1	Composite Samples	9/24/2008	--	<0.2	<0.005	<0.005	<0.005	<0.01	**0.0052**	**6.7**
WD-2		9/25/2008	--	**0.42**	<0.005	<0.005	<0.005	<0.01	<0.005	--

Notes:
bgs = below ground surface
BOLD = concentration detected above laboratory reporting limit
mg/kg = milligrams per kilogram
MTBE = methyl tert butyl ether
TPH-g = total petroleum hydrocarbons in the gasoline organics range
< = concentration is below laboratory reporting limt
-- = not analyzed or not applicable
[1] In situations where MTBE was analyzed using multiple analytical methods, the highest reported value was used.

Table 3
Current and Historical Groundwater Gauging and Analytical Results

Conceptual Site Model and Closure Request
Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Well ID	Date Sampled	TOC Elevation (feet MSL)	DTW (feet btoc)	LPH Thickness (feet)	GW Elevation (feet MSL)	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TAME	ETBE	DIPE	EDB	EDC	Ethanol	Comments
Shallow																			
U-1	06/27/2011	480.29	29.88	--	450.41	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-1[a]	6/25/2012	480.29	33.13	--	447.16	--	--	--	--	--	--	--	--	--	--	--	--	--	
U-1[a]	11/20/2012	480.29	33.16	--	447.13	--	--	--	--	--	--	--	--	--	--	--	--	--	a
U-2	06/27/2011	479.45	29.64	--	449.81	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-2	6/26/2012	479.45	31.80	--	447.65	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-2[a]	11/20/2012	479.45	32.47	--	446.98	--	--	--	--	--	--	--	--	--	--	--	--	--	a
U-3	06/27/2011	480.48	28.76	--	451.72	**1,400**	**4.9**	<0.50	**1.5**	<1.0	**39**	**9,600**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-3[a]	6/25/2012	480.48	32.69	--	447.79	--	--	--	--	--	--	--	--	--	--	--	--	--	
U-3[a]	11/20/2012	480.48	33.53	--	446.95	--	--	--	--	--	--	--	--	--	--	--	--	--	a
Intermediate																			
U-4	06/27/2011	478.95	31.68	--	447.27	<50	<0.50	<0.50	<0.50	<1.0	**14**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-4	6/26/2012	478.95	40.57	--	438.38	<50	<0.50	<0.50	<0.50	<1.0	**4.5**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-4	11/20/2012	478.95	40.53	--	438.42	<50	<0.50	<0.50	<0.50	<1.0	**3.5**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-5	06/27/2011	478.52	31.73	--	446.79	<50	<0.50	<0.50	<0.50	<1.0	**55**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-5	6/26/2012	478.52	40.82	--	437.70	<50	<0.50	<0.50	<0.50	<1.0	**54**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-5	11/20/2012	478.52	40.60	--	437.92	<50	<0.50	<0.50	<0.50	<1.0	**43**	**27**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-6	06/27/2011	480.40	31.54	--	448.86	**2,200**	**22**	**2.2**	**28**	**3.3**	**8.3**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-6	6/26/2012	480.40	39.18	--	441.22	**950**	**11**	**0.76**	**7.7**	**1.6**	**2.4**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-6	11/20/2012	480.40	39.75	--	440.65	**1,400**	**3.6**	<0.50	**0.68**	<1.0	**1.2**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-7	06/27/2011	480.78	30.64	--	450.14	**1,400**	**4.6**	**1.4**	**14**	**1.4**	**33**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-7	6/26/2012	480.78	39.10	--	441.68	**500**	<0.50	<0.50	<0.50	<1.0	**17**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-7	11/20/2012	480.78	39.27	--	441.51	**1,000**	**0.78**	<0.50	**0.5**	<1.0	**10**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-8	06/27/2011	480.43	30.60	--	449.83	**1,700**	**27**	**1.8**	**21**	**14**	**1.3**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-8	6/26/2012	480.43	36.22	--	444.21	**640**	**2.2**	<0.50	**1.5**	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-8	11/20/2012	480.43	37.41	--	443.02	**790**	**6.6**	**0.50**	**6.1**	**6.8**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-9	06/27/2011	479.39	30.32	--	449.07	**2,400**	**11**	**2.6**	**55**	**11**	**65**	**110**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-9	6/26/2012	479.39	37.20	--	442.19	**2,100**	**15**	**2.8**	**52**	**5.0**	**1.0**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-9	11/20/2012	479.39	39.69	--	439.70	**2,100**	**12**	**2.2**	**4.9**	**2.6**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-10	06/27/2011	480.51	30.71	--	449.80	**7,500**	**420**	**41**	**450**	**730**	**350**	**2,900**	<2.5	<2.5	<2.5	<2.5	<2.5	<1,200	
U-10	6/26/2012	480.51	39.96	--	440.55	**2,000**	**230**	**5.7**	**230**	**67**	**130**	**2,300**	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	b
U-10	11/20/2012	480.51	39.92	--	440.59	**4,000**	**330**	**7.5**	**370**	**92**	**170**	**3,000**	<2.5	<2.5	<2.5	<2.5	<2.5	<1200	b
U-11	06/27/2011	480.34	31.72	--	448.62	**1,100**	**8.3**	<0.50	**7.8**	<1.0	**3,600**	**6,500**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-11	6/26/2012	480.34	36.44	--	443.90	**450**	**7.3**	<0.50	<0.50	<0.50	**72**	**5,000**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-11	11/20/2012	480.34	37.22	--	443.12	**340**	<0.50	<0.50	<0.50	<1.0	**24**	**4,500**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
Deep																			
U-12	06/27/2011	480.75	31.05	--	449.70	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-12	6/25/2012	480.75	40.08	--	440.67	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-12	11/20/2012	480.75	39.88	--	440.87	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-13	06/27/2011	480.31	31.73	--	448.58	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-13	6/25/2012	480.31	40.73	--	439.58	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-13	11/20/2012	480.31	40.47	--	439.84	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-14	06/27/2011	479.38	31.02	--	448.36	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-14	6/25/2012	479.38	39.93	--	439.45	<50	<0.50	<0.50	<0.50	<1.0	<0.50	**10**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-14	11/20/2012	479.38	39.77	--	439.61	<50	<0.50	<0.50	<0.50	<1.0	<0.50	**23**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-15	06/27/2011	479.99	30.78	--	449.21	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-15	6/25/2012	479.99	39.73	--	440.26	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
U-15	11/20/2012	479.99	39.61	--	440.38	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	

Notes:

-- not applicable
< not detected at or above laboratory detection limit
a Insufficient water, no sample collected.
b PQLs and MDLs were raised due to sample dilution.
Bold Detected above the laboratory reporting limit

Analytical results given in µg/L unless otherwise noted.
United States Environmental Protection Agency Method 8260B for TPH-g/BTEX/MTBE/Oxygenates

Abbreviations:

µg/L micrograms per liter (approx. equivalent to parts per billion, ppb)
btoc below top of casing
DIPE di-isopropyl ether
DTW depth to water
EDB 1,2-dibromoethane
EDC 1,2-dichloroethane (same as ethylene dichloride)
ETBE ethyl tertiary butyl ether
GW groundwater
LPH liquid-phase hydrocarbons
MSL relative to mean sea level
MTBE methyl tertiary butyl ether
TAME tertiary amyl methyl ether
TBA tertiary butyl alcohol
TOC top of casing (surveyed reference elevation)
TPH-g total petroleum hydrocarbons as gasoline (C6-C12), analyzed as TPPH by (GC/MS)
GC/MS gas chromatography/mass spectrometry
TPPH total purgeable petroleum hydrocarbons
BTEX benzene, toluene, ethylbenzene, and total xylenes
PQL practical quantitation limit
MDL method detection limit

Table 4
Summary of Statistical Analysis of Groundwater Analytical Data

Conceptual Site Model and Closure Request
Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Constituent	Well	Screening Level (µg/L)[1]	Data Range						Linear Regression Analysis					
			Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Concentration Measured Most Recently (µg/L)	% of Data Above Laboratory Reporting Limit	Start Date	End Date	Coefficient of Determination, R^2	p-value of Correlation (Significance of Slope)	Attenuation Half-life (days)	Trend Direction	Significance of Trend[3]	Projected Year to Screening Level
TPH-g	U-3	100	390	70,000	1,400	95	7/13/1998	6/27/2011	0.74	1.25E-13	738	Decreasing	Significant	2016
TPH-g	U-6 [Since June 2005]	100	110	12,000	1,400	94	6/28/2005	11/20/2012	0.10	2.44E-01	1,773	Decreasing	NS	NA
TPH-g	U-7 [Since June 2008]	100	500	1,700	1,000	100	6/12/2008	11/20/2012	0.18	2.92E-01	2,347	Decreasing	NS	NA
Benzene	U-3	1	*0.5*	5,000	4.9	86	7/13/1998	6/27/2011	0.77	8.76E-15	437	Decreasing	Significant	2012
Benzene	U-6 [Since October 2003]	1	*0.5*	150	3.6	95	10/3/2003	11/20/2012	0.09	1.67E-01	1,425	No Trend		NA
Benzene	U-7	1	*0.5*	93	0.78	94	1/3/2002	11/20/2012	0.58	5.53E-07	795	Decreasing	Significant	2012
MTBE	U-3 [Since December 2005]	13	27	840	39	100	12/30/2005	6/27/2011	0.66	4.35E-04	528	Decreasing	Significant	2012
MTBE	U-5 [Since May 2003]	13	690	42,000	690	100	5/2/2003	11/20/2012	0.74	4.34E-08	792	Decreasing	Significant	2028
MTBE	U-7	13	8.1	130	10	100	1/3/2002	11/20/2012	0.40	1.60E-04	1,820	Decreasing	Significant	2014
TBA	U-3	12	2,000	66,000	9,600	93	10/2/2000	6/27/2011	0.44	8.59E-05	1,534	Decreasing	Significant	2050

NA = not applicable due to increasing trend or non-significant trend

[1] Source SLs: Total petroleum hydrocarbons as gasoline (TPH-g), Tert-butyl alcohol (TBA) - lowest SFBRWQCB groundwater Environmental Screening Levels (ESLs) 2013
Benzene, Toluene, Ethylbenzene, and Xylene compounds and Methyl-tert-butyl ether (MTBE) - Maximum Contaminant Levels (MCLs)
SFBRWQCB - San Francisco Bay Regional Water Quality Control Board

[2] Linear regression analysis with R^2 values <0.1 and wide variation in concentrations were defined as having no apparent trend (No Trend).

[3] Statistically significant trend defined as having p-value ≤ 0.05

Not detected data taken at reporting limit/reported value

Table 5
MTBE and TBA Results - June 2011

Conceptual Site Model and Closure Request
Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Well ID	Position	MTBE (µg/L)	TBA (µg/L)	TBA/MTBE Ratio
U-3	Source	39	9,600	246.2
U-5	Cross-gradient	55	9.9	0.18
U-9	Downgradient	65	110	1.7
U-10	Source	350	2,900	8.3
U-11	Cross-gradient	3,600	6,500	1.8

Notes:

MTBE	methyl tertiary butyl ether
TBA	tertiary butyl alcohol
µg/L	micrograms per liter

Table 6
Redox Data - June 2011

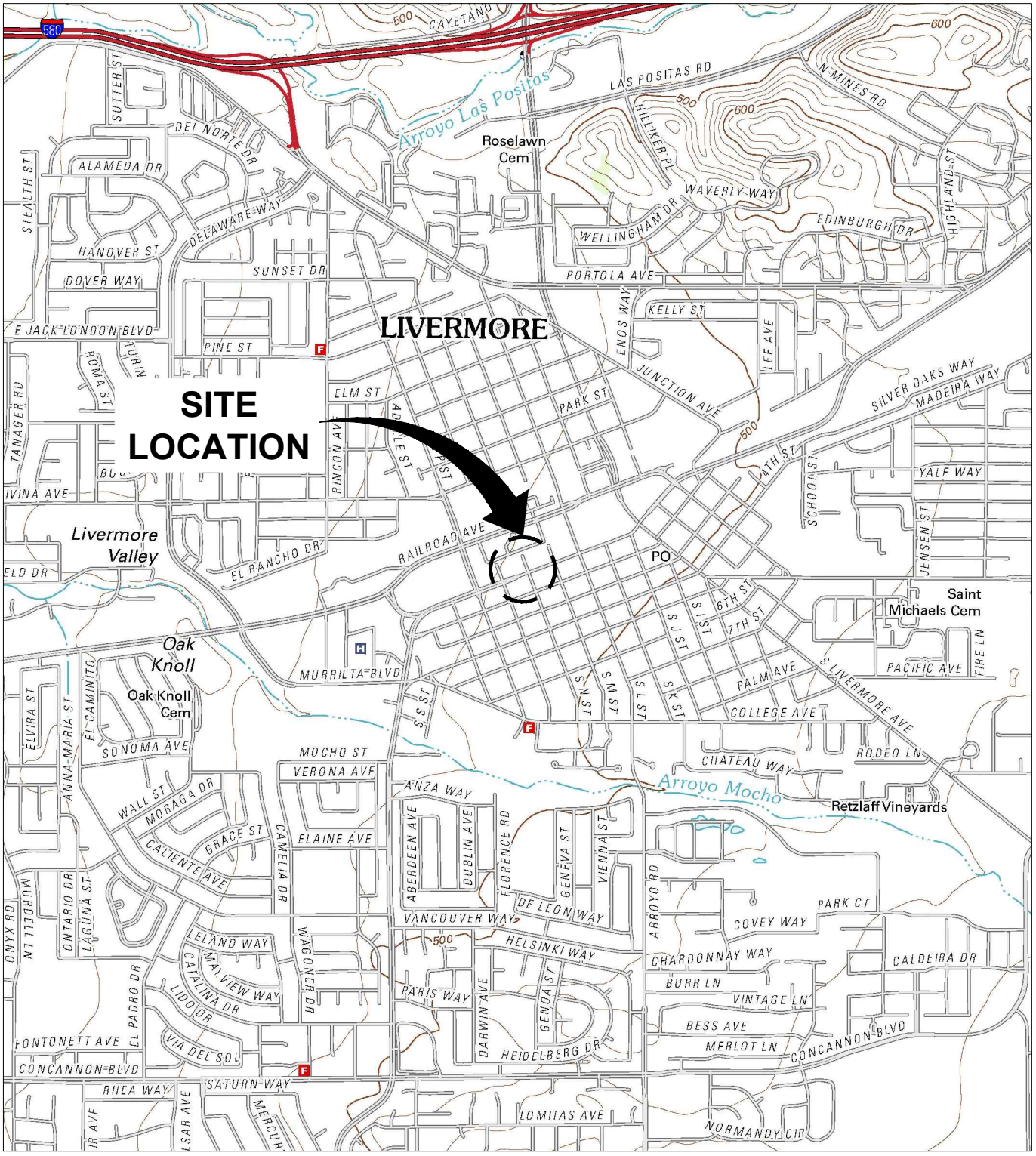
Conceptual Site Model and Closure Request
Union Oil Company of California
76 Service Station No. 4186
1771 First Street, Livermore, California

Well ID	Position	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane (mg/L)	Redox Condition
U-3	Source	<0.44	<1.0	3,300	1.4	Strongly reducing/anaerobic
U-5	Cross-gradient	3.5	33	<100	0.0065	Oxic/aerobic
U-9	Downgradient	<0.44	10	470	4.6	Strongly reducing/anaerobic
U-10	Source	<0.44	3.4	930	5.6	Strongly reducing/anaerobic
U-11	Cross-gradient	<0.88	1000	140	0.64	Moderately reducing/anaerobic

Notes:
< not detected at or above laboratory detection limit
mg/L milligrams per liter

ARCADIS

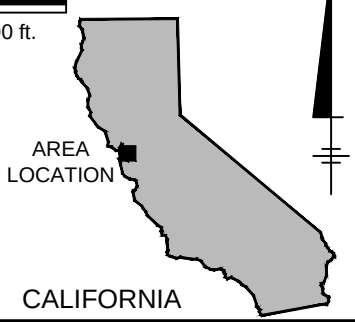
Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., LIVERMORE, CALIFORNIA, 2012.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

SITE LOCATION MAP

ARCADIS

FIGURE 1

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\B0047942\2012\00002\DWG\47942N01.dwg LAYOUT: 1 SAVED: 7/5/2012 6:45 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 7/5/2012 6:45 AM BY: HARRIS, JESSICA

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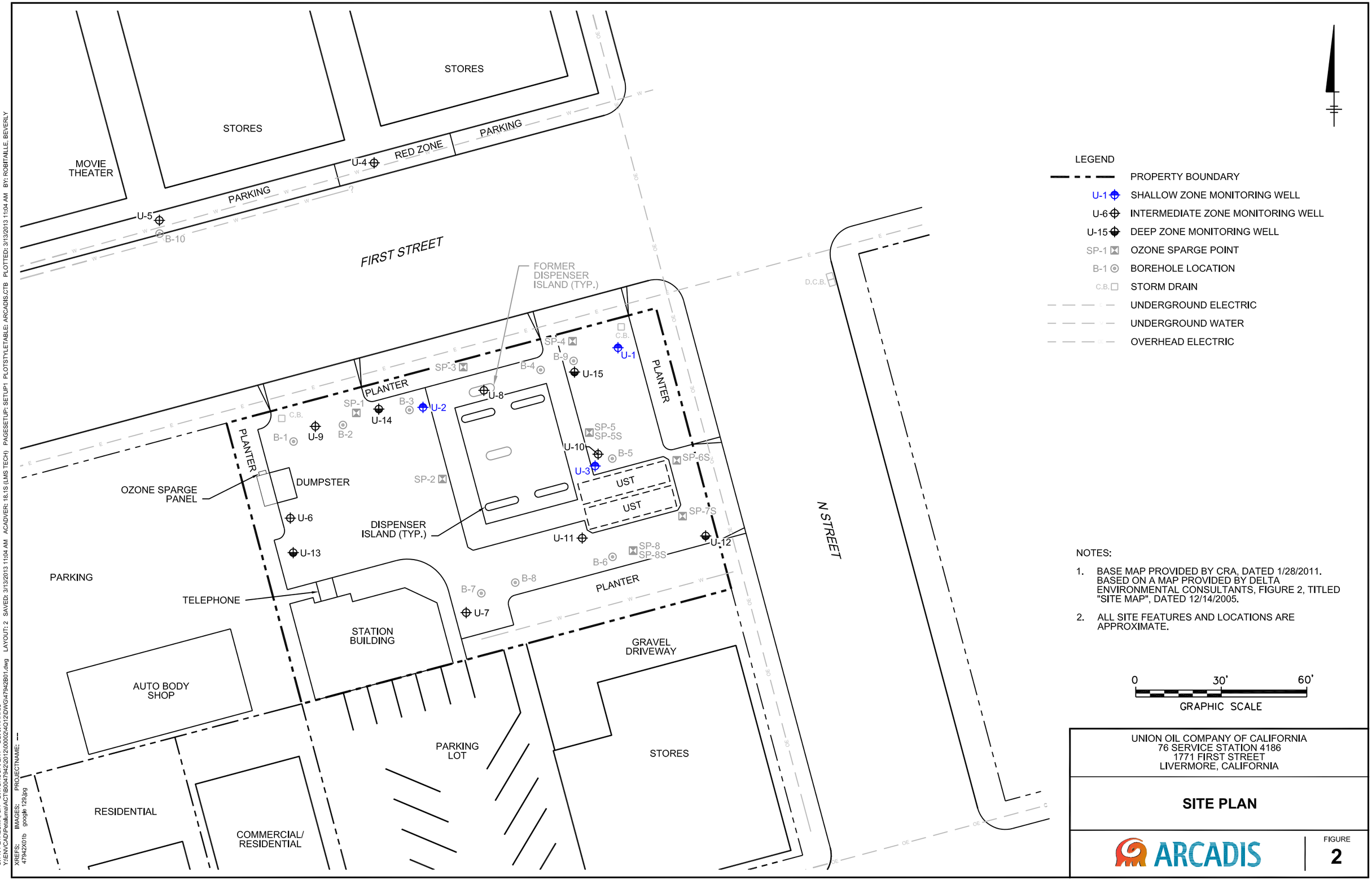
Livermore.jpg



NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

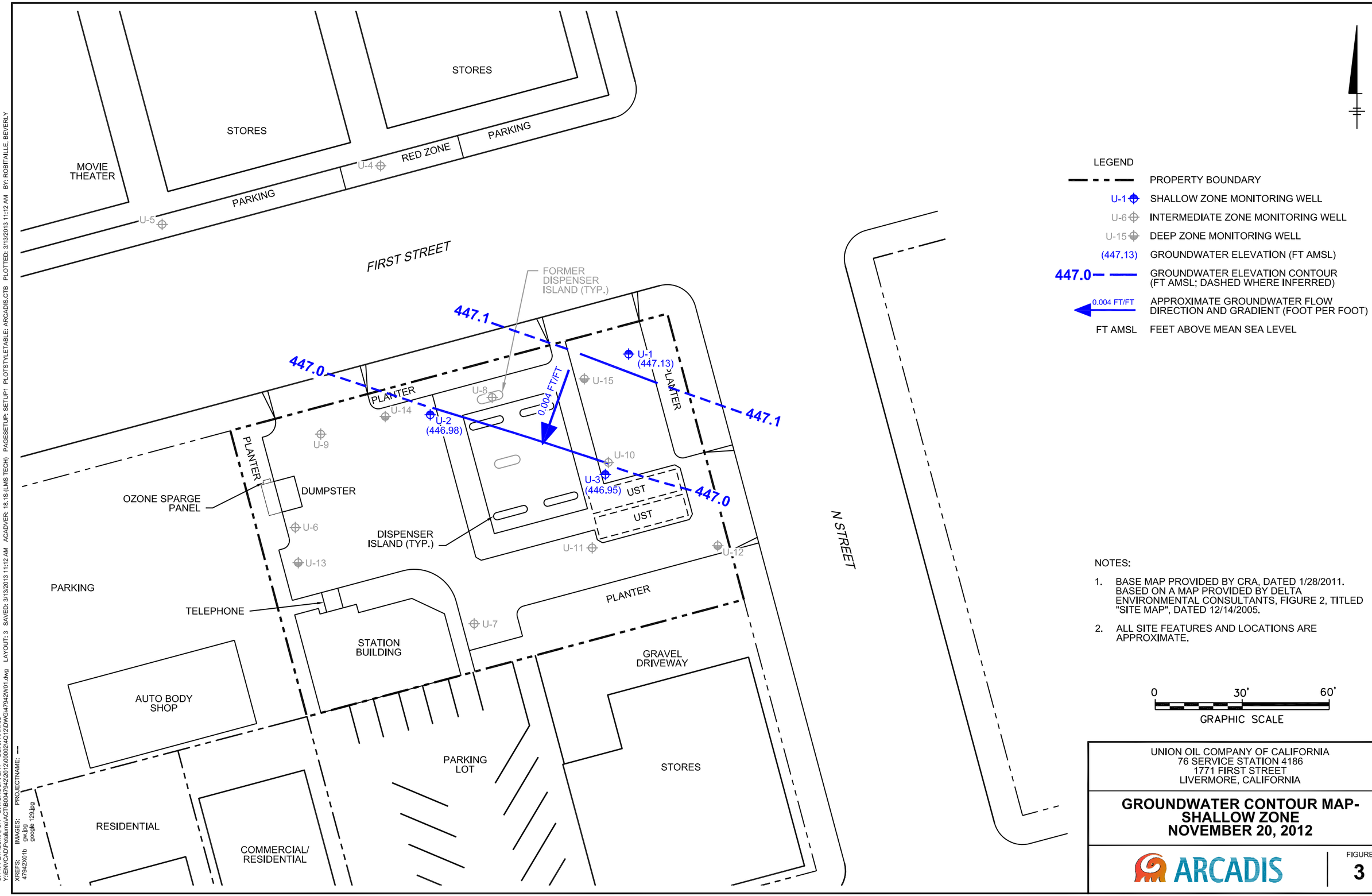
UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

SITE PLAN

ARCADIS

FIGURE 2

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\004794220120002\4Q12\DWG\047942B01.dwg LAYOUT: 2 SAVED: 3/13/2013 11:04 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:04 AM BY: ROBITAILLE, BEVERLY
XREFS: IMAGES: PROJECTNAME: ---
47942X01b google 129.jpg



LEGEND

	PROPERTY BOUNDARY
U-1	SHALLOW ZONE MONITORING WELL
U-6	INTERMEDIATE ZONE MONITORING WELL
U-15	DEEP ZONE MONITORING WELL
(447.13)	GROUNDWATER ELEVATION (FT AMSL)
447.0	GROUNDWATER ELEVATION CONTOUR (FT AMSL; DASHED WHERE INFERRED)
0.004 FT/FT	APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)
FT AMSL	FEET ABOVE MEAN SEA LEVEL

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

GROUNDWATER CONTOUR MAP- SHALLOW ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 3

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\00479422012\000024Q12\DWG\479422W01.dwg LAYOUT: 3 SAVED: 3/13/2013 11:12 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:12 AM BY: ROBITAILLE, BEVERLY
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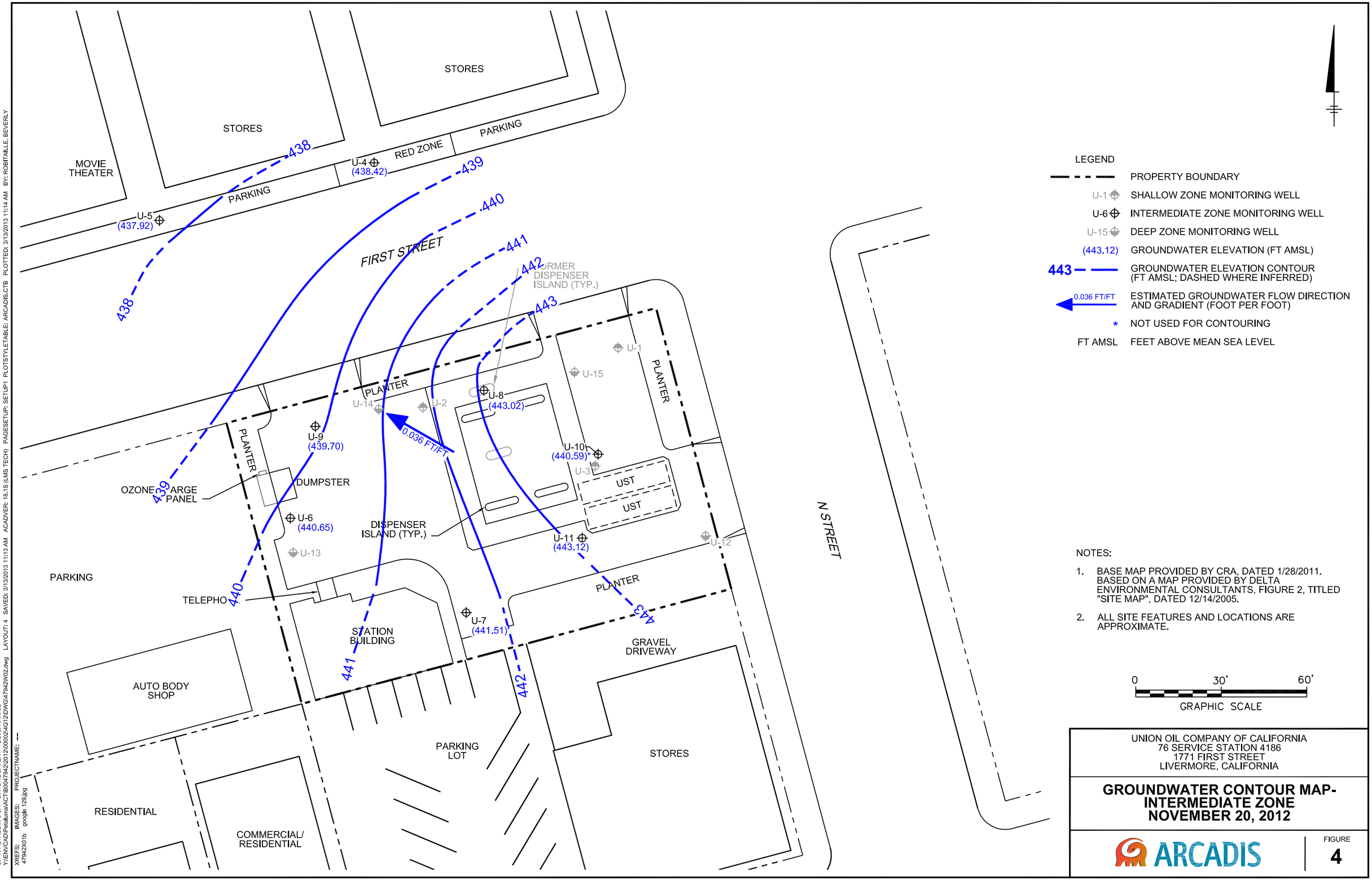

LEGEND

	PROPERTY BOUNDARY
U-1	SHALLOW ZONE MONITORING WELL
U-6	INTERMEDIATE ZONE MONITORING WELL
U-15	DEEP ZONE MONITORING WELL
(443.12)	GROUNDWATER ELEVATION (FT AMSL)
443	GROUNDWATER ELEVATION CONTOUR (FT AMSL; DASHED WHERE INFERRED)
0.036 FT/FT	ESTIMATED GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)
*	NOT USED FOR CONTOURING
FT AMSL	FEET ABOVE MEAN SEA LEVEL

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

GROUNDWATER CONTOUR MAP- INTERMEDIATE ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 4

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\00479422012000024012IDWG\47942W02.dwg LAYOUT: 4 SAVED: 3/13/2013 11:13 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:14 AM BY: ROBITAILLE, BEVERLY
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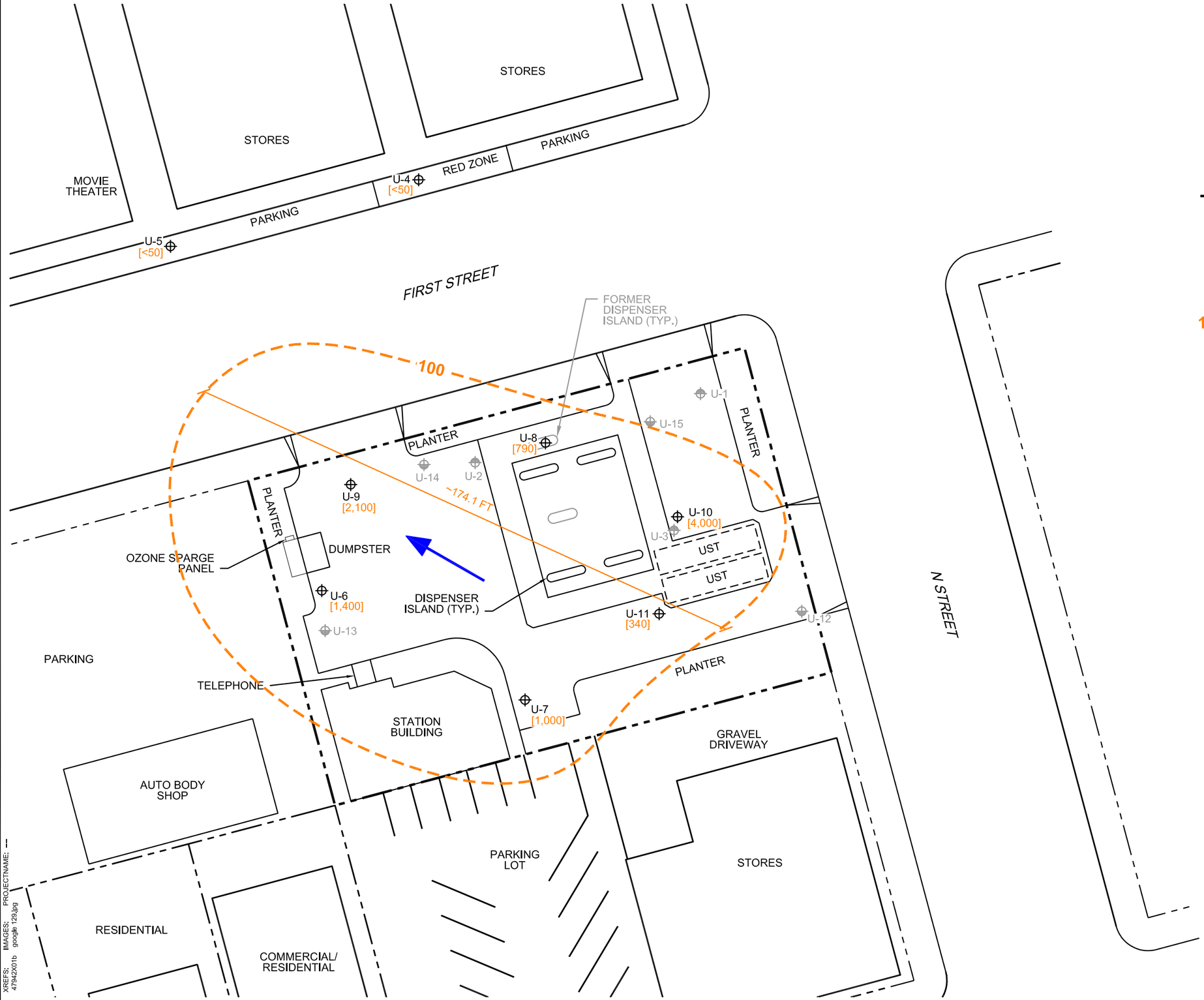


LEGEND

	PROPERTY BOUNDARY
U-1	SHALLOW ZONE MONITORING WELL
U-6	INTERMEDIATE ZONE MONITORING WELL
U-15	DEEP ZONE MONITORING WELL
[TPH-G]	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (C4-C12) CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
100	TPH-G ESL ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
<	DENOTES LESS THAN THE LABORATORY REPORTING LIMIT
ESL	ENVIRONMENTAL SCREENING LEVEL WHERE GROUNDWATER IS A CURRENT OR POTENTIAL SOURCE OF DRINKING WATER, TABLE F-1A, FINAL GROUNDWATER SCREENING LEVEL, SAN FRANCISCO REGION - REGIONAL WATER QUALITY CONTROL BOARD (SF-RWQCB), 2008.
	GROUNDWATER FLOW DIRECTION

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED SITE MAP, DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'
GRAPHIC SCALE

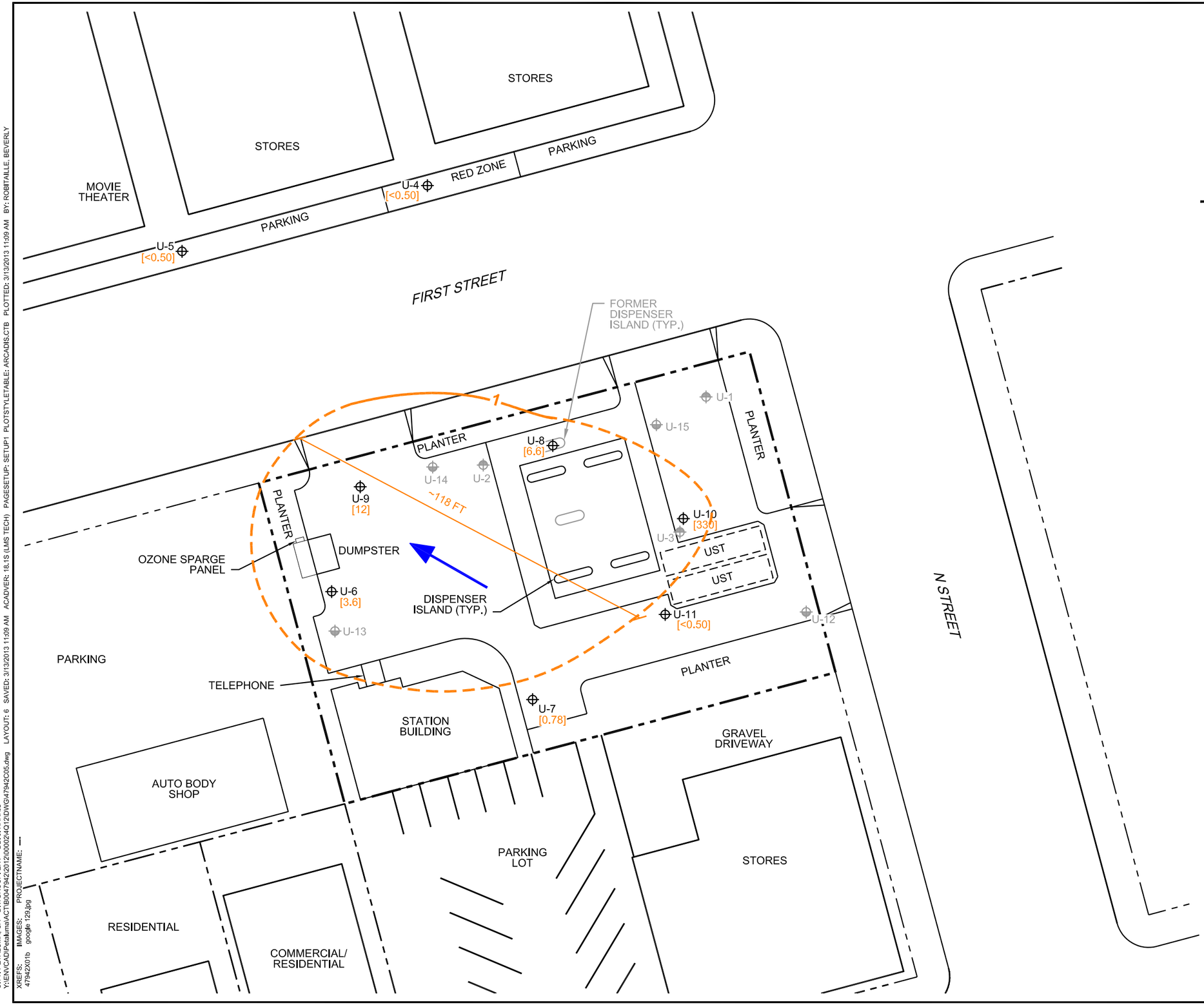
UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

TPH-G CONCENTRATION MAP- INTERMEDIATE ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 5

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\0047942\2012\000024Q12\DWG\47942C04.dwg LAYOUT: 5 SAVED: 3/13/2013 11:15 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:15 AM BY: ROBITAILLE, BEVERLY
XREFS: PROJECTNAME: ---
47942X01b IMAGES: google 129.jpg



LEGEND

- PROPERTY BOUNDARY
- U-1 SHALLOW ZONE MONITORING WELL
- U-6 INTERMEDIATE ZONE MONITORING WELL
- U-15 DEEP ZONE MONITORING WELL
- [BENZ] BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 1 BENZENE MCL ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < DENOTES LESS THAN THE LABORATORY REPORTING LIMIT
- MCL MAXIMUM CONTAMINANT LEVEL, CALIFORNIA DEPARTMENT OF PUBLIC HEALTH 2011
- GROUNDWATER FLOW DIRECTION

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

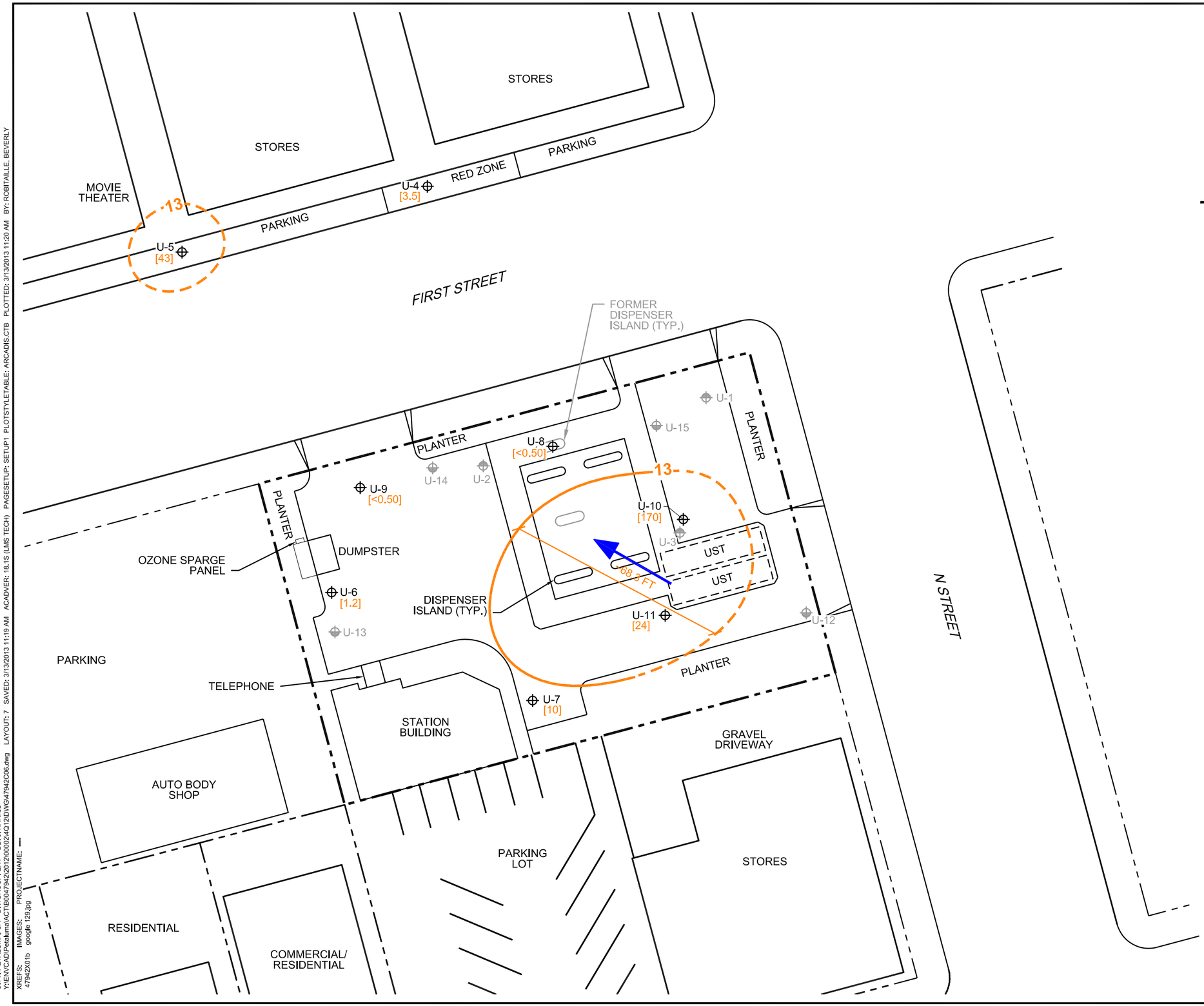
UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

BENZENE CONCENTRATION MAP- INTERMEDIATE ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 6

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\0047942\2012\000024Q12\DWG\47942C05.dwg LAYOUT: 6 SAVED: 3/13/2013 11:09 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:09 AM BY: ROBITAILLE, BEVERLY
XREFS: 47942X01b IMAGES: google 129.jpg PROJECTNAME: ---



LEGEND

- PROPERTY BOUNDARY
- U-1 SHALLOW ZONE MONITORING WELL
- U-6 INTERMEDIATE ZONE MONITORING WELL
- U-15 DEEP ZONE MONITORING WELL
- [MTBE] METHYL TERTIARY BUTYL ETHER CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 13 MTBE MCL ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < DENOTES LESS THAN THE LABORATORY REPORTING LIMIT
- MCL MAXIMUM CONTAMINANT LEVEL, CALIFORNIA DEPARTMENT OF PUBLIC HEALTH 2011
- GROUNDWATER FLOW DIRECTION

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

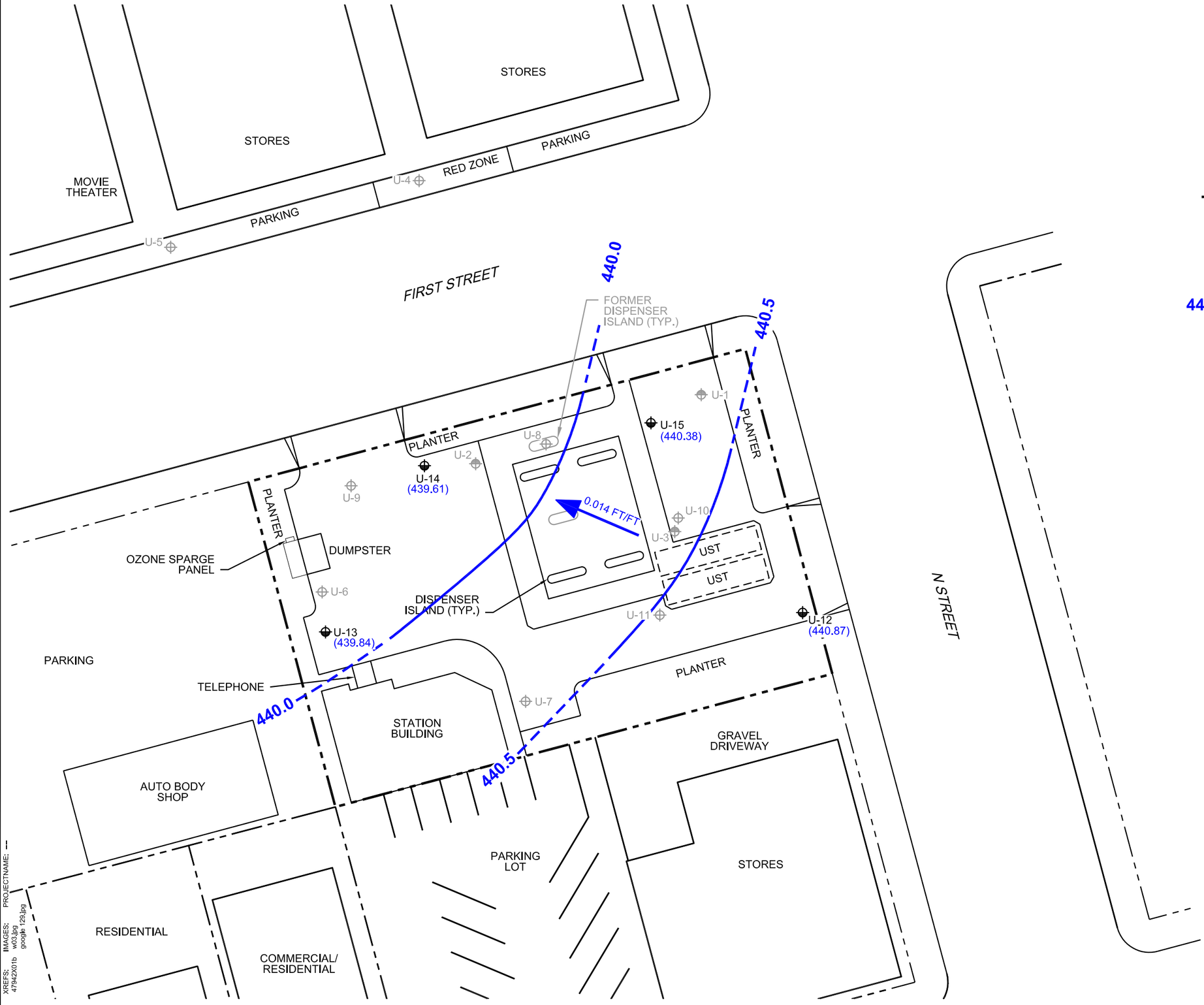
UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

MTBE CONCENTRATION MAP- INTERMEDIATE ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 7

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\0047942012\0000224012\DWG\47942C06.dwg LAYOUT: 7 SAVED: 3/13/2013 11:19 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:20 AM BY: ROBITAILLE, BEVERLY
XREFS: IMAGES: PROJECTNAME: ---
47942X01b google 129.jpg



LEGEND

	PROPERTY BOUNDARY
U-1	SHALLOW ZONE MONITORING WELL
U-6	INTERMEDIATE ZONE MONITORING WELL
U-15	DEEP ZONE MONITORING WELL
(440.87)	GROUNDWATER ELEVATION (FT AMSL)
440.0	GROUNDWATER ELEVATION CONTOUR (FT AMSL; DASHED WHERE INFERRED)
0.014 FT/FT	APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)
*	NOT USED FOR CONTOURING
FT AMSL	FEET ABOVE MEAN SEA LEVEL

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

GROUNDWATER CONTOUR MAP- DEEP ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 8

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\0047942\2012\000024Q12\DWG\47942W03.dwg LAYOUT: 8 SAVED: 3/13/2013 11:21 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:22 AM BY: ROBITAILLE, BEVERLY
XREFS: 47942X01b IMAGES: w03.jpg google 129.jpg PROJECTNAME: ---

LEGEND

- PROPERTY BOUNDARY
- U-1 SHALLOW ZONE MONITORING WELL
- U-6 INTERMEDIATE ZONE MONITORING WELL
- U-15 DEEP ZONE MONITORING WELL
- [TPH-G] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (C4-C12) CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN THE LABORATORY REPORTING LIMIT

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

TPH-G CONCENTRATION MAP- DEEP ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 9

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\047942\2012\000024\012\DWG\47942C07.dwg LAYOUT: 9 SAVED: 3/13/2013 11:24 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:24 AM BY: ROBITAILLE, BEVERLY
XREFS: IMAGES: PROJECTNAME: ---
47942X01b google 129.jpg

LEGEND

- PROPERTY BOUNDARY
- U-1 SHALLOW ZONE MONITORING WELL
- U-6 INTERMEDIATE ZONE MONITORING WELL
- U-15 DEEP ZONE MONITORING WELL
- [BENZ] BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN THE LABORATORY REPORTING LIMIT

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

BENZENE CONCENTRATION MAP- DEEP ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 10

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\047942\2012\000024Q12\DWG\047942C08.dwg LAYOUT: 10 SAVED: 3/13/2013 11:25 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:26 AM BY: ROBITAILLE, BEVERLY
XREFS: IMAGES: PROJECTNAME: ---
47942X01b google 129.jpg

LEGEND

- PROPERTY BOUNDARY
- U-1 SHALLOW ZONE MONITORING WELL
- U-6 INTERMEDIATE ZONE MONITORING WELL
- U-15 DEEP ZONE MONITORING WELL
- [MTBE] METHYL TERTIARY BUTYL ETHER CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN THE LABORATORY REPORTING LIMIT

NOTES:

1. BASE MAP PROVIDED BY CRA, DATED 1/28/2011. BASED ON A MAP PROVIDED BY DELTA ENVIRONMENTAL CONSULTANTS, FIGURE 2, TITLED "SITE MAP", DATED 12/14/2005.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

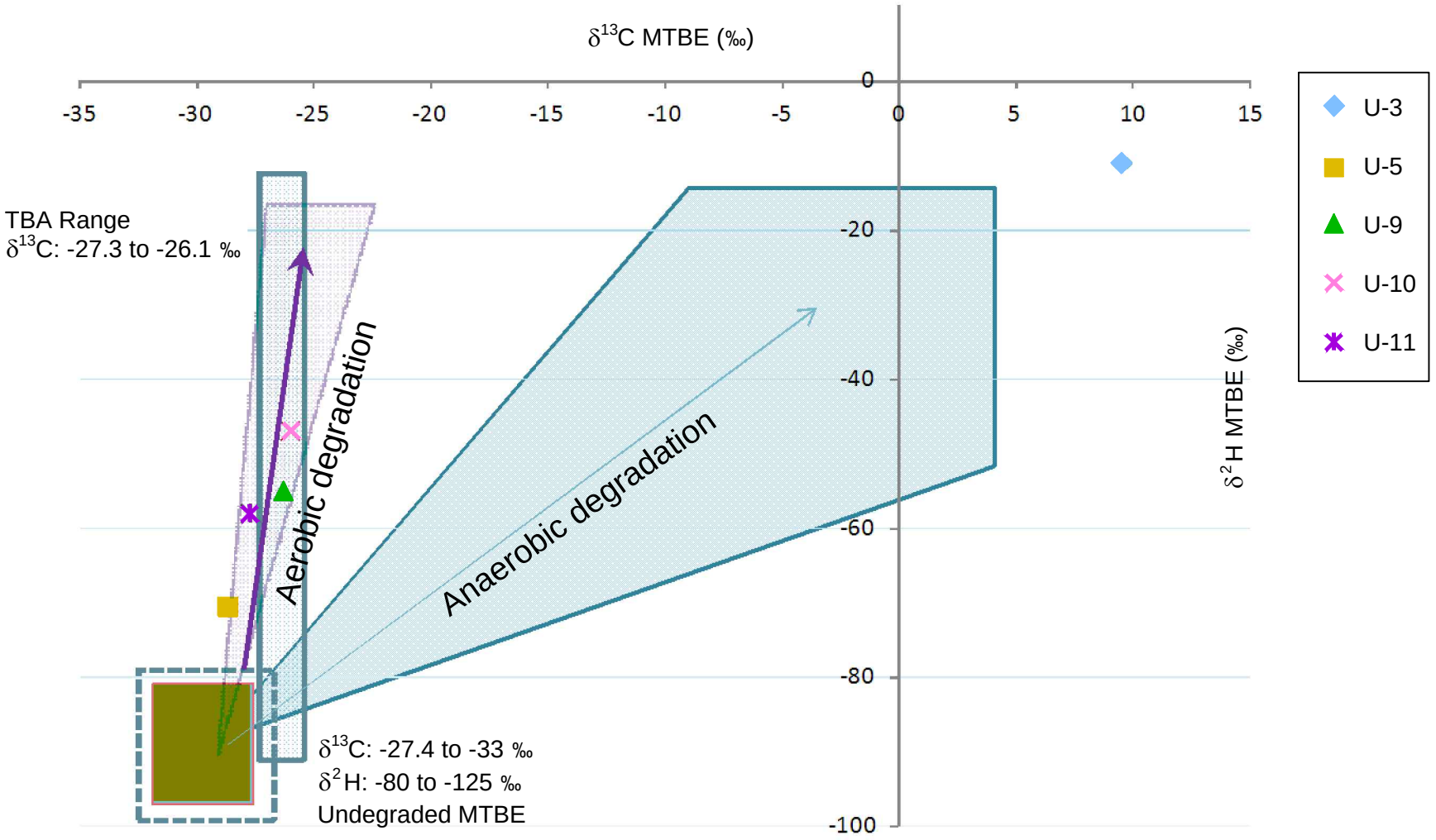
MTBE CONCENTRATION MAP- DEEP ZONE NOVEMBER 20, 2012

ARCADIS

FIGURE 11

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
Y:\ENVCAD\Petaluma\ACTIB\047942\2012\000024Q12\DWG\47942C09.dwg LAYOUT: 11 SAVED: 3/13/2013 11:28 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/13/2013 11:28 AM BY: ROBITAILLE, BEVERLY
XREFS: IMAGES: PROJECTNAME: ---
47942X01b google 129.jpg

CITY: PETALUMA, CA DIV/GROUP: ENVCAD DB: J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\B0047942\2012\00002\DWG\47942T06.dwg LAYOUT: 12 SAVED: 11/30/2012 5:17 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ---- PLOTTED: 5/3/2013 2:53 PM BY: HARRIS, JESSICA
XREFS: IMAGES: PROJECTNAME: ----



MTBE = METHYL TERTIARY BUTYL ETHER

TBA = TERTIARY BUTANOL

$\delta^{13}C$ $\delta^{2}H$ = ISOTOPIC SIGNATURE FOR CARBON AND HYDROGEN

‰ = PER MIL; PARTS PER THOUSAND

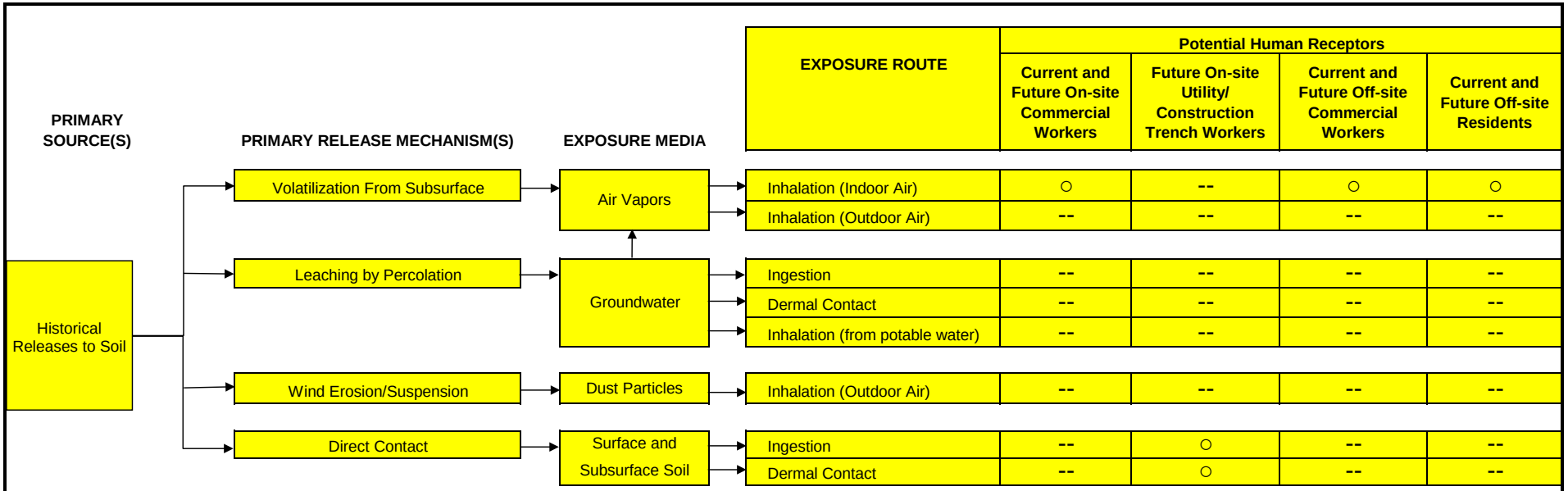
NOTE:
Observed $\delta^{13}C$ data range for TBA site data denoted as transparent narrow blue box. Anaerobic and Aerobic degradation trajectories are presented, as a result of the biodegradation of undegraded MTBE (the literature-derived data range is listed, as well as, graphically denoted with the yellow box, including error (the dashed border)).

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

CARBON ($\delta^{13}C$) VERSUS HYDROGEN ($\delta^{2}H$) ISOTOPE VALUES FOR MTBE AT U-3, U-5, U-9, U-10, AND U-11

ARCADIS

FIGURE
12



● Exposure pathway is complete or potentially complete.

○ Exposure pathway is complete or potentially complete; however, exposure is not considered significant at this time.

-- Incomplete exposure pathway.

UNION OIL COMPANY OF CALIFORNIA
76 SERVICE STATION 4186
1771 FIRST STREET, LIVERMORE, CA

EXPOSURE PATHWAY SUMMARY

ARCADIS

FIGURE 13

ARCADIS

Appendix A

Low-Threat Closure Checklist

Site Name: 76 Station No. 4186
Site Address: 1771 First Street, Livermore, CA

Site meets the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	■ Yes ☐ No
Does the unauthorized release consist only of petroleum?	■ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	■ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☐ Yes ☐ No ■ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	■ Yes ☐ No
Has secondary source been removed to the extent practicable?	■ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	■ Yes ☐ No
Does nuisance as defined by Water Code section 13050 exist at the site?	☐ Yes ■ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ■ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☐ Yes ☐ No ■ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?	▣ Yes ☐ No ☐ NA
If YES, check applicable class: ☐ **1** ■ **2** ☐ **3** ☐ **4** ☐ **5**	

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☐ No ■ NA
2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies. **Is the site an active commercial petroleum fueling facility?** Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk. **a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4?** If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☐ **4** **b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?** **c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?**	■ Yes ☐ No ☐Yes ☐ No ■ NA ☐ Yes ☐ No ■ NA ☐ Yes ☐ No ■ NA
3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c). **a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?** **b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?** **c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?**	■ Yes ☐ No ☐ NA ☐ Yes ☐ No ■ NA ☐ Yes ☐ No ■ NA

Appendix B

Boring Logs/Well Construction Diagrams

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-1
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/20/06	Location Map
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist		Air Knife	1			GM	**Silty GRAVEL with sand;** brown; medium dense; medium to coarse sand; subangular to rounded gravel and sand; no odor. (70,15,15)
					2				
					3				
					4				
					5				
					6				
					7				
					8				
					9				
		moist	0		10	B-1@10		SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; dense; no odor. (20,60,20)
					11				
					12				
					13				
					14				
		moist	0		15	B-1@15		SM	As above; gray.
					16				
					17				
					18				
					19				
		moist	0		20	B-1@20		SM	As above; brown.
					21				
					22				

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-1	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/20/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		moist	0		25		B-1@25'	CL	**Lean CLAY;** brown; high plasticity; some sand; medium stiff; no odor. (0,10,90)
					26				
					27				
					28				
					29				
		wet	0		30		B-1@30'	CL	As above.
					31				
					32				
					33				
					34				
		sat	0		35		B-1@35'	SM	**Silty SAND with gravel;** grayish brown; well graded sand and gravel; medium dense; saturated; no odor. (20,60,20)
					36				
					37				
					38				
					39				
		sat	120		40		B-1@40'	SM	As above; odor.
					41				
					42				
					43				
					44		X		Groundwater sampled @ 44'

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-1	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/20/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		sat	290		45	B-1@	45'	CL	**Lean CLAY;** brown; high plasticity; soft; saturated; strong odor. (0,0,100)
					46				
					47				
					48				
					49				
		sat	8		50	B-1@	50'	CL	As above; some gravel and sand. (5,5,90)
					51				
					52				
					53				
					54				
		wet	0		55	B-1@	55'	CL	As above.
					56				
					57				
					58				
					59				
		sat	9		60	B-1@	60'	SM	**Silty SAND with gravel**; grayish brown; well graded sand and gravel; subangular to rounded sand and gravel; medium dense; saturated; no odor. (20,60,20)
					61				
					62		X		Groundwater sampled @ 62'
					63				
					64				
		sat	3		65	B-1@	65'	SM	As above.
					66				**Total Depth = 65.5'**

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-2	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/19/06	Location Map	
Drilling Method: Cone Pentrometer Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 61.0'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist		Air Knife	1–9			GM	**Silty GRAVEL with sand;** brown; medium dense; medium to coarse sand; subangular to rounded gravel and sand; no odor. (70,15,15)
		moist	0		10			SM	**Silty SAND with gravel;** grayish brown; well graded sand; subangular to rounded sand and gravel; medium dense; no odor. (20,60,20)
					11	B-2@10			
					12–14				
		moist	0		15	B-2@15		SM	As above.
					16–19				
		moist	0		20			SM	As above.
					21	B-2@20			
					22				

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-2
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/19/06	Location Map
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 61.0'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		moist	0		25		B-2@ 25'	CL	**Lean CLAY**; brown; high plasticity; stiff; no odor; some sand. (0,10,90)
					26				
					27				
					28				
	▽				29				
		sat	0		30		B-2@ 30'	CL	As above; no sand; saturated. (0,0,100)
					31				
					32				
					33				
					34				
		moist	0		35		B-2@ 35'	SM	**Silty SAND with gravel**; grayish brown; well graded subangular to rounded sand and gravel; medium dense; moist; no odor. (20,60,20)
					36				
					37				
					38		X		Groundwater sampled @ 38'
					39				
		sat	173		40		B-2@ 40'	SM	As above; saturated; strong odor.
					41				
					42				
					43				
					44				

Delta
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Project No: C104186031	Client: ConocoPhillips	B-2	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/19/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 61.0'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		sat	157		45			CL	**Lean CLAY;** brown; high plasticity; medium stiff; some sand; strong odor; saturated. (0,10,90)
					46	B-2@	45		
					47				
					48				
					49				
		moist	20		50			CL	As above; slight odor.
					51	B-2@	50		
					52				
					53				
					54				
		moist	2		55			CL	As above; no odor. (0,20,80)
					56	B-2@	55		
					57				
					58				
					59				
		sat	6		60			SM	**Silty SAND with gravel**
					61	B-2@	60		
							X		Groundwater sampled @ 61'
					62				**Total Depth = 61.0'**
					63				
					64				
					65				
					66				

Delta

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Project No: C104186031	Client: ConocoPhillips	B-3	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/20/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	**See Site Map**	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist		Air Knife	1			GM	**Silty GRAVEL with sand;** brown; medium dense; medium to coarse sand; subangular to rounded gravel and sand; no odor. (70,15,15)
					2				
					3				
					4				
					5				
					6				
					7				
					8				
					9				
		moist	0		10		B-3@ 10'	SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; dense; moist; no odor. (20,60,20)
					11				
					12				
					13				
					14				
		moist	0		15		B-3@ 15'	SM	As above.
					16				
					17				
					18				
					19				
		wet	0		20		B-3@ 20'	SM	As above.
					21				
					22				

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Project No: C104186031	Client: ConocoPhillips	B-3
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/20/06	Location Map
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		wet	0		25		B-3@ 25'	CL	**Lean CLAY;** brown; high plasticity; stiff; wet; no odor. (0,0,100)
					26				
					27				
					28				
					29				
		sat	0		30		B-3@ 30'	CL	As above; some sand; saturated. (0,10,90)
					31				
					32				
					33				
					34				
		moist	0		35		B-3@ 35'	SM	**Silty SAND with Gravel;** grayish brown; well graded sand subangular to rounded sand and gravel; medium moist; no odor. (20,60,20)
					36				
					37				
					38		X		Groundwater sampled @38'
					39				
		sat	257		40		B-3@ 40'		
					41			CL	**Lean CLAY;** brown; high plasticity; some sand; saturated; odor; medium stiff to soft. (0,10,90)
					42				
					43				
					44				

Delta

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Project No: C104186031	Client: ConocoPhillips	B-3
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/20/06	Location Map
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		sat	11		45	B-3@	45'	CL	As above; soft; slight odor. (0,0,100)
					46				
					47				
					48				
					49				
		sat	215		50	B-3@	50'	CL	As above; grayish brown; some sand; odor. (0,10,90)
					51				
					52				
					53				
					54				
		sat	42		55	B-3@	55'	CL	As above; light grayish brown; odor. (0,20,80)
					56				
					57				
					58				
					59				
		wet	7		60	B-3@	60'	SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; medium dense; wet; slight odor. (20,60,20)
					61				
					62		X		Groundwater sampled @ 62'
					63				
					64				
		sat	22		65	B-3@	65'	SM	As above; odor; saturated.
					66				**Total Depth = 65.5'**

Delta

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Project No: C104186031	Client: ConocoPhillips	B-4
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/26/06	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	

Location Map

See Site Map

Elevation	Northing	Easting

Well Completion: Backfill	Well Completion: Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement			moist		Air Knife	1			GM	**Silty GRAVEL with sand;** brown; medium dense; medium to coarse sand; subangular to rounded sand and gravel; no odor. (70,15,15)
						2				
						3				
						4				
						5				
						6				
						7				
						8				
						9				
			wet	0		10	B-4@	10'	SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; medium dense; no odor. (20,60,20)
						11				
						12				
						13				
						14				
			wet	0		15	B-4@	15'	SM	As above.
						16				
						17				
						18				
						19				
						20				
			wet	0		21	B-4@	20'	SM	As above; grayish brown.
						22				

Delta
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Project No: C104186031	Client: ConocoPhillips	B-4	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/26/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist	0		25	B-4@25'		CL	**Lean CLAY;** brown; high plasticity; stiff; moist; no odor; some sand. (0,15,85)
		wet	0		30	B-4@30'		ML	**SILT;** brown; medium plasticity; soft; wet; no odor. (0,0,100).
		wet	0		35	B-4@35'		ML	As above.
		sat	12		40	B-4@40'		CL	**CLAY with sand;** medium plasticity; medium stiff; saturated; odor. (0,20,80)
					43		X		Groundawater sampled @ 43'

Delta

Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-4
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/26/06	Location Map
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		sat	92		45	B-4@	45'	ML	**SILT with sand;** brown; medium plasticity; soft; saturated; odor. (0,15,85)
					46				
					47				
					48				
					49				
		wet	89		50	B-4@	50'	ML	**SILT;** clay lenses; brown; medium plasticity; soft to stiff; wet; odor. (0,0,100)
					51				
					52				
					53				
					54				
		sat	34		55	B-4@	55'	CL	**Lean CLAY;** brown; high plasticity; stiff; saturated; odor. (0,0,100)
					56				
					57				
					58				
					59				
		wet/ sat	11		60	B-4@	60'	SM	**Silty SAND with gravel;** reddish brown; well graded sand; subangular to rounded sand and gravel; medium dense to dense; wet to saturated; odor. (20,60,20)
					61				
					62				
					63		X		Groundwater sampled @ 63'
					64				
		sat	13		65	B-4@	65'	SM	As above; saturated; dense.
					66				**Total Depth = 65.5'**

Delta

Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-5	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/26/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist		Air Knife	1			GM	**Silty GRAVEL with sand;** brown; medium dense; medium to coarse sand; subangular to rounded gravel and sand; no odor. (70,15,15)
					2				
					3				
					4				
					5				
					6				
					7				
					8				
					9				
		wet	0		10	B-5@	10'	SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; medium dense; no odor. (20,60,20)
					11				
					12				
					13				
					14				
		wet	0		15	B-5@	15'	SM	As above.
					16				
					17				
					18				
					19				
		wet	0		20	B-5@	20'	SM	As above.
					21				
					22				

Delta

Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-5	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/26/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		wet	0		25	B-5@	25'	CL	**Lean CLAY;** brown; high plasticity; medium stiff; wet; no odor. (0,0,100)
					26				
					27				
					28				
					29				
		wet	0		30	B-5@	30'	CL	**CLAY with sand;** (0,20,80)
					31				
					32				
					33				
					34				
		wet	0		35	B-5@	35'	ML	**SILT with sand;** brown; medium plasticity; medium stiff; wet; no odor. (0,30,70)
					36				
					37				
					38				
					39				
		sat	473		40	B-5@	40'	SM	**Silty SAND with gravel;** some clay lenses; well graded sand; subangular to rounded sand and gravel; medium dense to dense; saturated; strong odor. (10,60,30)
					41				
					42				
					43				
					44		X		Groundwater sampled @44'

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-5
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3
Driller: Gregg Drilling and Testing	Date Drilled: 4/26/06	Location Map
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		sat	30		45			CL	**Lean CLAY**; brown; high plasticity; medium stiff; saturated; odor. (0,10,90)
					46	B-5@	45'		
					47				
					48				
					49				
		sat	135		50			ML	**SILT;** brown; medium plasticity; soft; saturated; odor (0,0,100)
						B-5@	50'		
					51				
					52				
					53				
					54				
		wet	144		55			CL	**CLAY with sand**; medium plasticity; very stiff; wet; odor. (0,20,80)
						B-5@	55'		
					56				
					57				
					58				
					59				
		wet	96		60			SM	**Silty SAND with gravel;** dark grayish brown; well graded sand; subangular to rounded sand and gravel; medium dense to dense; wet; odor. (15,70,15)
						B-5@	60'		
					61				
					62				
					63				
					64				
		sat	73		65			SM	As above
						B-5@	65'		
							X		Groundwater sampled @ 65'
					66				**Total Depth = 65.5'**

Delta

Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-6	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/25/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	**See Site Map**	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist		Air Knife	1–5			GM	**Silty GRAVEL with sand;** brown; medium dense; medium to coarse sand; subangular to rounded gravel and sand; no odor. (70,15,15)
		moist	0		10		B-6@ 10'	SM	**Silty SAND with gravel;** grayish brown; well graded sand; subangular to rounded sand and gravel; medium dense; no odor. (20,60,20)
		wet	0		15		B-6@ 15'	SM	As above; reddish brown; wet; medium dense; some clay.
		wet	0		20		B-6@ 20'	SM	As above; grayish brown; some clay; saturated; no odor.

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-6	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/25/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		moist	48		25	B-6@	25'	CL	**Lean CLAY;** brown; high plasticity; stiff; moist; odor. (0,0,100)
					26				
					27				
					28				
					29				
		sat	18		30	B-6@	30'	CL	As above; saturated.
					31				
					32				
					33				
					34				
		sat	6		35	B-6@	35'	SM	**Silty SAND;** brown; well graded sand; medium dense; saturated. (10,70,20)
					36				
					37				
					38				
					39				
		wet	23		40	B-6@	40'	CL	**Lean CLAY;** brown; high plasticity; medium stiff; wet; od (0,0,100)
					41				
					42				
					43		X		Groundwater sampled @ 43'
					44				

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-6	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/25/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		wet	60		45–46	B-6@	46'	CL	As above; wet; odor.
					47–49				
		wet	175		50	B-6@	50'	CL	As above.
					51–54				
		wet	195		55	B-6@	55'	SC	**Clayey SAND with gravel;** brown; well graded sand; medium plasticity; stiff; odor; wet. (20,60,20)
					56–58				
		sat	21		60	B-6@	60'	SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; medium dense; saturated; odor. (20,60,20)
					61–62				
					63		X		Groundwater sampled @ 63'
					64				
		sat	11		65	B-6@	65'	SM	As above
					66				**Total Depth = 65.5'**

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-6	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/25/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		moist	48		25		B-6@25'	CL	**Lean CLAY;** brown; high plasticity; stiff; moist; odor. (0,0,100)
					26				
					27				
					28				
					29				
		sat	18		30		B-6@30'	CL	As above; saturated.
					31				
					32				
					33				
					34				
		sat	6		35		B-6@35'	SM	**Silty SAND;** brown; well graded sand; medium dense; saturated. (10,70,20)
					36				
					37				
					38				
					39				
		wet	23		40		B-6@40'	CL	**Lean CLAY;** brown; high plasticity; medium stiff; wet; od (0,0,100)
					41				
					42		X		Groundwater sampled @ 43'
					43				
					44				

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-6	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/25/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		wet	60		45–46		B-6@ 46'	CL	As above; wet; odor.
					47–49				
		wet	175		50		B-6@ 50'	CL	As Above.
					51–54				
		wet	195		55		B-6@ 55'	SC	**Clayey SAND with gravel;** brown; well graded sand; medium plasticity; stiff; odor; wet. (20,60,20)
					56–58				
		sat	21		60		B-6@ 60'	SM	**Silty SAND with gravel;** brown; well graded sand; subangular to rounded sand and gravel; medium dense; saturated; odor. (20,60,20)
					61–62				
					63		X		Groundwater sampled @ 63'
					64				
		sat	11		65		B-6@ 65'	SM	As above
					66				**Total Depth = 65.5'**

Delta

Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-7	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 1 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/21/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		moist		Air Knife	1			GM	**Silty GRAVEL with sand;** brown; medium dense; medium and coarse sand; subangular to rounded gravel; no odor. (70,15,15)
					2				
					3				
					4				
					5				
					6				
					7				
					8				
					9				
		moist	0		10		B-7@ 10'	SM	**Silty SAND with gravel;** gray to brown; well graded sand; subangular to rounded sand and gravel; dense; no oder. (20,60,20)
					11				
					12				
					13				
					14				
		wet	0		15		B-7@ 15'	SM	As above; reddish brown; wet; medium dense.
					16				
					17				
					18				
					19				
		wet	0		20		B-7@ 20'	SM	As above; grayish brown.
					21				
					22				

Delta
Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-7	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 2 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/21/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				
					24				
		wet	0		25		B-7@ 25'	CL	**Lean CLAY;** brown; high plasticity; medium stiff; odor. (0,0,100)
					26				
					27				
					28				
					29				
		wet	0		30		B-7@ 30'	CL	As above; soft.
					31				
					32				
					33				
					34				
		sat	6		35		B-7@ 35'	SM	**Silty SAND with gravel;** grayish brown; well graded sand; subangular to rounded sand and gravel; medium saturated; slight odor. (20.60,20)
					36				
					37				
					38				
					39		X		Groundwater sampled @ 39'
		sat	6		40		B-7@ 40'	CL	**Lean CLAY;** brown; high plasticity; soft; saturated; odor. (0,0,100)
					41				
					42				
					43				
					44				

Delta

Environmental Consultants, Inc.

Project No: C104186031	Client: ConocoPhillips	B-7	
Logged By: Ben Wright	Location: 1771 First Street, Livermore, California	Page 3 of 3	
Driller: Gregg Drilling and Testing	Date Drilled: 4/21/06	Location Map	
Drilling Method: Cone Penetration Testing	Hole Diameter: 1.75"	See Site Map	
Sampling Method:Piston Sampler/Hydropunch	Hole Depth: 65.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

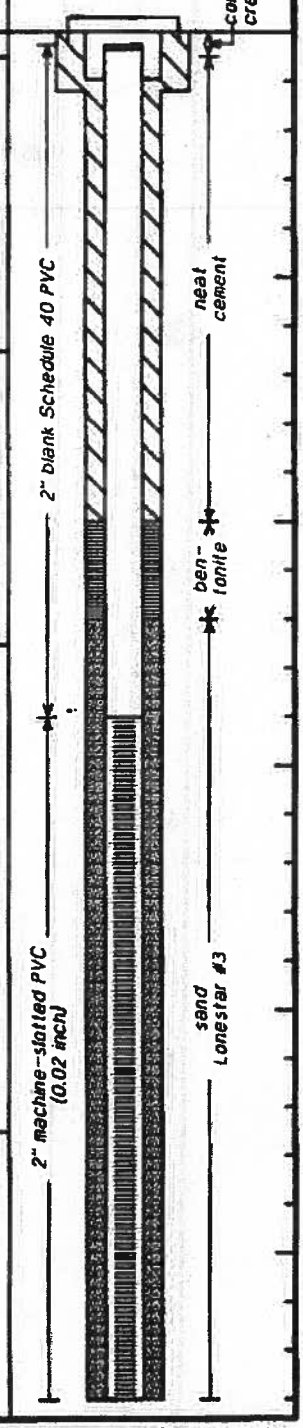
Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		sat	214		45	B-7@	45'	CL	As above; strong odor.
					46				
					47				
					48				
					49				
		sat	74		50	B-7@	50'	SM	**Silty SAND with Gravel;** brown; well graded sand; subangular to rounded sand and gravel; dense, odor. (20,60,20)
					51				
					52				
					53				
					54				
		sat	258		55	B-7@	55'	SM	As above; grayish brown; strong odor.
					56				
					57		X		Groundwater sampled @ 57'
					58				
					59				
		sat	153		60	B-7@	60'		As above.
					61				
					62				
					63				
					64				
		sat	199		65	B-7@	65'		As above.
					66				**Total Depth = 65.5'**

Gettler-Ryan Inc.

Log of Boring U-1

PROJECT: *Tosco (Unocal) Station No. 4186*	LOCATION: *1771 1st Street, Livermore, CA*
GSI PROJECT NO.: *140175.02*	CASING ELEVATION: *478.27 feet MSL*
DATE STARTED: *06/15/98*	WL (ft. bgs): *24.9* DATE: *06/16/98* TIME: *8:00 am*
DATE FINISHED: *06/15/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8" hollow-stem auger*	TOTAL DEPTH: *34.5 Feet*
DRILLING COMPANY: *Woodward Drilling*	GEOLOGIST: *Clyde Galantine*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							Asphalt and fill gravel.
						ML	GRAVELLY SILT WITH SAND (ML) – dark brown (10YR 3/3), damp, very stiff, non plastic, 80% silt, 20% fine gravel, 15% fine to coarse sand, 5% clay.
5	8	23	U-1-6				
						GW	
10	2	60	U-1-11				GRAVEL WITH SAND (GW) – dark brown (10YR 4/3), damp, very dense, 75% subangular to rounded fine gravel, 20% fine to coarse sand, 5% clay.
						GW GC	
15	3	69	U-1-15.5				GRAVEL WITH CLAY AND SAND (GW-GC) – brown (10YR 5/3), saturated, very dense, 70% subangular to rounded fine gravel, 20% fine to coarse sand, 10% clay.
	–	44	U-1-19				
20	4	78	U-1-21.5				
						CL	
25	2	24	U-1-26.5				CLAY (CL) – yellowish brown (10YR 5/4), damp, very stiff, plastic, 75% clay, 20% silt, 5% fine to medium sand.



JOB NUMBER: *140175.02*

Gettler-Ryan Inc.

Log of Boring U-1

PROJECT: *Tosco (Unocal) Station No. 4186*

LOCATION: *1771 1st Street, Livermore, CA*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
	1	24	U-1-30			CL	Becomes damp to wet.	cap 2" machine-slotted PVC (0.02 inch) sand Lonestar #3
33	2	28	U-1-34.5					
38								
43								
48								
53								
58								

JOB NUMBER: *140175.02*

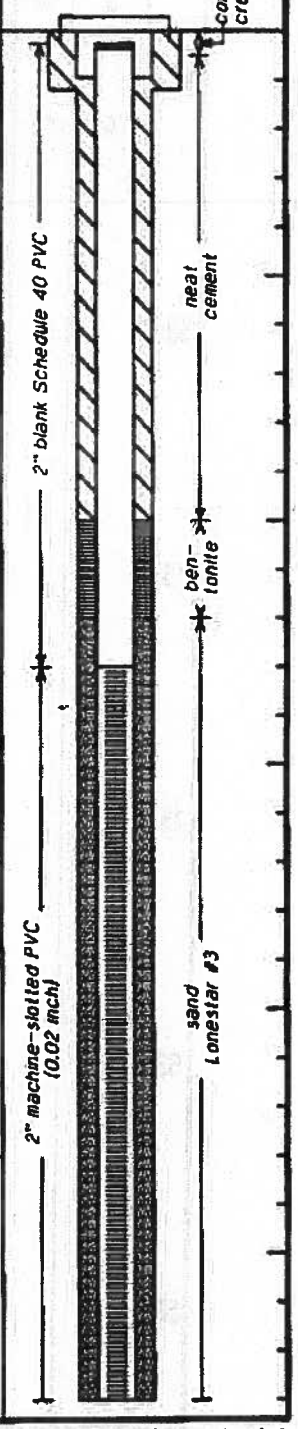
Gettler-Ryan Inc.

Log of Boring U-2

PROJECT: *Tosco (Unocal) Station No. 4188*	LOCATION: *1771 1st Street, Livermore, CA*
GSI PROJECT NO.: *140175.02*	CASING ELEVATION: *477.44 feet MSL*
DATE STARTED: *06/16/98*	WL (ft. bgs): *23.8* DATE: *06/16/98* TIME: *3:00 pm*
DATE FINISHED: *06/16/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8" hollow-stem auger*	TOTAL DEPTH: *34.5 Feet*
DRILLING COMPANY: *Woodward Drilling*	GEOLOGIST: *Clyde Galantine*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						GW GM	Asphalt and fill gravel.
5	-	21	U-2-5.5				GRAVEL WITH SILT AND SAND (GW-GM) - brown (10YR 5/3), damp, medium dense, 75% subangular to rounded fine gravel, 15% fine to coarse sand, 10% silt.
10	3	40	U-2-10.5				
15	-	79	U-2-14				Becomes very dense.
						GW GC	
20	4	51	U-2-21				GRAVEL WITH CLAY AND SAND (GW-GC) - brown (10YR 5/3), saturated, very dense, 70% subangular to rounded fine gravel, 20% fine to coarse sand, 10% clay.
						CL	
25	4	33	U-2-26.5				CLAY (CL) - brown (10YR 5/3) with dark blue gray (5B 4/1) mottling, moist to damp, hard, plastic, 90% clay, 10% silt, trace fine sand.

WELL DIAGRAM



JOB NUMBER: *140175.02*

Gettler-Ryan Inc.

Log of Boring U-2

PROJECT: *Tosco (Unocal) Station No. 4188*

LOCATION: *1771 1st Street, Livermore, CA*

DEPTH feet	PID (ppm)	BLOWS/FT. #	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
						CL	Color change to brown (10YR 5/3), becomes moist to saturated, very stiff.	cap; 2" machine-slotted PVC (0.02 inch); sand Lonestar #3; ben-tonite
	3	18	U-2-31.5					
33							Becomes damp, hard.	
	6	62	U-2-34			GW GC	GRAVEL WITH CLAY AND SAND (GW-GC) - gray (5Y 5/1) to dark yellowish brown (10YR 4/6), saturated, very dense, 75% subangular to rounded fine gravel, 20% fine to coarse sand, 10% clay.	
38								
43								
48								
53								
58								

JOB NUMBER: *140175.02*

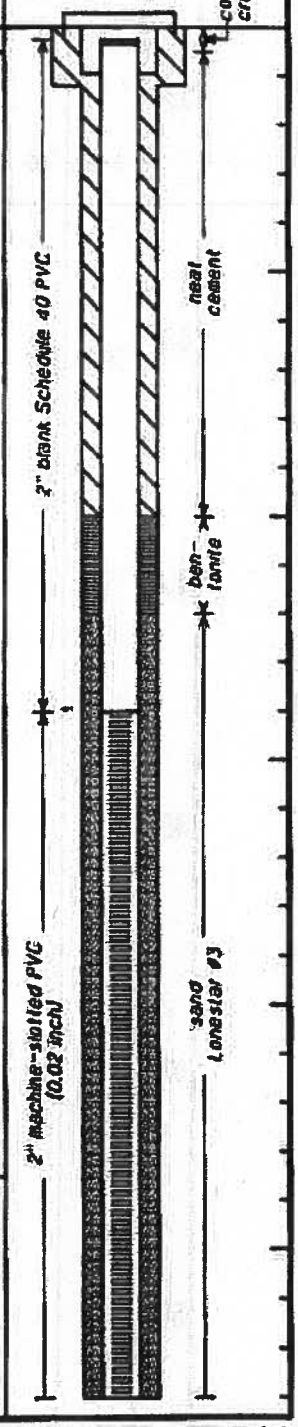
Gettler-Ryan Inc.

Log of Boring U-3

PROJECT: *Tosco (Unocal) Station No. 4186*	LOCATION: *1771 1st Street, Livermore, CA*
GSI PROJECT NO.: *140175.02*	CASING ELEVATION: *454.92 feet MSL*
DATE STARTED: *06/16/98*	WL (ft. bgs): *23.9* DATE: *06/16/98* TIME: *4:45 pm*
DATE FINISHED: *06/16/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8" hollow-stem auger*	TOTAL DEPTH: *38.5 Feet*
DRILLING COMPANY: *Woodward Drilling*	GEOLOGIST: *Clyde Galantine*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
0						GW GC	Asphalt and fill gravel.
5	2	27	U-3-6				GRAVEL WITH CLAY AND SAND (GW-GC) - brown (10YR 5/3), moist, dense, 70% subangular to rounded fine gravel, 20% fine to coarse sand, 10% clay.
10	2	51	U-3-11				Becomes very dense.
15	18	88	U-3-15.5				
20	-	70	U-3-20.5				
25	218	35	U-3-25.5			CL	CLAY (CL) - yellowish brown (10YR 5/4), damp to moist, hard, plastic, 85% clay, 15% silt, trace fine sand.

WELL DIAGRAM



JOB NUMBER: *140175.02*

Gettler-Ryan Inc.

Log of Boring U-3

PROJECT: *Tosco (Unocal) Station No. 4186*

LOCATION: *1771 1st Street, Livermore, CA*

DEPTH feet	PID (ppm)	BLOWS/FT. #	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
33	31	14	U-3-31			CL	Color change to olive brown (2.5Y 4/4), becomes saturated.	cap; 2" machine-slotted PVC (0.02 inch); sand Lonestar #3; ben-tonite
	340	30	U-3-34.5				CLAY WITH SAND AND GRAVEL (CL) - olive brown (2.5Y 4/4), 70% clay, 10% silt, 10% fine to coarse sand, 10% fine gravel.	
38	372	44	U-3-38.5			GW	GRAVEL (GW) - brown (10YR 4/3), saturated, very dense, 85% subangular to rounded fine gravel, 10% fine to coarse gravel, 10% clay, abundant water.	
43								
48								
53								
58								

JOB NUMBER: *140175.02*

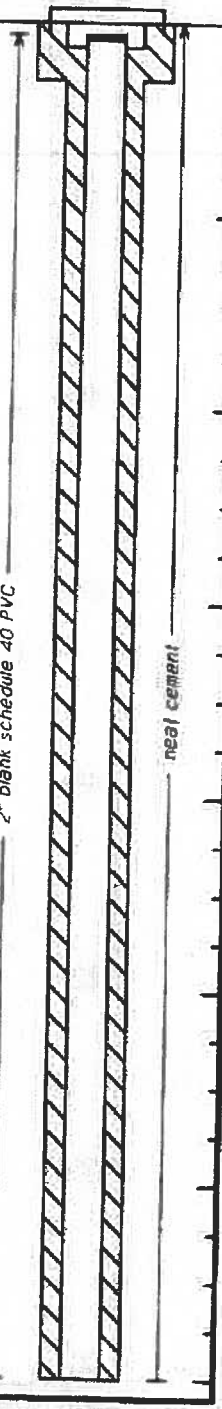
Gettler-Ryan, Inc.

Log of Boring U-4

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO. : *140175.05*	CASING ELEVATION:
DATE STARTED: *02/21/01*	WL (ft. bgs): *29.5* DATE: *02/21/01* TIME: *10:35*
DATE FINISHED: *02/21/01*	WL (ft. bgs): *33.0* DATE: *02/21/01* TIME: *15:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *46.5 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						GW	ASPHALT – 3 inches thick.
							GRAVEL WITH SAND (GW) – dark brown (10YR 3/3), dry, very dense; 60% fine to coarse subangular gravel to 4 cm, 40% fine to coarse sand.
4	0	>100	U-4-5				
8	0	>100					Becomes 50% fine to coarse subangular gravel to 4 cm, 30% fine to coarse sand, 20% silt.
12						SW-SM	SAND WITH SILT AND GRAVEL (SW-SM) – brown (10YR 4/3), dry, very dense; 50% fine to coarse sand, 30% silt, 20% fine gravel.
16	0	>100	U-4-15				
						SW-SC	SAND WITH GRAVEL AND CLAY (SW-SC) – brown (10YR 4/3), dry, very dense; 60% fine to coarse sand, 30% fine to coarse subangular gravel, 20% clay.
20	0	>100	U-4-20				
						CL	CLAY (CL) – yellowish brown (10YR 5/4), dry, hard, medium plasticity; 95% clay, 5% fine sand.
24	0	38	U-4-25				
28							

WELL DIAGRAM



JOB NUMBER: *140175.05*

Gettler-Ryan, Inc.

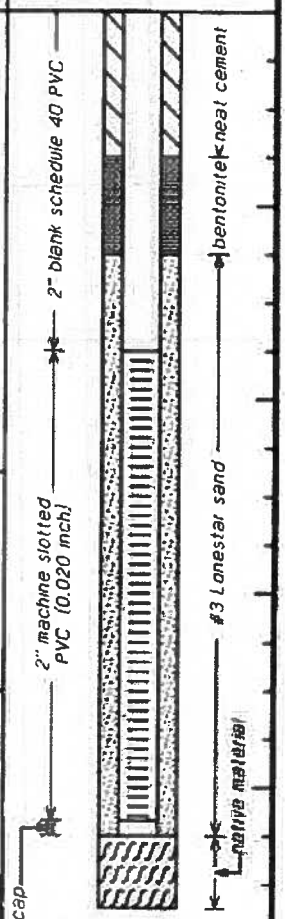
Log of Boring U-4

PROJECT: *Tosco (76) Service Station No. 4186*

LOCATION: *1771 First Street, Livermore, CA*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						CL	
	0	19	U-4-30				Becomes saturated, very stiff.
32							
	0	31	U-4-35				
36							
						GW-GM	GRAVEL WITH SAND AND SILT (GW-GM) - dark yellowish brown (10YR 4/4), saturated, very dense; 50% fine to coarse gravel, 30% fine to coarse sand, 20% silt.
40	0	>100					
						CL	CLAY (CL) - yellowish brown (10YR 5/4), saturated, hard; 90% clay, 10% fine sand.
44							
	0	24	U-4-45				
							Bottom of boring at 48.5 feet bgs.
48							(* = Converted to equivalent standard penetration blows/foot.)
52							
56							
60							

WELL DIAGRAM



JOB NUMBER: *140175.05*

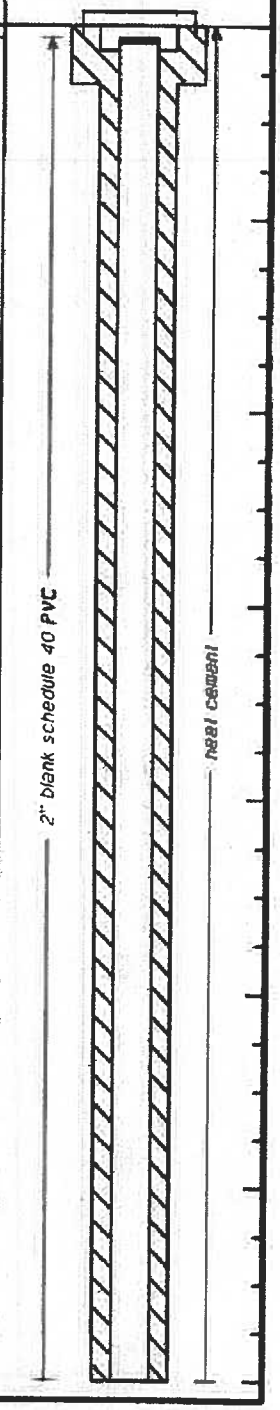
Gettler-Ryan, Inc.

Log of Boring U-5

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.05*	CASING ELEVATION:
DATE STARTED: *02/21/01*	WL (ft. bgs): *29* DATE: *02/21/01* TIME: *14:05*
DATE FINISHED: *02/21/01*	WL (ft. bgs): *33.4* DATE: *02/21/01* TIME: *15:30*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *47 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SOIL CLASS	GEOLOGIC DESCRIPTION
4				GW-GM	ASPHALT – 3 inches thick. GRAVEL WITH SAND AND SILT (GW-GM) – dark brown (10YR 3/3), dry, very dense; 60% fine to coarse subangular gravel to 4.5 cm, 25% fine to coarse sand, 15% silt.
8					
12	0	>100	U-5-10		
16	0	>100		SW	SAND (SW) – dark yellowish brown (10YR 4/4), wet, very dense; 90% fine to coarse sand, 10% clay. (perched zone ?)
20	0	64	U-5-20		
24	0	44	U-5-25	CL	CLAY (CL) – brown (10YR 4/3), dry, hard, low plasticity; 95% clay, 5% fine sand.
28					

WELL DIAGRAM



JOB NUMBER: *140175.05*

Gettler-Ryan, Inc.

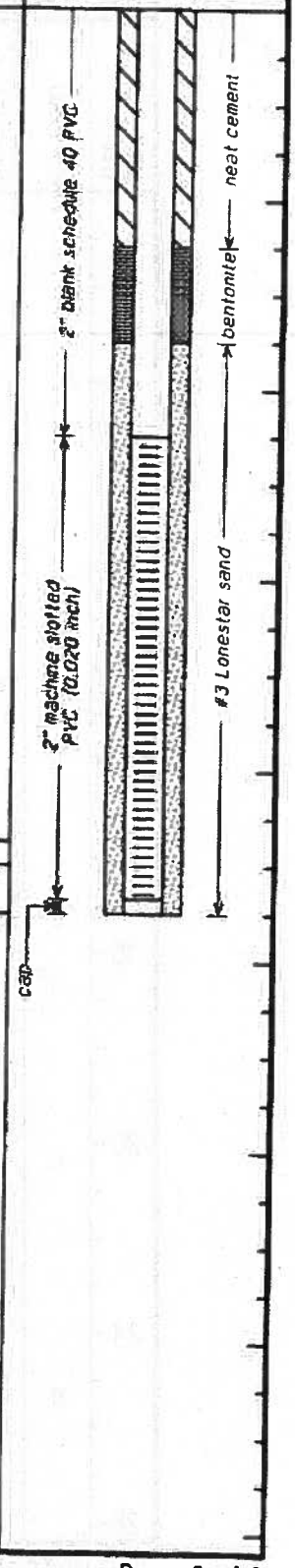
Log of Boring U-5

PROJECT: *Tosco (76) Service Station No. 4186*

LOCATION: *1771 First Street, Livermore, CA*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
32	0	18	U-5-30				Becomes saturated, very stiff, medium plasticity.
36	0	29	U-5-35				
40	0	25	U-5-40				
44	0	26				SC	CLAYEY SAND (SC) – brown (10YR 5/3), saturated, medium dense; 75% fine sand, 25% clay.
						CL	CLAY (CL) – brown (10YR 4/3), saturated, very stiff, medium plasticity; 95% clay, 5% fine sand.
48							Bottom of boring at 47 feet bgs.
							(* = Converted to equivalent standard penetration blows/foot.)
52							
56							
60							

WELL DIAGRAM



JOB NUMBER: *140175.05*

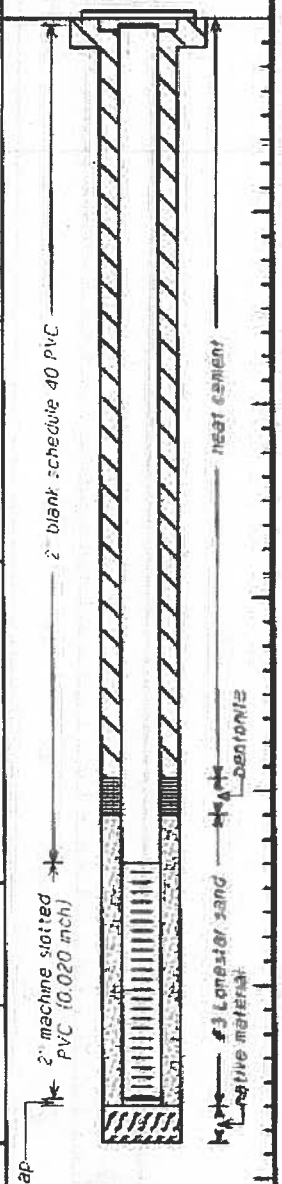
Gettler-Ryan, Inc.

Log of Boring U-6

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.07*	CASING ELEVATION: *478.38 Ft. (MSL)*
DATE STARTED: *12/06/01*	WL (ft. bgs): *31.5* DATE: *12/06/01* TIME: *04:40*
DATE FINISHED: *12/06/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *46.5 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	SOIL CLASS	GEOLOGIC DESCRIPTION
					GW	Asphalt and base rock.
	0	>100	U-6-5			WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/3), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
8	0	>100	U-6-10			Color changes to brown (10YR 4/3); becomes 70% fine to coarse gravel, 30% fine to coarse sand.
					SW	WELL-GRADED SAND WITH GRAVEL (SW) – brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
16	0	>100	U-6-15			
	8	48	U-6-20			Color changes to dark yellowish brown (10YR 4/4), becomes moist, dense, 70% fine to coarse sand, 30% fine to coarse gravel to 3 cm.
24					CL	CLAY (CL) – dark yellowish brown (10YR 4/6), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
	25	39	U-6-25			
	27	57	U-6-30			Becomes saturated, medium plasticity; 90% clay, 10% fine to coarse sand.
32						
	0	54	U-6-35			
					SW-SC	WELL-GRADED SAND WITH GRAVEL AND CLAY (SW-SC) – olive gray (5Y 4/2), saturated, very dense; 50% fine to coarse sand, 40% fine to coarse gravel, 10% clay.
40	199	50			CL	CLAY (CL) – olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
	54	50				Becomes saturated.
48						Bottom of boring at 46.5 feet bgs.
						(* = Converted to equivalent standard penetration blows/foot.)
56						

WELL DIAGRAM



JOB NUMBER: *140175.07*

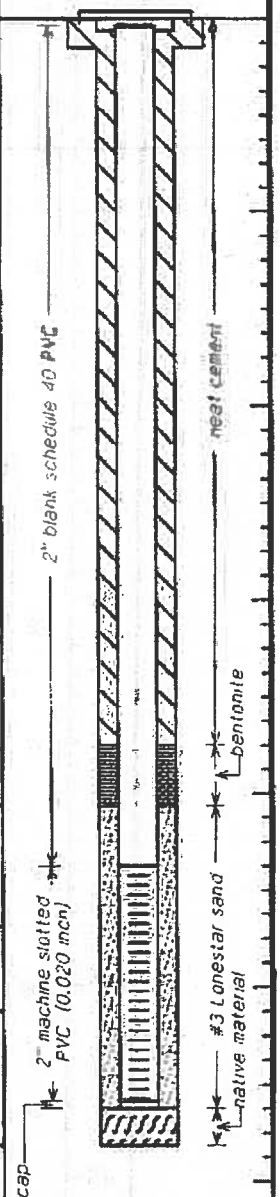
Gettler-Ryan, Inc.

Log of Boring U-7

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.07*	CASING ELEVATION: *478.74 Ft. (MSL)*
DATE STARTED: *12/06/01*	WL (ft. bgs): *20* DATE: *12/06/01* TIME: *13:05*
DATE FINISHED: *12/06/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *46.5 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SOIL CLASS	GEOLOGIC DESCRIPTION
				GW	Asphalt and base rock.
					WELL-GRADED GRAVEL WITH SAND (GW) - very dark grayish brown (10YR 3/2), dry, very dense; 50% fine to coarse gravel, 50% fine to coarse sand.
		>100			No recovery.
8					
	0	>100	U-7-10		Color changes to brown (10YR 4/3).
				SW	WELL-GRADED SAND WITH GRAVEL (SW) - dark yellowish brown (10YR 4/4), dry, very dense; 70% fine to coarse sand, 30% fine to coarse gravel to 3 cm.
16	0	>100	U-7-15		
	0	>100	U-7-20		Becomes wet; 60% fine to coarse sand, 40% fine to coarse gravel to 4 cm.
24				CL	CLAY (CL) - dark yellowish brown (10YR 4/4), dry, hard, low plasticity; 90% clay, 10% fine sand.
	0	51	U-7-25		
	0	52	U-7-30		Becomes wet, medium plasticity; iron oxide staining.
32				SW	WELL-GRADED SAND WITH GRAVEL (SW) - dark yellowish brown (10YR 4/4), wet, very dense; 70% fine to coarse sand, 30% fine to coarse gravel.
	0	47	U-7-35		
				GW	WELL-GRADED GRAVEL WITH SAND (GW) - dark yellowish brown (10YR 4/6), saturated, very dense; 60% fine to coarse gravel to 4 cm, 40% fine to coarse sand.
40	349	49		CL	CLAY (CL) - light olive brown (2.5Y 5/3), moist, hard, medium plasticity; 90% clay, 10% fine sand.
	558	52			Color changes to light olive brown (2.5Y 5/3) mottled with very dark gray (N3).
48					Bottom of boring at 46.5 feet bgs.
					(* = Converted to equivalent standard penetration blows/foot.)
56					

WELL DIAGRAM



JOB NUMBER: *140175.07*

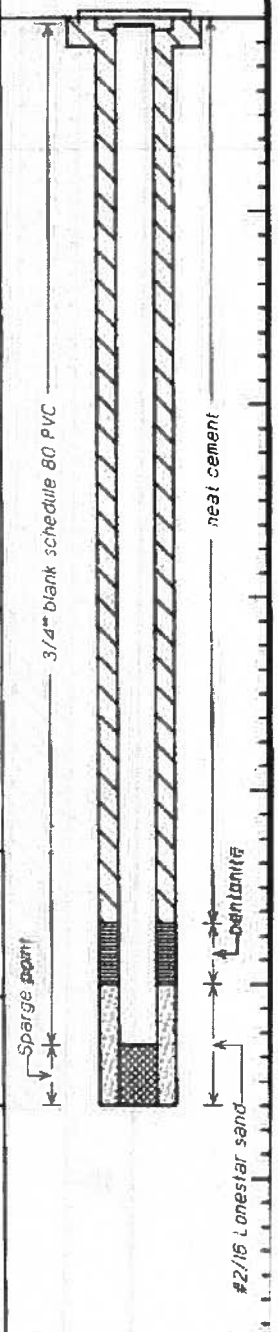
Gettler-Ryan, Inc.

Log of Boring SP-1

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO. : *140175.07*	CASING ELEVATION:
DATE STARTED: *12/07/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/07/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	SOIL CLASS	GEOLOGIC DESCRIPTION
	GW	Asphalt and base rock.
		WELL-GRADED GRAVEL WITH SAND (GW) - dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
8		
	SW	WELL-GRADED SAND WITH GRAVEL (SW) - brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
16		
24	CL	CLAY (CL) - dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32		
	SW-SC	WELL-GRADED SAND WITH GRAVEL AND CLAY (SW-SC) - brown (10YR 4/3), saturated, very dense; 50% fine to coarse sand, 40% fine to coarse gravel, 10% clay.
40	CL	CLAY (CL) - olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
		Bottom of boring at 45 feet bgs.
48		
56		

WELL DIAGRAM



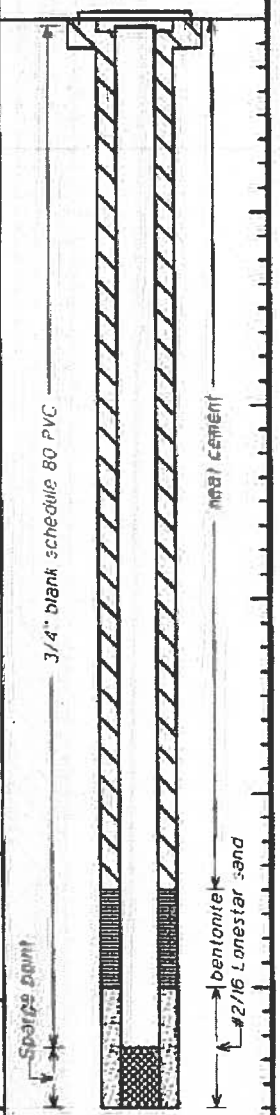
Gettler-Ryan, Inc.

Log of Boring SP-2

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.07*	CASING ELEVATION:
DATE STARTED: *12/07/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/07/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		GW	Asphalt and base rock. WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
8			
16		SW	WELL-GRADED SAND WITH GRAVEL (SW) – brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
24		CL	CLAY (CL) – dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32		SW-SC	WELL-GRADED SAND WITH GRAVEL AND CLAY (SW-SC) – brown (10YR 4/3), saturated, very dense; 50% fine to coarse sand, 40% fine to coarse gravel, 10% clay.
40		CL	CLAY (CL) – olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
48			Bottom of boring at 45 feet bgs.
56			

WELL DIAGRAM



JOB NUMBER: *140175.07*

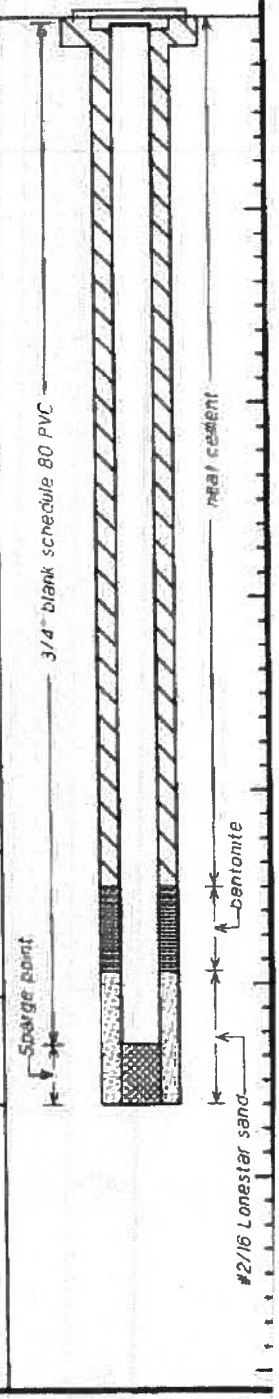
Gettler-Ryan, Inc.

Log of Boring SP-3

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO. : *140175.07*	CASING ELEVATION:
DATE STARTED: *12/06/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/06/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		GW	Topsoil. WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
8			
		SW	WELL-GRADED SAND WITH GRAVEL (SW) – brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
16			
24		CL	CLAY (CL) – dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32			
		SW-SC	WELL-GRADED SAND WITH GRAVEL AND CLAY (SW-SC) – brown (10YR 4/3), saturated, very dense; 50% fine to coarse sand, 40% fine to coarse gravel, 10% clay.
40		CL	CLAY (CL) – olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
			Bottom of boring at 45 feet bgs.
48			
56			

WELL DIAGRAM



JOB NUMBER: *140175.07*

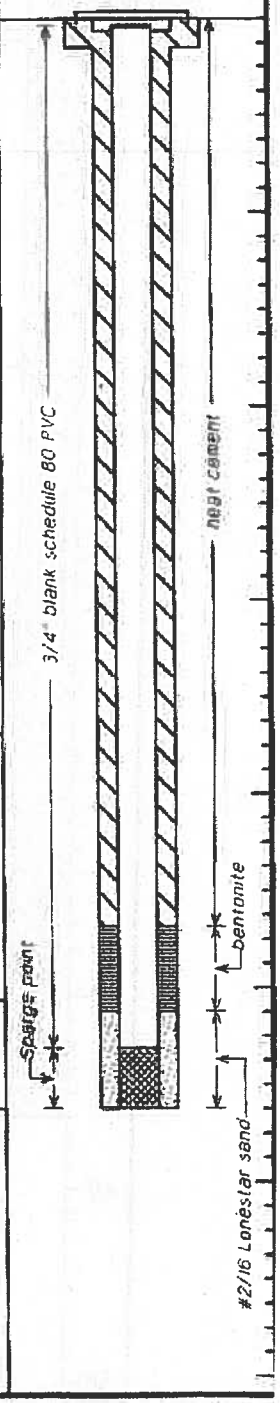
Gettler-Ryan, Inc.

Log of Boring SP-4

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO. : *140175.07*	CASING ELEVATION:
DATE STARTED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		GW	Asphalt and base rock. WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
24		CL	CLAY (CL) – dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32		GW	WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
40		CL	CLAY (CL) – olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
48			Bottom of boring at 45 feet bgs.
56			

WELL DIAGRAM



JOB NUMBER: *140175.07*

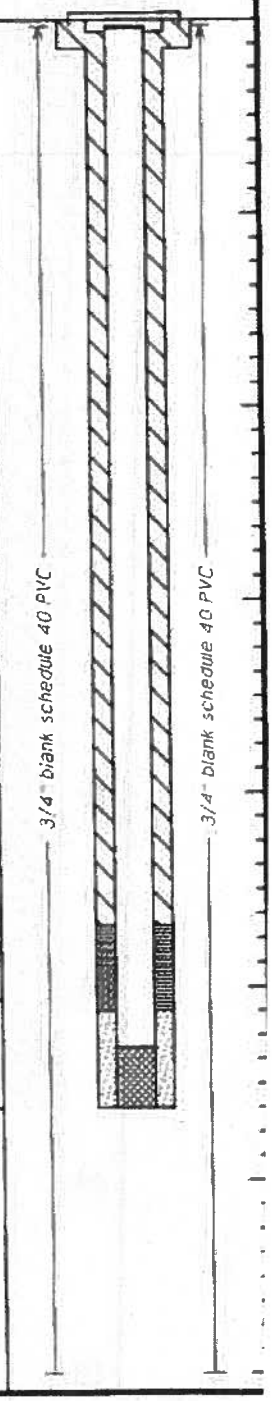
Gettler-Ryan, Inc.

Log of Boring SP-5

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO. : *140175.07*	CASING ELEVATION:
DATE STARTED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
0		GW-GC	Asphalt and base rock.
			WELL-GRADED GRAVEL WITH SAND AND CLAY (GW-GC) – dark grayish brown (10YR 4/2), dry, very dense; 60% fine to coarse gravel, 30% fine to coarse sand, 10% clay.
8			
16			
24		CL	CLAY (CL) – dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32		GW	WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
40		CL	CLAY (CL) – olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
48			Bottom of boring at 45 feet bgs.
56			

WELL DIAGRAM



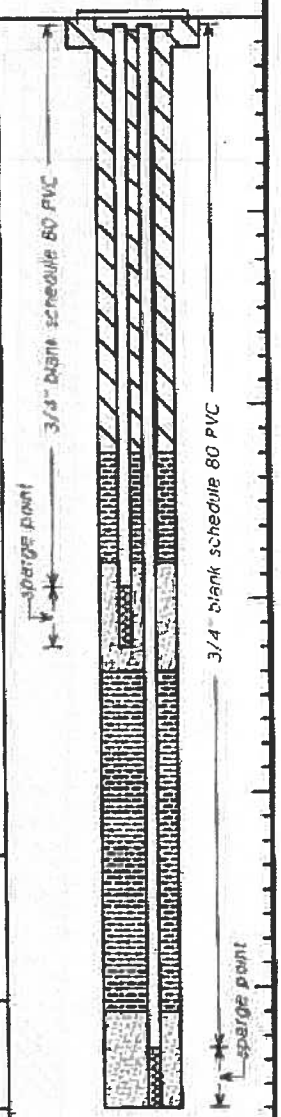
Gettler-Ryan, Inc.

Log of Boring SP-5/SP-5S

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.07*	CASING ELEVATION:
DATE STARTED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		GW-GC	Asphalt and base rock. WELL-GRADED GRAVEL WITH SAND AND CLAY (GW-GC) - dark grayish brown (10YR 4/2), dry, very dense; 60% fine to coarse gravel, 30% fine to coarse sand, 10% clay.
24		CL	CLAY (CL) - dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32		GW	WELL-GRADED GRAVEL WITH SAND (GW) - dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
40		CL	CLAY (CL) - olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
48			Bottom of boring at 45 feet bgs.

WELL DIAGRAM



JOB NUMBER: *140175.07*

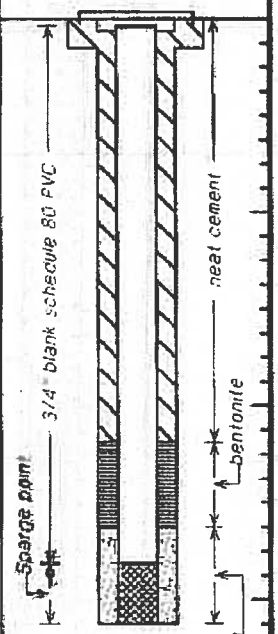
Gettler-Ryan, Inc.

Log of Boring SP-6S

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.07*	CASING ELEVATION:
DATE STARTED: *12/07/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/07/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *25 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
0		GW	Asphalt and base rock.
			WELL-GRADED GRAVEL WITH SAND (GW) - dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
8			
16		SW	WELL-GRADED SAND WITH GRAVEL (SW) - brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
24			Bottom of boring at 25 feet bgs.
32			
40			
48			
56			

WELL DIAGRAM



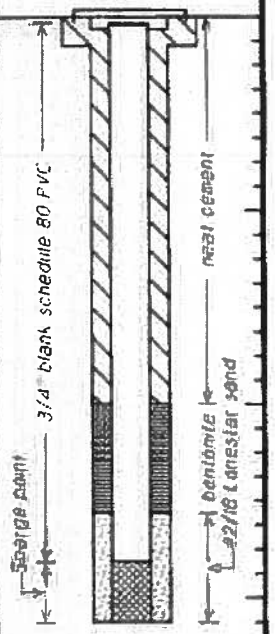
Gettler-Ryan, Inc.

Log of Boring SP-7S

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO.: *140175.07*	CASING ELEVATION:
DATE STARTED: *12/06/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/06/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *25 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		GW	Asphalt and base rock. WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
16		SW	WELL-GRADED SAND WITH GRAVEL (SW) – brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
24			Bottom of boring at 25 feet bgs.

WELL DIAGRAM



JOB NUMBER: *140175.07*

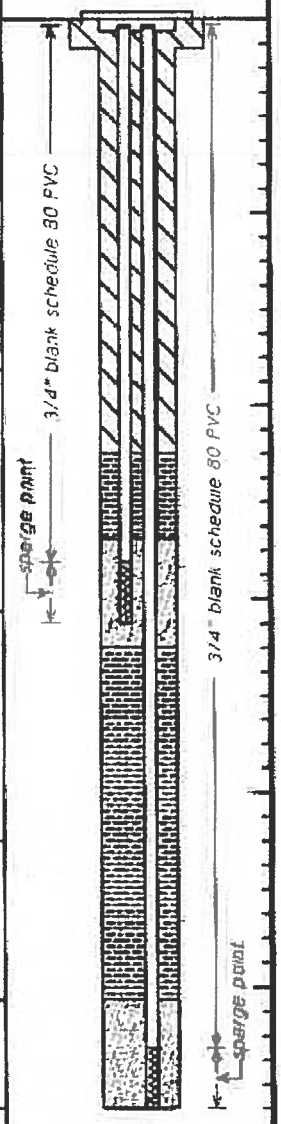
Gettler-Ryan, Inc.

Log of Boring SP-8/SP-8S

PROJECT: *Tosco (76) Service Station No. 4186*	LOCATION: *1771 First Street, Livermore, CA*
GR PROJECT NO. : *140175.07*	CASING ELEVATION:
DATE STARTED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *12/05/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *45 feet*
DRILLING COMPANY: *Cascade Drilling*	GEOLOGIST: *Jed Douglas*

DEPTH (feet)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
0		GW	**Asphalt and base rock.** WELL-GRADED GRAVEL WITH SAND (GW) – dark brown (10YR 3/2), dry, very dense; 50% fine to coarse subangular to rounded gravel to 3 cm, 50% fine to coarse sand.
16		SW	WELL-GRADED SAND WITH GRAVEL (SW) – brown (10YR 4/3), dry, very dense; 70% fine to coarse sand, 30% fine gravel.
24		CL	CLAY (CL) – dark yellowish brown (10YR 4/4), moist hard, low plasticity; 80% clay, 20% fine to coarse sand.
32		SW-SC	WELL-GRADED SAND WITH GRAVEL AND CLAY (SW-SC) – brown (10YR 4/3), saturated, very dense; 50% fine to coarse sand, 40% fine to coarse gravel, 10% clay.
40		CL	CLAY (CL) – olive brown (2.5Y 4/4), moist, hard, medium plasticity; 80% clay, 20% fine sand.
48			Bottom of boring at 45 feet bgs.
56			

WELL DIAGRAM



Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-8	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/4/08, 9/8/08	Location Map	
Drilling Method:	Hollow Stem Auger/Rhino	Hole Diameter:	8 inches		
Sampling Method:	Split Spoon	Hole Depth:	50 feet	Please see site map	
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	45 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box									Concrete
	neat cement				Air Knife	1.0				
						2.0			GM	**Silty Sandy Gravel:** well graded, no odor
	2" PVC casing					3.0				
						4.0				
						5.0			GM	**Silty Sandy Gravel:** dark brown, well graded,
			DRY	0		6.0				30-40% silty sand matrix, loose, no odor, dry
						7.0				
						8.0				
						9.0				
						10.0				
			DRY	0.3	Rhino Rig used- no blow counts collected	11.0				
						12.0				
						13.0				
						14.0				
						15.0				
			DRY	0		16.0				
						17.0				
						18.0			CL	**Gravelly Silty Clay:** brown, medium plasticity,
						19.0				>50% silty clay matrix, soft to firm,
						20.0				(as per driller from augers)
						20.0			CL	**Silty Clay:** brown, medium plasticity, firm, moderate
			WET	146		21.0				hydrocarbon odor, wet
						22.0				
						23.0				
						24.0				
						25.0				
			WET	0.4					CL	**Gravelly Clay:** brown, well graded, >50% clay, no odor

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-8	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/4/08, 9/8/08	Location Map	
Drilling Method:	Hollow Stem Auger/Rhino	Hole Diameter:	8 inches	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	50 feet		
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	45 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement		WET		Rhino Rig used- no blow counts collected	26.0			CL	**Gravelly Clay:** brown, well graded, >50% clay, no odor wet
	2" PVC casing					27.0				
						28.0				
						29.0				
						30.0			CL	**Silty Clay:** orange-brown, high plasticity, soft, no odor, wet
	bentonite		WET	0.3		31.0				
						32.0				
	#3 sand					33.0				
						34.0				
	well screen		WET	0.4		35.0			GC	**Sandy Clayey Gravel:** orange-brown mottled, low plasticity, soft, no odor, wet
						36.0				
						37.0				As above: grey mottled with moderate to strong hydrocarbon odor
			WET	1338*		38.0				
				165		39.0				* soil sample collected for laboratory analysis
			MOIST	358		40.0			CL	**Silty Clay:** orange-brown, medium-high plasticity, <20% silt, strong hydrocarbon odor, moist
						41.0				
						42.0				
			MOIST	20		43.0				As above: with no odor
			MOIST	57		44.0			CL	**Sandy Clay:** medium brown, medium-high plasticity, <30% sand, well graded, soft, no odor, moist
	# 3 sand		MOIST	56		45.0				
	bentonite		MOIST	238		46.0			CL	**Silty Clay:** grey-brown to orange-brown, medium plasticity, soft, no odor, moist
			MOIST	70		47.0				
			MOIST			48.0				
			MOIST	15		49.0				
						50.0				Boring terminated at 50 feet below ground surface.

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-9	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/4/08, 9/10/08	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	45 feet		
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	45 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box					1.0			Asphalt
	neat cement				Air Knife	2.0		GM	**Silty Sandy Gravel:** well graded, no odor
	2" PVC casing					3.0			
						4.0			
						5.0		GM	**Sandy Silty Gravel:** medium to dark brown,
			DRY	0.7	9 54 5	6.0			~30% sandy silt, well graded, no odor, dry
						7.0			
						8.0			
			DRY	0.7	9 18 10	9.0			as above: medium dense
						10.0			
						11.0			
						12.0			
						13.0			
			DRY	0.3	18 25 26	14.0		GM	**Silty Sandy Gravel:** brown, 30-35% silty sand, well graded, no odor, dry
						15.0			
						16.0			
						17.0			
						18.0			
			DRY	0.2	12 50 5	19.0		GC	**Sandy Clayey Gravel:** brown, low plasticity, 20-30% sandy clay, no odor, dry
						20.0			
						21.0			
						22.0			as above: with less gravel (50-60%) (as per driller from augers)
						23.0			
			MOIST	0	8 10 12	24.0		CL	**Silty Clay:** orange-brown, medium plasticity, very stiff, no odor, moist
						25.0			

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: D-9	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/4/08, 9/10/08	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches		
Sampling Method:	Split Spoon	Hole Depth:	45 feet	Please see site map	
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	45 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-	▼ = Static Groundwater	
Elevation		Latitude		Longitude	

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement		MOIST			26.0			CL	**Silty Clay:** orange-brown, medium plasticity, stiff to hard, no odor, moist
	2" PVC casing					27.0				
						28.0				
					6				CL	**Clay:** orange-brown, medium-high plasticity, stiff to very stiff, no odor, moist
			MOIST	0	8	29.0				
					9	30.0				
	bentonite					31.0				
						32.0			GM	**Gravel** (as per driller from augers)
	#3 sand		MOIST	0		33.0				
					18				CL	**Gravelly Sandy Clay:** orange-brown mottled, medium plasticity, 50-60% sandy clay, soft, no odor, moist
					25	34.0				
					34					
	well screen		WET	1	8	35.0				as above: with 50% sandy clay, no odor, wet
					18	36.0				
					25					
					36	37.0			GM	**Sandy Silty Gravel:** green-grey mottled with black staining, hydrocarbon odor, wet
			WET	60	15					
					21	38.0				
					34					
					21	39.0			GC	**Sandy Clayey Gravel:** black-brown mottled in color, low plasticity, dense, strong hydrocarbon odor, wet
			WET	122	24					
					30	40.0				
					9					
			MOIST	647	12	41.0				
					5					
					4	42.0			CL	**Clay:** orange brown, medium-high plasticity, medium stiff, strong hydrocarbon odor, moist
			MOIST	89	2					
					3	43.0			CL	**Silty Clay:** orange brown, medium-high plasticity, medium stiff, hydrocarbon odor, moist
					5					
					1	44.0				as above: becoming wet
		▼	WET	75	4					
					4	45.0				Boring terminated at 45 feet below ground surface.

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA
Driller:	Gregg Drilling	Date Drilled:	9/5/08, 9/11/08
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches
Sampling Method:	Split Spoon	Hole Depth:	48.5 feet
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches
Slot Size:	0.020	Well Depth:	47 feet
Gravel Pack:	#3 Sand	Casing Stickup:	-
Elevation		Latitude	Longitude

Well No: U-10
Page 1 of 2

Location Map

Please see site map

Well Completion: Backfill	Well Completion: Casing	Well Completion: Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
			well box				Air Knife					Asphalt
			neat cement					1.0			GM	**Gravel with Cobbles and Silt:** well graded, no odor
								2.0				
								3.0				
			2" PVC casing					4.0				
								5.0			GM	**Silty Sandy Gravel:** brown, well graded,
					DRY	13	18 21 34	6.0				20-30% silty sand matrix, dense, no odor, dry
								7.0				
								8.0				
					DRY	1	50/5	9.0			GC	**Sandy Clayey Gravel:** brown, well graded, medium-low plasticity, 30-40% sandy clay, very dense, no odor, dry
								10.0				
								11.0				
								12.0				
								13.0				
							27	14.0			GC	**Clayey Sandy Gravel:** brown-orange mottled,
					DRY	2	30 40	15.0				20-30% clayey sand, very dense, no odor, dry
								16.0				
								17.0				
								18.0				
							15	19.0				
					MOIST	1	20 4	20.0			CL	**Silty Clay:** orange-brown, high plasticity, hard, no odor, moist
								21.0				
								22.0				
								23.0				
							16	24.0				as above: with medium plasticity, hard
					MOIST	1	15 25	25.0				

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-10	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/5/08, 9/11/08	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	48.5 feet		
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	47 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement		MOIST			26.0			CL	**Silty Clay:** orange-brown, medium plasticity, hard, no odor moist
						27.0				
						28.0				
	2" PVC casing				6	29.0				as above: with high plasticity, stiff to very stiff
			MOIST	1	7					
					9	30.0				
						31.0				
						32.0				
						33.0				
	bentonite								CL	**Gravelly Clay:** orange-brown, high plasticity, <20% gravel, stiff to very stiff, no odor, moist
			MOIST	1	5	34.0				
					6					
	#3 sand		WET	2	14	35.0				as above: with sandy clay (<20%) and mottling
					10					
					12	36.0				
					19					
	well screen		WET	4	28	37.0				as above: with black staining and slight hydrocarbon odor, 30-40% sandy clay
					8					
			MOIST	11	27	38.0				
					35					
					18	39.0			CL	**Clay:** orange-brown with grey mottling, medium plasticity, hard, no odor
					21					
			WET	2	23	40.0				
					4				GC	**Silty Clayey Gravel:** orange-brown with ~20% silty clay, black staining, medium plasticity, no odor, wet
					14	41.0				
					28					
			WET	1	39	42.0				
					11					
					14	43.0				
					53					
				3	10	44.0				
					50/5"					as above: turning grey in color with orange mottling and staining, slight hydrocarbon odor
			WET	10	12	45.0				
					20					
			WET		25	46.0				
					30					
	bentonite		MOIST	62	8	47.0			CL	**Sandy Clay:** orange-brown mottled with grey staining, high plasticity, <10% sand, stiff to very stiff, moderate hydrocarbon odor, moist
					7	48.0				
					7					Boring terminated at 48.5 feet below ground surface.

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-11	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/3/08, 9/12/08	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	45 feet		
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	45 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box									Asphalt
	neat cement				Air Knife	1.0				
	2" PVC casing					2.0			GM	**Gravel with Cobbles and Silty Sand:** well graded, no odor
						3.0				
						4.0				
						5.0				
					4				SW	**Gravelly Sand:** brown, 1/4 - 3/4" diameter gravel,
			MOIST	0	19	6.0				~75% well graded sand, loose to medium dense,
					19					no odor, moist
						7.0				
						8.0				
						9.0				
						10.0				
					11				GM	**Gravel with Silty Sand:** light brown-brown, 1/2 -1 1/4"
			MOIST	0	14	11.0				diameter gravel, 40% sandy silt, medium dense,
					14					no odor, moist
						12.0				
						13.0				
						14.0				
						15.0				
					23					as above: with 25-30% sandy silt, dense,
			MOIST	0	50/5"	16.0				1/4" - 1" diameter gravel, no odor, moist
					5					
						17.0				
						18.0				
						19.0				
						20.0				
					20					
			MOIST	0	24	21.0				
					29					
						22.0			CL	**Silty Clay:** light brown, medium-high plasticity, stiff,
										no odor, moist (as per driller from augers)
						23.0				
						24.0				
						25.0				**Gravelly Silty Clay:** light brown, medium plasticity
					7				CL	very stiff, 5% gravel, no odor, moist

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-11	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/3/08, 9/12/08	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	45 feet		
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	45 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	

Well Completion (Backfill / Casing / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement		MOIST	24	13	26.0			CL	**Gravelly Silty Clay:** light brown, medium plasticity, very stiff, 5% gravel, no odor, moist
	2" PVC casing				16	27.0				
						28.0				
						29.0				
						30.0				
					5				CL	**Silty Clay:** light brown, medium-high plasticity, stiff, no odor, moist
			MOIST	33	7	31.0				
	bentonite				9					
						32.0				
	#3 sand					33.0				
						34.0				
	well screen		WET	0	11	35.0			SP	**Gravelly Clayey Sand:** orange-brown to brown mottled, 50% clayey sand, 1/4 - 1/2" gravel, soft-medium stiff, no odor, wet
					16	36.0				
					17					
					4	37.0				
			WET	1.5	13				GC	**Sandy Clayey Gravel:** orange-brown to brown mottled, 30% sandy clay, 1/4 - 1" gravel, soft, slight hydrocarbon odor, wet
					35	38.0				
					36					
					14	39.0				
			MOIST	4.8	29					
					40	40.0				
			DRY	7.1	10				CL	**Sandy Clay:** brown, low-medium plasticity, hard, no odor
					11	41.0				
					15					
					8	42.0				
			MOIST	2.7	4					as above: becoming light brown with high plasticity, soft to medium stiff, moist
					4	43.0				
			MOIST	13.3	6					
					3	44.0				as above: with grey staining, medium-high plasticity, soft to medium stiff, moist
					4					
					4	45.0				
										Boring terminated at 45 feet below ground surface.

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-12	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/2, 9/22-26,10/7/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	75 feet	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	75 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion (Backfill / Steel Casing / Steel Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box				Water Knife					Asphalt
	neat cement					1.0				
	12" steel & 4" PVC casings					2.0			GC	**Gravel with Sand, Silt and Clay:** tight sand-clay, no odor
						3.0				
						4.0				
						5.0			GW	**Sandy Gravel:** well graded, no odor (Note: Mud Rotary does not allow for detailed lithology)
					Mud Rotary	6.0				
						7.0				
						8.0				
						9.0				
						10.0				
						11.0				
						12.0				
						13.0				
						14.0				
						15.0				
						16.0				
						17.0			GM	**Sandy Gravel:** smaller coarse grained sand, no odor with < 1 1/2" diameter cobbles, no odor (as per driller)
						18.0				
						19.0				
						20.0			SW	**Gravelly Sand:** no odor (as per driller)
						21.0				
						22.0				as above: with cobbles
						23.0			SP	**Sand:** green-grey, no odor
						24.0				
						25.0			GC	**Clayey Gravel:** orange-brown, no odor

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-12	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/2, 9/22-26,10/7/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	75 feet	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	75 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Steel Casing / Steel Backfill	neat cement 12" steel & 4" PVC casings				Mud Rotary	26.0			GC	**Clayey Gravel:** orange-brown, no odor
						27.0				
						28.0			CL	**Clay:** orange-brown, no odor
						29.0				
						30.0			CL	**Sandy Clay:** orange-brown, no odor
						31.0				
						32.0				
						33.0				
						34.0				
						35.0				
						36.0			GW	**Sandy Gravel:** well graded, no odor
						37.0				
						38.0				
						39.0				
						40.0				
						41.0				
						42.0				
						43.0				
						44.0				
						45.0				
						46.0				
						47.0				
						48.0			CL	**Gravelly Clay:** light brown, no odor
						49.0				
						50.0				

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-12
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 3 of 3
Driller:	Gregg Drilling	Date Drilled:	9/2, 9/22-26,10/7/08	Location Map
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches	
Sampling Method:	Split Spoon Auger	Hole Depth:	75 feet	Please see site map
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches	
Slot Size:	0.020	Well Depth:	75 feet	
Gravel Pack:	#3 Sand	Casing Stickup:	-	
Elevation		Latitude		Longitude

▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Steel Casing / Steel Backfill	neat cement; 12" steel & 4" PVC casings	▼			Mud	51.0			CL	**Gravelly Clay:** light brown, no odor
						52.0				
						53.0				
						54.0				
						55.0				
	4" PVC casings					56.0				
						57.0				**NO RECOVERY**
						58.0				
						59.0				
			MOIST TO WET	0	10	60.0			CL	**Sandy Clay:** light brown, ~10" diameter coarse sand, medium plasticity, firm, no odor, moist to wet
	bentonite					61.0				
			MOIST	0	14	62.0				as above: becoming light brown-orange mottled
	#3 sand		WET	0	16	63.0			CL	**Gravelly Clay:** light brown, ~30-40% gravel, medium-high plasticity, very stiff, no odor, wet
						64.0				
	well screen					65.0				**NO RECOVERY**
			WET	0	18	66.0			CL	**Gravelly Sandy Clay:** light brown, >30% sand, 5-10% gravel, high plasticity, soft, no odor, wet
						67.0				
						68.0				**NO RECOVERY**
						69.0				
						70.0				
						71.0				
			WET	0	10	72.0			GP	**Sandy Gravel:** light brown, <5% sand, loose, no odor, wet
						73.0				
						74.0				**Clayey Gravel:** light brown, <20% clay, soft, wet
			WET	0		75.0			GC	as above: with >40% clay, high plasticity, very firm to hard, no odor, wet

Mud Rotary - 5 - 55' bgs; Hollow Stem Auger 55-75' bgs

Boring terminated at 75 feet below ground surface (bgs).

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-13	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/2,26,29-30,10/8/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	72 feet	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	72 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Steel Casing / Steel Backfill	well box; neat cement; 12" steel & 4" PVC casings				Air Knife	1.0				Asphalt
						2.0			GM	**Gravel with Silty Sand and Cobbles:** no odor
						3.0				
						4.0				
						5.0			GW	**Sandy Gravel with Cobbles:** well graded, no odor
						6.0				(Note: Mud Rotary does not allow for detailed lithology)
						7.0				
						8.0				
						9.0				
						10.0				
						11.0				
						12.0				
						13.0				
						14.0				
						15.0				
						16.0				
						17.0				
						18.0				
						19.0				
					Mud Rotary	20.0			SW	**Gravelly Sand:** 1-1.5" diameter gravel, coarse grained sand
						21.0				well graded, no odor
						22.0				
						23.0				
						24.0				
						25.0			GC	**Clayey Gravel:** orange-brown, no odor

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-13	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/2,26,29-30,10/6/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	72 feet	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	72 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion (Backfill / Steel Casing / Steel / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement 12" steel & 4" PVC casings				Mud Rotary	26.0			GC	**Clayey Gravel:** orange-brown, no odor
						27.0				
						28.0			CL	**Clay:** orange-brown, high plasticity, no odor
						29.0				
						30.0			SC	**Sandy Clay:** orange-brown, no odor
						31.0				
						32.0				
						33.0				
						34.0				
						35.0				
						36.0				
						37.0			GP	**Sandy Gravel:** no odor
						38.0				
						39.0				
						40.0				
						41.0				
						42.0				
						43.0				
						44.0				
						45.0				
						46.0				
						47.0				
						48.0			CL	**Gravelly Clay:** no odor
						49.0				
						50.0				

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-13
Logged By:	Joyce Welsh	Location:	1771 First Street, Livemore, CA	Page 3 of 3
Driller:	Gregg Drilling	Date Drilled:	9/2,26,29-30,10/8/08	Location Map
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches	
Sampling Method:	Split Spoon Auger	Hole Depth:	72 feet	Please see site map
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches	
Slot Size:	0.020	Well Depth:	72 feet	
Gravel Pack:	#3 Sand	Casing Stickup:	-	
Elevation		Latitude		Longitude

▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Steel Casing / Steel Backfill	neat cement 12" steel & 4" PVC casings	▼			Mud	51.0			GC	**Gravelly Clay:** no odor
						52.0			GP	**Gravel:** no odor
						53.0				
	bentonite grout plug					54.0			GC	**Clayey Gravel:** no odor
						55.0			GP	**Gravel:** no odor
	4" PVC casing					56.0				
						57.0				
	bentonite					58.0				
						59.0				NOTE: Drilled to 59' with 10" bit; backfilled to 54' with bentonite quick grout
	#3 sand		WET	0		60.0			GC	**Clayey Gravel:** light brown, 20-30% clay, no odor
			WET	0		61.0			CL	**Gravelly Sandy Clay:** light brown-orange mottled, ~30% gravel, low plasticity, hard, no odor, wet
	well screen		WET	0		62.0				
			WET	0		63.0				
						64.0				
			WET	0		65.0				
			WET	0		66.0				
			WET	0		67.0			GP	**Sandy Gravel:** light brown, ~10% sand, no odor,wet
						68.0			GC	**Sandy Clayey Gravel:** light brown, no odor, wet
			WET	0		69.0			CL	**Sandy Clay:** light brown, 20-30% sand, medium stiff, no odor, wet
						70.0				
						71.0				as above: with <20% sand, low plasticity, soft
			WET	0		72.0				as above: with ~5-10% sand, stiff, no odor, wet

Mud Rotary - 5 - 59' bgs; Hollow Stem Auger 59-72' bgs

Boring terminated at 72 feet below ground surface (bgs).

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA
Driller:	Gregg Drilling	Date Drilled:	9/3,29,30,10/1, 9/08
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches
Sampling Method:	Split Spoon Auger	Hole Depth:	73 feet
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches
Slot Size:	0.020	Well Depth:	73 feet
Gravel Pack:	#3 Sand	Casing Stickup:	-

Well No: U-14

Location Map

Please see site map

Elevation | Latitude | Longitude

▼ = Static Groundwater

Well Completion (Backfill / Steel Casing / Steel Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box									Asphalt
	neat cement				Air Knife	1.0				
	12" steel & 4" PVC casings					2.0			GM	**Gravel with Silty Sand and Cobbles:** well graded, no odor
						3.0				
						4.0				
						5.0			GW	**Sandy Gravel with Cobbles: well graded,** no odor
						6.0				(Note: Mud Rotary does not allow for detailed lithology)
						7.0				
						8.0				
						9.0				
						10.0				
						11.0				
						12.0				
						13.0				
						14.0				
					Mud Rotary	15.0				as above: with fewer larger sized cobbles
						16.0				
						17.0				
						18.0				
						19.0				
						20.0			SW	**Gravelly Sand:** well graded, no odor
						21.0				
						22.0				
						23.0				
						24.0			GC	**Clayey Gravel:** orange-brown, no odor
						25.0			CL	**Sandy Clay:** orange-brown, no odor

Delta
Consultants

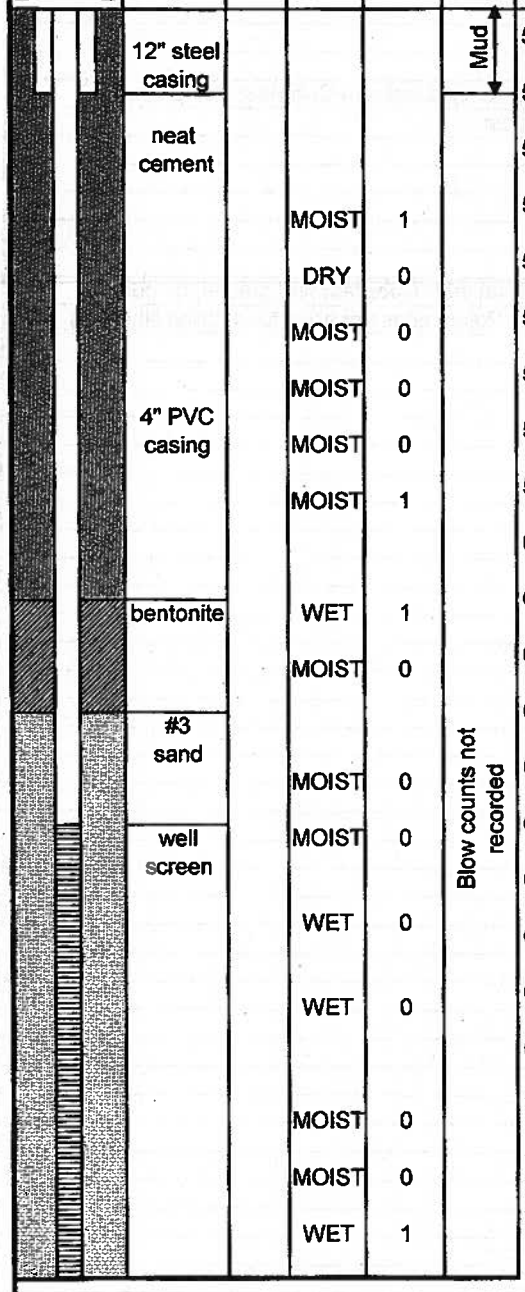
Project No:	C104186	Client:	ConocoPhillips	Well No: U-14	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/3,29,30,10/1, 9/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	73 feet	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	73 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-	▼ = Static Groundwater	
Elevation		Latitude		Longitude	

Well Completion (Backfill / Steel Casing / Steel / Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement 12" steel & 4" PVC casings				Mud Rotary	26.0			CL	**Sandy Clay:** orange-brown, no odor
						27.0				
						28.0				
						29.0				
						30.0				
						31.0				
						32.0				
						33.0				
						34.0				
						35.0				
						36.0				
						37.0				
						38.0				
						39.0				
						40.0			GM	**Sandy Gravel:** no odor
						41.0				
						42.0			GC	**Clayey Gravel:** no odor
						43.0				
						44.0				
						45.0			CL	**Gravelly Clay:** no odor
						46.0				
						47.0				
						48.0				
						49.0				
			▼			50.0			CL	**Sandy Clay:** no odor

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-14
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 3 of 3
Driller:	Gregg Drilling	Date Drilled:	9/3,29,30,10/1-3/08	Location Map
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches	
Sampling Method:	Split Spoon Auger	Hole Depth:	73 feet	Please see site map
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches	
Slot Size:	0.020	Well Depth:	73 feet	
Gravel Pack:	#3 Sand	Casing Stickup:	-	
Elevation		Latitude		Longitude

▼ = Static Groundwater



Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
		Mud	51.0		CL	**Sandy Clay:** no odor
			52.0			
			53.0			
MOIST	1		54.0		CL	**Gravelly Clay:** orange-brown-light brown mottled, ~20% gravel, high-medium plasticity, hard, no odor, moist
DRY	0		55.0		CL	**Gravelly Sandy Clay:** orange-brown-light brown, <20% gravel, ~20% sand, low-medium plasticity no odor
MOIST	0		56.0			
MOIST	0		57.0		CL	**Sandy Gravelly Clay:** light brown, <5% gravel, 20-40% sand, high plasticity, firm, no odor, moist
MOIST	0		58.0			as above: turning orange-brown-light brown in color, with <5% gravel and 15-20% sand
MOIST	1		59.0			
			60.0		GC	**Clayey Sandy Gravel:** orange-brown, 20-30% clay, low plasticity, soft, no odor, moist
WET	1		61.0			as above: turning orange-brown-light brown in color with 30-40% clay, 50-60% gravel, soft, wet
MOIST	0		62.0			
			63.0			
MOIST	0	Blow counts not recorded	64.0			as above: turning light brown in color
MOIST	0		65.0			
			66.0			as above: turning orange-brown-light brown in color
WET	0		67.0		CL	**Gravelly Clay:** light brown, ~ 40% gravel, medium-high plasticity, soft-firm, no odor, wet
WET	0		68.0			
			69.0		GM	**Sandy Gravel:** light brown, loose, no odor, wet
MOIST	0		70.0		CL	**Sandy Clay:** orange-brown, high plasticity, hard, no odor, moist
MOIST	0		71.0			
			72.0			
WET	1		73.0		CL	**Gravelly Clay:** orange-brown, 5-10% gravel, high plasticity firm to hard, no odor, wet

Mud Rotary - 5 - 50' bgs; Hollow Stem Auger 50-73' bgs

Boring terminated at 73 feet below ground surface (bgs).

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-15	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/4-5,23,10/2-3,6,10/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	71.5	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	71		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion (Backfill / Steel Casing / Steel Backfill)	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery / Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box				Air Knife	0			Asphalt
	neat cement					1.0			
	12" steel & 4" PVC casings					2.0		GM	**Gravel with Silty Sand and Cobbles:** well graded, no odor
						3.0			
						4.0			
						5.0		GW	**Sandy Gravel with Cobbles:** well graded, no odor
						6.0			(Note: Mud Rotary does not allow for detailed lithology)
						7.0			
						8.0			
						9.0			
						10.0			
						11.0			
						12.0			
						13.0			
						14.0			
						15.0			
						16.0			
						17.0			
						18.0			
						19.0			
						20.0			
						21.0			
						22.0			
					Mud Rotary	23.0		GC	**Clayey Gravel with Cobbles:** no odor
						24.0			
						25.0			

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-15	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/4-5,23,10/2-3,6,10/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	71.5	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	71		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Steel Casing / Steel Backfill	neat cement 12" steel & 4" PVC casings		▼		Mud Rotary	26.0			GC	**Clayey Gravel with Cobbles:** no odor
						27.0				
						28.0				
						29.0				
						30.0			CL	**Clay:** light brown, no odor
						31.0				
						32.0				
						33.0				
						34.0				
						35.0				
						36.0				
						37.0				
						38.0			GC	**Clayey Gravel:** no odor
						39.0				
						40.0			CL	**Gravelly Clay:** light brown, no odor
						41.0				
						42.0				
						43.0				
						44.0				
						45.0				
						46.0				
						47.0			GC	**Clayey Gravel:** no odor
						48.0				
						49.0				
						50.0				

Delta
Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No: U-15	
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 3 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/4-5,23,10/2-3,6,10/06	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches		
Sampling Method:	Split Spoon Auger	Hole Depth:	71.5	Please see site map	
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	71		
Gravel Pack:	#3 Sand	Casing Stickup:	-		
Elevation		Latitude		Longitude	▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Steel Casing / Steel / Backfill	neat cement; 12" steel casing				Mud	51.0		GC	**Gravelly Clay**: light brown
						52.0			
						53.0			
						54.0			
						55.0		CL	**Gravelly Sandy Clay:** orange-brown-light brown mottled, 10-15% gravel, medium plasticity, hard-firm, no odor
	4" PVC casing		DRY	5		56.0			
			DRY	5		57.0			
	bentonite					58.0		CL	**Sandy Clay:** light brown, <5% gravel, low plasticity, soft-firm, no odor, moist
			MOIST	2		59.0			
	#3 sand		MOIST	1		60.0		GC	**Sandy Clayey Gravel:** light brown, ~30% sandy clay, 1-2" diameter cobbles, soft, loose, no odor, moist
			WET			61.0			
	well screen		WET			62.0			
						63.0			**NO RECOVERY**
			WET	14	Blow counts not recorded	64.0		GC	**Sandy Clayey Gravel:** light brown, 20-30% sandy clay, loose, no odor, wet
			WET	7		65.0			
			WET	0		66.0			
			WET	8		67.0			as above: with 40% sandy clay
						68.0			
						69.0			**NO RECOVERY**
								CL	(as per driller: clay @ 69')
			WET	1		70.0		CL	**Sandy Clay:** light brown, 5-10% sand, high plasticity, soft, no odor, wet
						71.0			

Mud Rotary - 5 - 59' bgs; Hollow Stem Auger 59-71.5' bgs

Boring terminated at 71.5 feet below ground surface (bgs).

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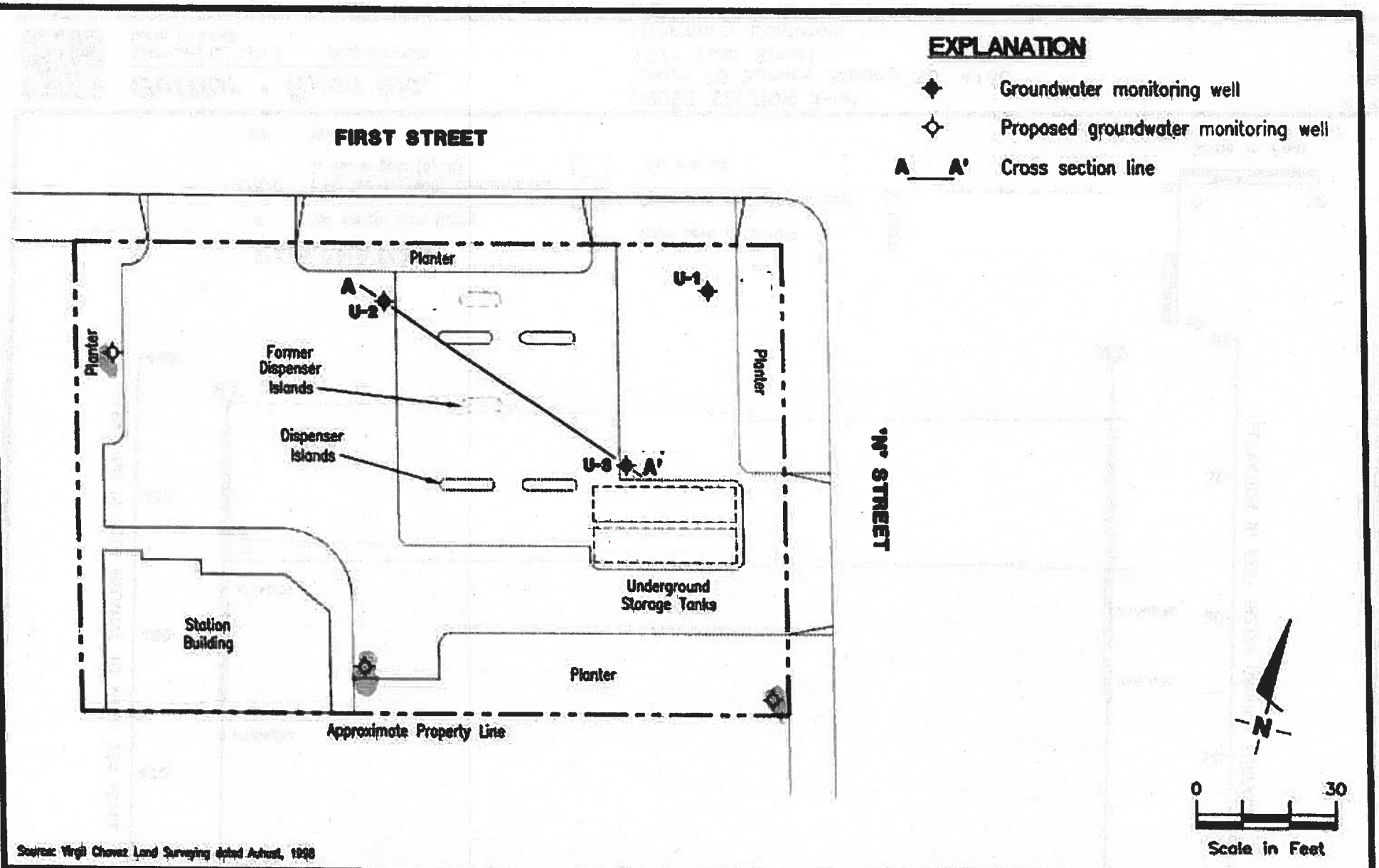
Appendix C

Geologic Cross-Sections

ARCADIS

Taken from Gettler-Ryan's Site Conceptual Model, dated May 12, 2000



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

SITE PLAN
Tosco 76 Service Station No. 4186
1771 First Street
Livermore, California

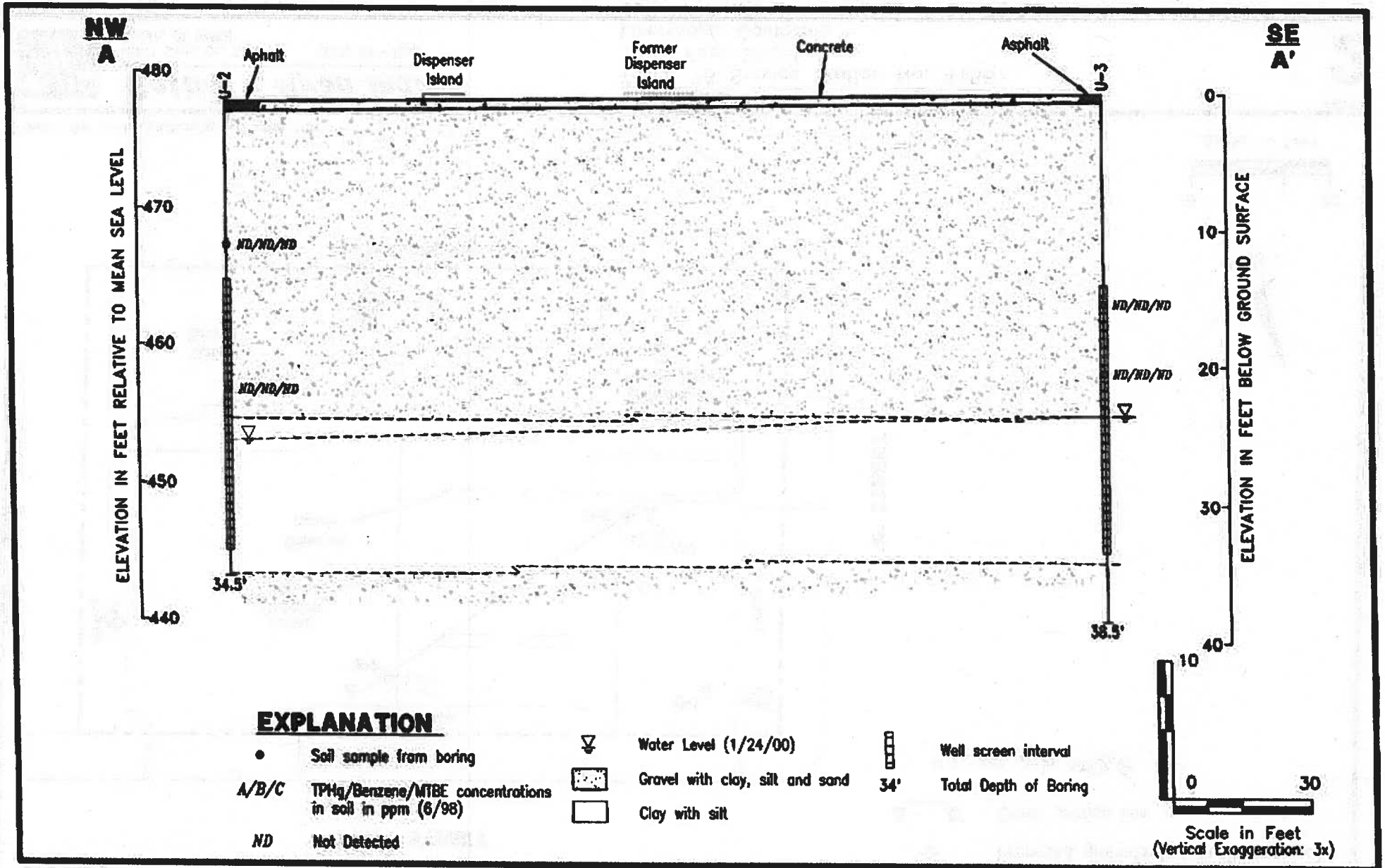
FIGURE
2

JOB NUMBER
140175.04

REVIEWED BY

DATE
4/00

REVISED DATE



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

CROSS SECTION A-A'
Tosco 76 Service Station No. 4186
1771 First Street
Livermore, California

FIGURE
3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
140175.04		4/00	

ARCADIS

Taken from Delta's Soil Boring Assessment, dated May 26, 2006

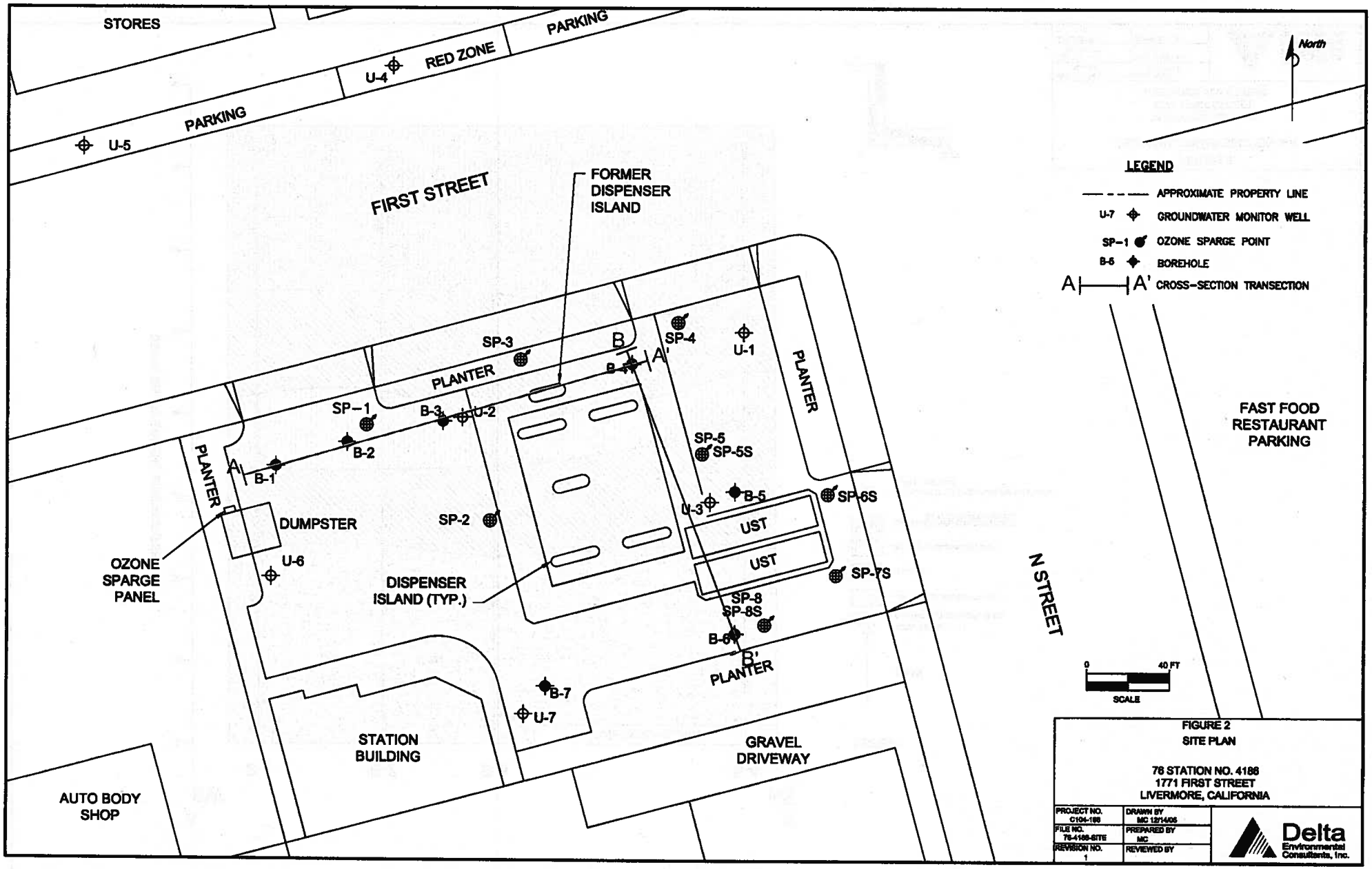
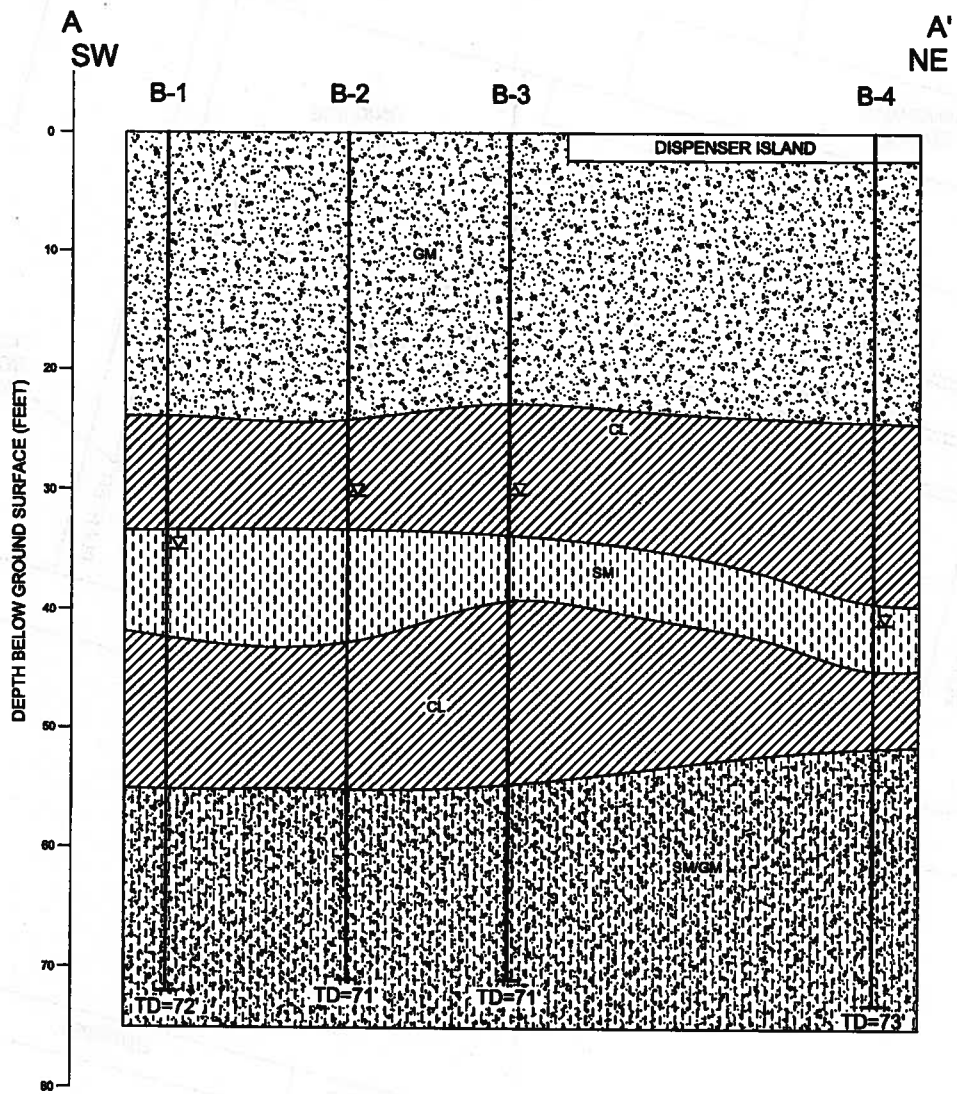


FIGURE 2
SITE PLAN

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C104-186	DRAWN BY MC 12/14/05
FILE NO. 76-4186-SITE	PREPARED BY MC
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

BORING

TD=75' TOTAL DEPTH

CONTACT BETWEEN SOIL UNITS

GM - GRAVEL WITH SANDY SILT

CL - CLAY

SM - SILTY SAND WITH GRAVEL

SM/GM - GRAVEL WITH SANDY SILT/ SILTY SAND WITH GRAVEL

INITIAL GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING

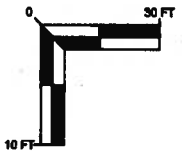
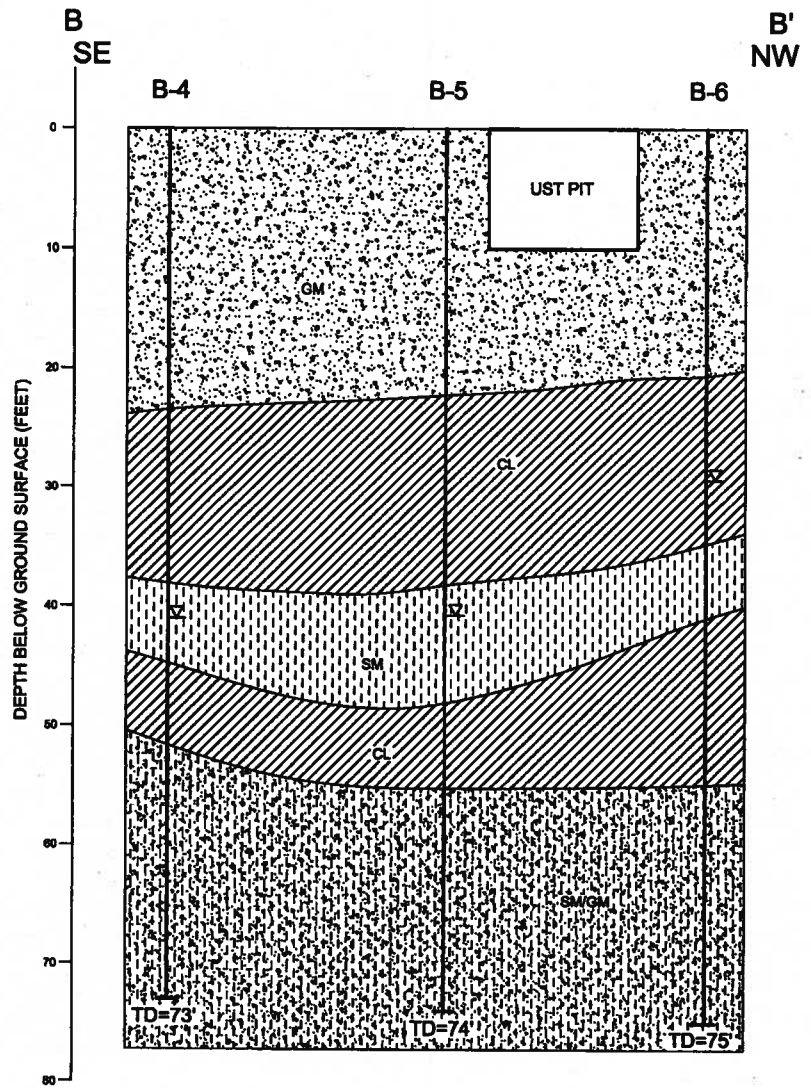


FIGURE 3
GEOLOGIC CROSS SECTION A-A'

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C104-186	DRAWN BY MC 5/22/08
FILE NO. 76-4186-XS	PREPARED BY BW
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

- SORING
- TD=75' TOTAL DEPTH
- CONTACT BETWEEN SOIL UNITS
- GM - GRAVEL WITH SANDY SILT
- CL - CLAY
- SM - SILTY SAND WITH GRAVEL
- SM/GM - GRAVEL WITH SANDY SILT/ SILTY SAND WITH GRAVEL
- INITIAL GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING

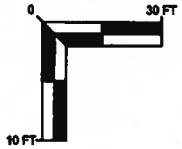


FIGURE 4
GEOLOGIC CROSS SECTION B-B'

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C104-186	DRAWN BY MC 5/22/06
FILE NO. 76-4186-XS	PREPARED BY SW
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

ARCADIS

Taken from Delta's Additional Subsurface Assessment and Oxygen Injection Test Report, dated April 26, 2007

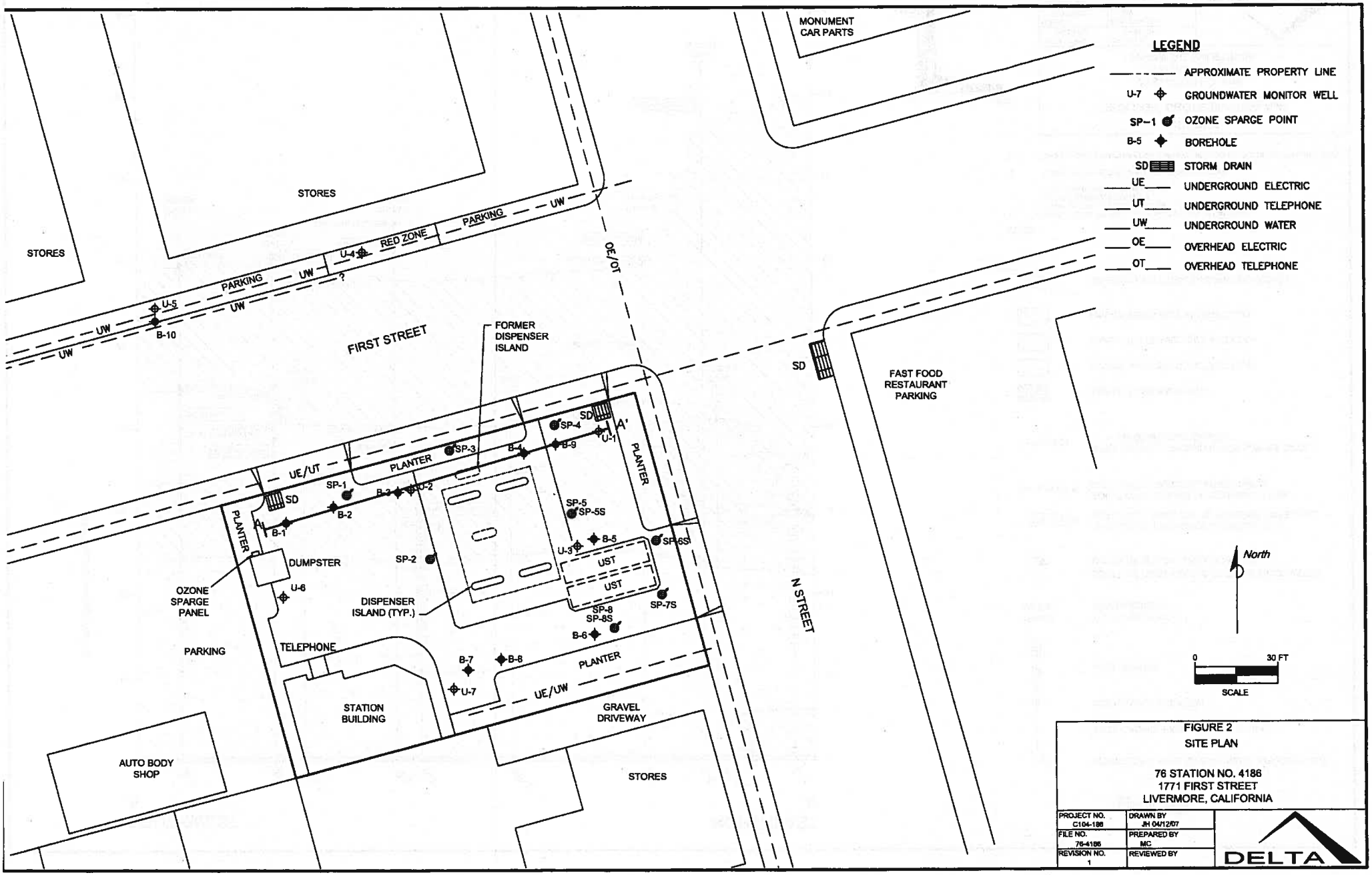
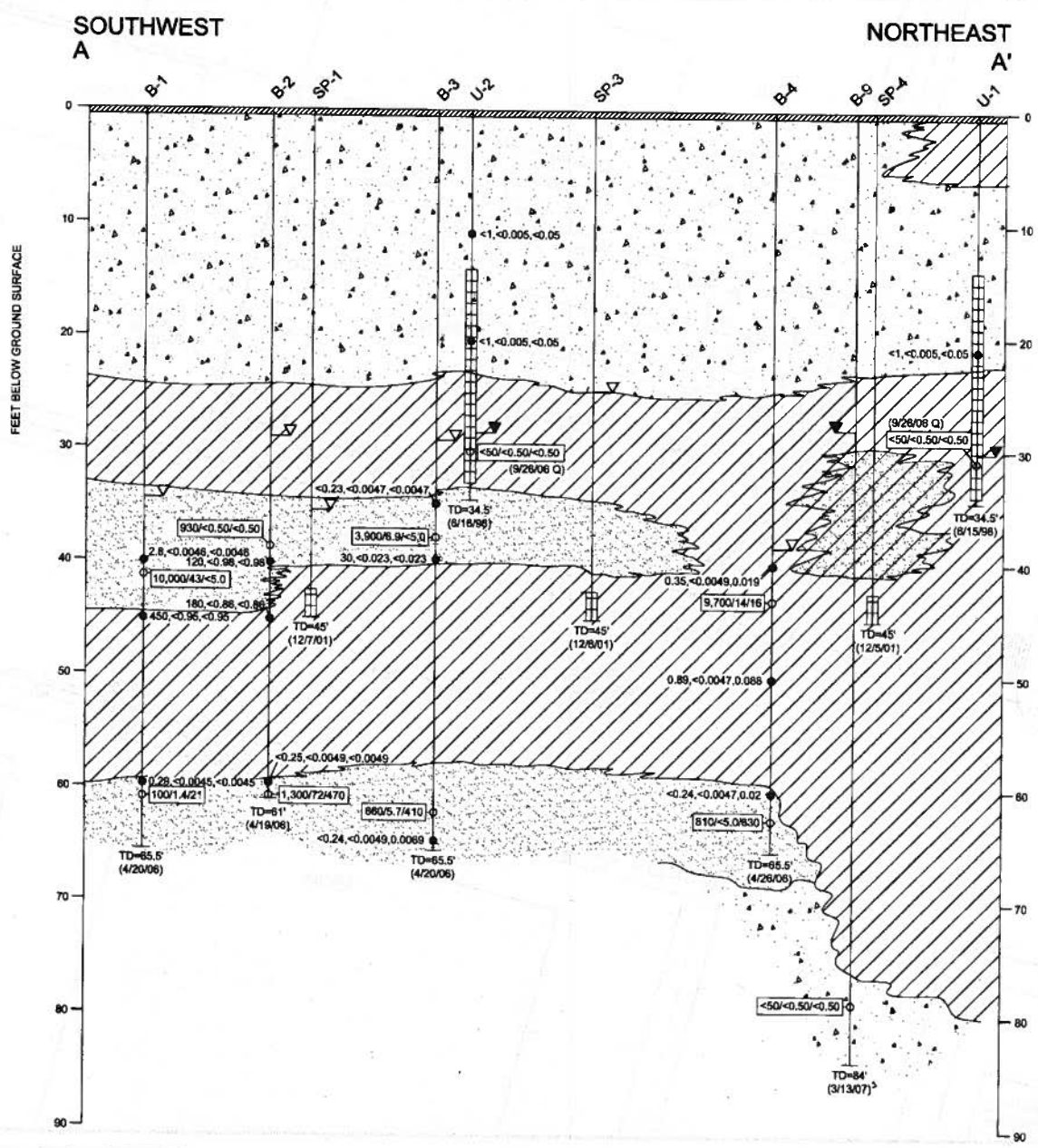


FIGURE 2
SITE PLAN

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C104-186	DRAWN BY JH 04/12/07
FILE NO. 76-4186	PREPARED BY MC
REVISION NO. 1	REVIEWED BY

DELTA



LEGEND

- U-1 — MONITORING WELL, BORING NAME, SPARGE POINT
- WELL CASING, EXPLORATORY BORING
- SOIL SAMPLE LOCATION
- WELL SCREEN
- TD=65.5' (4/20/06) — TD= TOTAL DEPTH (DRILLING DATE)
- DEPTH OF FIRST ENCOUNTERED GROUNDWATER
- DEPTH OF (STATIC) GROUNDWATER
- 100/1.4/21 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (ug/L)
- 120,<0.98,470 — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (mg/Kg)
- (7/13/98 Q) — MONITOR WELL GROUNDWATER SAMPLE DATE Q= QUARTERLY SAMPLE
- ASPHALT AND BASEROCK
- GRAVEL WITH SAND, SILT AND CLAY
- SAND WITH GRAVEL, SILT AND CLAY
- FINE-GRAINED (SILT AND/OR CLAY)
- APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE = METHYL TERT-BUTYL ETHER
ug/L = MICROGRAMS PER LITER
mg/Kg = MILLIGRAMS PER KILOGRAM

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE

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

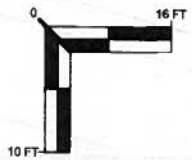


FIGURE 3
GEOLOGIC CROSS SECTION A-A'

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C104-186	DRAWN BY JH 04/12/07
FILE NO. 76-4186-XS	PREPARED BY BW
REVISION NO. 2	REVIEWED BY

DELTA

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Appendix D

Historical Groundwater Results from TRC

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

December 20, 2010
76 Station 4186

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
U-1														
12/20/2010	480.29	28.90	0	451.39	2.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-2														
12/20/2010	479.45	25.99	0	453.46	4.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-3														
12/20/2010	480.48	29.58	0	450.90	0.33	--	1100	5.1	ND<0.50	ND<0.50	ND<1.0	--	49	
U-4														
12/20/2010	478.95	34.57	0	444.38	-0.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	7.5	
U-5														
12/20/2010	478.52	34.67	0	443.85	-0.84	--	51	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	52	
U-6														
12/20/2010	480.40	34.49	0	445.91	-1.12	--	2000	29	2.9	94	10	--	12	
U-7														
12/20/2010	480.78	33.53	0	447.25	0.31	--	1600	2.9	0.83	7.9	ND<1.0	--	13	
U-8														
12/20/2010	480.43	29.57	0	450.86	3.34	--	2400	11	ND<1.0	22	12	--	ND<1.0	
U-9														
12/20/2010	479.39	32.35	0	447.04	1.29	--	1900	7.0	2.0	45	9.7	--	4.3	
U-10														
12/20/2010	480.51	34.32	0	446.19	0.10	--	2100	79	2.4	98	33	--	98	
U-11														
12/20/2010	480.34	32.66	0	447.68	-0.25	--	1700	ND<10	ND<10	ND<10	ND<20	--	1400	
U-12														
12/20/2010	480.75	34.02	0	446.73	-0.49	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-13														
12/20/2010	480.31	34.44	0	445.87	-0.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-14														
12/20/2010	479.38	33.74	0	445.64	-0.34	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-15														
12/20/2010	479.99	33.79	0	446.20	-0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

Table 1a
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
U-1													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	140	ND<50	3500	
U-2													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	850	
U-3													
12/20/2010	2800	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	130	ND<50	1700	
U-4													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	1200	
U-5													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	520	
U-6													
12/20/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	720	
U-7													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	460	
U-8													
12/20/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	430	
U-9													
12/20/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	460	
U-10													
12/20/2010	610	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	290	
U-11													
12/20/2010	3700	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	ND<100	ND<100	ND<50	ND<50	370	
U-12													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	370	
U-13													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	46	
U-14													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	250	
U-15													
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	55	

Table 1b
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
U-1													
12/20/2010	390	ND<10	ND<10	ND<10	ND<10	60	2.6	1400	ND<10	390	ND<50	ND<10	
U-2													
12/20/2010	250	ND<10	ND<10	ND<10	ND<10	43	2.7	230	ND<10	64	ND<50	ND<10	
U-3													
12/20/2010	360	ND<10	ND<10	ND<10	ND<10	44	ND<2.0	560	ND<10	170	ND<50	ND<10	
U-4													
12/20/2010	440	ND<10	ND<10	ND<10	ND<10	59	ND<2.0	240	ND<10	80	ND<50	ND<10	
U-5													
12/20/2010	390	ND<10	ND<10	ND<10	ND<10	60	ND<2.0	12	ND<10	ND<50	ND<50	ND<10	
U-6													
12/20/2010	510	ND<10	ND<10	ND<10	ND<10	72	ND<2.0	54	ND<10	ND<50	ND<50	ND<10	
U-7													
12/20/2010	440	ND<10	ND<10	ND<10	ND<10	42	ND<2.0	ND<10	ND<10	ND<50	ND<50	ND<10	
U-8													
12/20/2010	390	ND<10	ND<10	ND<10	ND<10	44	ND<2.0	13	ND<10	ND<50	ND<50	ND<10	
U-9													
12/20/2010	350	ND<10	ND<10	ND<10	ND<10	43	ND<2.0	53	ND<10	ND<50	ND<50	ND<10	
U-10													
12/20/2010	150	ND<10	ND<10	ND<10	ND<10	48	ND<2.0	83	ND<10	ND<50	ND<50	ND<10	
U-11													
12/20/2010	43	ND<10	ND<10	ND<10	ND<10	120	ND<2.0	44	ND<10	ND<50	ND<50	ND<10	
U-12													
12/20/2010	340	ND<10	ND<10	ND<10	ND<10	50	2.5	ND<10	ND<10	ND<50	ND<50	36	
U-13													
12/20/2010	42	ND<10	ND<10	ND<10	ND<10	8.0	26	28	28	ND<50	ND<50	10	
U-14													
12/20/2010	240	ND<10	ND<10	ND<10	ND<10	40	3.9	ND<10	ND<10	ND<50	ND<50	23	
U-15													
12/20/2010	38	ND<10	ND<10	ND<10	ND<10	6.5	34	39	36	ND<50	ND<50	ND<10	

Table 1c
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
U-1													
12/20/2010	860	ND<50	180	85	ND<10	1.1	ND<0.20	ND<50	ND<50	3700	ND<10	3.5	
U-2													
12/20/2010	140	ND<50	ND<50	64	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	630	ND<10	3.6	
U-3													
12/20/2010	300	ND<50	77	71	1900	0.52	ND<0.20	ND<50	ND<50	1500	ND<10	2.2	
U-4													
12/20/2010	120	ND<50	ND<50	85	210	0.36	ND<0.20	ND<50	ND<50	750	ND<10	3.3	
U-5													
12/20/2010	12	ND<50	ND<50	79	500	ND<0.20	ND<0.20	ND<50	ND<50	47	ND<10	2.7	
U-6													
12/20/2010	27	ND<50	ND<50	120	3500	ND<0.20	ND<0.20	ND<50	ND<50	160	ND<10	2.1	
U-7													
12/20/2010	ND<10	ND<50	ND<50	70	1900	ND<0.20	ND<0.20	ND<50	ND<50	17	ND<10	2.8	
U-8													
12/20/2010	ND<10	ND<50	ND<50	77	1900	ND<0.20	ND<0.20	ND<50	ND<50	28	ND<10	2.1	
U-9													
12/20/2010	27	ND<50	ND<50	83	2100	ND<0.20	ND<0.20	ND<50	ND<50	150	ND<10	2.8	
U-10													
12/20/2010	39	ND<50	ND<50	96	2100	0.28	ND<0.20	ND<50	ND<50	260	ND<10	8.4	
U-11													
12/20/2010	27	ND<50	ND<50	450	7000	ND<0.20	ND<0.20	ND<50	ND<50	180	43	3.8	
U-12													
12/20/2010	43	ND<50	ND<50	71	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	12	ND<10	2.8	
U-13													
12/20/2010	13	ND<50	ND<50	64	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	63	
U-14													
12/20/2010	31	ND<50	ND<50	47	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	4.8	
U-15													
12/20/2010	ND<10	ND<50	ND<50	67	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	15	12	72	

Table 1d
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
U-1													
12/20/2010	ND<100	ND<100	ND<10	ND<10	55	ND<100	ND<100	570	ND<10	ND<10	1300	42	
U-2													
12/20/2010	ND<100	ND<100	ND<10	ND<10	56	ND<100	ND<100	110	ND<10	ND<10	260	17	
U-3													
12/20/2010	ND<100	ND<100	ND<10	ND<10	32	ND<100	ND<100	230	ND<10	ND<10	470	6.9	
U-4													
12/20/2010	ND<100	ND<100	ND<10	ND<10	33	ND<100	ND<100	94	ND<10	ND<10	190	31	
U-5													
12/20/2010	ND<100	ND<100	ND<10	ND<10	38	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	67	
U-6													
12/20/2010	ND<100	ND<100	ND<10	ND<10	93	ND<100	ND<100	22	ND<10	ND<10	57	190	
U-7													
12/20/2010	ND<100	ND<100	ND<10	ND<10	64	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	87	
U-8													
12/20/2010	ND<100	ND<100	ND<10	ND<10	47	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	50	
U-9													
12/20/2010	ND<100	ND<100	ND<10	ND<10	54	ND<100	ND<100	22	ND<10	ND<10	55	64	
U-10													
12/20/2010	ND<100	ND<100	ND<10	ND<10	55	ND<100	ND<100	31	ND<10	ND<10	85	34	
U-11													
12/20/2010	ND<100	ND<100	ND<10	ND<10	59	ND<100	ND<100	27	ND<10	ND<10	64	55	
U-12													
12/20/2010	ND<100	ND<100	ND<10	ND<10	51	ND<100	ND<100	ND<10	ND<10	160	170	87	
U-13													
12/20/2010	ND<100	ND<100	ND<10	ND<10	100	ND<100	ND<100	ND<10	ND<10	14	ND<50	81	
U-14													
12/20/2010	ND<100	ND<100	ND<10	ND<10	36	ND<100	ND<100	ND<10	ND<10	59	84	56	
U-15													
12/20/2010	ND<100	ND<100	ND<10	ND<10	100	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	82	

Table 1e
ADDITIONAL CURRENT ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Post-purge ORP ()	Comments
U-1										
12/20/2010	0.098	19	37	610	937.4	6.93	20.3	1.18	227	
U-2										
12/20/2010	0.099	16	47	500	878.7	6.89	18.9	4.44	246	
U-3										
12/20/2010	0.11	0.71	9.3	460	758.2	6.58	20.0	1.29	-63	
U-4										
12/20/2010	0.12	7.5	28	570	945.4	7.43	18.8	3.30	253	
U-5										
12/20/2010	0.14	4.5	36	600	933.6	7.47	17.8	0.62	240	
U-6										
12/20/2010	0.10	1.5	32	940	1580	6.50	17.3	0.90	9	
U-7										
12/20/2010	0.074	17	22	570	1040	8.05	17.5	0.84	40	
U-8										
12/20/2010	0.13	1.1	24	520	1078	7.01	18.9	0.96	-56	
U-9										
12/20/2010	0.12	ND<0.44	17	570	984.9	7.49	17.8	0.55	-41	
U-10										
12/20/2010	0.18	ND<0.44	4.7	600	1066	7.06	18.1	0.99	-92	
U-11										
12/20/2010	0.22	2.7	1500	2800	2203	6.69	18.0	0.82	-33	
U-12										
12/20/2010	0.13	23	54	600	962.8	7.28	19.5	3.22	104	
U-13										
12/20/2010	0.10	24	55	640	914.8	7.76	17.3	2.23	179	
U-14										
12/20/2010	0.094	23	38	420	874.8	7.78	18.3	2.33	236	
U-15										
12/20/2010	0.13	20	53	620	983.7	7.52	18.5	2.38	118	

Table 2
HISTORICT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

December 20, 2010
76 Station 4186

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
U-1															
7/13/1998	478.27	23.28	0	454.99	--	ND	--	ND	ND	ND	ND	ND	--	--	
10/7/1998	478.27	26.43	0	451.84	-3.15	ND	--	ND	ND	ND	ND	ND	--	--	
1/15/1999	478.27	30.42	0	447.85	-3.99	ND	--	ND	ND	ND	1.1	7.3	--	--	
4/14/1999	478.27	24.21	0	454.06	6.21	ND	--	ND	ND	ND	ND	160	--	--	
7/19/1999	478.27	27.10	0	451.17	-2.89	ND	--	ND	ND	ND	ND	92	--	--	
10/12/1999	478.27	29.40	0	448.87	-2.30	ND	--	ND	ND	ND	ND	37	--	--	
1/24/2000	478.27	27.90	0	450.37	1.50	ND	--	ND	ND	ND	ND	28	--	--	
4/10/2000	478.27	26.16	0	452.11	1.74	ND	--	ND	0.930	ND	ND	ND	--	--	
7/17/2000	478.27	28.04	0	450.23	-1.88	ND	--	ND	ND	ND	ND	160	--	--	
10/2/2000	478.27	28.41	0	449.86	-0.37	ND	--	ND	ND	ND	ND	120	--	--	
1/8/2001	478.27	28.68	0	449.59	-0.27	ND	--	ND	ND	ND	ND	103	--	--	
4/3/2001	478.27	25.74	0	452.53	2.94	ND	--	ND	ND	ND	ND	55.1	--	--	
7/2/2001	478.27	30.67	0	447.60	-4.93	ND	--	ND	ND	ND	ND	ND	--	--	
10/8/2001	478.27	33.13	0	445.14	-2.46	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	--	
1/3/2002	478.27	27.67	0	450.60	5.46	160	--	ND<0.50	0.51	ND<0.50	0.69	31	--	--	
4/5/2002	478.27	29.40	0	448.87	-1.73	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	60	--	--	
7/2/2002	478.27	31.17	0	447.10	-1.77	--	1100	ND<0.50	1.7	0.73	130	--	35	--	
10/1/2002	478.27	33.00	0	445.27	-1.83	--	120	ND<0.50	ND<0.50	ND<0.50	8.8	--	28	--	
12/30/2002	478.27	22.03	0	456.24	10.97	--	ND<50	ND<0.50	ND<0.50	ND<0.50	1.2	--	90	--	
5/2/2003	478.27	24.13	0	454.14	-2.10	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	50	--	
7/1/2003	478.27	25.35	0	452.92	-1.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	--	
10/3/2003	478.27	27.24	0	451.03	-1.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	--	
1/8/2004	478.27	22.67	0	455.60	4.57	--	54	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.5	--	
4/15/2004	478.27	25.33	0	452.94	-2.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
7/15/2004	478.27	26.47	0	451.80	-1.14	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/8/2004	478.27	31.17	0	447.10	-4.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
3/23/2005	478.27	22.47	0	455.80	8.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/28/2005	478.27	25.37	0	452.90	-2.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
9/23/2005	478.27	29.15	0	449.12	-3.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/30/2005	478.27	23.69	0	454.58	5.46	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
3/24/2006	478.27	22.54	0	455.73	1.15	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.6	--	
6/26/2006	478.27	24.99	0	453.28	-2.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
9/26/2006	478.27	30.19	0	448.08	-5.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
11/21/2006	478.27	28.27	0	450.00	1.92	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	

Table 2
HISTORICT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

December 20, 2010
76 Station 4186

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
3/26/2007	478.27	26.92	0	451.35	1.35	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
6/27/2007	478.27	30.78	0	447.49	-3.86	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
9/23/2007	478.27	33.17	0	445.10	-2.39	--	--	--	--	--	--	--	--	--	ıugh water to
12/20/2007	478.27	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	478.27	31.20	0	447.07	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/12/2008	478.27	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
9/3/2008	478.27	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/3/2008	480.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	480.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	480.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/15/2010	480.29	31.35	0	448.94	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/20/2010	480.29	28.90	0	451.39	2.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
U-2															
7/13/1998	477.44	23.52	0	453.92	--	1200	--	130	12	62	180	1100	--	--	
10/7/1998	477.44	25.31	0	452.13	-1.79	ND	--	ND	ND	ND	ND	160	--	--	
1/15/1999	477.44	30.22	0	447.22	-4.91	ND	--	ND	ND	ND	ND	280	--	--	
4/14/1999	477.44	24.50	0	452.94	5.72	ND	--	ND	ND	ND	ND	460	--	--	
7/19/1999	477.44	28.54	0	448.90	-4.04	ND	--	ND	ND	ND	ND	220	--	--	
10/12/1999	477.44	30.48	0	446.96	-1.94	ND	--	ND	ND	ND	ND	160	--	--	
1/24/2000	477.44	24.52	0	452.92	5.96	ND	--	ND	ND	ND	ND	150	--	--	
4/10/2000	477.44	23.68	0	453.76	0.84	ND	--	ND	ND	ND	ND	177	--	--	
7/17/2000	477.44	28.35	0	449.09	-4.67	ND	--	ND	ND	ND	ND	62.7	--	--	
10/2/2000	477.44	28.72	0	448.72	-0.37	ND	--	ND	ND	ND	ND	52	--	--	
1/8/2001	477.44	29.11	0	448.33	-0.39	ND	--	ND	ND	ND	ND	57.3	--	--	
4/3/2001	477.44	25.95	0	451.49	3.16	ND	--	ND	ND	ND	ND	30.2	--	--	
7/2/2001	477.44	29.01	0	448.43	-3.06	ND	--	ND	ND	ND	ND	16	--	--	
10/8/2001	477.44	30.94	0	446.50	-1.93	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	82	--	--	
1/3/2002	477.44	27.33	0	450.11	3.61	260	--	7.7	11	1.7	15	42	--	--	
4/5/2002	477.44	30.02	0	447.42	-2.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	25	--	--	
7/2/2002	477.44	31.23	0	446.21	-1.21	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
10/1/2002	477.44	32.00	0	445.44	-0.77	--	ND<50	ND<0.50	0.62	ND<0.50	ND<1.0	--	ND<2.0	--	
12/30/2002	477.44	22.32	0	455.12	9.68	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	--	
5/2/2003	477.44	25.92	0	451.52	-3.60	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	--	
7/1/2003	477.44	24.99	0	452.45	0.93	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	--	

Table 2
HISTORICT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

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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
10/3/2003	477.44	25.31	0	452.13	-0.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	--	
1/8/2004	477.44	21.94	0	455.50	3.37	--	ND<50	ND<0.50	ND<0.50	0.51	ND<1.0	--	ND<2.0	--	
4/15/2004	477.44	25.20	0	452.24	-3.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
7/15/2004	477.44	24.45	0	452.99	0.75	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/8/2004	477.44	29.89	0	447.55	-5.44	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
3/23/2005	477.44	22.00	0	455.44	7.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	1.1	--	ND<0.50	--	
6/28/2005	477.44	25.30	0	452.14	-3.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
9/23/2005	477.44	28.25	0	449.19	-2.95	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/30/2005	477.44	24.33	0	453.11	3.92	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
3/24/2006	477.44	22.34	0	455.10	1.99	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/26/2006	477.44	23.15	0	454.29	-0.81	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
9/26/2006	477.44	28.52	0	448.92	-5.37	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
11/21/2006	477.44	25.85	0	451.59	2.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
3/26/2007	477.44	25.62	0	451.82	0.23	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
6/27/2007	477.44	28.37	0	449.07	-2.75	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
9/23/2007	477.44	31.40	0	446.04	-3.03	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
12/20/2007	477.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	477.44	30.45	0	446.99	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/12/2008	477.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
9/3/2008	477.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/3/2008	479.45	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	479.45	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	479.45	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	479.45	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/15/2010	479.45	30.78	0	448.67	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/20/2010	479.45	25.99	0	453.46	4.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
U-3															
7/13/1998	478.46	23.82	0	454.64	--	70000	--	3100	5500	2700	16000	7500	--	--	
10/7/1998	478.46	25.64	0	452.82	-1.82	54000	--	5000	1100	3100	14000	6100	--	--	
1/15/1999	478.46	30.92	0	447.54	-5.28	41000	--	3100	ND	1800	3800	15000	--	--	
4/14/1999	478.46	24.48	0	453.98	6.44	33000	--	86	290	2200	7800	39000	--	--	
7/19/1999	478.46	28.46	0	450.00	-3.98	48000	--	3900	2500	3600	14000	12000	16000	--	
10/12/1999	478.46	30.39	0	448.07	-1.93	35000	--	4200	ND	2300	1800	22000	8300	--	
1/24/2000	478.46	23.43	0	455.03	6.96	13000	--	260	ND	770	3200	53000	42000	--	
4/10/2000	478.46	23.31	0	455.15	0.12	35200	--	1070	241	2820	8850	35600	40900	--	

Table 2
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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
7/17/2000	478.46	27.53	0	450.93	-4.22	29000	--	3570	525	3180	5660	22500	21000	--	
10/2/2000	478.46	28.19	0	450.27	-0.66	11000	--	2100	31	2000	780	25000	28000	--	
1/8/2001	478.46	29.85	0	448.61	-1.66	33600	--	3060	427	3040	4190	24700	30900	--	
4/3/2001	478.46	24.98	0	453.48	4.87	5390	--	660	10.8	304	356	15200	19300	--	
7/2/2001	478.46	31.35	0	447.11	-6.37	13000	--	1200	58	1300	930	25000	26000	--	
10/8/2001	478.46	32.69	0	445.77	-1.34	6100	--	500	ND<10	570	130	23000	22000	--	
1/3/2002	478.46	23.73	0	454.73	8.96	9900	--	700	130	24	1000	14000	12000	--	
4/5/2002	477.44	28.27	0	449.17	-5.56	9800	--	1100	180	220	1400	16000	30000	--	
7/2/2002	478.46	29.71	0	448.75	-0.42	--	ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	--	
10/1/2002	478.46	31.18	0	447.28	-1.47	--	ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	--	
12/30/2002	478.46	21.62	0	456.84	9.56	--	23000	330	170	870	4900	18000	18000	--	
5/2/2003	478.46	23.11	0	455.35	-1.49	--	19000	280	ND<50	880	1500	15000	15000	--	
7/1/2003	478.46	24.89	0	453.57	-1.78	--	19000	120	ND<100	180	880	22000	22000	--	
10/3/2003	478.46	26.59	0	451.87	-1.70	--	20000	170	ND<50	250	730	--	16000	--	
1/8/2004	478.46	21.92	0	456.54	4.67	--	17000	250	ND<100	770	1500	--	9700	--	
4/15/2004	478.46	23.59	0	454.87	-1.67	--	4600	ND<25	ND<25	36	100	--	3700	--	
7/15/2004	478.46	24.80	0	453.66	-1.21	--	2700	ND<25	ND<25	ND<25	ND<50	--	3400	--	
12/8/2004	478.46	29.13	0	449.33	-4.33	--	12000	ND<50	ND<50	250	140	--	13000	--	
3/23/2005	478.46	21.64	0	456.82	7.49	--	21000	94	ND<50	630	1200	--	6200	--	
6/28/2005	478.46	24.57	0	453.89	-2.93	--	6600	24	0.64	150	70	--	4700	--	
9/23/2005	478.46	27.64	0	450.82	-3.07	--	6000	31	ND<25	150	ND<50	--	8900	--	
12/30/2005	478.46	23.96	0	454.50	3.68	--	390	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	840	--	
3/24/2006	478.46	22.52	0	455.94	1.44	--	2700	28	ND<5.0	57	120	--	690	--	
6/26/2006	478.46	23.89	0	454.57	-1.37	--	2000	51	0.77	84	45	--	560	--	
9/26/2006	478.46	28.08	0	450.38	-4.19	--	1200	20	ND<2.5	5.2	2.8	--	170	--	
11/21/2006	478.46	27.23	0	451.23	0.85	--	1500	22	ND<5.0	5.8	ND<5.0	--	180	--	
3/26/2007	478.46	25.27	0	453.19	1.96	--	3900	65	0.61	50	160	--	95	--	
6/27/2007	478.46	27.51	0	450.95	-2.24	--	1400	29	ND<0.50	5.6	2.3	--	170	--	
9/23/2007	478.46	31.70	0	446.76	-4.19	--	1600	16	0.61	2.7	3.7	--	88	--	
12/20/2007	478.46	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	478.46	28.84	0	449.62	--	--	1400	17	ND<1.0	2.3	ND<2.0	--	150	--	
6/12/2008	478.46	31.23	0	447.23	-2.39	--	770	4.1	ND<1.0	ND<1.0	ND<2.0	--	27	--	
9/3/2008	478.46	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/3/2008	480.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry

Table 2
HISTORICT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

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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
6/11/2009	480.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	480.48	31.73	0	448.75	--	--	1100	4.2	ND<0.50	2.1	2.9	--	62	--	
6/15/2010	480.48	29.91	0	450.57	1.82	--	810	5.5	ND<1.0	ND<1.0	ND<2.0	--	48	--	
12/20/2010	480.48	29.58	0	450.90	0.33	--	1100	5.1	ND<0.50	ND<0.50	ND<1.0	--	49	--	
U-4															
4/3/2001	476.93	31.63	0	445.30	--	ND	--	ND	ND	ND	ND	37.8	38.2	--	
7/2/2001	476.93	37.96	0	438.97	-6.33	ND	--	ND	ND	ND	ND	ND	5.3	--	
10/8/2001	476.93	44.24	0	432.69	-6.28	--	--	--	--	--	--	--	--	--	ɔugh water to
1/3/2002	476.93	36.15	0	440.78	8.09	100	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	10	8.5	--	
4/5/2002	476.93	37.64	0	439.29	-1.49	ND<50	--	0.50	ND<0.50	ND<0.50	ND<0.50	4.1	--	--	
7/2/2002	476.93	36.85	0	440.08	0.79	--	67	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	12	--	
10/1/2002	476.93	38.54	0	438.39	-1.69	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	9.8	--	
12/30/2002	476.93	32.64	0	444.29	5.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	25	--	
5/2/2003	476.93	31.40	0	445.53	1.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.1	--	
7/1/2003	476.93	33.60	0	443.33	-2.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.1	--	
10/3/2003	476.93	37.63	0	439.30	-4.03	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	9.1	--	
1/8/2004	476.93	29.23	0	447.70	8.40	--	ND<50	0.55	ND<0.50	1.6	3.7	--	2.5	--	
4/15/2004	476.93	29.80	0	447.13	-0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.2	--	
7/15/2004	476.93	35.05	0	441.88	-5.25	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.1	--	
12/8/2004	476.93	35.10	0	441.83	-0.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.0	--	
3/23/2005	476.93	25.38	0	451.55	9.72	--	ND<50	ND<0.50	ND<0.50	1.3	1.2	--	0.65	--	
6/28/2005	476.93	28.67	0	448.26	-3.29	--	34J	ND<0.50	0.15J	ND<0.50	ND<1.0	--	0.23J	--	
9/23/2005	476.93	32.25	0	444.68	-3.58	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	11	--	
12/30/2005	476.93	31.02	0	445.91	1.23	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	17	--	
3/24/2006	476.93	26.51	0	450.42	4.51	--	ND<50	ND<0.50	ND<0.50	ND<0.50	4.4	--	21	--	
6/26/2006	476.93	27.98	0	448.95	-1.47	--	63	ND<0.50	ND<0.50	0.56	ND<1.0	--	11	--	
9/26/2006	476.93	33.72	0	443.21	-5.74	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	13	--	
11/21/2006	476.93	33.43	0	443.50	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
3/26/2007	476.93	30.52	0	446.41	2.91	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	--	
6/27/2007	476.93	38.20	0	438.73	-7.68	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.78	--	
9/23/2007	476.93	--	--	--	--	--	--	--	--	--	--	--	--	--	parked over
12/20/2007	476.93	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	476.93	34.18	0	442.75	--	--	71	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.9	--	
6/12/2008	476.93	39.50	0	437.43	-5.32	--	71	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	7.5	--	
9/3/2008	476.93	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry

Table 2
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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
12/3/2008	478.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	478.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	478.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	478.95	40.98	0	437.97	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.3	--	
6/15/2010	478.95	33.90	0	445.05	7.08	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/20/2010	478.95	34.57	0	444.38	-0.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	7.5	--	
U-5															
4/3/2001	476.51	31.75	0	444.76	--	ND	--	ND	0.728	ND	0.993	54.8	55.4	--	
7/2/2001	476.51	38.68	0	437.83	-6.93	ND	--	ND	ND	ND	ND	88	94	--	
10/8/2001	476.51	46.31	0	430.20	-7.63	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	37	54	--	
1/3/2002	476.51	36.55	0	439.96	9.76	ND<50	--	ND<0.50	0.59	ND<0.50	0.91	51	53	--	
4/5/2002	476.51	37.83	0	438.68	-1.28	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	37	--	--	
7/2/2002	476.51	36.92	0	439.59	0.91	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	43	--	
10/1/2002	476.51	--	--	--	--	--	--	--	--	--	--	--	--	--	‹ parked over
12/30/2002	476.51	--	--	--	--	--	--	--	--	--	--	--	--	--	parked over
5/2/2003	476.51	31.55	0	444.96	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	18	--	
7/1/2003	476.51	33.83	0	442.68	-2.28	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	46	--	
10/3/2003	476.51	37.72	0	438.79	-3.89	--	58	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	44	--	
1/8/2004	476.51	29.21	0	447.30	8.51	--	ND<50	ND<0.50	ND<0.50	1.1	2.7	--	17	--	
4/15/2004	476.51	30.05	0	446.46	-0.84	--	57	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	37	--	
7/15/2004	476.51	35.15	0	441.36	-5.10	--	60	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	--	
12/8/2004	476.51	35.33	0	441.18	-0.18	--	62	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	39	--	
3/23/2005	476.51	25.45	0	451.06	9.88	--	ND<50	ND<0.50	ND<0.50	0.51	ND<1.0	--	4.5	--	
6/28/2005	476.51	28.90	0	447.61	-3.45	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	40	--	
9/23/2005	476.51	33.01	0	443.50	-4.11	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	53	--	
12/30/2005	476.51	30.96	0	445.55	2.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	72	--	
3/24/2006	476.51	22.42	0	454.09	8.54	--	2400	13	ND<5.0	48	58	--	54	--	
6/26/2006	476.51	29.31	0	447.20	-6.89	--	72	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	82	--	
9/26/2006	476.51	34.35	0	442.16	-5.04	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	51	--	
11/21/2006	476.51	32.43	0	444.08	1.92	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	25	--	
3/26/2007	476.51	31.20	0	445.31	1.23	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	29	--	
6/27/2007	476.51	38.62	0	437.89	-7.42	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	30	--	
9/23/2007	476.51	--	--	--	--	--	--	--	--	--	--	--	--	--	parked over
12/20/2007	476.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	476.51	34.28	0	442.23	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	25	--	

Table 2
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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
6/12/2008	476.51	39.90	0	436.61	-5.62	--	55	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	28	--	
9/3/2008	476.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/3/2008	478.52	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	478.52	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	478.52	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	478.52	41.35	0	437.17	--	--	83	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	41	--	
6/15/2010	478.52	33.83	0	444.69	7.52	--	50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	76	--	
12/20/2010	478.52	34.67	0	443.85	-0.84	--	51	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	52	--	
U-6															
1/3/2002	478.38	33.99	0	444.39	--	5000	--	36	ND<25	260	450	ND<250	ND<10	--	
4/5/2002	478.38	36.18	0	442.20	-2.19	1300	--	16	ND<5.0	54	ND<5.0	ND<25	--	--	
7/2/2002	478.38	36.33	0	442.05	-0.15	--	1100	1.4	ND<0.50	16	ND<1.0	--	0.94	--	
10/1/2002	478.38	37.70	0	440.68	-1.37	--	2000	5.4	ND<0.50	62	ND<1.0	--	2.6	--	
12/30/2002	478.38	31.63	0	446.75	6.07	--	130	ND<0.50	ND<0.50	2.3	ND<1.0	--	ND<2.0	--	
5/2/2003	478.38	31.49	0	446.89	0.14	--	150	ND<0.50	ND<0.50	1.8	1.7	--	82	--	
7/1/2003	478.38	32.88	0	445.50	-1.39	--	190	1.8	ND<0.50	9.4	8.7	--	36	--	
10/3/2003	478.38	36.54	0	441.84	-3.66	--	ND<10000	140	ND<100	940	560	--	ND<400	--	
1/8/2004	478.38	30.45	0	447.93	6.09	--	3500	29	32	90	89	--	27	--	
4/15/2004	478.38	29.48	0	448.90	0.97	--	2400	19	ND<2.5	91	53	--	16	--	
7/15/2004	478.38	34.30	0	444.08	-4.82	--	8500	150	5.7	970	560	--	24	--	
12/8/2004	478.38	34.80	0	443.58	-0.50	--	2700	16	ND<2.5	28	ND<5.0	--	10	--	
3/23/2005	478.38	25.08	0	453.30	9.72	--	960	2.7	ND<0.50	9.6	4.8	--	2.5	--	
6/28/2005	478.38	28.75	0	449.63	-3.67	--	12000	120	4.9	930	780	--	21	--	
9/23/2005	478.38	32.38	0	446.00	-3.63	--	5200	78	ND<25	540	230	--	34	--	
12/30/2005	478.38	30.43	0	447.95	1.95	--	2400	15	0.67	99	12	--	3.5	--	
3/24/2006	478.38	25.94	0	452.44	4.49	--	4300	52	ND<5.0	440	160	--	11	--	
6/26/2006	478.38	28.07	0	450.31	-2.13	--	5300	59	ND<5.0	520	300	--	ND<5.0	--	
9/26/2006	478.38	33.31	0	445.07	-5.24	--	7400	78	ND<5.0	490	160	--	6.4	--	
11/21/2006	478.38	31.65	0	446.73	1.66	--	1500	5.5	ND<0.50	37	2.4	--	1.4	--	
3/26/2007	478.38	29.25	0	449.13	2.40	--	480	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.50	--	
6/27/2007	478.38	35.09	0	443.29	-5.84	--	110	1.2	ND<0.50	1.3	ND<0.50	--	0.86	--	
9/23/2007	478.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
12/20/2007	478.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	478.38	33.82	0	444.56	--	--	580	1.5	ND<0.50	3.2	ND<1.0	--	ND<0.50	--	
6/12/2008	478.38	38.16	0	440.22	-4.34	--	2100	11	0.79	27	2.3	--	1.1	--	

Table 2
HISTORICT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

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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
9/3/2008	478.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/3/2008	480.40	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.40	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	480.40	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	480.40	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/15/2010	480.40	33.37	0	447.03	--	--	1900	35	2.7	50	7.1	--	14	--	
12/20/2010	480.40	34.49	0	445.91	-1.12	--	2000	29	2.9	94	10	--	12	--	
U-7															
1/3/2002	478.74	32.43	0	446.31	--	3100	--	93	ND<10	35	73	140	130	--	
4/5/2002	478.74	34.06	0	444.68	-1.63	630	--	22	0.53	2.6	ND<0.50	45	--	--	
7/2/2002	478.74	35.28	0	443.46	-1.22	--	1100	21	ND<0.50	6.9	ND<1.0	--	60	--	
10/1/2002	478.74	37.70	0	441.04	-2.42	--	1700	11	ND<0.50	3.1	ND<1.0	--	25	--	
12/30/2002	478.74	31.93	0	446.81	5.77	--	4600	41	5.3	32	13	--	34	--	
5/2/2003	478.74	31.81	0	446.93	0.12	--	3000	17	2.7	14	5.1	--	42	--	
7/1/2003	478.74	33.47	0	445.27	-1.66	--	2300	11	0.53	8.0	1.5	--	35	--	
10/3/2003	478.74	35.84	0	442.90	-2.37	--	6500	30	ND<5.0	41	ND<10	--	53	--	
1/8/2004	478.74	30.35	0	448.39	5.49	--	1600	4.0	ND<1.0	4.2	8.7	--	56	--	
4/15/2004	478.74	29.03	0	449.71	1.32	--	3600	22	1.3	64	40	--	57	--	
7/15/2004	478.74	33.52	0	445.22	-4.49	--	4700	15	1.2	59	57	--	50	--	
12/8/2004	478.74	34.68	0	444.06	-1.16	--	5800	26	1.9	63	27	--	52	--	
3/23/2005	478.74	24.49	0	454.25	10.19	--	5600	18	1.3	42	14	--	39	--	
6/28/2005	478.74	28.83	0	449.91	-4.34	--	5400	16	1.1	35	10	--	45	--	
9/23/2005	478.74	32.35	0	446.39	-3.52	--	2400	13	1.3	31	6.9	--	46	--	
12/30/2005	478.74	30.18	0	448.56	2.17	--	2500	11	1.1	28	4.3	--	35	--	
3/24/2006	478.74	25.06	0	453.68	5.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	32	--	
6/26/2006	478.74	28.30	0	450.44	-3.24	--	2500	11	1.1	45	15	--	55	--	
9/26/2006	478.74	33.47	0	445.27	-5.17	--	2300	7.8	0.84	17	2.1	--	61	--	
11/21/2006	478.74	31.66	0	447.08	1.81	--	3000	15	1.1	26	2.2	--	69	--	
3/26/2007	478.74	29.82	0	448.92	1.84	--	2200	1.2	ND<0.50	ND<0.50	ND<0.50	--	70	--	
6/27/2007	478.74	36.59	0	442.15	-6.77	--	590	5.8	ND<0.50	3.3	0.94	--	100	--	
9/23/2007	478.74	44.05	0	434.69	-7.46	--	--	--	--	--	--	--	--	--	ıugh water to
12/20/2007	478.74	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry well
3/17/2008	478.74	33.83	0	444.91	--	--	1200	1.9	ND<0.50	0.82	ND<1.0	--	27	--	
6/12/2008	478.74	38.56	0	440.18	-4.73	--	1200	1.9	ND<0.50	1.1	ND<1.0	--	40	--	
9/3/2008	478.74	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry

Table 2
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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
12/3/2008	480.78	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.78	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	480.78	38.80	0	441.98	--	--	1100	2.4	0.80	3.2	ND<1.0	--	8.2	--	
12/9/2009	480.78	37.08	0	443.70	1.72	--	1200	2.8	0.72	5.3	1.5	--	8.1	--	
6/15/2010	480.78	33.84	0	446.94	3.24	--	1700	4.3	1.7	24	1.2	--	26	--	
12/20/2010	480.78	33.53	0	447.25	0.31	--	1600	2.9	0.83	7.9	ND<1.0	--	13	--	
U-8															
12/3/2008	480.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	480.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	480.43	38.22	0	442.21	--	--	7200	42	ND<2.5	50	250	--	ND<2.5	--	
6/15/2010	480.43	32.91	0	447.52	5.31	--	2000	22	1.3	12	4.2	--	ND<1.0	--	
12/20/2010	480.43	29.57	0	450.86	3.34	--	2400	11	ND<1.0	22	12	--	ND<1.0	--	
U-9															
12/3/2008	479.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	479.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	479.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
12/9/2009	479.39	40.70	0	438.69	--	--	8800	51	ND<0.50	300	74	--	23	--	
6/15/2010	479.39	33.64	0	445.75	7.06	--	2000	10	2.1	61	18	--	4.9	--	
12/20/2010	479.39	32.35	0	447.04	1.29	--	1900	7.0	2.0	45	9.7	--	4.3	--	
U-10															
12/3/2008	480.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	480.51	44.30	0	436.21	--	--	1400	15	1.1	12	12	--	88	--	
12/9/2009	480.51	41.45	0	439.06	2.85	--	4300	280	71	180	900	--	320	--	
6/15/2010	480.51	34.42	0	446.09	7.03	--	12000	550	70	780	1400	--	530	--	
12/20/2010	480.51	34.32	0	446.19	0.10	--	2100	79	2.4	98	33	--	98	--	
U-11															
12/3/2008	480.34	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
2/18/2009	480.34	--	--	--	--	--	--	--	--	--	--	--	--	--	Dry
6/11/2009	480.34	43.18	0	437.16	--	--	1200	0.93	ND<0.50	ND<0.50	ND<1.0	--	2500	--	
12/9/2009	480.34	39.62	0	440.72	3.56	--	1300	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	2100	--	
6/15/2010	480.34	32.41	0	447.93	7.21	--	2800	ND<12	ND<12	21	ND<25	--	3600	--	
12/20/2010	480.34	32.66	0	447.68	-0.25	--	1700	ND<10	ND<10	ND<10	ND<20	--	1400	--	
U-12															

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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
12/3/2008	480.75	50.08	0	430.67	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
2/18/2009	480.75	46.10	0	434.65	3.98	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/11/2009	480.75	45.85	0	434.90	0.25	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/9/2009	480.75	40.74	0	440.01	5.11	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/15/2010	480.75	33.53	0	447.22	7.21	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/20/2010	480.75	34.02	0	446.73	-0.49	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
U-13															
12/3/2008	480.31	50.74	0	429.57	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.85	--	
2/18/2009	480.31	45.87	0	434.44	4.87	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.87	--	
6/11/2009	480.31	46.60	0	433.71	-0.73	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.81	--	
12/9/2009	480.31	41.28	0	439.03	5.32	--	ND<50	ND<0.50	1.1	ND<0.50	ND<1.0	--	ND<0.50	--	
6/15/2010	480.31	34.14	0	446.17	7.14	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/20/2010	480.31	34.44	0	445.87	-0.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
U-14															
12/3/2008	479.38	49.90	0	429.48	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.4	--	
2/18/2009	479.38	46.65	0	432.73	3.25	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/11/2009	479.38	45.75	0	433.63	0.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/9/2009	479.38	40.60	0	438.78	5.15	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/15/2010	479.38	33.40	0	445.98	7.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
12/20/2010	479.38	33.74	0	445.64	-0.34	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
U-15															
12/3/2008	479.99	49.58	0	430.41	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
2/18/2009	479.99	45.58	0	434.41	4.00	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	--	
6/11/2009	479.99	45.45	0	434.54	0.13	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.6	--	
12/9/2009	479.99	40.38	0	439.61	5.07	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	
6/15/2010	479.99	33.22	0	446.77	7.16	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.75	--	
12/20/2010	479.99	33.79	0	446.20	-0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	--	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
U-1													
10/2/2000	ND	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	ND<500000	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	ND<500	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	ND<500	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	ND<50	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
11/21/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/26/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/27/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<100	--	ND<50	--	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	140	ND<50	3500	
U-2													
10/2/2000	ND	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	ND<500000	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	ND<500	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	ND<500	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	730	--	--	--	--	--	--	--	--	--	--	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
11/21/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/26/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/27/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
9/23/2007	69	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	58	--	2000	
6/12/2008	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<100	--	ND<50	--	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	850	
U-3													
10/2/2000	63000	--	--	--	--	--	--	--	--	--	--	--	
1/8/2001	49300	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
4/3/2001	22200	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
7/2/2001	27000	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
10/8/2001	33000	D<14000000	ND<290	ND<290	ND<290	ND<290	ND<290	--	--	--	--	--	
1/3/2002	17000	D<50000000	ND<100	ND<100	ND<100	ND<100	ND<100	--	--	--	--	--	
4/5/2002	66000	D<25000000	ND<100	ND<100	ND<100	ND<100	ND<100	--	--	--	--	--	
7/2/2002	47000	D<13000000	ND<250	ND<250	ND<500	ND<250	ND<250	--	--	--	--	--	
10/1/2002	ND<50000	D<25000000	ND<1000	ND<1000	ND<1000	ND<1000	ND<1000	--	--	--	--	--	
12/30/2002	23000	D<10000000	ND<400	ND<400	ND<400	ND<400	ND<400	--	--	--	--	--	
5/2/2003	25000	D<50000000	ND<200	ND<200	ND<200	ND<200	ND<200	--	--	--	--	--	
7/1/2003	32000	D<10000000	ND<400	ND<400	ND<400	ND<400	ND<400	--	--	--	--	--	
10/3/2003	39000	ND<50000	ND<200	ND<200	ND<2.0	ND<200	ND<200	--	--	--	--	--	
1/8/2004	ND<20000	ND<100000	ND<400	ND<400	ND<400	ND<400	ND<400	--	--	--	--	--	
4/15/2004	18000	ND<2500	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	--	--	--	--	--	
7/15/2004	15000	ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	--	--	--	--	--	
12/8/2004	34000	ND<5000	ND<50	ND<50	ND<100	ND<50	ND<50	--	--	--	--	--	
3/23/2005	--	ND<5000	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<50000	--	--	--	--	--	--	--	--	--	--	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
12/30/2005	2000	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.58	--	--	--	--	--	
3/24/2006	--	ND<2500	--	--	--	--	--	--	--	--	--	--	
6/26/2006	18000	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
9/26/2006	--	ND<1200	--	--	--	--	--	--	--	--	--	--	
11/21/2006	33000	ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--	
3/26/2007	13000	ND<250	ND<0.50	0.95	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/27/2007	20000	ND<250	ND<0.50	0.79	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
9/23/2007	19000	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	15000	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	95	ND<50	1700	
6/12/2008	21000	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	--	210	--	2800	
12/9/2009	8800	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/15/2010	11000	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	92	ND<50	1600	
12/20/2010	2800	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	130	ND<50	1700	
U-4													
4/3/2001	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
7/2/2001	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
1/3/2002	ND<20	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	ND<500000	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	ND<500	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	ND<500	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	ND<50	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
11/21/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/26/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
6/27/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	2000	
6/12/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	2500	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	2200	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	1200	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	1200	
U-5													
4/3/2001	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
7/2/2001	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
10/8/2001	ND<100	ND<100000(	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--	
1/3/2002	ND<20	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	ND<500	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	ND<500	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	ND<500	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	ND<50	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	ND<50	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	ND<2500	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
11/21/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/26/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/27/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	1300	
6/12/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	830	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	1300	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	460	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	520	
U-6													
1/3/2002	ND<200	ND<500000(	ND<10	ND<10	ND<10	ND<10	ND<10	--	--	--	--	--	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	ND<500000	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	ND<100000	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	ND<5000	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	ND<250	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	ND<250	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	ND<50	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<50000	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	ND<2500	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	ND<2500	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	ND<2500	--	--	--	--	--	--	--	--	--	--	
11/21/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/26/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/27/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	520	
6/12/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	910	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	690	
12/20/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	720	
U-7													
1/3/2002	30	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	ND<500000	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	ND<5000	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	ND<100	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	ND<100	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	ND<100	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	ND<100	--	--	--	--	--	--	--	--	--	--	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
6/28/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	ND<1000	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	ND<250	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	ND<250	--	--	--	--	--	--	--	--	--	--	
11/21/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/26/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
6/27/2007	14	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
3/17/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	670	
6/12/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	520	
6/11/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	380	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	390	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	340	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	460	
U-8													
12/9/2009	ND<50	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<100	ND<100	ND<50	ND<50	650	
6/15/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	390	
12/20/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	430	
U-9													
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	96	
6/15/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	510	
12/20/2010	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	460	
U-10													
6/11/2009	98	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<100	--	ND<50	--	
12/9/2009	1100	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	150	
6/15/2010	2400	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<100	ND<100	ND<50	ND<50	290	
12/20/2010	610	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<100	ND<100	ND<50	ND<50	290	
U-11													
6/11/2009	6800	ND<250	ND<0.50	1.8	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	
12/9/2009	10000	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<100	ND<100	ND<50	ND<50	170	
6/15/2010	6600	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	ND<100	ND<100	51	ND<50	560	
12/20/2010	3700	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	ND<100	ND<100	ND<50	ND<50	370	
U-12													
12/3/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	330	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

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)	Antimony (total) (µg/l)	Antimony (dissolved) (µg/l)	Arsenic (total) (µg/l)	Arsenic (dissolved) (µg/l)	Barium (total) (µg/l)	Comments
2/18/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	370	
6/11/2009	15	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	400	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	360	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	350	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	370	
U-13													
12/3/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	140	
2/18/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	120	
6/11/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	120	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	15	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	13	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	46	
U-14													
12/3/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	340	
2/18/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	350	
6/11/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	340	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	310	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	260	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	250	
U-15													
12/3/2008	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	320	
2/18/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	140	
6/11/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	52	
12/9/2009	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	96	
6/15/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	28	
12/20/2010	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<100	ND<50	ND<50	55	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
U-1													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	--	--	--	--	--	--	ND<2.0	--	--	--	--	--	
6/15/2010	430	--	ND<10	--	ND<10	73	ND<2.0	--	ND<10	--	ND<50	ND<10	
12/20/2010	390	ND<10	ND<10	ND<10	ND<10	60	2.6	1400	ND<10	390	ND<50	ND<10	
U-2													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	--	ND<10	--	ND<10	--	--	ND<2.0	540	--	150	--	--	
6/12/2008	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	300	--	ND<10	--	ND<10	57	ND<2.0	--	ND<10	--	ND<50	ND<10	
12/20/2010	250	ND<10	ND<10	ND<10	ND<10	43	2.7	230	ND<10	64	ND<50	ND<10	
U-3													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
4/5/2002	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	410	ND<10	ND<10	ND<10	ND<10	59	ND<2.0	450	ND<10	140	ND<50	ND<10	
6/12/2008	--	ND<10	--	ND<10	--	--	--	980	--	350	--	--	
12/9/2009	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	410	ND<10	ND<10	ND<10	ND<10	56	ND<2.0	420	ND<10	130	ND<50	ND<10	
12/20/2010	360	ND<10	ND<10	ND<10	ND<10	44	ND<2.0	560	ND<10	170	ND<50	ND<10	
U-4													
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	470	ND<10	ND<10	ND<10	ND<10	68	ND<2.0	410	ND<10	140	ND<50	ND<10	
6/12/2008	52	ND<10	ND<10	ND<10	ND<10	2.4	ND<2.0	610	ND<10	180	ND<50	ND<10	
12/9/2009	500	ND<10	ND<10	ND<10	ND<10	62	ND<2.0	610	ND<10	200	ND<50	ND<10	
6/15/2010	420	ND<10	ND<10	ND<10	ND<10	69	30	270	29	80	ND<50	ND<10	
12/20/2010	440	ND<10	ND<10	ND<10	ND<10	59	ND<2.0	240	ND<10	80	ND<50	ND<10	
U-5													
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	390	ND<10	ND<10	ND<10	ND<10	67	ND<2.0	110	--	ND<50	ND<50	ND<10	
6/12/2008	370	ND<10	ND<10	ND<10	ND<10	66	ND<2.0	86	ND<10	ND<50	ND<50	ND<10	
12/9/2009	410	ND<10	ND<10	ND<10	ND<10	62	ND<2.0	180	ND<10	50	ND<50	ND<10	
6/15/2010	390	ND<10	ND<10	ND<10	ND<10	59	ND<2.0	ND<10	ND<10	ND<50	ND<50	ND<10	
12/20/2010	390	ND<10	ND<10	ND<10	ND<10	60	ND<2.0	12	ND<10	ND<50	ND<50	ND<10	
U-6													
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	330	ND<10	ND<10	ND<10	ND<10	73	ND<2.0	34	ND<10	ND<50	ND<50	ND<10	
6/12/2008	600	ND<10	ND<10	ND<10	ND<10	69	ND<2.0	ND<10	ND<10	ND<50	ND<50	ND<10	
6/15/2010	500	ND<10	ND<10	ND<10	ND<10	79	ND<2.0	37	ND<10	ND<50	ND<50	ND<10	
12/20/2010	510	ND<10	ND<10	ND<10	ND<10	72	ND<2.0	54	ND<10	ND<50	ND<50	ND<10	
U-7													
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	510	ND<10	ND<10	ND<10	ND<10	68	ND<2.0	28	ND<10	ND<50	ND<50	ND<10	
6/12/2008	490	ND<10	ND<10	ND<10	ND<10	60	ND<2.0	10	ND<10	ND<50	ND<50	ND<10	
6/11/2009	340	ND<10	ND<10	ND<10	ND<10	31	ND<2.0	ND<10	ND<10	ND<50	ND<50	ND<10	
12/9/2009	280	ND<10	ND<10	ND<10	ND<10	37	ND<2.0	27	ND<10	ND<50	ND<50	ND<10	
6/15/2010	300	ND<10	ND<10	ND<10	ND<10	40	ND<2.0	ND<10	ND<10	ND<50	ND<50	ND<10	
12/20/2010	440	ND<10	ND<10	ND<10	ND<10	42	ND<2.0	ND<10	ND<10	ND<50	ND<50	ND<10	
U-8													
12/9/2009	200	ND<10	ND<10	ND<10	ND<10	53	ND<2.0	ND<10	ND<10	78	ND<50	ND<10	
6/15/2010	320	ND<10	ND<10	ND<10	ND<10	47	ND<2.0	27	ND<10	ND<50	ND<50	ND<10	
12/20/2010	390	ND<10	ND<10	ND<10	ND<10	44	ND<2.0	13	ND<10	ND<50	ND<50	ND<10	
U-9													
12/9/2009	64	ND<10	ND<10	ND<10	ND<10	69	ND<2.0	18	ND<10	ND<50	ND<50	ND<10	
6/15/2010	270	ND<10	ND<10	ND<10	ND<10	50	ND<2.0	79	ND<10	ND<50	ND<50	ND<10	
12/20/2010	350	ND<10	ND<10	ND<10	ND<10	43	ND<2.0	53	ND<10	ND<50	ND<50	ND<10	
U-10													
6/11/2009	50	--	ND<10	--	ND<10	40	ND<2.0	--	ND<10	--	ND<50	ND<10	
12/9/2009	59	ND<10	ND<10	ND<10	ND<10	47	ND<2.0	34	ND<10	ND<50	ND<50	ND<10	
6/15/2010	250	ND<10	ND<10	ND<10	ND<10	50	ND<2.0	23	ND<10	ND<50	ND<50	ND<10	
12/20/2010	150	ND<10	ND<10	ND<10	ND<10	48	ND<2.0	83	ND<10	ND<50	ND<50	ND<10	
U-11													
6/11/2009	--	--	--	--	--	--	--	--	--	--	--	--	
12/9/2009	89	ND<10	ND<10	ND<10	ND<10	61	ND<2.0	31	ND<10	ND<50	ND<50	ND<10	
6/15/2010	30	ND<10	ND<10	ND<10	ND<10	230	ND<2.0	54	ND<10	50	ND<50	ND<10	
12/20/2010	43	ND<10	ND<10	ND<10	ND<10	120	ND<2.0	44	ND<10	ND<50	ND<50	ND<10	
U-12													
12/3/2008	330	ND<10	ND<10	ND<10	ND<10	51	2.7	11	ND<10	ND<50	ND<50	ND<10	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Barium (dissolved) (µg/l)	Beryllium (total) (µg/l)	Beryllium (dissolved) (µg/l)	Cadmium (total) (µg/l)	Cadmium (dissolved) (µg/l)	Calcium ()	Chromium VI (µg/l)	Chromium (total) (µg/l)	Chromium (dissolved) (µg/l)	Cobalt (total) (µg/l)	Cobalt (dissolved) (µg/l)	Copper (dissolved) (µg/l)	Comments
2/18/2009	330	ND<10	ND<10	ND<10	ND<10	50	2.7	ND<10	ND<10	ND<50	ND<50	ND<10	
6/11/2009	320	ND<10	ND<10	ND<10	ND<10	47	ND<2.0	21	ND<10	ND<50	ND<50	ND<10	
12/9/2009	330	ND<10	ND<10	ND<10	ND<10	47	2.3	ND<10	ND<10	ND<50	ND<50	ND<10	
6/15/2010	320	ND<10	ND<10	ND<10	ND<10	48	2.2	ND<10	ND<10	ND<50	ND<50	ND<10	
12/20/2010	340	ND<10	ND<10	ND<10	ND<10	50	2.5	ND<10	ND<10	ND<50	ND<50	36	
U-13													
12/3/2008	110	ND<10	ND<10	ND<10	ND<10	24	85	93	86	ND<50	ND<50	ND<10	
2/18/2009	98	ND<10	ND<10	ND<10	ND<10	22	88	88	88	ND<50	ND<50	ND<10	
6/11/2009	110	ND<10	ND<10	ND<10	ND<10	24	82	84	78	ND<50	ND<50	ND<10	
12/9/2009	10	ND<10	ND<10	ND<10	ND<10	3.9	67	74	70	ND<50	ND<50	ND<10	
6/15/2010	13	ND<10	ND<10	ND<10	ND<10	1.8	48	50	48	ND<50	ND<50	ND<10	
12/20/2010	42	ND<10	ND<10	ND<10	ND<10	8.0	26	28	28	ND<50	ND<50	10	
U-14													
12/3/2008	320	ND<10	ND<10	ND<10	ND<10	47	3.0	ND<10	ND<10	ND<50	ND<50	ND<10	
2/18/2009	320	ND<10	ND<10	ND<10	ND<10	46	3.4	ND<10	ND<10	ND<50	ND<50	ND<10	
6/11/2009	310	ND<10	ND<10	ND<10	ND<10	45	2.9	16	ND<10	ND<50	ND<50	ND<10	
12/9/2009	270	ND<10	ND<10	ND<10	ND<10	42	2.9	ND<10	ND<10	ND<50	ND<50	ND<10	
6/15/2010	220	ND<10	ND<10	ND<10	ND<10	36	3.9	ND<10	ND<10	ND<50	ND<50	ND<10	
12/20/2010	240	ND<10	ND<10	ND<10	ND<10	40	3.9	ND<10	ND<10	ND<50	ND<50	23	
U-15													
12/3/2008	300	ND<10	ND<10	ND<10	ND<10	47	3.7	ND<10	ND<10	ND<50	ND<50	ND<10	
2/18/2009	91	ND<10	ND<10	ND<10	ND<10	14	10	11	ND<10	ND<50	ND<50	ND<10	
6/11/2009	30	ND<10	ND<10	ND<10	ND<10	4.6	9.0	12	ND<10	ND<50	ND<50	ND<10	
12/9/2009	64	ND<10	ND<10	ND<10	ND<10	13	17	20	17	ND<50	ND<50	ND<10	
6/15/2010	19	ND<10	ND<10	ND<10	ND<10	3.8	22	25	21	ND<50	ND<50	ND<10	
12/20/2010	38	ND<10	ND<10	ND<10	ND<10	6.5	34	39	36	ND<50	ND<50	ND<10	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
U-1													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	--	ND<50	--	100	11	--	ND<0.20	--	ND<50	--	ND<10	2.9	
12/20/2010	860	ND<50	180	85	ND<10	1.1	ND<0.20	ND<50	ND<50	3700	ND<10	3.5	
U-2													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	330	--	71	--	--	1.7	--	ND<50	--	1500	--	--	
6/12/2008	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	--	ND<50	--	85	ND<10	--	ND<0.20	--	ND<50	--	ND<10	2.2	
12/20/2010	140	ND<50	ND<50	64	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	630	ND<10	3.6	
U-3													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
4/5/2002	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	240	ND<50	65	94	2600	0.84	ND<0.20	ND<50	ND<50	1200	ND<10	1.6	
6/12/2008	590	--	160	--	--	2.4	--	81	--	2800	--	--	
12/9/2009	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	230	ND<50	67	91	2300	ND<0.20	ND<0.20	ND<50	ND<50	1200	ND<10	1.6	
12/20/2010	300	ND<50	77	71	1900	0.52	ND<0.20	ND<50	ND<50	1500	ND<10	2.2	
U-4													
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	250	ND<50	ND<50	88	2000	ND<0.20	ND<0.20	ND<50	ND<50	1300	ND<10	2.3	
6/12/2008	360	ND<50	53	7.7	720	2.5	ND<0.20	ND<50	ND<50	2100	ND<10	ND<1.0	
12/9/2009	300	ND<50	59	91	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	2000	ND<10	2.7	
6/15/2010	110	ND<50	ND<50	87	ND<10	0.63	ND<0.20	ND<50	ND<50	770	ND<10	2.8	
12/20/2010	120	ND<50	ND<50	85	210	0.36	ND<0.20	ND<50	ND<50	750	ND<10	3.3	
U-5													
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	72	ND<50	ND<50	89	76	0.55	ND<0.20	ND<50	ND<50	360	ND<10	2.4	
6/12/2008	53	ND<50	ND<50	73	36	0.26	ND<0.20	ND<50	ND<50	290	ND<10	1.9	
12/9/2009	110	ND<50	ND<50	79	1000	ND<0.20	ND<0.20	ND<50	ND<50	540	ND<10	2.4	
6/15/2010	ND<10	ND<50	ND<50	78	660	ND<0.20	ND<0.20	ND<50	ND<50	30	ND<10	2.2	
12/20/2010	12	ND<50	ND<50	79	500	ND<0.20	ND<0.20	ND<50	ND<50	47	ND<10	2.7	
U-6													
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	17	ND<50	ND<50	120	4300	ND<0.20	ND<0.20	ND<50	ND<50	91	ND<10	1.0	
6/12/2008	ND<10	ND<50	ND<50	110	3800	0.60	ND<0.20	ND<50	ND<50	47	ND<10	1.3	
6/15/2010	25	ND<50	ND<50	140	3900	ND<0.20	ND<0.20	ND<50	ND<50	100	ND<10	1.4	
12/20/2010	27	ND<50	ND<50	120	3500	ND<0.20	ND<0.20	ND<50	ND<50	160	ND<10	2.1	
U-7													
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	16	ND<50	ND<50	110	2300	ND<0.20	ND<0.20	ND<50	ND<50	79	ND<10	2.4	
6/12/2008	ND<10	ND<50	ND<50	92	2400	ND<0.20	ND<0.20	ND<50	ND<50	38	ND<10	2.4	
6/11/2009	ND<10	ND<0.05	ND<50	50	1100	ND<0.20	ND<0.20	ND<50	ND<50	25	ND<10	2.6	
12/9/2009	14	ND<50	ND<50	64	1800	ND<0.20	ND<0.20	ND<50	ND<50	74	ND<10	2.1	
6/15/2010	ND<10	ND<50	ND<50	68	1900	ND<0.20	ND<0.20	ND<50	ND<50	12	ND<10	1.8	
12/20/2010	ND<10	ND<50	ND<50	70	1900	ND<0.20	ND<0.20	ND<50	ND<50	17	ND<10	2.8	
U-8													
12/9/2009	130	ND<50	ND<50	91	4000	ND<0.20	ND<0.20	ND<50	ND<50	690	ND<10	2.8	
6/15/2010	11	ND<50	ND<50	83	2600	ND<0.20	ND<0.20	ND<50	ND<50	57	ND<10	1.8	
12/20/2010	ND<10	ND<50	ND<50	77	1900	ND<0.20	ND<0.20	ND<50	ND<50	28	ND<10	2.1	
U-9													
12/9/2009	15	ND<50	ND<50	120	3800	ND<0.20	ND<0.20	ND<50	ND<50	35	ND<10	8.5	
6/15/2010	40	ND<50	ND<50	96	2500	ND<0.20	ND<0.20	ND<50	ND<50	230	ND<10	3.2	
12/20/2010	27	ND<50	ND<50	83	2100	ND<0.20	ND<0.20	ND<50	ND<50	150	ND<10	2.8	
U-10													
6/11/2009	--	ND<0.05	--	87	780	--	ND<0.20	--	ND<50	--	ND<10	30	
12/9/2009	17	ND<50	ND<50	110	1400	ND<0.20	ND<0.20	ND<50	ND<50	110	ND<10	29	
6/15/2010	19	ND<50	ND<50	110	2200	ND<0.20	ND<0.20	ND<50	ND<50	68	ND<10	7.5	
12/20/2010	39	ND<50	ND<50	96	2100	0.28	ND<0.20	ND<50	ND<50	260	ND<10	8.4	
U-11													
6/11/2009	--	--	--	--	--	--	--	--	--	--	--	--	
12/9/2009	22	ND<50	ND<50	110	2500	ND<0.20	ND<0.20	ND<50	ND<50	83	ND<10	4.3	
6/15/2010	33	ND<50	ND<50	1800	20000	ND<0.20	ND<0.20	ND<50	ND<50	230	93	4.1	
12/20/2010	27	ND<50	ND<50	450	7000	ND<0.20	ND<0.20	ND<50	ND<50	180	43	3.8	
U-12													
12/3/2008	12	ND<50	ND<50	73	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	24	ND<10	2.6	

Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Copper (total) (µg/l)	Lead (dissolved) ()	Lead (total) (µg/l)	Magnesium (dissolved) (mg/l)	Manganese (dissolved) (µg/l)	Mercury (total) (µg/l)	Mercury (dissolved) (µg/l)	Molyb-denum (total) (µg/l)	Molyb-denum (dissolved) (µg/l)	Nickel (total) (µg/l)	Nickel (dissolved) (µg/l)	Potassium ()	Comments
2/18/2009	ND<10	ND<50	ND<50	71	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	12	ND<10	2.3	
6/11/2009	ND<10	ND<0.05	ND<50	70	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	62	ND<10	2.2	
12/9/2009	ND<10	ND<50	ND<50	70	26	ND<0.20	ND<0.20	ND<50	ND<50	10	ND<10	2.7	
6/15/2010	ND<10	ND<50	ND<50	69	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	10	ND<10	2.4	
12/20/2010	43	ND<50	ND<50	71	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	12	ND<10	2.8	
U-13													
12/3/2008	21	ND<50	ND<50	53	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	8.3	
2/18/2009	ND<10	ND<50	ND<50	52	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	14	
6/11/2009	ND<10	ND<0.05	ND<50	53	12	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	13	
12/9/2009	ND<10	ND<50	ND<50	45	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	88	
6/15/2010	ND<10	ND<50	ND<50	47	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	71	
12/20/2010	13	ND<50	ND<50	64	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	63	
U-14													
12/3/2008	26	ND<50	ND<50	67	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	15	ND<10	2.6	
2/18/2009	ND<10	ND<50	ND<50	66	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	2.5	
6/11/2009	ND<10	ND<0.05	ND<50	64	17	ND<0.20	ND<0.20	ND<50	ND<50	40	ND<10	2.5	
12/9/2009	ND<10	ND<50	ND<50	53	27	ND<0.20	ND<0.20	ND<50	ND<50	10	ND<10	3.1	
6/15/2010	ND<10	ND<50	ND<50	44	21	ND<0.20	ND<0.20	ND<50	ND<50	13	ND<10	3.9	
12/20/2010	31	ND<50	ND<50	47	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	4.8	
U-15													
12/3/2008	12	ND<50	ND<50	69	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	3.7	
2/18/2009	ND<10	ND<50	ND<50	62	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	39	
6/11/2009	ND<10	ND<0.05	ND<50	62	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	ND<10	ND<10	36	
12/9/2009	ND<10	ND<50	ND<50	70	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	11	ND<10	41	
6/15/2010	ND<10	ND<50	ND<50	65	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	17	10	52	
12/20/2010	ND<10	ND<50	ND<50	67	ND<10	ND<0.20	ND<0.20	ND<50	ND<50	15	12	72	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
U-1													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	--	ND<100	--	ND<10	61	--	ND<100	--	ND<10	ND<10	--	58	
12/20/2010	ND<100	ND<100	ND<10	ND<10	55	ND<100	ND<100	570	ND<10	ND<10	1300	42	
U-2													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	ND<100	--	ND<10	--	--	ND<100	--	240	--	--	590	--	
6/12/2008	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	--	ND<100	--	ND<10	66	--	ND<100	--	ND<10	ND<10	--	28	
12/20/2010	ND<100	ND<100	ND<10	ND<10	56	ND<100	ND<100	110	ND<10	ND<10	260	17	
U-3													
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
4/5/2002	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	ND<100	ND<100	ND<10	ND<10	41	ND<100	ND<100	190	ND<10	ND<10	360	14	
6/12/2008	ND<100	--	ND<10	--	--	ND<100	--	410	--	--	970	--	
12/9/2009	--	--	--	--	--	--	--	--	--	--	--	--	
6/15/2010	ND<100	ND<100	ND<10	ND<10	36	ND<100	ND<100	170	ND<10	ND<10	360	9.9	
12/20/2010	ND<100	ND<100	ND<10	ND<10	32	ND<100	ND<100	230	ND<10	ND<10	470	6.9	
U-4													
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	ND<100	ND<100	ND<10	ND<10	35	ND<100	ND<100	190	ND<10	ND<10	340	37	
6/12/2008	ND<100	ND<100	ND<10	ND<10	9.0	ND<100	ND<100	260	ND<10	ND<10	420	38	
12/9/2009	ND<100	ND<100	ND<10	ND<10	35	ND<100	ND<100	230	ND<10	ND<10	400	35	
6/15/2010	ND<100	ND<100	ND<10	ND<10	65	ND<100	ND<100	96	ND<10	ND<10	190	44	
12/20/2010	ND<100	ND<100	ND<10	ND<10	33	ND<100	ND<100	94	ND<10	ND<10	190	31	
U-5													
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	ND<100	ND<100	ND<10	ND<10	49	ND<100	ND<100	60	ND<100	ND<10	120	32	
6/12/2008	ND<100	ND<100	ND<10	ND<10	26	ND<100	ND<100	44	ND<10	ND<10	87	31	
12/9/2009	ND<100	ND<100	ND<10	ND<10	32	ND<100	ND<100	93	ND<10	ND<10	180	43	
6/15/2010	ND<100	ND<100	ND<10	ND<10	42	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	61	
12/20/2010	ND<100	ND<100	ND<10	ND<10	38	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	67	
U-6													
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	ND<100	ND<100	ND<10	ND<10	90	ND<100	ND<100	15	ND<10	ND<10	79	160	
6/12/2008	ND<100	ND<100	ND<10	ND<10	76	ND<100	ND<100	ND<10	ND<10	11	ND<50	190	
6/15/2010	ND<100	ND<100	ND<10	ND<10	96	ND<100	ND<100	14	ND<10	ND<10	72	170	
12/20/2010	ND<100	ND<100	ND<10	ND<10	93	ND<100	ND<100	22	ND<10	ND<10	57	190	
U-7													
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/1/2003	--	--	--	--	--	--	--	--	--	--	--	--	
10/3/2003	--	--	--	--	--	--	--	--	--	--	--	--	
1/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
4/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2004	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2004	--	--	--	--	--	--	--	--	--	--	--	--	
3/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	
9/23/2005	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2005	--	--	--	--	--	--	--	--	--	--	--	--	
3/24/2006	--	--	--	--	--	--	--	--	--	--	--	--	
6/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
9/26/2006	--	--	--	--	--	--	--	--	--	--	--	--	
11/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	
3/26/2007	--	--	--	--	--	--	--	--	--	--	--	--	
6/27/2007	--	--	--	--	--	--	--	--	--	--	--	--	
3/17/2008	ND<100	ND<100	ND<10	ND<10	68	ND<100	ND<100	12	ND<10	ND<10	51	91	
6/12/2008	ND<100	ND<100	ND<10	ND<10	59	ND<100	ND<100	ND<10	ND<10	11	ND<50	120	
6/11/2009	ND<100	ND<100	ND<10	ND<10	62	ND<100	ND<100	ND<10	ND<10	26	ND<50	110	
12/9/2009	ND<100	ND<100	ND<10	ND<10	64	ND<100	ND<100	13	ND<10	ND<10	ND<50	110	
6/15/2010	ND<100	ND<100	ND<10	ND<10	66	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	110	
12/20/2010	ND<100	ND<100	ND<10	ND<10	64	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	87	
U-8													
12/9/2009	ND<100	ND<100	ND<10	ND<10	58	ND<100	ND<100	96	ND<10	ND<10	180	59	
6/15/2010	ND<100	ND<100	ND<10	ND<10	50	ND<100	ND<100	10	ND<10	ND<10	ND<50	59	
12/20/2010	ND<100	ND<100	ND<10	ND<10	47	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	50	
U-9													
12/9/2009	ND<100	ND<100	ND<10	ND<10	84	ND<100	ND<100	ND<10	ND<10	ND<10	55	100	
6/15/2010	ND<100	ND<100	ND<10	ND<10	61	ND<100	ND<100	31	ND<10	ND<10	94	70	
12/20/2010	ND<100	ND<100	ND<10	ND<10	54	ND<100	ND<100	22	ND<10	ND<10	55	64	
U-10													
6/11/2009	--	ND<100	--	ND<10	170	--	ND<100	--	ND<10	24	--	110	
12/9/2009	ND<100	ND<100	ND<10	ND<10	130	ND<100	ND<100	16	ND<10	ND<10	ND<50	47	
6/15/2010	ND<100	ND<100	ND<10	ND<10	67	ND<100	ND<100	ND<10	ND<10	30	ND<50	46	
12/20/2010	ND<100	ND<100	ND<10	ND<10	55	ND<100	ND<100	31	ND<10	ND<10	85	34	
U-11													
6/11/2009	--	--	--	--	--	--	--	--	--	--	--	--	
12/9/2009	ND<100	ND<100	ND<10	ND<10	67	ND<100	ND<100	19	ND<10	ND<10	ND<50	70	
6/15/2010	ND<100	ND<100	ND<10	ND<10	120	ND<100	ND<100	29	ND<10	10	62	60	
12/20/2010	ND<100	ND<100	ND<10	ND<10	59	ND<100	ND<100	27	ND<10	ND<10	64	55	
U-12													
12/3/2008	ND<100	ND<100	ND<10	ND<10	49	ND<100	ND<100	ND<10	ND<10	26	ND<50	85	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Selenium (total) (µg/l)	Selenium (dissolved) (µg/l)	Silver (total) (µg/l)	Silver (dissolved) (µg/l)	Sodium ()	Thallium (total) (µg/l)	Thallium (dissolved) (µg/l)	Vanadium (total) (µg/l)	Vanadium (dissolved) (µg/l)	Zinc (dissolved) (µg/l)	Zinc (total) (µg/l)	Chloride (mg/l)	Comments
2/18/2009	ND<100	ND<100	ND<10	ND<10	48	ND<100	ND<100	ND<10	ND<10	13	ND<50	86	
6/11/2009	ND<100	ND<100	ND<10	ND<10	50	ND<100	ND<100	ND<10	ND<10	30	ND<50	91	
12/9/2009	ND<100	ND<100	ND<10	ND<10	51	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	83	
6/15/2010	ND<100	ND<100	ND<10	ND<10	50	ND<100	ND<100	ND<10	ND<10	18	ND<50	85	
12/20/2010	ND<100	ND<100	ND<10	ND<10	51	ND<100	ND<100	ND<10	ND<10	160	170	87	
U-13													
12/3/2008	ND<100	ND<100	ND<10	ND<10	59	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	95	
2/18/2009	ND<100	ND<100	ND<10	ND<10	65	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	96	
6/11/2009	ND<100	ND<100	ND<10	ND<10	66	ND<100	ND<100	ND<10	ND<10	29	ND<50	100	
12/9/2009	ND<100	ND<100	ND<10	ND<10	110	ND<100	ND<10	ND<10	ND<10	ND<10	ND<50	82	
6/15/2010	ND<100	ND<100	ND<10	ND<10	110	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	80	
12/20/2010	ND<100	ND<100	ND<10	ND<10	100	ND<100	ND<100	ND<10	ND<10	14	ND<50	81	
U-14													
12/3/2008	ND<100	ND<100	ND<10	ND<10	48	ND<100	ND<100	ND<10	ND<10	43	69	85	
2/18/2009	ND<100	ND<100	ND<10	ND<10	47	ND<100	ND<100	ND<10	ND<10	24	53	84	
6/11/2009	ND<100	ND<100	ND<10	ND<10	47	ND<100	ND<100	ND<10	ND<10	34	ND<50	86	
12/9/2009	ND<100	ND<100	ND<10	ND<10	41	ND<100	ND<100	ND<10	ND<10	21	64	66	
6/15/2010	ND<100	ND<100	ND<10	ND<10	35	ND<100	ND<100	ND<10	ND<10	19	57	55	
12/20/2010	ND<100	ND<100	ND<10	ND<10	36	ND<100	ND<100	ND<10	ND<10	59	84	56	
U-15													
12/3/2008	ND<100	ND<100	ND<10	ND<10	48	ND<100	ND<100	ND<10	ND<10	36	54	87	
2/18/2009	ND<100	ND<100	ND<10	ND<10	78	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	86	
6/11/2009	ND<100	ND<100	ND<10	ND<10	76	ND<100	ND<100	ND<10	ND<10	24	ND<50	92	
12/9/2009	ND<100	ND<100	ND<10	ND<10	80	ND<100	ND<100	ND<10	ND<10	ND<10	52	85	
6/15/2010	ND<100	ND<100	ND<10	ND<10	95	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	84	
12/20/2010	ND<100	ND<100	ND<10	ND<10	100	ND<100	ND<100	ND<10	ND<10	ND<10	ND<50	82	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
U-1												
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	
12/30/2002	--	--	--	--	--	--	--	0.60	--	--	91	
5/2/2003	--	--	--	--	--	--	--	0.50	--	--	90	
7/1/2003	--	--	--	--	--	--	--	0.60	--	--	110	
10/3/2003	--	--	--	--	--	--	--	3.79	--	--	329	
1/8/2004	--	--	--	--	--	--	--	12.36	--	--	184	
4/15/2004	--	--	--	--	--	--	--	10.56	--	--	213	
7/15/2004	--	--	--	--	--	--	--	6.62	--	--	251	
12/8/2004	--	--	--	--	--	--	--	2.66	--	--	68	
3/23/2005	--	--	--	--	--	--	--	3.12	--	--	091	
6/28/2005	--	--	--	--	--	--	--	8.84	--	--	153	
9/23/2005	--	--	--	--	--	--	--	2.26	--	--	187	
12/30/2005	--	--	--	--	--	--	--	7.74	--	--	159	
3/24/2006	--	--	--	--	--	--	--	4.02	3.88	036	016	
6/26/2006	--	--	--	--	--	--	--	7.05	5.50	008	007	
9/26/2006	--	--	--	--	--	--	--	4.24	4.66	203	200	
11/21/2006	--	--	--	--	--	--	--	4.24	4.56	1.97	2.00	
3/26/2007	--	--	--	--	--	--	--	6.58	6.98	107	102	
6/27/2007	--	--	--	--	--	--	--	4.98	4.85	20	34	
3/17/2008	--	--	--	--	--	--	--	3.12	2.43	151	153	
6/15/2010	0.15	17	40	740	1295	6.62	19.5	1.36	--	--	221	
12/20/2010	0.098	19	37	610	937.4	6.93	20.3	1.18	--	--	227	
U-2												
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	1.40	--	--	--	
12/30/2002	--	--	--	--	--	--	--	2.80	--	--	120	
5/2/2003	--	--	--	--	--	--	--	150.00	--	--	120	
7/1/2003	--	--	--	--	--	--	--	1.20	--	--	110	
10/3/2003	--	--	--	--	--	--	--	5.61	--	--	321	
1/8/2004	--	--	--	--	--	--	--	12.11	--	--	- 6	
4/15/2004	--	--	--	--	--	--	--	11.39	--	--	259	
7/15/2004	--	--	--	--	--	--	--	7.46	--	--	238	
12/8/2004	--	--	--	--	--	--	--	3.57	--	--	132	
3/23/2005	--	--	--	--	--	--	--	4.57	--	--	024	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
6/28/2005	--	--	--	--	--	--	--	8.08	--	--	230	
9/23/2005	--	--	--	--	--	--	--	5.47	--	--	188	
12/30/2005	--	--	--	--	--	--	--	8.33	--	--	177	
3/24/2006	--	--	--	--	--	--	--	4.80	6.20	-004	002	
6/26/2006	--	--	--	--	--	--	--	6.20	4.51	040	046	
9/26/2006	--	--	--	--	--	--	--	3.70	3.49	-31	-17	
11/21/2006	--	--	--	--	--	--	--	3.70	3.45	-29	-20	
3/26/2007	--	--	--	--	--	--	--	10.05	10.31	90	95	
6/27/2007	--	--	--	--	--	--	--	3.87	4.21	-63	-41	
9/23/2007	--	--	--	--	--	--	--	--	--	-133	-48	
3/17/2008	--	--	--	600	--	--	--	3.31	3.13	154	153	
6/12/2008	--	--	--	--	--	--	--	--	8.32	177	--	
6/15/2010	0.16	16	74	680	1108	6.54	19.5	3.00	--	--	202	
12/20/2010	0.099	16	47	500	878.7	6.89	18.9	4.44	--	--	246	
U-3												
10/2/2000	--	--	--	--	--	--	--	--	--	--	--	
1/8/2001	--	--	--	--	--	--	--	--	--	--	--	
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	
4/5/2002	--	--	--	--	--	--	--	--	--	--	--	
7/2/2002	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	0.50	--	--	- 47	
12/30/2002	--	--	--	--	--	--	--	0.20	--	--	106	
5/2/2003	--	--	--	--	--	--	--	0.50	--	--	85	
7/1/2003	--	--	--	--	--	--	--	0.50	--	--	90	
10/3/2003	--	--	--	--	--	--	--	3.80	--	--	- 27	
1/8/2004	--	--	--	--	--	--	--	12.82	--	--	133	
4/15/2004	--	--	--	--	--	--	--	3.11	--	--	24	
7/15/2004	--	--	--	--	--	--	--	1.90	--	--	53	
12/8/2004	--	--	--	--	--	--	--	1.30	--	--	-81	
3/23/2005	--	--	--	--	--	--	--	0.52	--	--	-087	
6/28/2005	--	--	--	--	--	--	--	1.47	--	--	-151	
9/23/2005	--	--	--	--	--	--	--	1.40	--	--	-80	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
12/30/2005	--	--	--	--	--	--	--	1.45	--	--	-068	
3/24/2006	--	--	--	--	--	--	--	1.53	0.79	003	009	
6/26/2006	--	--	--	--	--	--	--	2.19	3.56	015	017	
9/26/2006	--	--	--	--	--	--	--	1.06	1.10	-72	-95	
11/21/2006	--	--	--	--	--	--	--	1.04	1.10	-83	-96	
3/26/2007	--	--	--	--	--	--	--	7.08	6.99	78	68	
6/27/2007	--	--	--	--	--	--	--	4.89	4.79	-79	-82	
9/23/2007	--	--	--	--	--	--	--	--	--	-114	-88	
3/17/2008	0.073	ND<0.44	ND<1.0	530	--	--	--	2.88	1.96	-5	-33	
6/12/2008	--	--	--	--	--	--	--	0.11	1.30	-17	-40	
12/9/2009	--	--	--	--	781	6.95	16.7	--	--	--	--	
6/15/2010	0.15	ND<0.44	ND<1.0	630	1019	6.52	19.6	0.94	--	--	7	
12/20/2010	0.11	0.71	9.3	460	758.2	6.58	20.0	1.29	--	--	-63	
U-4												
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	1.00	--	--	83	
12/30/2002	--	--	--	--	--	--	--	0.40	--	--	126	
5/2/2003	--	--	--	--	--	--	--	0.70	--	--	120	
7/1/2003	--	--	--	--	--	--	--	0.60	--	--	130	
10/3/2003	--	--	--	--	--	--	--	2.06	--	--	3.05	
1/8/2004	--	--	--	--	--	--	--	11.90	--	--	76	
4/15/2004	--	--	--	--	--	--	--	3.30	--	--	116	
7/15/2004	--	--	--	--	--	--	--	2.50	--	--	32	
12/8/2004	--	--	--	--	--	--	--	2.09	--	--	47	
3/23/2005	--	--	--	--	--	--	--	0.04	--	--	021	
6/28/2005	--	--	--	--	--	--	--	2.24	--	--	120	
9/23/2005	--	--	--	--	--	--	--	3.01	--	--	176	
12/30/2005	--	--	--	--	--	--	--	1.96	--	--	175	
3/24/2006	--	--	--	--	--	--	--	1.17	1.48	015	014	
6/26/2006	--	--	--	--	--	--	--	2.55	1.31	031	034	
9/26/2006	--	--	--	--	--	--	--	1.38	1.23	-54	-7	
11/21/2006	--	--	--	--	--	--	--	1.38	1.13	-60	-10	
3/26/2007	--	--	--	--	--	--	--	7.09	7.28	14	25	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
6/27/2007	--	--	--	--	--	--	--	2.82	2.62	82	73	
3/17/2008	0.12	0.61	29	540	--	--	--	2.47	2.71	153	150	
6/12/2008	0.14	ND<0.44	30	610	--	--	--	1.26	4.00	185	188	
12/9/2009	0.096	0.59	37	590	927	7.55	15.5	1.82	--	--	-84	
6/15/2010	0.18	24	37	630	1057	7.71	20.2	1.02	--	--	54	
12/20/2010	0.12	7.5	28	570	945.4	7.43	18.8	3.30	--	--	253	
U-5												
4/3/2001	--	--	--	--	--	--	--	--	--	--	--	
7/2/2001	--	--	--	--	--	--	--	--	--	--	--	
10/8/2001	--	--	--	--	--	--	--	--	--	--	--	
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	
5/2/2003	--	--	--	--	--	--	--	0.60	--	--	120	
7/1/2003	--	--	--	--	--	--	--	0.90	--	--	145	
10/3/2003	--	--	--	--	--	--	--	2.21	--	--	3.13	
1/8/2004	--	--	--	--	--	--	--	11.27	--	--	104	
4/15/2004	--	--	--	--	--	--	--	3.35	--	--	65	
7/15/2004	--	--	--	--	--	--	--	2.87	--	--	66	
12/8/2004	--	--	--	--	--	--	--	1.67	--	--	102	
3/23/2005	--	--	--	--	--	--	--	0.75	--	--	131	
6/28/2005	--	--	--	--	--	--	--	2.29	--	--	103	
9/23/2005	--	--	--	--	--	--	--	2.05	--	--	172	
12/30/2005	--	--	--	--	--	--	--	1.39	--	--	171	
3/24/2006	--	--	--	--	--	--	--	0.97	0.97	011	013	
6/26/2006	--	--	--	--	--	--	--	7.18	7.23	091	084	
9/26/2006	--	--	--	--	--	--	--	1.19	0.80	44	44	
11/21/2006	--	--	--	--	--	--	--	1.12	0.79	41	47	
3/26/2007	--	--	--	--	--	--	--	3.20	3.60	31	52	
6/27/2007	--	--	--	--	--	--	--	2.01	1.67	66	58	
3/17/2008	0.086	3.8	31	530	--	--	--	2.91	1.98	151	156	
6/12/2008	0.070	1.8	26	550	--	--	--	1.89	1.22	172	171	
12/9/2009	0.17	ND<0.44	30	530	792	7.40	18.2	1.12	--	--	-101	
6/15/2010	0.13	3.3	36	550	1087	7.59	21.4	0.25	--	--	67	
12/20/2010	0.14	4.5	36	600	933.6	7.47	17.8	0.62	--	--	240	
U-6												
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
10/1/2002	--	--	--	--	--	--	--	0.90	--	--	--	
12/30/2002	--	--	--	--	--	--	--	0.20	--	--	88	
5/2/2003	--	--	--	--	--	--	--	0.90	--	--	145	
7/1/2003	--	--	--	--	--	--	--	0.70	--	--	120	
10/3/2003	--	--	--	--	--	--	--	2.26	--	--	12	
1/8/2004	--	--	--	--	--	--	--	11.95	--	--	- 37	
4/15/2004	--	--	--	--	--	--	--	3.47	--	--	- 20	
7/15/2004	--	--	--	--	--	--	--	3.25	--	--	- 43	
12/8/2004	--	--	--	--	--	--	--	0.94	--	--	-91	
3/23/2005	--	--	--	--	--	--	--	0.55	--	--	-077	
6/28/2005	--	--	--	--	--	--	--	0.86	--	--	-129	
9/23/2005	--	--	--	--	--	--	--	1.97	--	--	-82	
12/30/2005	--	--	--	--	--	--	--	1.01	--	--	-66	
3/24/2006	--	--	--	--	--	--	--	0.79	1.25	011	009	
6/26/2006	--	--	--	--	--	--	--	1.23	5.48	015	027	
9/26/2006	--	--	--	--	--	--	--	6.97	7.05	-67	-69	
11/21/2006	--	--	--	--	--	--	--	0.83	1.05	-65	-69	
3/26/2007	--	--	--	--	--	--	--	6.40	6.26	15	9	
6/27/2007	--	--	--	--	--	--	--	3.51	3.20	-64	-54	
3/17/2008	0.066	ND<0.44	51	860	--	--	--	1.19	1.87	101	26	
6/12/2008	0.11	0.45	27	860	--	--	--	1.10	2.08	-20	-26	
6/15/2010	0.17	ND<0.44	13	960	1830	6.57	19.3	1.04	--	--	-55	
12/20/2010	0.10	1.5	32	940	1580	6.50	17.3	0.90	--	--	9	
U-7												
1/3/2002	--	--	--	--	--	--	--	--	--	--	--	
10/1/2002	--	--	--	--	--	--	--	1.80	--	--	- 60	
12/30/2002	--	--	--	--	--	--	--	0.10	--	--	121	
5/2/2003	--	--	--	--	--	--	--	0.40	--	--	105	
7/1/2003	--	--	--	--	--	--	--	0.50	--	--	95	
10/3/2003	--	--	--	--	--	--	--	2.91	--	--	- 21	
1/8/2004	--	--	--	--	--	--	--	11.85	--	--	- 51	
4/15/2004	--	--	--	--	--	--	--	4.68	--	--	- 16	
7/15/2004	--	--	--	--	--	--	--	2.55	--	--	- 52	
12/8/2004	--	--	--	--	--	--	--	1.20	--	--	-88	
3/23/2005	--	--	--	--	--	--	--	0.21	--	--	-088	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
6/28/2005	--	--	--	--	--	--	--	1.32	--	--	-160	
9/23/2005	--	--	--	--	--	--	--	2.25	--	--	108	
12/30/2005	--	--	--	--	--	--	--	1.12	--	--	105	
3/24/2006	--	--	--	--	--	--	--	1.09	0.99	008	009	
6/26/2006	--	--	--	--	--	--	--	1.46	1.27	025	032	
9/26/2006	--	--	--	--	--	--	--	0.78	1.02	-47	-63	
11/21/2006	--	--	--	--	--	--	--	0.88	0.98	-43	-59	
3/26/2007	--	--	--	--	--	--	--	5.85	6.00	14	8	
6/27/2007	--	--	--	--	--	--	--	2.98	2.60	-90	-102	
3/17/2008	0.077	ND<0.44	7.0	640	--	--	--	3.06	2.86	137	120	
6/12/2008	0.15	19	13	700	--	--	--	0.98	2.27	9	-11	
6/11/2009	ND<0.050	ND<0.44	30	490	--	--	--	--	--	--	--	
12/9/2009	0.12	ND<0.44	13	510	772	7.27	17.0	0.94	--	--	23	
6/15/2010	0.15	ND<0.44	12	540	1080	7.76	22.4	0.15	--	--	17	
12/20/2010	0.074	17	22	570	1040	8.05	17.5	0.84	--	--	40	
U-8												
12/9/2009	0.19	ND<0.44	4.1	630	972	7.87	16.6	2.06	--	--	-78	
6/15/2010	0.19	0.59	16	600	2757	7.09	21.2	0.51	--	--	-32	
12/20/2010	0.13	1.1	24	520	1078	7.01	18.9	0.96	--	--	-56	
U-9												
12/9/2009	0.30	ND<0.44	ND<1.0	860	1203	6.94	13.5	1.29	--	--	-10	
6/15/2010	0.20	ND<0.44	12	630	1196	6.82	19.4	2.45	--	--	-89	
12/20/2010	0.12	ND<0.44	17	570	984.9	7.49	17.8	0.55	--	--	-41	
U-10												
6/11/2009	0.49	ND<0.44	190	970	--	--	--	--	--	--	--	
12/9/2009	0.33	ND<0.44	76	880	1009	7.04	17.9	0.94	--	--	-77	
6/15/2010	0.16	ND<0.44	8.2	700	1188	7.18	21.4	0.48	--	--	-66	
12/20/2010	0.18	ND<0.44	4.7	600	1066	7.06	18.1	0.99	--	--	-92	
U-11												
6/11/2009	--	--	--	--	--	--	--	--	--	--	--	
12/9/2009	0.26	ND<0.44	4.9	700	896	7.47	17.3	1.39	--	--	91	
6/15/2010	0.67	ND<4.4	7600	11000	5791	6.81	20.9	0.65	--	--	63	
12/20/2010	0.22	2.7	1500	2800	2203	6.69	18.0	0.82	--	--	-33	
U-12												
12/3/2008	0.14	28	59	630	--	--	--	2.85	2.71	66	26	

Table 2e
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 4186

Date Sampled	Fluoride (mg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	TDS (mg/l)	Field Con-ductivity ()	Field pH ()	Field Temp. ()	Post-purge Dissolved Oxygen ()	Pre-purge Dissolved Oxygen ()	Pre-purge ORP ()	Post-purge ORP ()	Comments
2/18/2009	0.086	29	61	610	1007	7.82	18.2	2.74	2.65	145	121	
6/11/2009	0.13	29	61	610	--	--	--	--	--	--	--	
12/9/2009	0.20	26	57	550	813	7.75	17.1	2.51	--	--	62	
6/15/2010	0.19	26	56	580	979.4	7.41	21.4	2.53	--	--	65	
12/20/2010	0.13	23	54	600	962.8	7.28	19.5	3.22	--	--	104	
U-13												
12/3/2008	0.16	26	65	610	--	--	--	1.70	2.21	62	58	
2/18/2009	0.20	26	69	510	1022	7.75	18.0	1.49	1.52	171	110	
6/11/2009	0.14	25	71	550	--	--	--	--	--	--	--	
12/9/2009	0.15	22	59	600	820	7.61	16.6	1.65	--	--	-52	
6/15/2010	0.091	25	54	620	996.2	7.46	20.2	1.75	--	--	37	
12/20/2010	0.10	24	55	640	914.8	7.76	17.3	2.23	--	--	179	
U-14												
12/3/2008	0.14	25	55	660	--	--	--	2.63	2.96	91	59	
2/18/2009	0.13	25	57	560	950.4	7.70	18.4	2.25	2.55	106	113	
6/11/2009	0.11	25	56	600	--	--	--	--	--	--	--	
12/9/2009	0.084	26	44	460	776	7.90	17.9	1.66	--	--	-22	
6/15/2010	0.10	25	38	400	971.6	7.53	18.9	1.67	--	--	-26	
12/20/2010	0.094	23	38	420	874.8	7.78	18.3	2.33	--	--	236	
U-15												
12/3/2008	0.13	21	52	670	--	--	--	2.21	2.55	108	118	
2/18/2009	0.12	23	54	570	962.4	7.66	17.4	1.98	1.95	109	104	
6/11/2009	0.12	22	55	560	--	--	--	--	--	--	--	
12/9/2009	0.17	18	52	560	831	7.85	15.1	1.98	--	--	-84	
6/15/2010	0.15	21	56	590	985.7	7.68	20.8	2.09	--	--	40	
12/20/2010	0.13	20	53	620	983.7	7.52	18.5	2.38	--	--	118	

ARCADIS

Appendix E

Linear Regression Analysis Outputs

Constituent	Screening Levels (µg/L)
TPH-GRO	100
Benzene	1
Toluene	150
Ethylbenzene	300
Total Xylenes	1,750
MTBE	13
TBA	12

Note:

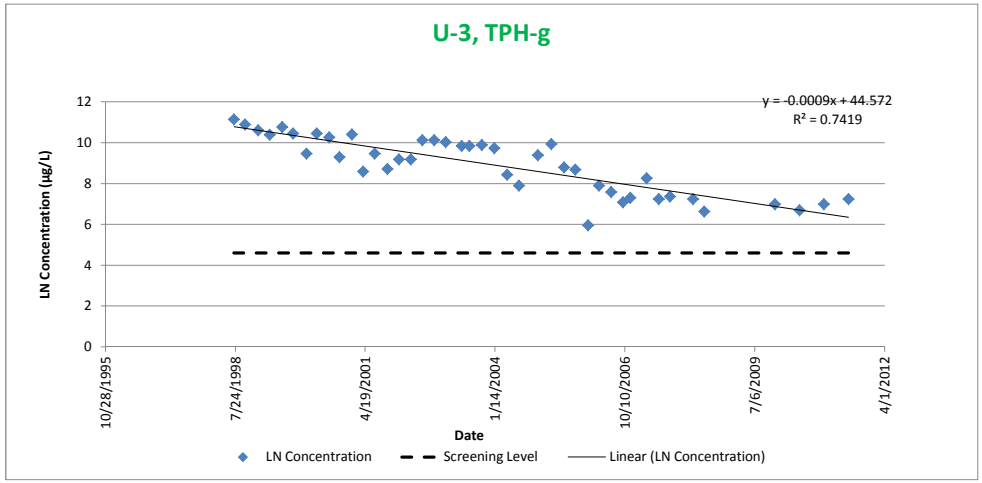
[1] Source SLs: Total petroleum hydrocarbons as gasoline (TPH-G), Tert-butyl alcohol (TBA) - lowest SFBRWQCB groundwater Environmental Screening Levels (ESLs) 2013

Benzene, Toluene, Ethylbenzene, and Xylene compounds and Methyl-tert-butyl ether (MTBE) - Maximum Contaminant Levels (MCLs)

SFBRWQCB - San Francisco Bay Regional Water Quality Control Board

Sample Information
Sample Location **U-3**
Constituent TPH-g

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
7/13/1998	70000	11.16
10/7/1998	54000	10.90
1/15/1999	41000	10.62
4/14/1999	33,000	10.40
7/19/1999	48,000	10.78
10/12/1999	35,000	10.46
1/24/2000	13,000	9.47
4/10/2000	35,200	10.47
7/17/2000	29,000	10.28
10/2/2000	11,000	9.31
1/8/2001	33,600	10.42
4/3/2001	5,390	8.59
7/2/2001	13,000	9.47
10/8/2001	6,100	8.72
1/3/2002	9,900	9.20
4/5/2002	9,800	9.19
7/2/2002	25,000	10.13
10/1/2002	25,000	10.13
12/30/2002	23,000	10.04
5/2/2003	19,000	9.85
7/1/2003	19,000	9.85
10/3/2003	20,000	9.90
1/8/2004	17,000	9.74
4/15/2004	4,600	8.43
7/15/2004	2,700	7.90
12/8/2004	12,000	9.39
3/23/2005	21,000	9.95
6/28/2005	6,600	8.79
9/23/2005	6,000	8.70
12/30/2005	390	5.97
3/24/2006	2,700	7.90
6/26/2006	2,000	7.60
9/26/2006	1,200	7.09
11/21/2006	1,500	7.31
3/26/2007	3,900	8.27
6/27/2007	1,400	7.24
9/23/2007	1,600	7.38
3/17/2008	1,400	7.24
6/12/2008	770	6.65
12/9/2009	1,100	7.00
6/15/2010	810	6.70
12/20/2010	1,100	7.00
6/27/2011	1,400	7.24



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value
GC/MS

Data quality	
Total # of data points used in regression	43
# of nondetects	2
% of data as detects	95

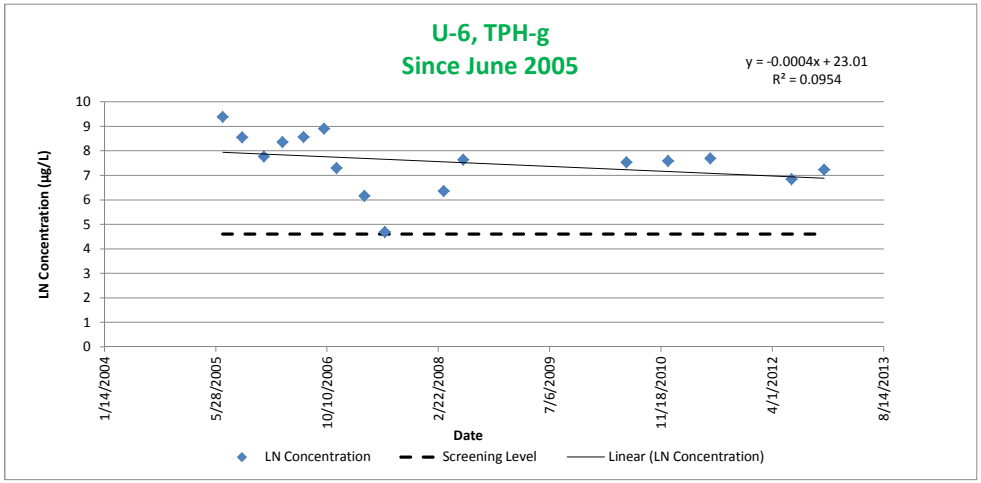
Results		
Coefficient of Determination (R^2) =	0.7419	
p-Value =	1.25E-13	
Attenuation Rate in Groundwater (K) =	0.0009	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0008	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	7.38E+02	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	44.572
Slope	-0.0009
Date to Screening Level	7/30/2016

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-6 [Since June 2005]**
Constituent TPH-g

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
6/28/2005	12,000	9.39
9/23/2005	5,200	8.56
12/30/2005	2,400	7.78
3/24/2006	4,300	8.37
6/26/2006	5,300	8.58
9/26/2006	7,400	8.91
11/21/2006	1,500	7.31
3/26/2007	480	6.17
6/27/2007	110	4.70
3/17/2008	580	6.36
6/12/2008	2,100	7.65
6/15/2010	1,900	7.55
12/20/2010	2,000	7.60
6/27/2011	2,200	7.70
6/26/2012	950	6.86
11/20/2012	1,400	7.24



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value
GC/MS

Data quality	
Total # of data points used in regression	16
# of nondetects	1
% of data as detects	94

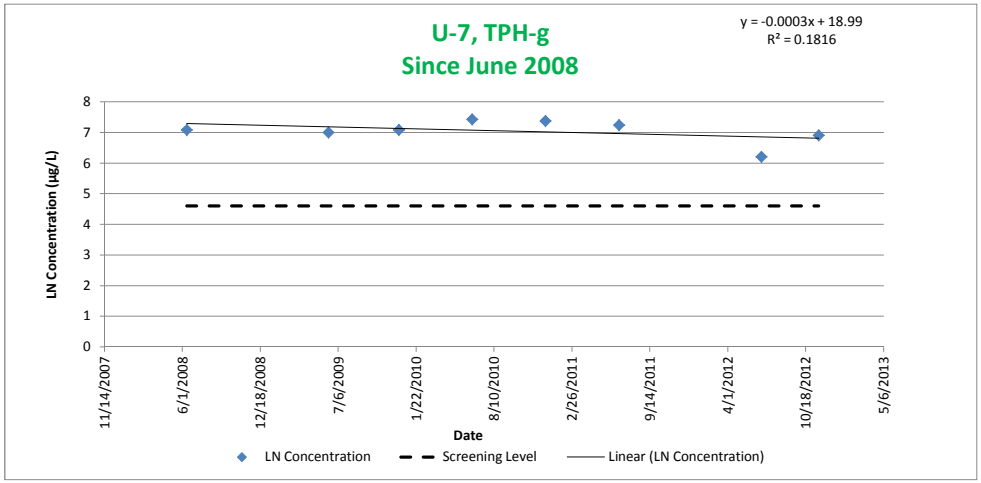
Results		
Coefficient of Determination (R^2) =	0.0954	
p-Value =	2.44E-01	
Attenuation Rate in Groundwater (K) =	0.0004	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0000	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.77E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	23.010
Slope	-0.0004
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-7 [Since June 2008]**
Constituent TPH-g

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
6/12/2008	1,200	7.09
6/11/2009	1,100	7.00
12/9/2009	1,200	7.09
6/15/2010	1,700	7.44
12/20/2010	1,600	7.38
6/27/2011	1,400	7.24
6/26/2012	500	6.21
11/20/2012	1,000	6.91



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value
GC/MS

Data quality	
Total # of data points used in regression	8
# of nondetects	0
% of data as detects	100

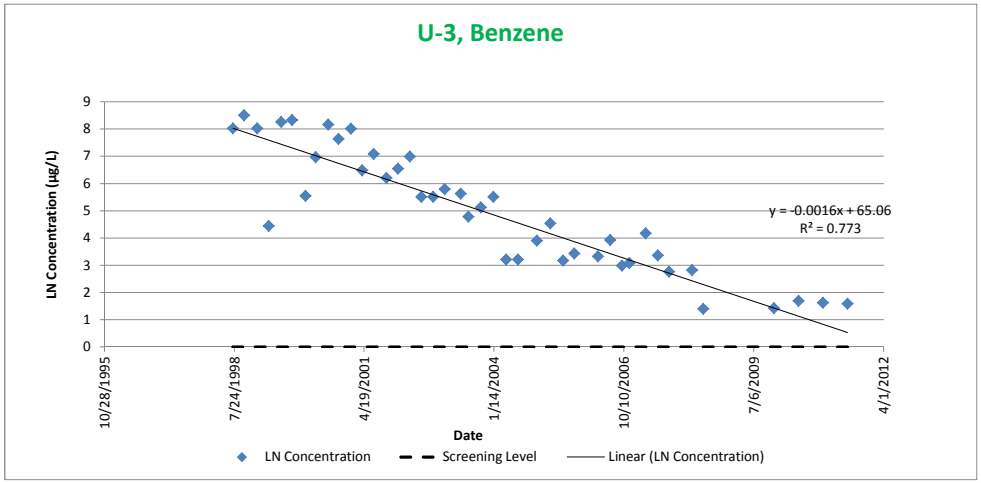
Results		
Coefficient of Determination (R^2) =	0.1816	
p-Value =	2.92E-01	
Attenuation Rate in Groundwater (K) =	0.0003	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	-0.0001	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	2.35E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	18.990
Slope	-0.0003
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-3**
Constituent Benzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
7/13/1998	3100	8.04
10/7/1998	5000	8.52
1/15/1999	3100	8.04
4/14/1999	86	4.45
7/19/1999	3,900	8.27
10/12/1999	4,200	8.34
1/24/2000	260	5.56
4/10/2000	1,070	6.98
7/17/2000	3,570	8.18
10/2/2000	2,100	7.65
1/8/2001	3,060	8.03
4/3/2001	660	6.49
7/2/2001	1,200	7.09
10/8/2001	500	6.21
1/3/2002	700	6.55
4/5/2002	1,100	7.00
7/2/2002	250	5.52
10/1/2002	250	5.52
12/30/2002	330	5.80
5/2/2003	280	5.63
7/1/2003	120	4.79
10/3/2003	170	5.14
1/8/2004	250	5.52
4/15/2004	25	3.22
7/15/2004	25	3.22
12/8/2004	50	3.91
3/23/2005	94	4.54
6/28/2005	24	3.18
9/23/2005	31	3.43
12/30/2005	0.5	-0.69
3/24/2006	28	3.33
6/26/2006	51	3.93
9/26/2006	20	3.00
11/21/2006	22	3.09
3/26/2007	65	4.17
6/27/2007	29	3.37
9/23/2007	16	2.77
3/17/2008	17	2.83
6/12/2008	4.1	1.41
12/9/2009	4.2	1.44
6/15/2010	5.5	1.70
12/20/2010	5.1	1.63
6/27/2011	4.9	1.59



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	43
# of nondetects	6
% of data as detects	86

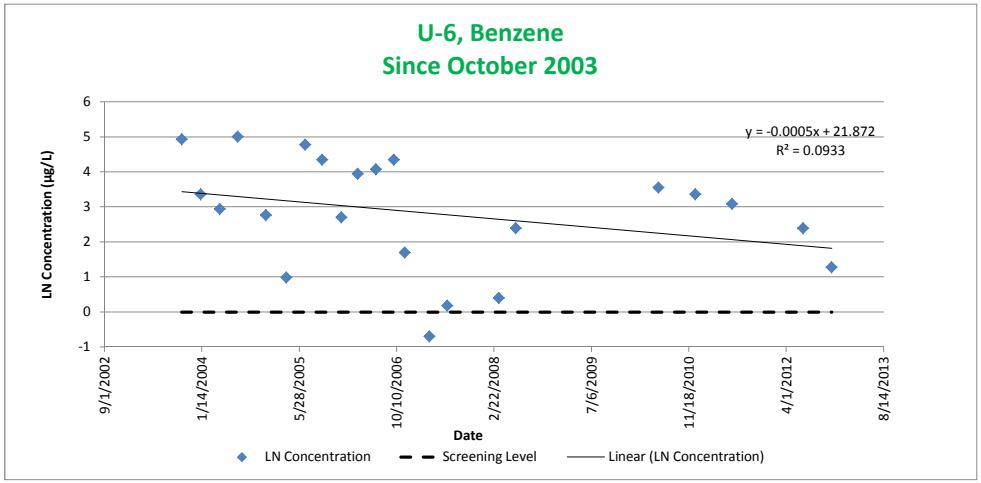
Results		
Coefficient of Determination (R^2) =	0.7730	
p-Value =	8.76E-15	
Attenuation Rate in Groundwater (K) =	0.0016	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0014	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	4.37E+02	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	65.060
Slope	-0.0016
Date to Screening Level	5/31/2012

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-6 [Since October 2003]**
Constituent Benzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
10/3/2003	140	4.94
1/8/2004	29	3.37
4/15/2004	19	2.94
7/15/2004	150	5.01
12/8/2004	16	2.77
3/23/2005	2.7	0.99
6/28/2005	120	4.79
9/23/2005	78	4.36
12/30/2005	15	2.71
3/24/2006	52	3.95
6/26/2006	59	4.08
9/26/2006	78	4.36
11/21/2006	6	1.70
3/26/2007	0.5	-0.69
6/27/2007	1.2	0.18
3/17/2008	1.5	0.41
6/12/2008	11	2.40
6/15/2010	35	3.56
12/20/2010	29	3.37
6/27/2011	22	3.09
6/26/2012	11	2.40
11/20/2012	3.6	1.28



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	22
# of nondetects	1
% of data as detects	95

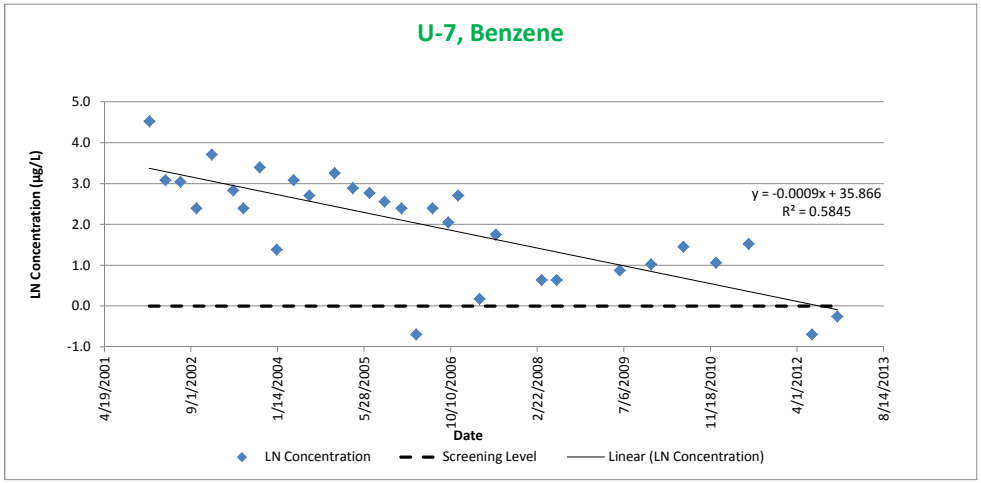
Results		
Coefficient of Determination (R^2) =	0.0933	
p-Value =	1.67E-01	
Attenuation Rate in Groundwater (K) =	0.0005	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0000	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.42E+03	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	21.872
Slope	-0.0005
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-7**
Constituent Benzene

Data		
Sample Date	Concentration (ug/L)	LN Concentration
1/3/2002	93	4.53
4/5/2002	22	3.09
7/2/2002	21	3.04
10/1/2002	11.0	2.40
12/30/2002	41.0	3.71
5/2/2003	17.0	2.83
7/1/2003	11.0	2.40
10/3/2003	30	3.40
1/8/2004	4	1.39
4/15/2004	22	3.09
7/15/2004	15	2.71
12/8/2004	26	3.26
3/23/2005	18.0	2.89
6/28/2005	16	2.77
9/23/2005	13	2.56
12/30/2005	11	2.40
3/24/2006	0.5	-0.69
6/26/2006	11	2.40
9/26/2006	8	2.05
11/21/2006	15	2.71
3/26/2007	1.2	0.18
6/27/2007	6	1.76
3/17/2008	2	0.64
6/12/2008	2	0.64
6/11/2009	2	0.88
12/9/2009	3	1.03
6/15/2010	4	1.46
12/20/2010	3	1.06
6/27/2011	5	1.53
6/26/2012	0.5	-0.69
11/20/2012	0.78	-0.25



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	31
# of nondetects	2
% of data as detects	94

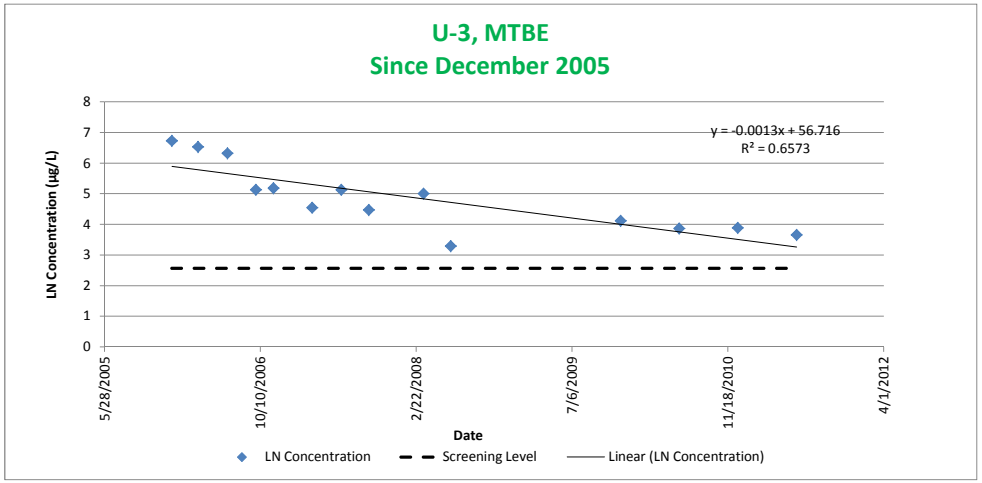
Results		
Coefficient of Determination (R^2) =	0.5845	
p-Value =	5.53E-07	
Attenuation Rate in Groundwater (K) =	0.0009	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0007	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	7.95E+02	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	35.866
Slope	-0.0009
Date to Screening Level	8/9/2012

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-3 [Since December 2005]**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/30/2005	840	6.73
3/24/2006	690	6.54
6/26/2006	560	6.33
9/26/2006	170	5.14
11/21/2006	180	5.19
3/26/2007	95	4.55
6/27/2007	170	5.14
9/23/2007	88	4.48
3/17/2008	150	5.01
6/12/2008	27	3.30
12/9/2009	62	4.13
6/15/2010	48	3.87
12/20/2010	49	3.89
6/27/2011	39	3.66



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	14
# of nondetects	0
% of data as detects	100

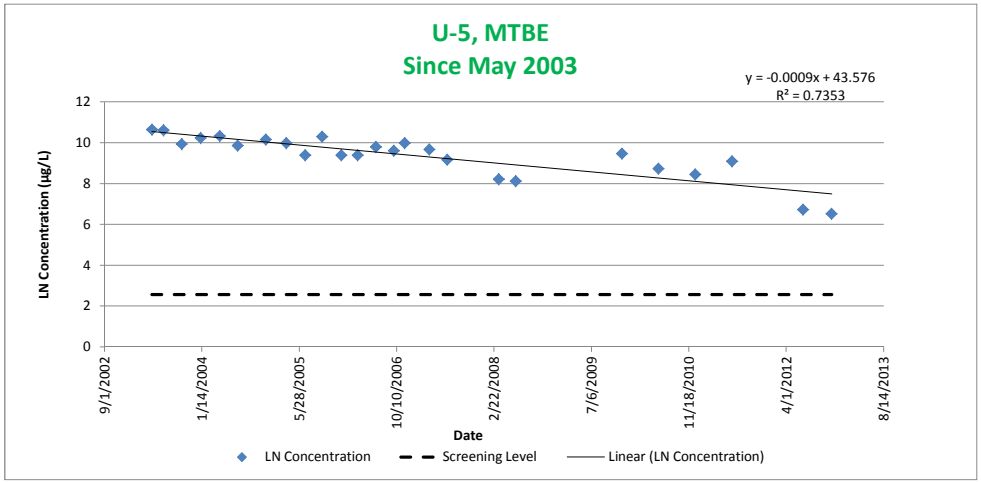
Results		
Coefficient of Determination (R^2) =	0.6573	
p-Value =	4.35E-04	
Attenuation Rate in Groundwater (K) =	0.0013	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0009	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	5.28E+02	days

Date Screening Level Reached	
Screening Level	13
LN Screening Level	2.6
Intercept	56.716
Slope	-0.0013
Date to Screening Level	12/7/2012

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-5 [Since May 2003]**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
5/2/2003	42,000	10.65
7/1/2003	40,900	10.62
10/3/2003	21,000	9.95
1/8/2004	28,000	10.24
4/15/2004	30,900	10.34
7/15/2004	19,300	9.87
12/8/2004	26,000	10.17
3/23/2005	22,000	10.00
6/28/2005	12,000	9.39
9/23/2005	30,000	10.31
12/30/2005	12,000	9.39
3/24/2006	12,000	9.39
6/26/2006	18,000	9.80
9/26/2006	15,000	9.62
11/21/2006	22,000	10.00
3/26/2007	16,000	9.68
6/27/2007	9,700	9.18
3/17/2008	3,700	8.22
6/12/2008	3,400	8.13
12/9/2009	13,000	9.47
6/15/2010	6,200	8.73
12/20/2010	4,700	8.46
6/27/2011	8,900	9.09
6/26/2012	840	6.73
11/20/2012	690	6.54



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value
8021B

Data quality	
Total # of data points used in regression	25
# of nondetects	0
% of data as detects	100

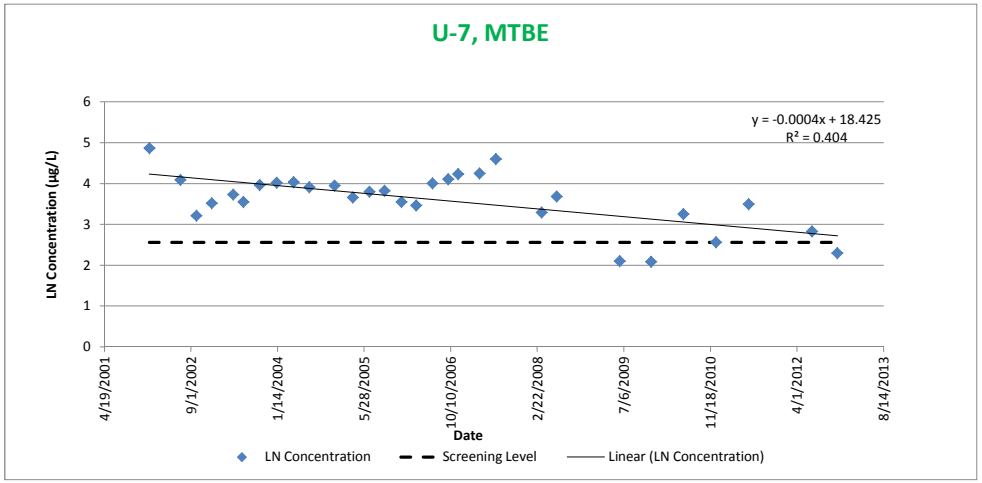
Results		
Coefficient of Determination (R^2) =	0.7353	
p-Value =	4.34E-08	
Attenuation Rate in Groundwater (K) =	0.0009	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0007	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	7.92E+02	days

Date Screening Level Reached	
Screening Level	13
LN Screening Level	2.6
Intercept	43.576
Slope	-0.0009
Date to Screening Level	4/29/2028

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-7**
Constituent MTBE

Data		
Sample Date	Concentration (ug/L)	LN Concentration
1/3/2002	130	4.87
7/2/2002	60	4.09
10/1/2002	25	3.22
12/30/2002	34	3.53
5/2/2003	42	3.74
7/1/2003	35	3.56
10/3/2003	53	3.97
1/8/2004	56	4.03
4/15/2004	57	4.04
7/15/2004	50	3.91
12/8/2004	52	3.95
3/23/2005	39	3.66
6/28/2005	45	3.81
9/23/2005	46	3.83
12/30/2005	35	3.56
3/24/2006	32	3.47
6/26/2006	55	4.01
9/26/2006	61	4.11
11/21/2006	69	4.23
3/26/2007	70	4.25
6/27/2007	100	4.61
3/17/2008	27	3.30
6/12/2008	40	3.69
6/11/2009	8	2.10
12/9/2009	8	2.09
6/15/2010	26	3.26
12/20/2010	13	2.56
6/27/2011	33	3.50
6/26/2012	17	2.83
11/20/2012	10	2.30



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	30
# of nondetects	0
% of data as detects	100

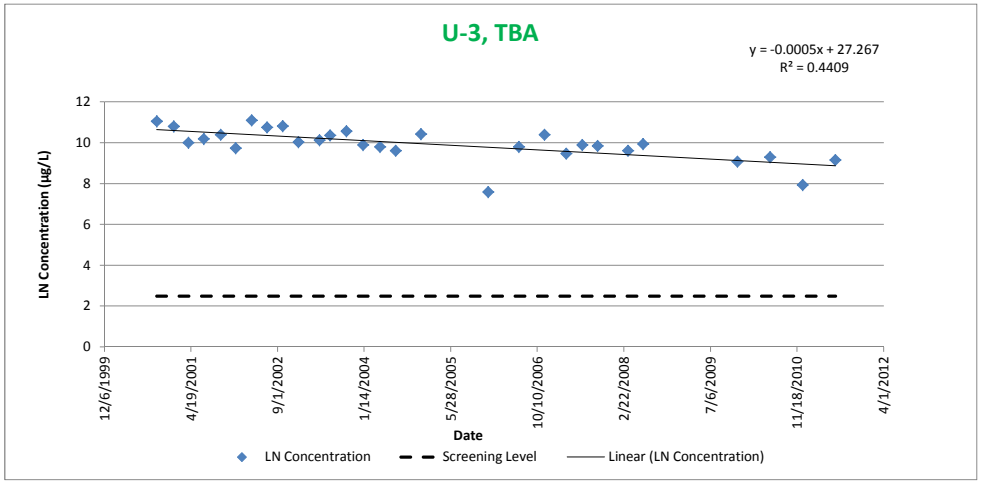
Results		
Coefficient of Determination (R^2) =	0.4040	
p-Value =	1.60E-04	
Attenuation Rate in Groundwater (K) =	0.0004	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0003	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.82E+03	days

Date Screening Level Reached	
Screening Level	13
LN Screening Level	2.6
Intercept	18.425
Slope	-0.0004
Date to Screening Level	1/1/2014

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **U-3**
Constituent TBA

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
10/2/2000	63000	11.05
1/8/2001	49300	10.81
4/3/2001	22200	10.01
7/2/2001	27,000	10.20
10/8/2001	33,000	10.40
1/3/2002	17,000	9.74
4/5/2002	66,000	11.10
7/2/2002	47,000	10.76
10/1/2002	50,000	10.82
12/30/2002	23,000	10.04
5/2/2003	25,000	10.13
7/1/2003	32,000	10.37
10/3/2003	39,000	10.57
1/8/2004	20,000	9.90
4/15/2004	18,000	9.80
7/15/2004	15,000	9.62
12/8/2004	34,000	10.43
12/30/2005	2,000	7.60
6/26/2006	18,000	9.80
11/21/2006	33,000	10.40
3/26/2007	13,000	9.47
6/27/2007	20,000	9.90
9/23/2007	19,000	9.85
3/17/2008	15,000	9.62
6/12/2008	21,000	9.95
12/9/2009	8,800	9.08
6/15/2010	11,000	9.31
12/20/2010	2,800	7.94
6/27/2011	9,600	9.17



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	29
# of nondetects	2
% of data as detects	93

Results		
Coefficient of Determination (R^2) =	0.4409	
p-Value =	8.59E-05	
Attenuation Rate in Groundwater (K) =	0.0005	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0003	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.53E+03	days

Date Screening Level Reached	
Screening Level	12
LN Screening Level	2.5
Intercept	27.267
Slope	-0.0005
Date to Screening Level	3/24/2050

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm