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**Alameda County
Environmental Health**

Antea USA, Inc.
5910 Rice Creek Parkway, Suite 100
Shoreview, Minnesota 55126 USA
www.anteagroup.com

May 21, 2012

Mr. George Lockwood
State Water Resources Control Board
Division of Water Quality
P.O. Box 2231
Sacramento, CA 95812

**Re: Case Closure Petition
76 Station No. 5748/6419
6401 Dublin Boulevard
Dublin, California
Case No. RO0000459**

Dear Mr. Lockwood,

Antea Group has prepared this Case Closure Petition to document historical activities at the site, current site conditions, and petroleum hydrocarbon degradation timeframes to provide sufficient information for closure of the site. Attenuation of soil and groundwater at the site has occurred. The enclosed documentation has been provided to support that the residual impacts at the site present no risk to human health or the environment and the contaminant concentrations are expected to meet basin water quality objectives within a reasonable timeframe.

Antea Group submitted a request for regulatory closure for the site to the Alameda County Health Care Services (ACHCSA) on March 9, 2012. To date, Antea Group has not received a response from the ACHCSA as to the status of case closure.

Upon receipt of site closure, Antea Group will initiate the removal of existing site monitoring wells as required and final report documenting removal of the monitoring wells will be submitted. If you have any questions regarding the contents of this Case Closure Petition or require additional information prior to closure, please do not hesitate to contact me at (916) 503-1261.

Sincerely,
ANTEA GROUP

A handwritten signature in blue ink that reads "Dennis S. Dettloff".

Dennis S. Dettloff
Project Manager
Dennis.dettloff@anteagroup.com
Antea Group





LBermudez@pcandf.com

Direct: 925-931-5760

Fax: 925-905-2746

March 9, 2012

Mr. Paresh Khatari
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Case Closure Request
Site: 76 Station No. 5748/6419
6401 Dublin Boulevard
Dublin, California
Fuel Leak Case No. RO0000459

Dear Mr. Khatari;

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.

If you have any questions or need additional information, please call:

Liz Bermudez
Pacific Convenience & Fuel
7180 Koll Center Parkway, Suite 100
Pleasanton, California 94566
Tel: (925) 931-5760
Fax: (925) 905-2746
lbermudez@pcandf.com

Sincerely,

PACIFIC CONVENIENCE & FUEL

A handwritten signature in black ink that reads "Liz Bermudez". The signature is written in a cursive, flowing style.

LIZ BERMUDEZ
Senior Paralegal

Attachment

Case Closure Request

*76 Station No. 5748/6419
6401 Dublin Boulevard
Dublin, California*

*Alameda County LOP
No. RO0000459
Regional Water Quality Control Board -
San Francisco Bay, Case No.01-1568*

GeoTracker Global ID No. T0600101443

*Antea Group Project No. I42705748
March 9, 2012*

Prepared for:
Mr. Paresh Khatri
Hazardous Material Specialist
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway
Suite 250
Alameda, CA 94502

Prepared by:
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1.0 INTRODUCTION

Antea Group has prepared this Case Closure Request for the Alameda County Health Care Services Agency (ACHCSA). The purpose of this report is to summarize historical data collected during previous investigations, monitoring and sampling events, and evaluate the site data for low-risk case closure.

1.1 Site Description

The subject site is an active 76 station located on the western corner of Dublin Boulevard and Dougherty Road in Dublin, California. The site is bounded to the south by Dublin Boulevard, to the northeast by Dougherty Road, and to the northwest and southwest by a shopping center and parking lot. Properties in the immediate site vicinity are commercial, including service stations and retail facilities.

Current aboveground site facilities consist of two dispenser islands, a car wash, and a station building/convenience store. Two 12,000-gallon gasoline underground storage tanks (USTs) are located in the common pit, east of the station building (**Figures 1 and 2**).

1.2 Geologic Setting

1.2.1 Regional Geologic Setting

The site is underlain by Pleistocene alluvial deposits and Miocene to Pliocene sedimentary rock described as marine and nonmarine conglomerate, sandstone and siltstone as well as basalt and limestone.

1.2.2 Site Geologic Setting

Based on soils observed during soil boring activities at the site, the site is underlain by silt with sand, clay, clay with sand, sand, and gravelly sand. Fine grain material such as clay and silt extend from just below ground surface to depths of 32 feet bgs, with lenses of sand and silty sand. A layer of sand is located at approximately 32 to 34 feet bgs and extends to 40 feet bgs. A lens of sandy silt and clay is located at approximately 36 feet bgs. Cross sections are presented on **Figure 3** and **Figure 4**. Boring logs are presented as **Appendix A**.

1.3 Hydrogeologic Setting

1.3.1 Regional Hydrogeologic setting

The site is located in the Livermore Valley Groundwater Basin. This basin ranges from the Pleasanton Ridge, east to the Altamont Hills and from the Livermore Upland, north to the Orinda Upland. Surface waters are drained by the Arroyo Valley, Arroyo Mocho, Arroyo las Positas, Alamo Creek, South San Ramon Creek, and Tassajara Creek, all of which converge on the west side of the basin to form the Arroyo de la Laguna. Groundwater gradient within the basin is generally to the west, then south towards the Arroyo de la Laguna.

1.3.2 Site Hydrogeologic Setting

The site currently has a network of three on-site monitoring wells (MW-1R, MW-3, and MW-5). Depth to groundwater in the monitoring wells has historically ranged from 5.09 feet below top of casing (btc) [MW-2, February 1998] to 13.37 feet btc [MW-8, February 2004]. The groundwater flow direction and gradient observed during the third quarter 2011 sampling event are shown on **Figure 5**. The historical groundwater flow direction is predominantly southwest with an average hydraulic gradient of 0.006 foot per foot (ft/ft). Historical groundwater flow directions and gradient data are presented as **Appendix B**.

2.0 SUMMARY OF PREVIOUS WORK

Over the history of the site assessment, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by United States Environmental Protection Agency (EPA) Method 8015B or 8260. Antea Group uses the designation TPHg for total petroleum hydrocarbons as gasoline within the C5 to C12 carbon range, diesel range organics (DRO) for total petroleum hydrocarbons as diesel within the C10 to C28 carbon range, and residual range organics (RRO) for total petroleum hydrocarbons as oil within the C24 to C40 carbon range.

Terms from previous reports may include, but are not limited to, total petroleum hydrocarbons (TPH), total recoverable petroleum hydrocarbons (TRPH), total extractable petroleum hydrocarbons (TEPH), total purgeable petroleum hydrocarbons (TPPH), and total volatile hydrocarbon (TVH) which refers to a

broad carbon range. More specific terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO, respectively. Antea Group has left the original designation when summarizing historical data and the second designations when applied to recent investigations and summary discussions.

September 1993: Two 10,000-gallon gasoline USTs, one 55-gallon waste-oil UST, and the associated product piping were removed from the site subsequent to confirmation sampling. Groundwater was observed entering the UST excavation. Concentrations of petroleum hydrocarbons in confirmation soil samples beneath the fuel USTs were non-detect to low. Petroleum hydrocarbon and volatile organic compounds (VOCs) concentrations in confirmation soil samples beneath the waste-oil UST were non-detect to low, and concentrations of metals were considered background levels. Petroleum hydrocarbon and lead concentrations in confirmation soil samples from the dispenser islands were non-detect, and low, respectively. Petroleum hydrocarbon and lead concentrations in confirmation soil samples from the piping trenches were non-detect, and low, respectively.

February 1994: Three on-site monitoring wells (MW-1 through MW-3) were installed.

June 1999: Four on-site monitoring wells (MW-4 through MW-7) were installed to a depth of approximately 19 feet below ground surface (bgs).

November 1999: A four-inch diameter groundwater observation and extraction well (TPW-1) was installed in the gasoline UST pit backfill to allow purging of methyl tert-butyl ether (MTBE) impacted groundwater.

September 2001: Two off-site monitoring wells (MW-8 and MW-9) were installed to a depth of 20 feet bgs.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

December 2004: Off-site monitoring wells MW-8 and MW-9 were abandoned due to construction activities planned at those locations by Pin Brothers Fine Homes.

January 12, 2006: On-site monitoring wells MW-2, MW-4, MW-6, and MW-7 were abandoned at the request of the City of Dublin in anticipation of street widening on both Dougherty Road and Dublin Boulevard.

December 21, 2010: MW-1 was replaced with MW-1R after the casing in MW-1 was found to be compromised. MW-1 was over-drilled and MW-1R was installed in the same boring.

January 2011: Delta Consultants rebranded to Antea Group.

August 2011: Antea Group supervised the advancement of soil borings CPT-1 and CPT-2. Analytical results from the soil samples indicated that MTBE was present at concentrations ranging from 0.0074 mg/kg (CPT-2d40) to 0.01 mg/kg (CPT1d15). Analytical results from grab-groundwater samples collected during the soil boring advancement indicated that all analyzed constituents were below the laboratory's indicated reporting limits.

3.0 PETROLEUM HYDROCARBON DISTRIBUTION AND TRENDS

3.1 Lateral and Vertical Extent of Non-Aqueous Phase Liquid

Non-aqueous phase liquid (NAPL) has not been observed in soil and groundwater samples collected at the site.

3.2 Distribution of Petroleum Hydrocarbons in Soil

Historical soil sampling analytical results are summarized in **Table 1**.

3.2.1 TPHg Distribution in Soil

TPHg was reported in several soil samples collected on-site with a maximum concentration of 9.7 mg/kg at 3 feet bgs in soil sample P3 in 1993. This soil sample was collected from beneath the former product lines located south of the station building. TPHg impacted soil at the site has been laterally and vertically delineated and further investigation is not warranted at this time, based on the soil sample analytical results from samples collected from monitoring wells MW-1 through MW-9 and CPT-1 and CPT-2.

3.2.2 Benzene Distribution in Soil

Benzene has been reported in several soil samples collected on-site with a maximum concentration of 0.11 mg/kg at 13.5 feet bgs in soil sample SW-4. This soil sample was collected from the northern side wall of the former UST pit. Benzene impacted soil has been laterally and vertically delineated and further investigation is not warranted at this time, based on the soil sample analytical results from samples collected from monitoring wells MW-1 through MW-9 and CPT-1 and CPT-2.

3.2.3 MTBE Distribution in Soil

MTBE has been reported in several soil samples collected on-site with a maximum concentration of 6 mg/kg at 6 feet bgs in soil boring MW-5. MTBE impacted soil has been laterally and vertically delineated and further investigation is not warranted at this time, based on the analytical results from the soil samples collected from monitoring wells MW-6 through MW-9 and CPT-1 and CPT-2.

3.3 Distribution of Petroleum Hydrocarbons in Groundwater

Historical groundwater sampling locations are shown on **Figure 2**. Historical groundwater concentrations observed during periodic monitoring and sampling events since 2002 are presented in **Table 2**. Historical grab groundwater concentrations are presented in **Table 3**.

Constituents of concern (COC) in groundwater at the site have historically been TPHg and MTBE. There are currently three groundwater monitoring wells on-site (MW-1R, MW-3, and MW-5) which monitor COC concentrations. Well construction details are included in **Table 4**.

3.3.1 TPHg Distribution in Groundwater

TPHg has historically been observed above the laboratory reporting limit in monitoring wells MW-1 through MW-9. TPHg was not reported above the laboratory's reporting limits in monitoring wells MW-1R, MW-3, and MW-5 during the third quarter 2011 monitoring and sampling event.

3.3.2 MTBE Distribution in Groundwater

MTBE has historically been observed above the laboratory reporting limit in monitoring wells MW-1 through MW-9. MTBE was reported in monitoring wells MW-1R, MW-3, and MW-5 during the third quarter 2011 monitoring and sampling event with a maximum concentration of 9.1 micrograms per liter ($\mu\text{g/L}$) in the sample collected from monitoring well MW-5 (**Figure 6**).

4.0 CONTAMINANT SOURCES, TRANSPORT, AND EXPOSURE PATHWAYS

4.1 Contaminant Source

Based on the distribution of contaminants of concern in the soil and groundwater, it appears the on-site release occurred from the former USTs in the center portion of the site (Figure 2) and/or the former product piping in the south central portion of the site. The highest concentrations of TPHg were found in soils immediately beneath the former product piping. Both the USTs and product lines have been replaced. It appears that contaminants of concern currently observed in soil and groundwater are residual in nature and will naturally attenuate within a reasonable amount of time.

4.2 Contaminant Transport and Preferential Pathways

A detailed underground utility survey has not been performed at the site. Based on the general arrangement diagram it appears that a majority of the underground utilities come onto the property on the north side of the site. However, the water utility does enter the site from the south and cuts across the product lines servicing the dispenser islands.

4.3 Potential Sensitive Receptors

July 3, 2007: TRC completed a sensitive receptor survey for the site. According to California Department of Water Resources (DWR) and the Zone 7 Water Agency records, four water supply wells are located within a one-half mile of the site. Three of the wells are listed by the Zone 7 Water Agency as water supply wells and are located approximately 1,940 feet east, 2,175 feet north, and 2,070 feet northwest of the site. One well is listed by the Zone 7 Water Agency as an abandoned water supply well and is located approximately 2,440 feet west-southwest of the site.

Three surface water bodies were identified within a one-half mile of the site. San Ramon Creek is located approximately 2,145 feet northwest of the site, an unnamed canal is located approximately 625 feet southwest of the site, and the Chabot Canal is located approximately 1,650 feet east of the site.

4.4 Exposure Pathways

4.4.1 Direct Contact (Ingestion and Dermal Contact)

Direct exposure to chemicals in the soil is primarily a concern when the impacts are located within 10 feet of the ground surface. Because the majority of the site is covered in concrete and asphalt, construction workers are the most likely on-site receptor to be directly exposed to the impacted soil and groundwater either during utility work or excavation activities. Commercial workers such as landscapers can potentially be exposed to chemicals in the soil to two feet bgs during typical irrigation system maintenance on-site. Due to the limited amount of landscaping on-site, the potential for exposure to this receptor is low. Commercial employees of the station typically do not perform subsurface work, and thus are less likely to be exposed.

4.4.2 Inhalation

Because the site is currently occupied by an active station, commercial workers are most susceptible to exposure via the inhalation pathway, as they spend the greatest amount of time on-site. The risk to customers is far less, based on their limited potential exposure time. Construction workers conducting an indoor remodel or outside work could be exposed to vapors within buildings or ambient air, although their time on-site would be limited. Because groundwater impact is limited to the site, it appears the inhalation risk to off-site residents does not exist.

A soil vapor survey has not been conducted at this site. In 1993 two soil samples, ST1 and ST2 were collected behind the former station building and adjacent to the current station building (ST2). These soil samples were analyzed for TPHg, benzene, toluene, ethylbenzene, and total xylenes. All constituents tested were below the laboratory's indicated reporting limits. This and the location of the station building, up-gradient and cross-gradient of the fuel dispensers, USTs, underground product piping, and the limited impacted groundwater indicate that the soil and groundwater beneath the current station is not likely impacted by petroleum hydrocarbons and MTBE and therefore, a soil vapor survey is not necessary.

5.0 LOW RISK CLOSURE READINESS EVALUATION

- **The release has been stopped and ongoing contaminant sources have been removed or remediated.**

Based on the distribution of contaminants of concern in the soil and groundwater, it appears the on-site release(s) occurred from the former USTs in the center portion of the site (**Figure 2**) and/or the former product lines in the south central portion of the site. The highest concentrations of TPHg was reported in soils immediately beneath the former product lines. Both the USTs and product lines have been replaced. It appears concentrations observed in soil and groundwater are residual in nature and will naturally attenuate within a reasonable amount of time.

- **The site has been adequately characterized.**

Soil impact at the site is minimal, and has been laterally and vertically delineated (**Section 3.2**). Groundwater impact at the site is now limited to MTBE (**Section 3.3**). It appears historical soil and groundwater sampling activities at the site have adequately delineated groundwater impact and further investigation is not warranted.

- **The contamination is not migrating.**

As stated before, groundwater impact at the site is now limited to MTBE. The highest concentration of MTBE (9.1 µg/L) is located in monitoring well MW-5 in the southwest portion of the site and observed concentrations decline in the predominant groundwater flow direction, southwest (**Figure 4 and Appendix B**). Grab-groundwater samples collected from boring CPT-1 and CPT-2, which were advanced south and southwest of monitoring well MW-5, did not report MTBE above the laboratory's indicated reporting limit. Based on the sampling data collected during the third quarter sampling event and grab-groundwater samples collected from CPT-1 and CPT-2, it appears the plume is stable and will naturally attenuate in a reasonable amount of time, absent an ongoing contaminant source.

- **No water wells, deep water drinking aquifers, surface water, or sensitive receptors are likely to be impacted.**

TRC performed a sensitive receptor survey in 2007. Three water supply wells were identified in the search and are approximately 1,940 feet east (up-gradient), 2,175 feet north (up- to cross-gradient), and 2,070 feet northwest (cross-gradient) of the site. Based on the CPT investigation and the third quarter sampling event, it does not appear that contamination is migrating in the direction of these water supply wells and impact to the wells due to contamination in the shallow groundwater originating beneath the site is unlikely.

There are three surface water bodies identified within a one-half mile of the site. San Ramon Creek is located approximately 2,145 feet northwest (cross-gradient) of the site, an unnamed canal is located approximately 625 feet southwest (down-gradient) of the site, and the Chabot Canal is located approximately 1,650 feet east (up-gradient) of the site. Based on the data obtained from the recent CPT investigation and the third quarter sampling event, it appears that impact to these water bodies due to contamination in the shallow groundwater originating beneath the site is unlikely.

- **The site presents no significant risk to human health and/or environment.**

There are no water supply wells in the immediate vicinity of the site and the shallow impacted groundwater plume does not appear to be migrating. Therefore, it appears the risk to off-site residents direct exposure to the shallow groundwater does not exist.

- **Destruction of Monitoring Wells.**

Antea Group will remove the three on-site monitoring wells by either over-drilling or pressure grouting when instructed to do so by the ACHCSA in preparation for regulatory closure. The well construction details are presented in **Table 4**.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Antea Group has made the following conclusions in this Case Closure Request:

- All contaminants of concern in soil have been laterally and vertically delineated, and do not pose a significant risk to human health. Further investigation of the soil impact due to the on-site release(s) is not warranted.
- Groundwater impacted has been adequately delineated cross- and down-gradient of the site. The MTBE reported in monitoring wells MW-3 and MW-5 during the third quarter 2011 was the only contaminants reported above water quality objectives (5 µg/L). The impacted groundwater plume does not appear to be migrating and concentrations reported in the three site monitoring wells show a decreasing trend.

7.0 REMARKS

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

Prepared by:

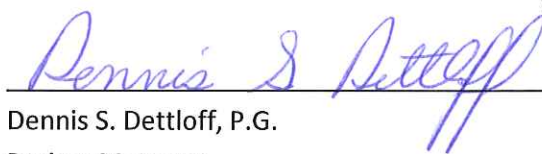


Edward T. Weyrens, G.I.T.
Staff Geologist

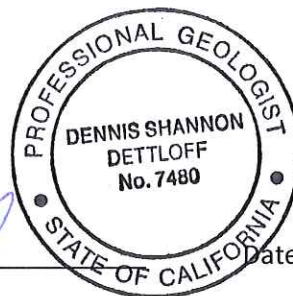
Date: 3-9-12

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Dennis S. Dettloff, P.G.
Project Manager
California Registered Professional Geologist No. 7480



Date: 3/9/12

Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Cross Section A-A'
- Figure 4 Cross Section B-B'
- Figure 5 Groundwater Elevation Contour Map – September 1, 2011
- Figure 6 Dissolved Phase MTBE Isoconcentration Map – September 1, 2011

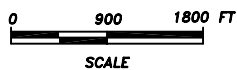
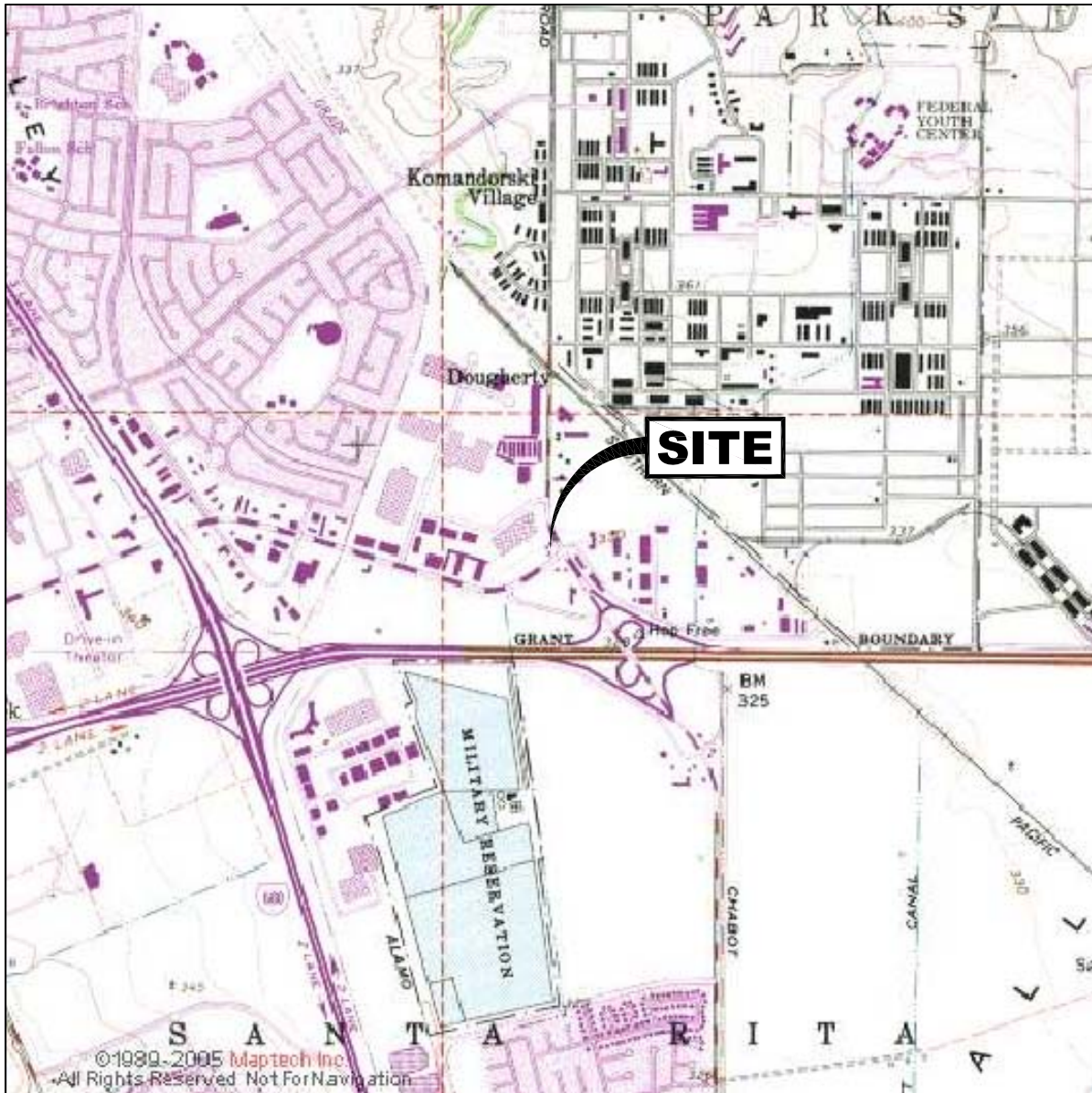


FIGURE 1

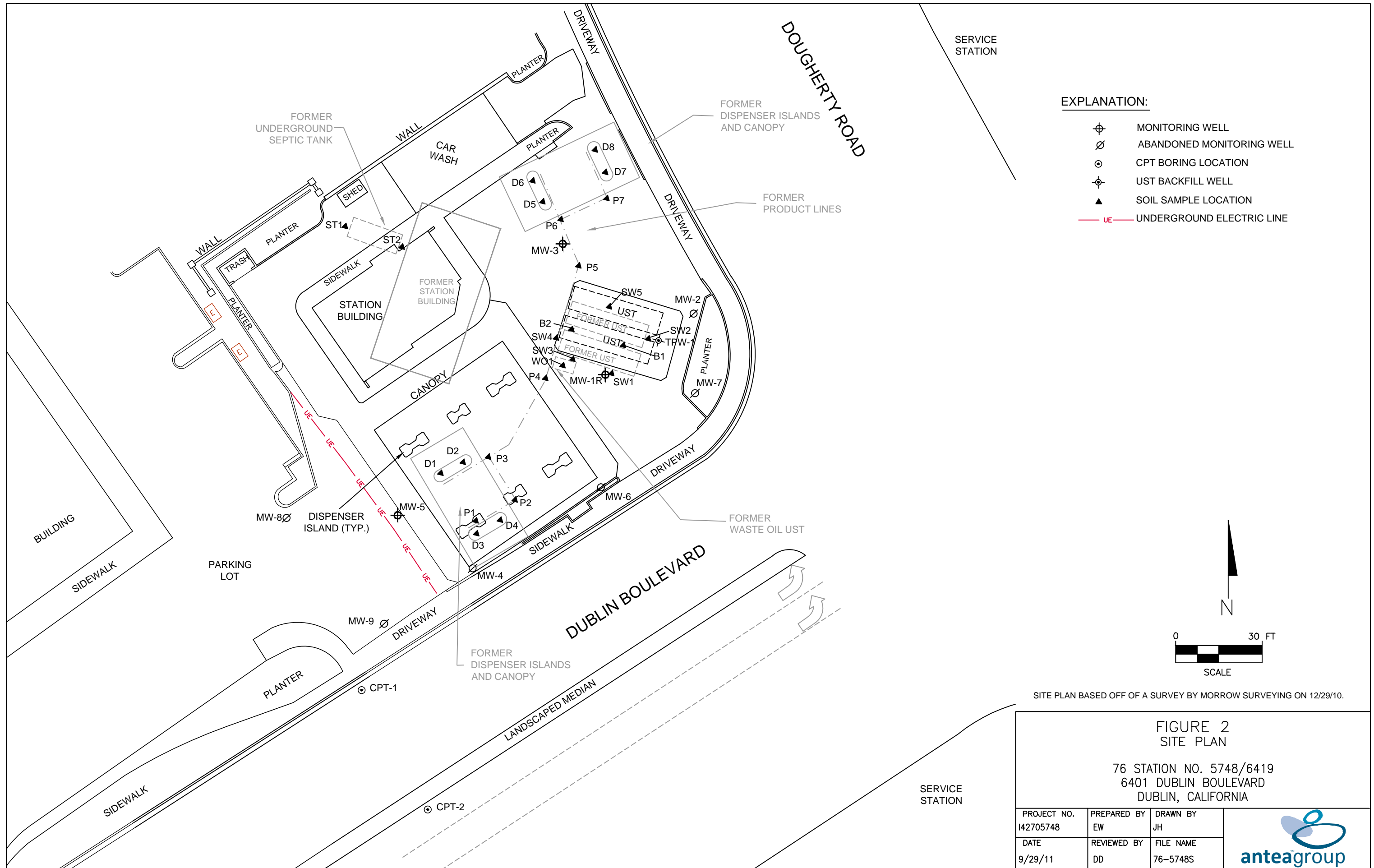
SITE LOCATION MAP

76 STATION NO. 5748 / 6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

PROJECT NO. C105748	DRAWN BY JH 2/2/11
FILE NO. 5748-SiteLocator	PREPARED BY JH
REVISION NO.	REVIEWED BY DD




SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, DUBLIN (1998) QUADRANGLE

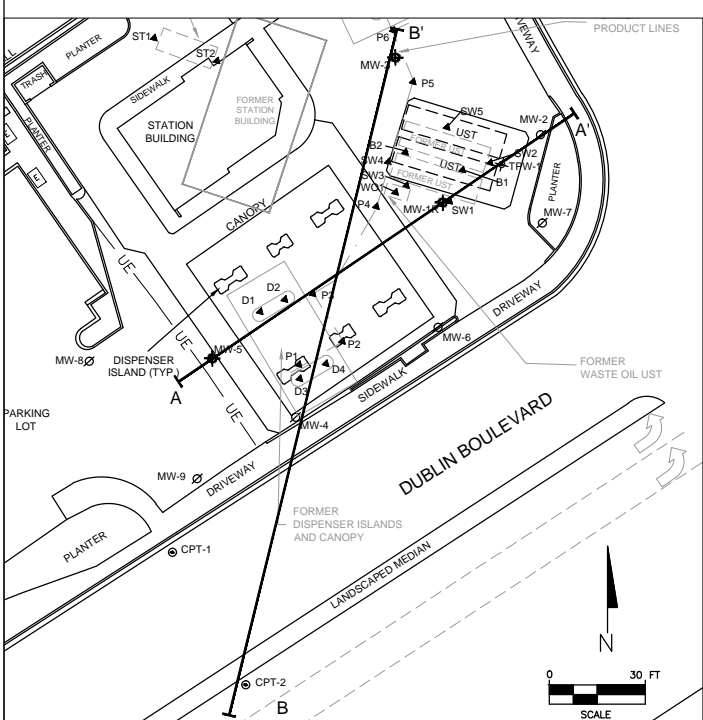
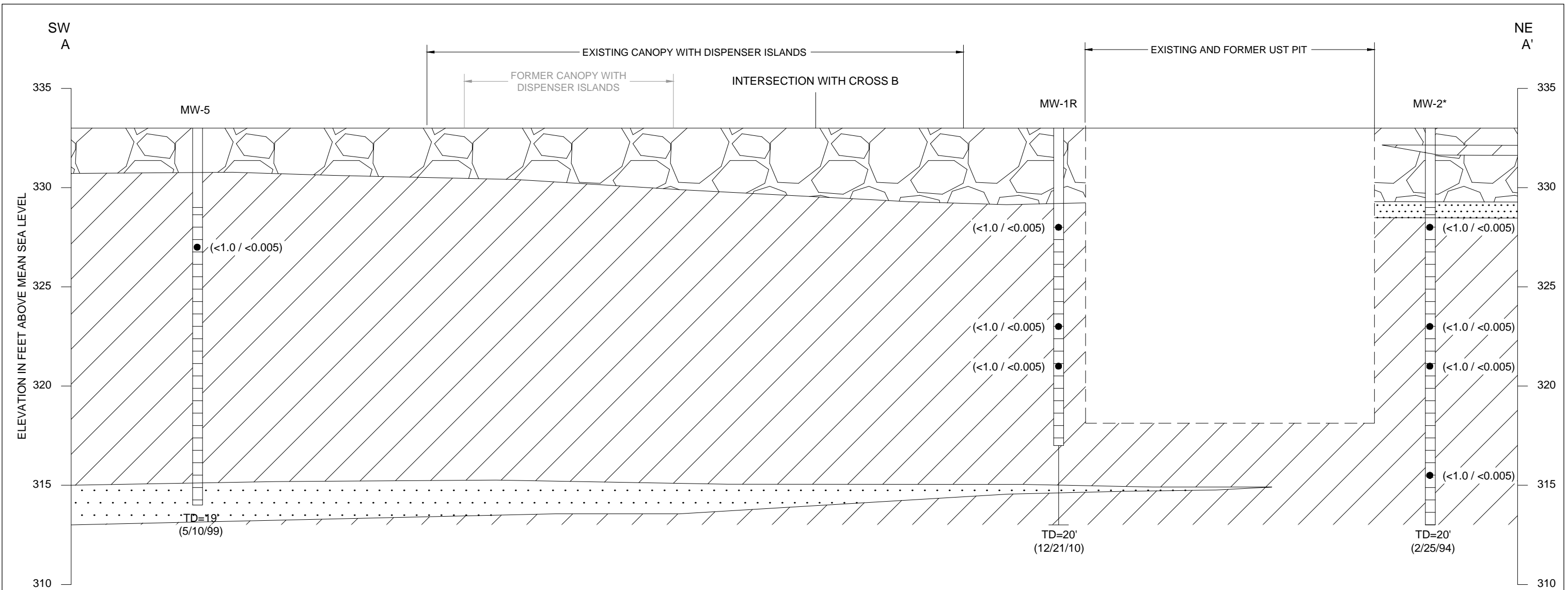


**FIGURE 2
SITE PLAN**

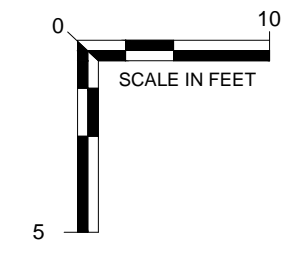
76 STATION NO. 5748/6419
6401 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 142705748	PREPARED BY EW	DRAWN BY JH
DATE 9/29/11	REVIEWED BY DD	FILE NAME 76-5748S





- LEGEND**
- MW-1R WELL NAME
 - WELL CASING
 - SOIL SAMPLE LOCATION WITH ANALYTICAL DATA; [TPHg/BENZENE] (mg/kg)
 - WELL SCREEN
 - FINE GRAINED MATERIAL
 - SAND
 - GRAVEL
 - APPROXIMATE STRATIGRAPHIC BOUNDARY

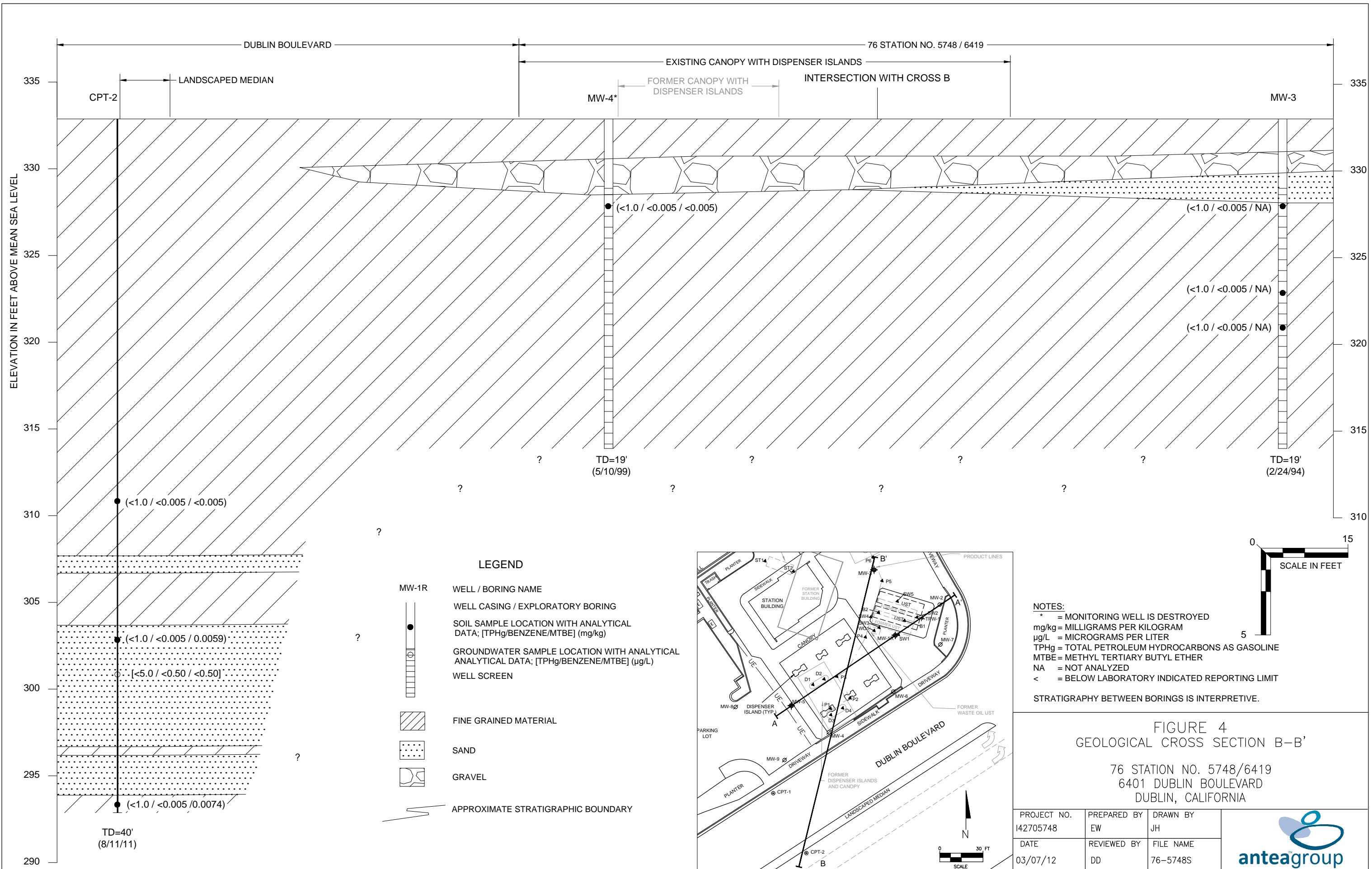


NOTES:
 * = MONITORING WELL IS DESTROYED
 mg/kg = MILLIGRAMS PER KILOGRAM
 TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
 < = BELOW LABORATORY INDICATED REPORTING LIMIT
 STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

FIGURE 3
GEOLOGICAL CROSS SECTION A-A'

76 STATION NO. 5748/6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

PROJECT NO. 142705748	PREPARED BY EW	DRAWN BY JH	
DATE 03/07/12	REVIEWED BY DD	FILE NAME 76-5748S	



ELEVATION IN FEET ABOVE MEAN SEA LEVEL

335
330
325
320
315
310
305
300
295
290

335
330
325
320
315
310

CPT-2

LANDSCAPED MEDIAN

MW-4*

FORMER CANOPY WITH DISPENSER ISLANDS

INTERSECTION WITH CROSS B

MW-3

DUBLIN BOULEVARD

76 STATION NO. 5748 / 6419

EXISTING CANOPY WITH DISPENSER ISLANDS

(<1.0 / <0.005 / <0.005)

(<1.0 / <0.005 / NA)

(<1.0 / <0.005 / NA)

(<1.0 / <0.005 / NA)

TD=19'
(5/10/99)

TD=19'
(2/24/94)

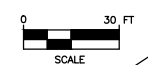
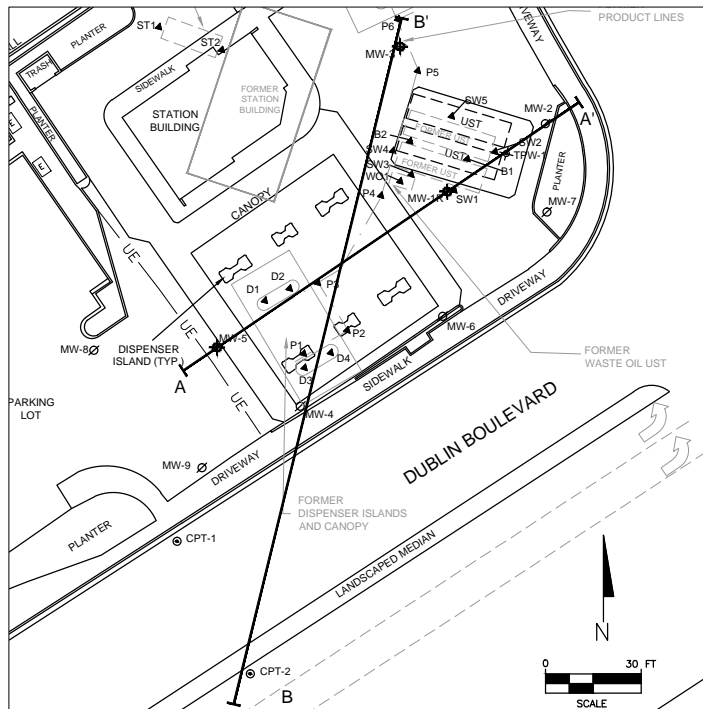
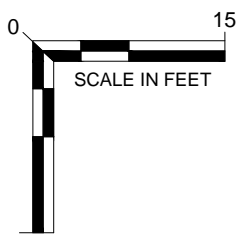
(<1.0 / <0.005 / <0.005)

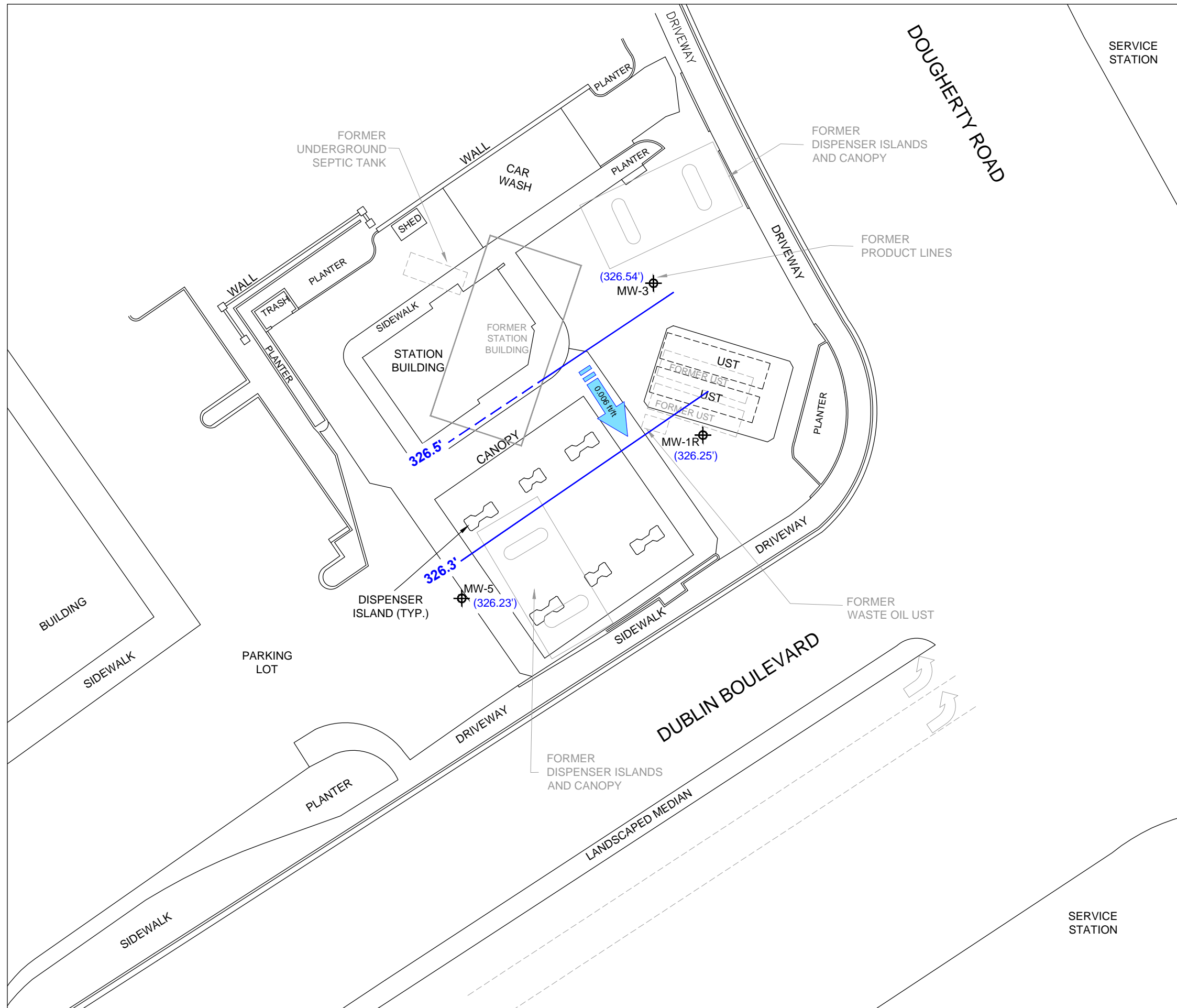
(<1.0 / <0.005 / 0.0059)

[<5.0 / <0.50 / <0.50]

(<1.0 / <0.005 / 0.0074)

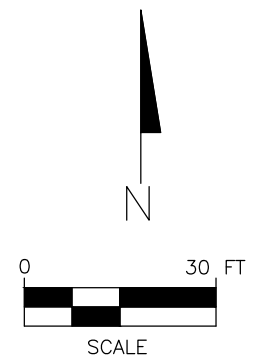
TD=40'
(8/11/11)





EXPLANATION:

- ⊕ MONITORING WELL
- (326.54) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (ft/msl)
- 326.3' — GROUNDWATER CONTOUR LINE (ft/msl)
-DASHED WHERE INFERRED
(CONTOUR INTERVAL: 0.20 ft.)
- ||| 0.006 ft/ft → GENERAL DIRECTION OF GROUNDWATER FLOW AND GRADIENT



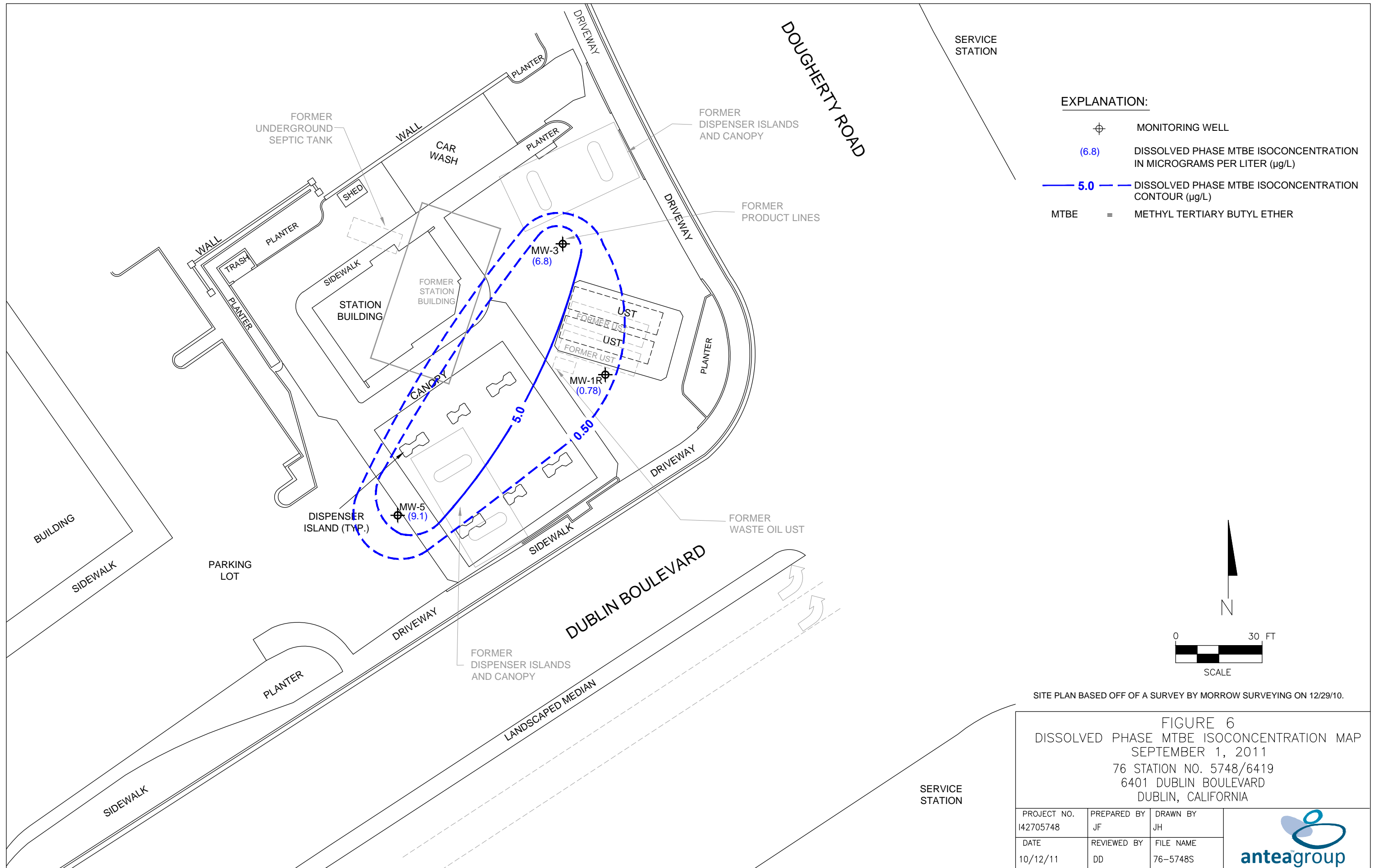
SITE PLAN BASED OFF OF A SURVEY BY MORROW SURVEYING ON 12/29/10.

FIGURE 5
 GROUNDWATER ELEVATION CONTOUR MAP
 SEPTEMBER 1, 2011
 76 STATION NO. 5748/6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

PROJECT NO. 142705748	PREPARED BY JF	DRAWN BY JH
DATE 10/12/11	REVIEWED BY DD	FILE NAME 76-5748S

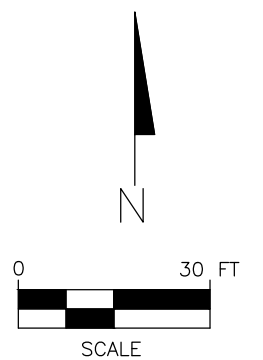


SERVICE STATION



EXPLANATION:

- ⊕ MONITORING WELL
- (6.8) DISSOLVED PHASE MTBE ISOCONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 5.0 — DISSOLVED PHASE MTBE ISOCONCENTRATION CONTOUR (µg/L)
- 0.50 — DISSOLVED PHASE MTBE ISOCONCENTRATION CONTOUR (µg/L)
- MTBE = METHYL TERTIARY BUTYL ETHER



SITE PLAN BASED OFF OF A SURVEY BY MORROW SURVEYING ON 12/29/10.

FIGURE 6
 DISSOLVED PHASE MTBE ISOCONCENTRATION MAP
 SEPTEMBER 1, 2011
 76 STATION NO. 5748/6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

PROJECT NO. 142705748	PREPARED BY JF	DRAWN BY JH
DATE 10/12/11	REVIEWED BY DD	FILE NAME 76-5748S



SERVICE STATION

Tables

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TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
76 Station No. 5748/6419
6401 Dublin Blvd, Dublin, California

Sample ID	Date	Sample Depth (feet)	TPHg (mg/kg)	TPHg* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Ethanol (mg/kg)	Lead (mg/kg)
D1	9/7/1993	2.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	14
D2	9/7/1993	2.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.4
D3	9/7/1993	2.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.2
D4	9/7/1993	2.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.2
D5	9/7/1993	5.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.3
D6	9/7/1993	5.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	9.8
D7	9/7/1993	5.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.1
D8	9/7/1993	5.5	<1.0	--	<0.005	<0.005	<0.005	0.03	--	--	4.8
P1	9/7/1993	3	<1.0	--	<0.005	0.0068	<0.005	0.012	--	--	6.4
P2	9/7/1993	3	<1.0	--	0.0073	0.012	<0.005	0.015	--	--	5
P3	9/7/1993	3	9.7	--	0.15	1.2	0.36	2.4	--	--	4.9
P4	9/7/1993	4.75	1.8	--	0.0061	0.012	0.066	0.053	--	--	6.8
P5	9/7/1993	7	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.3
P6	9/7/1993	6	<1.0	--	<0.005	0.011	0.048	0.032	--	--	17
P7	9/7/1993	6	2.4	--	<0.005	0.011	0.048	0.032	--	--	6.1
ST1	9/7/1993	10	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.8
ST2	9/7/1993	10	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	6.6
B1	9/8/1993	17	<1.0	--	0.0071	0.014	0.0072	0.026	--	--	5.9
B2	9/8/1993	15.5	1.2	--	0.017	0.01	0.13	0.017	--	--	7.3
SW1	9/8/1993	13.5	<1.0	--	<0.005	0.013	<0.005	0.019	--	--	6.2
SW2	9/8/1993	13.5	<1.0	--	0.0054	0.011	<0.005	0.012	--	--	6
SW3	9/8/1993	13.5	<1.0	--	0.005	0.011	0.0065	0.013	--	--	6.2
SW4	9/8/1993	13.5	2.6	--	0.11	0.28	0.067	0.34	--	--	6.5
SW5	9/8/1993	13.5	<1.0	--	0.0084	0.011	<0.005	0.021	--	--	6.8
WO1	9/8/1993	8	6.8	--	0.05	<0.005	0.28	0.02	--	--	6.3
MW1(5)	2/24/1994	5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW1(10)	2/24/1994	10	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW1(12)	2/24/1994	12	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW2(5)	2/25/1994	5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW2(10)	2/25/1994	10	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW2(12)	2/25/1994	12	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW2(17)	2/25/1994	17	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW3(5)	2/24/1994	5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW3(9.5)	2/24/1994	9.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW3(11)	2/24/1994	11	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--
MW4-6	5/10/1999	6	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW5-6	5/10/1999	6	<1.0	--	<0.005	<0.005	<0.005	<0.005	6	--	--
MW6-12	5/10/1999	12	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.33	--	--
MW7-6	5/10/1999	6	<1.0	--	0.01	<0.005	<0.005	0.008	<0.05	--	--
MW-8(5.5)	9/28/2001	5.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-8(7.5)	9/28/2001	7.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-9(5.5)	9/28/2001	5.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-9(7.5)	9/28/2001	7.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
CPT-1d15	8/10/2011	15	--	<1.0	<0.005	<0.005	<0.005	<0.005	0.01	<0.05	4.7
CPT-1d35	8/11/2011	35	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	2.7
CPT-1d40	8/11/2011	40	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	3
CPT-2d22	8/12/2011	22	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	5.3
CPT-2d31	8/12/2011	31	--	<1.0	<0.005	<0.005	<0.005	<0.005	0.0059	<0.05	4.3
CPT-2d40	8/12/2011	40	--	<1.0	<0.005	<0.005	<0.005	<0.005	0.0074	<0.05	4.1

Notes:

TPHg = total petroleum hydrocarbons as gasoline by EPA Method 8015

TPHg* = total petroleum hydrocarbons as gasoline by CA LUFT

BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260E

MTBE = methyl tertiary-butyl ether by EPA Method 8260

mg/kg = milligrams per kilogram

-- = not applicable

< = below laboratory's indicated reporting limit

Bold = above the laboratory's indicated reporting limit

TABLE 2
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5748/6419
6401 DUBLIN BLVD
DUBLIN, CALIFORNIA



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA						
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Ethanol (ug/L)
MW-1R	9/1/2011	333.08	6.83	NP	326.25	<50.0	<0.50	<0.50	<0.50	<1.5	0.78	<250
MW-3	9/1/2011	333.40	6.86	NP	326.54	<50.0	<0.50	<0.50	<0.50	<1.5	6.8	<250
MW-5	9/1/2011	333.05	6.82	NP	326.23	<50.0	<0.50	<0.50	<0.50	<1.5	9.1	<250

Gauging Notes:

TOC - Top of Casing

ft - Feet

NP - LNAPL not present

LNAPL - Light non-aqueous phase liquid

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

-- - No information available

Analytical Notes:

< - Below laboratory's indicated reporting limit

Bold - Above laboratory's indicated reporting limit

ug/L - micrograms/liter

GRO- gasoline range organics

MTBE- Methyl tertiary-butyl ether

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
 76 Station No. 5748/6419
 6401 DUBLIN BLVD
 DUBLIN, CALIFORNIA



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-3	8/2/1999	330.49	6.95	NP	323.54	--	ND	ND	ND	ND	ND	140	--	--	--	--	--	--	--	--
	2/11/2000	330.49	6.71	NP	323.78	--	ND	ND	ND	ND	ND	46	--	--	--	--	--	--	--	--
	7/26/2000	330.60	7.35	NP	323.25	--	ND	ND	ND	ND	ND	927	--	--	--	--	--	--	--	--
	2/2/2001	330.60	7.17	NP	323.43	--	ND	ND	ND	ND	ND	2240	--	--	--	--	--	--	--	--
	5/16/2001	330.60	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/24/2001	330.60	7.88	NP	322.72	--	<50	<0.50	<0.50	<0.50	<0.50	2500	--	--	--	--	--	--	--	--
	10/11/2001	330.59	7.83	NP	322.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/2002	330.59	6.73	NP	323.86	--	<1000	<10	<10	<10	<10	4300	3300	<33	<33	<33	<670	<17000	<33	<33
	7/30/2002	330.59	7.38	NP	323.21	--	<2500	<25	<25	<25	<50	--	4900	--	--	--	--	--	--	--
	2/17/2003	330.59	6.49	NP	324.10	--	<2500	<25	<25	<25	<50	--	4400	--	--	--	--	--	--	--
	8/18/2003	330.59	6.70	NP	323.89	--	4400	<20	<20	<20	<40	--	3300	--	--	--	--	<20000	--	--
	2/24/2004	330.59	6.11	NP	324.48	--	<2500	<25	<25	<25	<50	--	3000	--	--	--	--	<25000	--	--
	9/17/2004	330.59	7.61	NP	322.98	--	<1300	<13	<13	<13	<25	--	2300	--	--	--	--	<1300	--	--
	3/22/2005	330.59	5.79	NP	324.80	--	<1300	<0.50	<0.50	<0.50	<1.0	--	1600	--	--	--	--	<1300	--	--
	9/29/2005	330.59	9.24	NP	321.35	--	680	<0.50	<0.50	<0.50	<1.0	--	1600	--	--	--	--	<250	--	--
	1/9/2006	330.59	7.74	NP	322.85	--	410	<0.50	<0.50	<0.50	<1.0	--	1200	--	--	--	--	<250	--	--
	9/27/2006	330.59	8.54	NP	322.05	--	780	<5.0	<5.0	<5.0	<5.0	--	1500	--	--	--	--	<2500	--	--
	3/29/2007	330.59	8.82	NP	321.77	--	230	<0.50	<0.50	<0.50	<0.50	--	230	--	--	--	--	<250	--	--
	9/21/2007	330.59	9.38	NP	321.21	--	140	<0.50	<0.50	<0.50	<0.50	--	160	--	--	--	--	<250	--	--
3/27/2008	330.59	7.08	NP	323.51	--	84	<0.50	<0.50	<0.50	<1.0	--	98	--	--	--	--	<250	--	--	
9/2/2008	330.59	7.84	NP	322.75	--	<50	<0.50	<0.50	<0.50	<1.0	--	50	--	--	--	--	<250	--	--	
3/6/2009	330.59	5.85	NP	324.74	--	<50	<0.50	<0.50	<0.50	<1.0	--	43	--	--	--	--	<250	--	--	
8/21/2009	330.59	8.04	NP	322.55	--	<50	<0.50	<0.50	<0.50	<1.0	--	33	--	--	--	--	<250	--	--	
3/10/2010	330.59	6.43	NP	324.16	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	16.7	--	--	--	--	<250	--	--	
9/24/2010	330.59	8.02	NP	322.57	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	23.5	--	--	--	--	<250	--	--	
3/8/2011	333.40	6.62	NP	326.78	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	19.5	--	--	--	--	<250	--	--	
9/1/2011	333.40	6.86	NP	326.54	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	6.8	--	--	--	--	<250	--	--	
MW-4	5/21/1999	330.36	6.43	NP	323.93	--	ND	ND	ND	ND	960	910	--	--	--	--	--	--	--	
	8/2/1999	330.36	7.34	NP	323.02	--	ND	10	ND	13	11	ND	--	--	--	--	--	--	--	
	2/11/2000	330.36	6.92	NP	323.44	--	ND	ND	ND	ND	2700	--	--	--	--	--	--	--	--	
	7/26/2000	330.35	7.68	NP	322.67	--	ND	ND	ND	ND	3710	--	--	--	--	--	--	--	--	
	2/2/2001	330.35	7.40	NP	322.95	--	ND	ND	ND	ND	5340	--	--	--	--	--	--	--	--	
	8/24/2001	330.35	8.14	NP	322.21	--	<50	<0.50	<0.50	<0.50	<0.50	7800	--	--	--	--	--	--	--	
	10/11/2001	330.35	8.29	NP	322.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/6/2002	330.35	7.28	NP	323.07	--	<100	<1.0	<1.0	<1.0	<1.0	2300	3100	<25	<25	<25	<500	<12000	<25	<25
	7/30/2002	330.35	7.76	NP	322.59	--	<500	<5.0	<5.0	5.8	<10	--	1600	--	--	--	--	--	--	--
	2/17/2003	330.35	6.85	NP	323.50	--	<1000	<10	<10	<10	<20	--	2200	--	--	--	--	--	--	--
	8/18/2003	330.35	7.30	NP	323.05	--	2000	<10	<10	<10	<20	--	1400	--	--	--	--	<10000	--	--
	2/24/2004	330.35	6.55	NP	323.80	--	<2000	<20	<20	<20	<40	--	2000	--	--	--	--	--	--	--
	9/17/2004	330.35	8.00	NP	322.35	--	340	<2.5	<2.5	<2.5	<5.0	--	610	--	--	--	--	<250	--	--
	3/22/2005	330.35	6.37	NP	323.98	--	<200	<0.50	<0.50	<0.50	<1.0	--	290	--	--	--	--	<200	--	--
9/29/2005	330.35	9.43	NP	320.92	--	84	<0.50	<0.50	0.53	<1.0	--	57	--	--	--	--	<250	--	--	
1/9/2006	330.35	7.97	NP	322.38	--	100	<0.50	<0.50	1.5	<1.0	--	150	--	--	--	--	<250	--	--	
9/27/2006	330.35	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	
MW-5	5/21/1999	330.20	5.99	NP	324.21	--	ND	ND	ND	ND	32	33	--	--	--	--	--	--	--	
	8/2/1999	330.20	6.83	NP	323.37	--	ND	ND	ND	ND	230	--	--	--	--	--	--	--	--	
	2/11/2000	330.20	6.34	NP	323.86	--	ND	ND	ND	ND	98	--	--	--	--	--	--	--	--	
	7/26/2000	330.20	7.06	NP	323.14	--	ND	ND	ND	ND	25.9	--	--	--	--	--	--	--	--	
	2/2/2001	330.20	6.81	NP	323.39	--	ND	ND	ND	ND	18	--	--	--	--	--	--	--	--	
	8/24/2001	330.20	7.60	NP	322.60	--	<50	<0.50	<0.50	<0.50	<0.50	18	--	--	--	--	--	--	--	
	10/11/2001	330.18	7.34	NP	322.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/6/2002	330.18	6.55	NP	323.63	--	<50	<0.50	<0.50	<0.50	<0.50	7.7	7.9	<1.0	<1.0	<1.0	<20	<500	<1.0	<1.0
	7/30/2002	330.18	7.15	NP	323.03	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.6	--	--	--	--	--	--	--
	2/17/2003	330.18	6.27	NP	323.91	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.8	--	--	--	--	--	--	--
8/18/2003	330.18	6.57	NP	323.61	--	75	<0.50	<0.50	<0.50	<1.0	--	3.8	--	--	--	--	<500	--	--	
2/24/2004	330.18	5.88	NP	324.30	--	<50	<0.50	<0.50	<0.50	<1.0	--	3.3	--	--	--	--	<500	--	--	

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5748/6419
6401 DUBLIN BLVD
DUBLIN, CALIFORNIA



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	
MW-5	9/17/2004	330.18	7.41	NP	322.77	--	<50	<0.50	<0.50	<0.50	1.4	--	6.0	--	--	--	--	--	--	--	
	3/22/2005	330.18	5.58	NP	324.60	--	<50	<0.50	<0.50	<0.50	<1.0	--	5.8	--	--	--	--	<50	--	--	
	9/29/2005	330.18	9.42	NP	320.76	--	<50	<0.50	<0.50	<0.50	<1.0	--	7.8	--	--	--	--	<250	--	--	
	1/9/2006	330.18	7.93	NP	322.25	--	<50	<0.50	<0.50	<0.50	<1.0	--	14	--	--	--	--	<250	--	--	
	9/27/2006	330.18	8.60	NP	321.58	--	300	<0.50	<0.50	<0.50	<0.50	--	860	--	--	--	--	<250	--	--	
	3/29/2007	330.18	8.82	NP	321.36	--	520	<0.50	<0.50	<0.50	<0.50	--	690	--	--	--	--	<250	--	--	
	9/21/2007	330.18	9.66	NP	320.52	--	300	<0.50	<0.50	<0.50	<0.50	--	490	--	--	--	--	<250	--	--	
	3/27/2008	330.18	7.12	NP	323.06	--	580	<0.50	<0.50	<0.50	<1.0	--	1400	--	--	--	--	<250	--	--	
	9/2/2008	330.18	7.70	NP	322.48	--	360	<0.50	<0.50	<0.50	<1.0	--	840	--	--	--	--	<250	--	--	
	3/6/2009	330.18	5.79	NP	324.39	--	240	<0.50	<0.50	<0.50	<1.0	--	480	--	--	--	--	<250	--	--	
	8/21/2009	330.18	7.90	NP	322.28	--	260	<0.50	<0.50	<0.50	<1.0	--	310	--	--	--	--	<250	--	--	
	3/10/2010	330.18	6.30	NP	323.88	--	94.8	<0.50	<0.50	<0.50	<1.5	--	144	--	--	--	--	<250	--	--	
	9/24/2010	330.18	7.93	NP	322.25	--	169	<0.50	<0.50	<0.50	<1.5	--	209	--	--	--	--	<250	--	--	
3/8/2011	333.05	6.54	NP	326.51	--	94.6	<0.50	<0.50	<0.50	<1.5	--	116	--	--	--	--	<250	--	--		
9/1/2011	333.05	6.82	NP	326.23	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	9.1	--	--	--	--	<250	--	--		
MW-6	5/21/1999	330.49	6.24	NP	324.25	--	ND	ND	ND	ND	ND	2200	2300	<8.3	<8.3	<8.3	<170	--	--		
	8/2/1999	330.49	7.10	NP	323.39	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--		
	2/11/2000	330.49	6.60	NP	323.89	--	ND	ND	ND	ND	ND	2500	--	--	--	--	--	--	--		
	7/26/2000	330.49	7.31	NP	323.18	--	ND	ND	ND	ND	ND	4280	--	--	--	--	--	--	--		
	2/2/2001	330.49	7.02	NP	323.47	--	ND	ND	ND	ND	ND	1990	--	--	--	--	--	--	--		
	8/24/2001	330.49	7.84	NP	322.65	--	<200	<2.0	<2.0	<2.0	<2.0	1100	--	--	--	--	--	--	--		
	10/11/2001	330.47	8.03	NP	322.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/6/2002	330.47	6.78	NP	323.69	--	<50	<0.50	<0.50	<0.50	<0.50	610	680	<8.3	<8.3	<8.3	<170	<4200	<8.3	<8.3	
	7/30/2002	330.47	7.40	NP	323.07	--	180	<0.50	<0.50	<0.50	<1.0	--	160	--	--	--	--	--	--		
	2/17/2003	330.47	6.49	NP	323.98	--	<250	<2.5	<2.5	<2.5	<5.0	--	400	--	--	--	--	--	--		
	8/18/2003	330.47	6.81	NP	323.66	--	320	<1.0	<1.0	<1.0	<2.0	--	280	--	--	--	--	<1000	--	--	
	2/24/2004	330.47	6.11	NP	324.36	--	130	<1.0	<1.0	<1.0	<2.0	--	200	--	--	--	--	<1000	--	--	
	9/17/2004	330.47	7.64	NP	322.83	--	110	<1.0	<1.0	<1.0	<2.0	--	200	--	--	--	--	<100	--	--	
	3/22/2005	330.47	5.81	NP	324.66	--	<50	<0.50	<0.50	<0.50	<1.0	--	83	--	--	--	--	<50	--	--	
	9/29/2005	330.47	9.19	NP	321.28	--	110	<0.50	<0.50	<0.50	<1.0	--	140	--	--	--	--	<250	--	--	
1/9/2006	330.47	7.65	NP	322.82	--	100	<0.50	<0.50	<0.50	<1.0	--	160	--	--	--	--	<250	--	--		
9/27/2006	330.47	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD		
MW-7	5/21/1999	330.43	6.13	NP	324.30	--	ND	ND	ND	ND	ND	22	22	--	--	--	--	--	--		
	8/2/1999	330.43	6.92	NP	323.51	--	ND	ND	ND	ND	ND	31	--	--	--	--	--	--	--		
	2/11/2000	330.43	6.50	NP	323.93	--	ND	ND	ND	ND	ND	20	--	--	--	--	--	--	--		
	7/26/2000	330.43	7.18	NP	323.25	--	ND	ND	ND	ND	ND	17.9	--	--	--	--	--	--	--		
	2/2/2001	330.43	6.95	NP	323.48	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--		
	8/24/2001	330.43	7.72	NP	322.71	--	<50	<0.50	<0.50	<0.50	<0.50	4.4	--	--	--	--	--	--	--		
	10/11/2001	330.41	7.87	NP	322.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/6/2002	330.41	6.62	NP	323.79	--	<50	<0.50	<0.50	<0.50	<0.50	3.9	3.2	1.4	<1.0	<1.0	<20	<500	<1.0	<1.0	
	7/30/2002	330.41	NG	NG	NG	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.3	--	--	--	--	--	--		
	2/17/2003	330.41	NG	NG	NG	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.7	--	--	--	--	--	--		
	8/18/2003	330.41	6.64	NP	323.77	--	76	<0.50	<0.50	<0.50	<1.0	--	6.3	--	--	--	--	<500	--	--	
	2/24/2004	330.41	6.01	NP	324.40	--	<50	<0.50	<0.50	<0.50	<1.0	--	6.2	--	--	--	--	<500	--	--	
	9/17/2004	330.41	7.45	NP	322.96	--	<50	<0.50	<0.50	<0.50	<1.0	--	8.7	--	--	--	--	<50	--	--	
	3/22/2005	330.41	5.73	NP	324.68	--	<50	<0.50	<0.50	<0.50	<1.0	--	9.4	--	--	--	--	<50	--	--	
	9/29/2005	330.41	8.94	NP	321.47	--	<50	<0.50	<0.50	<0.50	<1.0	--	11	--	--	--	--	<250	--	--	
1/9/2006	330.41	7.43	NP	322.98	--	<50	<0.50	<0.50	<0.50	<1.0	--	7.6	--	--	--	--	<250	--	--		
9/27/2006	330.41	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD		
MW-8	10/11/2001	329.97	7.57	NP	322.40	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.0	<2.0	<2.0	<2.0	<20	<500	<2.0	<2.0	
	2/6/2002	329.97	6.35	NP	323.62	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	<1.0	<1.0	<1.0	<20	<500	<1.0	<1.0		
	7/30/2002	329.97	6.95	NP	323.02	--	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--		
	2/17/2003	329.97	6.11	NP	323.86	--	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--		
	8/18/2003	329.97	6.33	NP	323.64	--	53	<0.50	<0.50	<0.50	<1.0	--	<2	--	--	--	--	<500	--	--	
	2/24/2004	329.97	13.37	NP	316.60	--	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--	
	9/17/2004	329.97	7.23	NP	322.74	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.0	--	--	--	--	<50	--	--	
3/22/2005	329.97	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD		
MW-9	10/11/2001	329.51	7.12	NP	322.39	--	<50	<0.50	<0.50	<0.50	<0.50	22	15	<2.0	<2.0	<2.0	<20	<500	<2.0	<2.0	

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Station No. 5748/6419
6401 DUBLIN BLVD
DUBLIN, CALIFORNIA



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	DRO (ug/L)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-9	2/6/2002	329.51	5.94	NP	323.57	--	<50	<0.50	<0.50	<0.50	<0.50	19	14	<1.0	<1.0	<1.0	<20	<500	<1.0	<1.0
	7/30/2002	329.51	6.53	NP	322.98	--	<50	<0.50	<0.50	<0.50	<1.0	--	9	--	--	--	--	--	--	--
	2/17/2003	329.51	5.63	NP	323.88	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.9	--	--	--	--	--	--	--
	8/18/2003	329.51	5.99	NP	323.52	--	57	<0.50	<0.50	<0.50	<1	--	6.2	--	--	--	--	<500	--	--
	2/24/2004	329.51	5.27	NP	324.24	--	<50	<0.50	<0.50	<0.50	<1.0	--	5.6	--	--	--	--	<500	--	--
	9/17/2004	329.51	6.80	NP	322.71	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.8	--	--	--	--	<50	--	--
	3/22/2005	329.51	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD

Gauging Notes:

TOC - Top of Casing
ft - Feet
NP - LNAPL not present
LNAPL - Light non-aqueous phase liquid
* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)
ABD - Well Abandoned
NG - Not gauged
WD - Well Destroyed
DRY - Well is dry
--- No information available

Analytical Notes:

-- No information available
< - Below laboratory's indicated reporting limit
ABD - Well Abandoned
DRY - Well was Dry; sample could not be taken
ND - Not detected, and detection limit is not known
NS - Well not sampled.
ug/L - micrograms/liter
WD - Well Destroyed
DRO- diesel range organics
GRO- gasoline range organics
MTBE- Methyl tertiary-butyl ether
TBA- Tertiary-butyl alcohol
DIPE- Di-isopropyl ether
ETBE- Ethyl tertiary-butyl ether
TAME- Tertiary-amyl methyl ether

TABLE 4

HISTORICAL GRAB-GROUNDWATER ANALYTICAL RESULTS
 76 Station No. 5748/6419
 6401 Dublin Blvd, Dublin, California

Sample ID	Date	Sample Depth	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Ethanol (µg/L)
W1	9/10/1993	15	2,600	530	33	19	150	190	--	--
W2	9/14/1993	12	740	--	14	32	13	75	--	--
CPT-1d40W	8/10/2011	40	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0
CPT-2d33W	8/12/2011	33	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0

Notes:
 TPHg = total petroleum hydrocarbons as gasoline by EPA Method 8015
 TPHd = total petroleum hydrocarbons as diesel by EPA Method 8015
 BTEX = benzene, toluene, ethyl-benzene, total xylenes by EPA Method 8260
 MTBE = methyl tertiary-butyl ether by EPA Method 8260
 1,2-DCA = 1,2-Dichlorethane by EPA Method 8260
 µg/L = micrograms per liter
Bold = Above laboratory's indicated reporting limit
 < = Below laboratory's indicated reporting limits
 -- = not applicable

Table 5
Well Construction Details
 76 Station No. 5748/6419
 6401 Dublin Boulevard
 Dublin, CA

Well I.D.	Drill Date	Well		Screen		Screen Length (feet)	Comments
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)		
Monitoring Wells							
MW-1R	12/21/10	15.0	2	5.0	15.0	10.0	
MW-3	02/24/94	19.0	2	4.0	19.0	15.0	
MW-5	05/10/99	19.0	2	4.0	19.0	15.0	
Explanation							
Wells are of poly-vinyl-chloride (PVC) construction							
bgs = Below ground surface							

Appendix A

Historical Boring Logs

BORING LOG

Project No. KBI-P93-0401	Boring Diameter 8.5" Casing Diameter 2"	Logged By JGG D.L. LEB 1633
Project Name Unocal S/S #6419 6401 Dublin Blvd., Dublin	Well Cover Elevation N/A	Date Drilled 2/24/94
Boring No. MW1	Drilling Method Hollow-stem Auger	Drilling Company Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet)	Samples	Stratigraphy USCS	Description
		0			A.C. Pavement over sand and gravel base.
				GC	Clayey gravel with sand, medium dense, moist, dark greenish gray and black, mottled, disturbed (fill).
				GP	Gravel and sand, loose, moist, brown, gravel is fine grained (fill).
3/4/6		5		MH	Clayey silt, stiff, moist, black, with iron oxide staining, disturbed above 4.5 feet, clay content increasing with depth.
				CL	Silty clay, estimated at 35-45% silt, stiff, moist, black, with caliche nodules to 1/2 inch in diameter.
				MH	Clayey silt, estimated at 30-40% clay, stiff, moist, very dark gray.
3/5/8				MH	Clayey silt, estimated at 30-40% clay, trace fine grained sand, stiff, moist, olive brown.
		10		ML	Silt with sand, estimated at 10-15% clay, stiff, moist, olive brown.
3/5/6	▽			MH	Sandy silt, trace clay, stiff, very moist, olive brown.
				MH	Clayey silt, trace fine grained sand, stiff, moist, olive brown and olive gray, mottled.
4/5/7				ML	Silt, estimated at 15-30% clay, and 5-10% sand, stiff, moist, olive and olive brown, mottled, grades to sandy silt below 15.5 feet.
		15		CL	Clay estimated at 15-30% silt, very stiff, moist, olive brown and dark greenish gray, mottled.
4/6/9				ML	Silt with sand, stiff, moist, dark greenish gray.
				SP	Poorly graded sand, estimated at 5-15% silt, medium dense, wet, dark greenish gray.
5/8/11				ML	Clayey silt, very stiff, moist, dark greenish gray, with caliche.
		20			TOTAL DEPTH: 19'

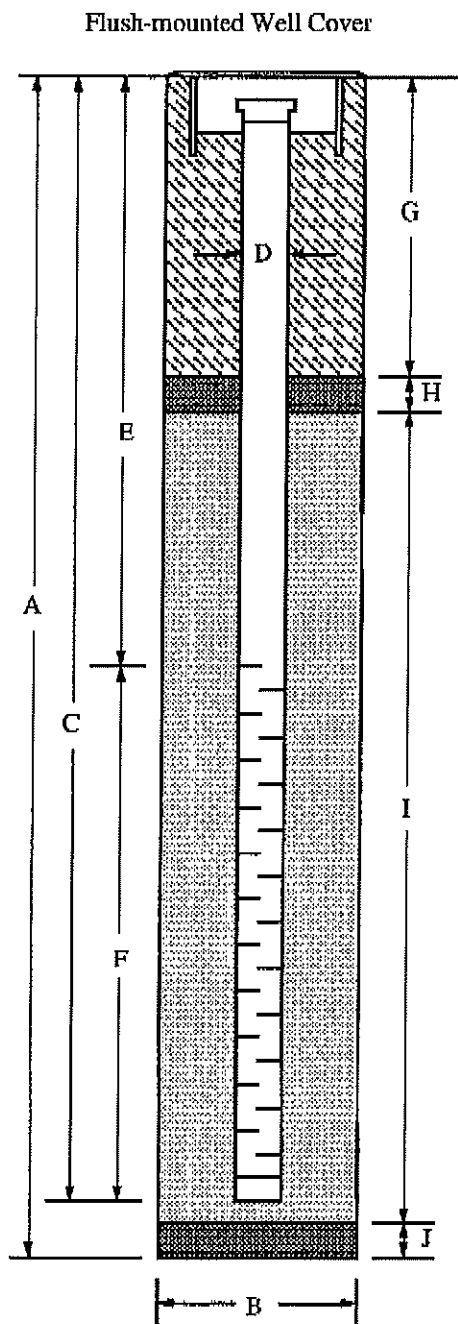
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #6419, 6401 Dublin Blvd., Dublin

WELL NO.: MW1

PROJECT NUMBER: KEI-P93-0401

WELL PERMIT NO.: ACFC & WCD #94071



- A. Total Depth : 19'
- B. Boring Diameter: 8.5"
- Drilling Method: Hollow Stem Auger
- C. Casing Length: 19'
- Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
- ID = 2.067"
- E. Depth to Perforations: 4'
- F. Perforated Length: 15'
- Perforation Type: Machined Slot
- Perforation Size: 0.010"
- G. Surface Seal: 2'
- Seal Material: Neat Cement
- H. Seal: 1'
- Seal Material: Bentonite
- I. Filter Pack: 16'
- Pack Material: RMC Lonestar Sand
- Size: #2/12
- J. Bottom Seal: None
- Seal Material: N/A

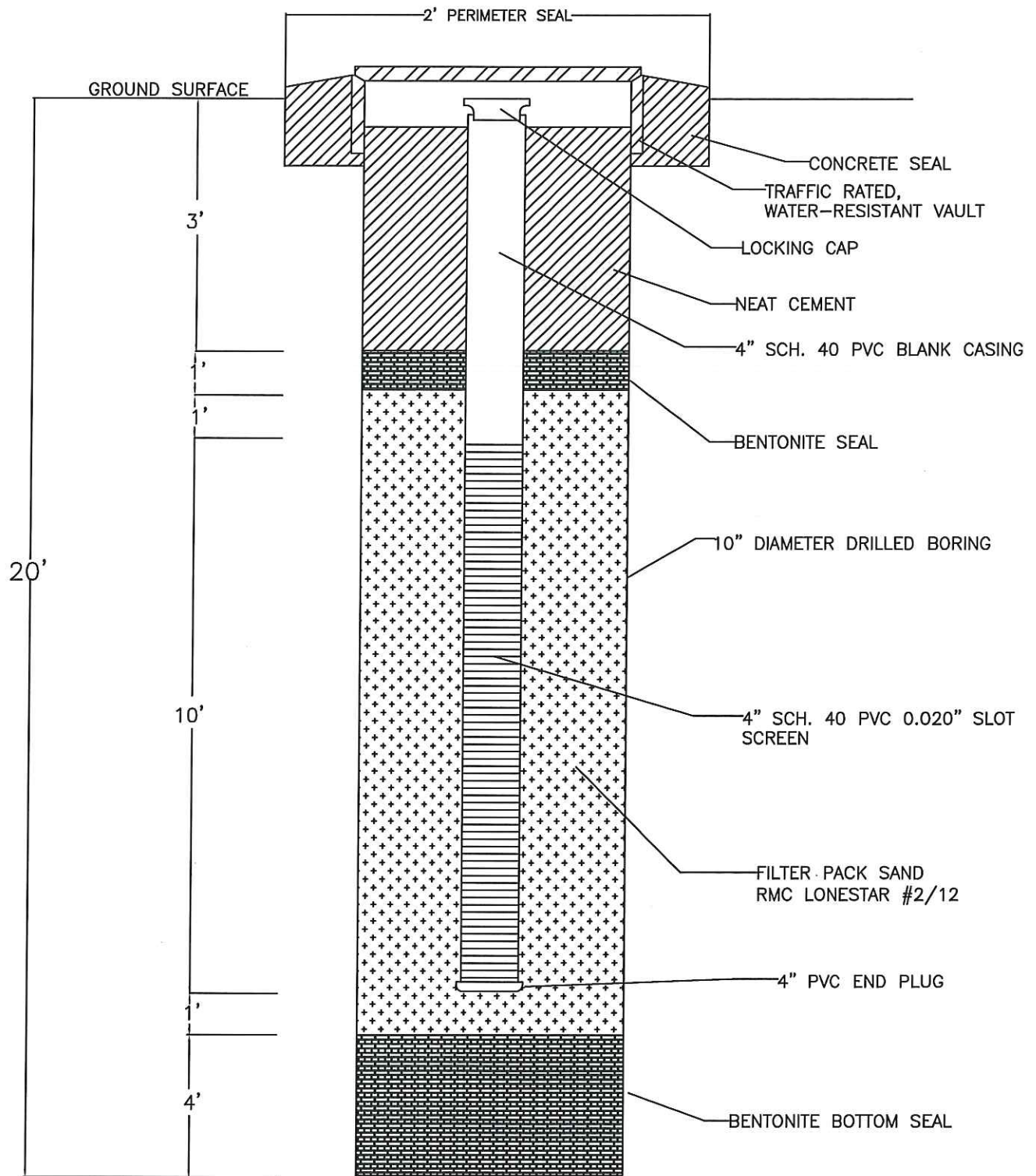


FIGURE 3
MW-1R WELL CONSTRUCTION DIAGRAM

76 STATION NO. 5748/6419
6401 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 142705748	PREPARED BY JF	DRAWN BY JH
DATE 2/2/11	REVIEWED BY DD	FILE NAME 5748-WellDetail



BORING LOG

Project No. KEI-P93-0401		Boring Diameter 8.5"	Casing Diameter 2"	Logged By JGG D.L. LEB 1633
Project Name Unocal S/S #6419 6401 Dublin Blvd., Dublin		Well Cover Elevation N/A		Date Drilled 2/25/94
Boring No. MW2		Drilling Method Hollow-stem Auger	Drilling Company Woodward Drilling	
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement over sand and gravel base.
			CL	Silty clay, stiff, moist, black grading to olive brown (fill).
			GC	Clayey gravel with sand, gravel to 2 3/4 inches in diameter, dense, moist, dark olive gray, disturbed, pocketed (fill).
			CH	Silty clay, stiff, moist, black.
3/5/7		5	SM	Poorly graded sand, predominantly medium grained, loose, moist, dark olive gray.
			ML	Silt, trace clay grading to 10-15% clay, stiff, moist, dark olive gray.
			CH	Silty clay, stiff, moist, black, high plasticity.
			CL	Silty clay, estimated at 35-45% silt, stiff, moist, olive brown and very dark grayish brown, mottled, with root holes, locally grades to very clayey silt.
3/5/10		10	MH	Clayey silt, stiff, moist, olive brown and brown, mottled.
3/6/7			ML	Silt, estimated at 20-30% clay, and 5-10% sand, stiff, moist, olive brown and brown, mottled.
3/6/9		15	CL	Silty clay, estimated at 30-40% silt, stiff, moist, olive and olive brown, mottled, with caliche nodules to 3/4 inch in diameter.
4/6/9	▽		MH	Silty clay, as above, except olive brown. Clayey silt, estimated at 35-45% clay, stiff, moist, olive to olive brown, trace organic matter.
3/4/6			ML	Silt, estimated at 15-30% clay, stiff, very moist, olive, with trace caliche.
		20	CL	Silty clay, stiff, moist, olive and olive brown, mottled.
TOTAL DEPTH: 20'				

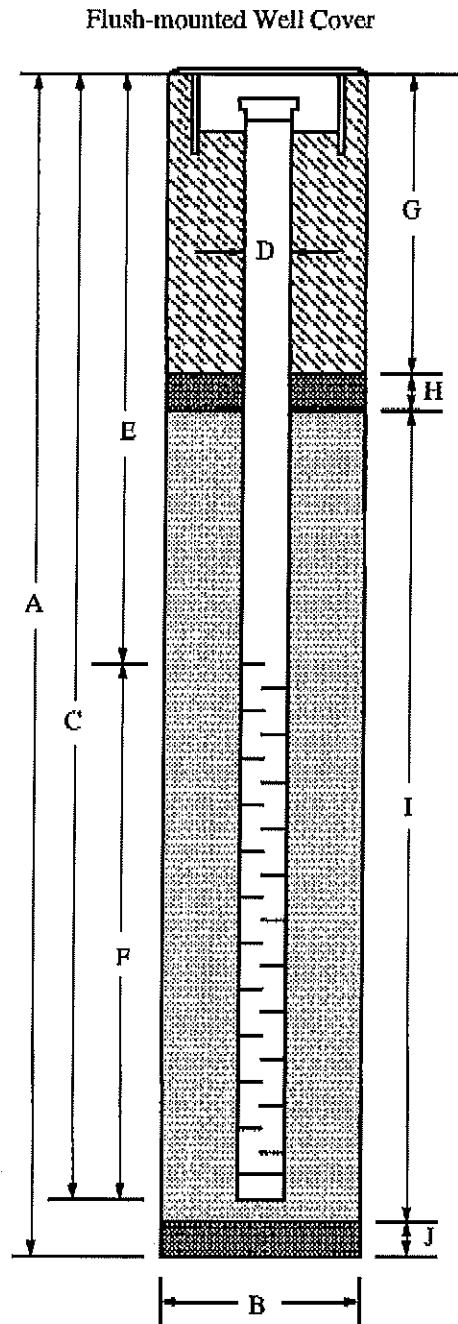
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #6419, 6401 Dublin Blvd., Dublin

WELL NO.: MW2

PROJECT NUMBER: KE1-P93-0401

WELL PERMIT NO.: ACFC & WCD #94071



- A. Total Depth : 20'
- B. Boring Diameter: 8.5"
Drilling Method: Hollow Stem Auger
- C. Casing Length: 20'
Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 4'
- F. Perforated Length: 16'
Perforation Type: Machined Slot
Perforation Size: 0.010"
- G. Surface Seal: 1.5'
Seal Material: Neat Cement
- H. Seal: 1.5'
Seal Material: Bentonite
- I. Filter Pack: 17'
Pack Material: RMC Lonestar Sand
Size: #2/12
- J. Bottom Seal: None
Seal Material: N/A

BORING LOG

Project No. KEI-P93-0401	Boring Diameter	8.5"	Logged By	<i>JGG</i>
	Casing Diameter	2"	D.L.	<i>LEG 1633</i>
Project Name Unocal S/S #6419 6401 Dublin Blvd., Dublin	Well Cover Elevation	N/A	Date Drilled	2/24/94
Boring No. MW3	Drilling Method	Hollow-stem Auger	Drilling Company	Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement over sand and gravel base.
			GC	Clayey gravel with sand and clayey sand with gravel, medium dense to dense, moist, dark greenish gray, disturbed, pocketed, with debris (fill).
			SC	Clayey sand, trace gravel, medium dense, moist, very dark gray, disturbed (fill).
4/7/8		5	CL	Silty clay, estimated at 35-45% silt, stiff, moist, black, with root holes.
3/5/8			CL	
3/5/8		10	MH	Clayey silt, estimated at 30-40% clay, trace sand and gravel to 1/4 inch in diameter, stiff, moist, very dark grayish brown, with roots and root holes.
4/6/10	▽		ML	Silt with clay, estimated at 10-15% sand, stiff, moist, wet in voids, dark brown and very dark gray, mottled.
4/10/13			MH	Sandy silt, estimated at 10-20% clay, sand is fine to coarse grained, stiff, moist, wet in voids, olive brown.
			MH	Clayey silt, very stiff, moist, olive brown with root holes.
3/6/8		15	CL	Clay, estimated at 15-25% silt, stiff, moist, olive brown, with caliche nodules to 1 inch in diameter.
			ML	Clayey silt, stiff, moist, olive brown.
5/8/8			CL	Clay, estimated at 15-25% silt, stiff to very stiff, moist, olive brown, with caliche and trace organic matter.
		20		TOTAL DEPTH: 19'

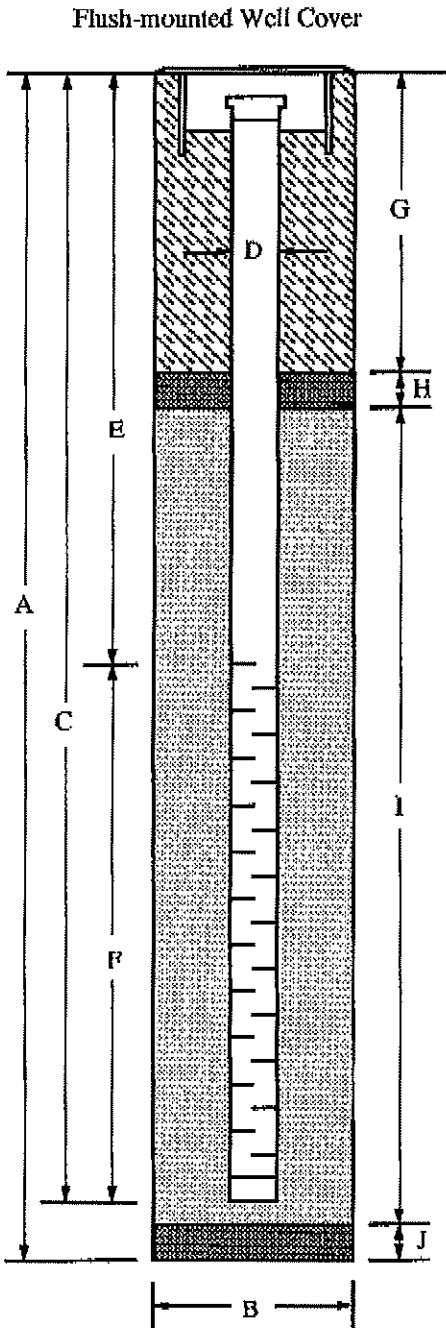
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #6419, 6401 Dublin Blvd., Dublin

WELL NO.: MW3

PROJECT NUMBER: KEI-P93-0401

WELL PERMIT NO.: ACFC & WCD #94071



- A. Total Depth : _____ 19' _____
- B. Boring Diameter: _____ 8.5" _____
 Drilling Method: _____ Hollow Stem Auger _____
- C. Casing Length: _____ 19' _____
 Material: _____ Schedule 40 PVC _____
- D. Casing Diameter: _____ OD = 2.375" _____
 _____ ID = 2.067" _____
- E. Depth to Perforations: _____ 4' _____
- F. Perforated Length: _____ 15' _____
 Perforation Type: _____ Machined Slot _____
 Perforation Size: _____ 0.010" _____
- G. Surface Seal: _____ 2' _____
 Seal Material: _____ Neat Cement _____
- H. Seal: _____ 1' _____
 Seal Material: _____ Bentonite _____
- I. Filter Pack: _____ 16' _____
 Pack Material: _____ RMC Lonestar Sand _____
 Size: _____ #2/12 _____
- J. Bottom Seal: _____ None _____
 Seal Material: _____ N/A _____

Gettler-Ryan Inc.

Log of Boring MW-4

PROJECT: *Tosco (Unocal) Station No. 6419*

LOCATION: *6401 Dublin Blvd., Dublin, CA*

PROJECT NO.: *140101.02*

CASING ELEVATION: *330.36 ft. MSL*

DATE STARTED: *05/10/99*

WL (ft. bgs): *12* DATE: *05/10/99* TIME: *9:05 AM*

DATE FINISHED: *05/10/99*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8" Geoprobe Macrocore*

TOTAL DEPTH: *19 Feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0			MW-4-8			CL	CLAY (CL) - dark gray (10YR 4/1), damp, stiff, 75% clay, 20% silt, 5% fine to coarse sand, asphalt: FILL.	
5					GC	CLAYEY GRAVEL (GC) - dark grayish brown (10YR 4/2), damp, medium dense, 80% rounded fine gravel, 30% clay, 5% silt, 5% fine sand, plastic, asphalt fragments: FILL.		
10	2					CL	CLAY (CL) - very dark gray (2.5Y N3/) to dark grayish brown (2.5Y 4/2), saturated, stiff, 65% clay, 20% silt, 10% fine to coarse sand, 5% fine gravel, plastic: FILL. Becomes 90% clay, 10% silt, trace fine sand at 10 feet.	
12.5							Pea gravel with brick fragment sluff material from 12 to 12.5 feet.	
15	0					CL	CLAY (CL) - olive brown (2.5Y 4/3), saturated, very stiff, 80% clay, 20% silt, trace fine sand, plastic: native material. Color change to light olive brown (2.5Y 4/3) at 17 feet, becomes 90% clay, 10% silt, trace fine sand, plastic.	
20								

Gettler-Ryan Inc.

Log of Boring MW-5

PROJECT: Tosco (Unocal) Station No. 8419

LOCATION: 8401 Dublin Blvd., Dublin, CA

PROJECT NO.: 140101.02

CASING ELEVATION: 330.20 ft. MSL

DATE STARTED: 05/10/99

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 05/10/99

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 8" Geoprobe Macrocore

TOTAL DEPTH: 19 Feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Clyde Galantine

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							Asphalt.	
						GW	GRAVEL WITH SAND (GW) - dark gray (10YR 4/1), damp, dense, 70% fine gravel, 30% fine to coarse sand; FILL.	
						ML	SILT (ML) - very dark gray (10YR 3/1), damp, stiff, 75% silt, 15% fine sand, 10% clay. Color change to dark gray (10YR 4/1) at 4 feet.	
5	0		MW-5-8			CL	CLAY (CL) - dark gray (10YR 4/1), damp, stiff, 80% clay, 20% silt, trace fine sand, plastic. Color change to very dark grayish brown (2.5Y 3/2) at 8.5 feet. Medium to coarse sand layer from 12 to 12.2 feet.	
10	0					SC	CLAYEY SAND (SC) - olive brown (2.5Y 4/3), damp to moist, dense, 65% subangular to rounded medium to coarse sand, 25% clay, 10% silt.	
15	1						Becomes 65% clay, 35% silt at 14.5 feet.	
20	0							

Gettler-Ryan Inc.

Log of Boring MW-6

PROJECT: *Tosco (Unocal) Station No. 6419*

LOCATION: *6401 Dublin Blvd., Dublin, CA*

PROJECT NO.: *140101.02*

CASING ELEVATION: *330.49 ft. MSL*

DATE STARTED: *05/10/99*

WL (ft. bgs): DATE: TIME:

DATE FINISHED: *05/10/99*

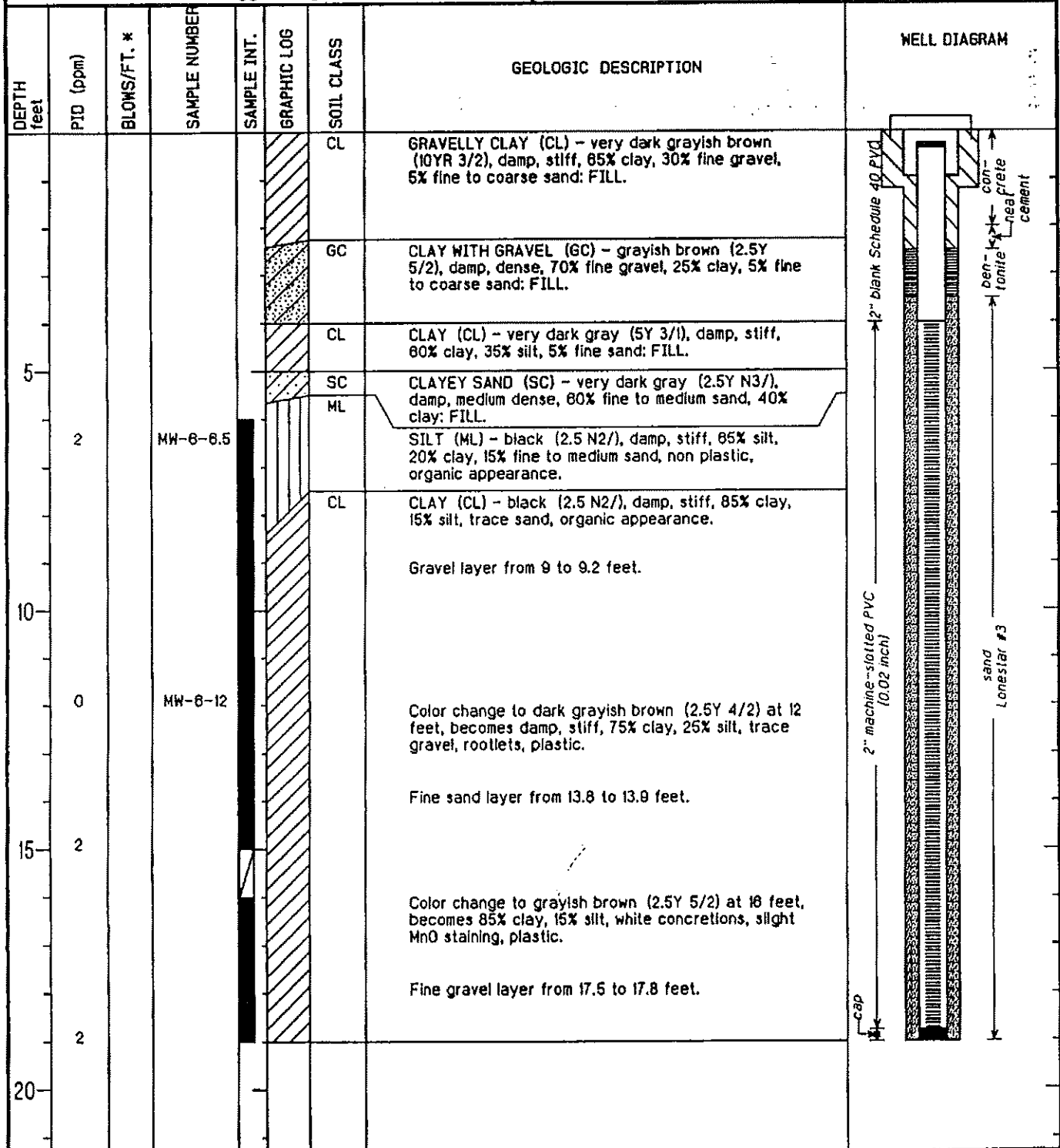
WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8" Geoprobe Macrocore*

TOTAL DEPTH: *19 Feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*



Gettler-Ryan Inc.

Log of Boring MW-7

PROJECT: *Tosco (Unocal) Station No. 6419*

LOCATION: *6401 Dublin Blvd., Dublin, CA*

PROJECT NO.: *140101.02*

CASING ELEVATION: *330.43 ft. MSL*

DATE STARTED: *05/10/99*

WL (ft. bgs): *5.75* DATE: *05/10/99* TIME: *5:00 PM*

DATE FINISHED: *05/10/99*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8" Geoprobe Macrocore*

TOTAL DEPTH: *19 Feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
5	8		MW-7-8			CL	GRAVELLY CLAY (CL) - grayish brown (2.5Y 5/2), damp, stiff, 80% clay, 15% fine gravel, 5% fine to coarse sand; FILL.	
						GC	CLAYEY GRAVEL (GC) - grayish brown (2.5Y 5/2), damp, dense, 65% fine gravel, 30% clay, 5% fine to coarse sand; FILL.	
						SC	CLAYEY SAND (SC) - very dark gray (2.5Y N3/), saturated, medium stiff, 65% fine to medium sand, 30% clay, 5% silt; FILL.	
10	0					CL	CLAY (CL) - very dark gray (10YR 3/1), damp, stiff, 90% clay, 10% silt, trace fine sand, very plastic. Fine to medium sand layers from 9.25 to 9.5 feet and from 9.75 to 9.9 feet. Color change to very dark grayish brown (2.5Y 3/2) at 10.5 feet, becomes wet, 80% clay, 20% silt, trace gravel, plastic.	
15	0					SW-SM	SAND WITH SILT (SW-SM) - dark grayish green (2.5Y 4/2), saturated, loose, 90% fine sand, 10% silt.	
						CL	CLAY (CL) - olive brown (2.5Y 4/3), damp, stiff, 80% clay, 30% silt, 10% fine sand. Becomes 80% clay, 20% silt, trace gravel or concretions, plastic at 14.5 feet.	
20	0					SW-SM	SAND WITH SILT (SW-SM) - dark grayish green (2.5Y 4/2), saturated, loose, 90% fine sand, 10% silt.	
						CL	CLAY (CL) - light olive brown (2.5Y 5/3), damp, stiff, 70% clay, 25% silt, 5% fine sand, caliche, plastic.	

Gettler-Ryan, Inc.

Log of Boring MW-8

PROJECT: *Tosco (76) Service Station No. 6419*

LOCATION: *6401 Dublin Boulevard, Dublin, California*

GR PROJECT NO.: *140101.04*

CASING ELEVATION:

DATE STARTED: *09/28/01*

WL (ft. bgs): *15.0* DATE: *09/28/01* TIME: *09:30*

DATE FINISHED: *09/28/01*

WL (ft. bgs): *7.5* DATE: *09/28/01* TIME: *13:45*

DRILLING METHOD: *8" Hollow stem auger*

TOTAL DEPTH: *20 feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
						Asphalt and base rock - 6 inches thick.	<p>The well diagram shows a vertical cross-section of the boring. At the top is a cap. Below it is a 2-inch machine slotted PVC casing (0.020 inch) extending to a depth of 15 feet. A 2-inch blank schedule 40 PVC pipe is shown from 0 to 3 feet depth. Bentonite is applied in several sections: from 0 to 3 feet, from 6 to 7.5 feet, and from 15 to 20 feet. The soil layers are: 0-6 inches (Asphalt and base rock), 6-10 feet (Silty Sand with Gravel - SM), 10-12 feet (Silt with Sand - ML), 12-15 feet (Poorly Graded Sand - SP), and 15-20 feet (Clay - CL). A #3 Lanester sand filter is located at the bottom of the casing. The bottom of the boring is at 20 feet bgs.</p>
					SM	SILTY SAND WITH GRAVEL (SM) - dark reddish brown (5YR 3/2), moist, loose; 65% fine to medium sand, 20% silt, 15% rounded fine to medium gravel.	
3	0				ML	SILT WITH SAND (ML) - dark greenish gray (GLE Y2, 5B6 4/1), moist, medium stiff; 85% silt, 15% fine sand.	
					SP	POORLY GRADED SAND (SP) - dark greenish gray (GLE Y2, 5B6 4/1), moist, loose; 95% fine sand, 5% silt.	
6	0	MW-8-5.5			CL	CLAY (CL) - dark brown (7.5YR 3/2), moist, stiff; 95% clay, 5% fine sand.	
9	0	MW-8-7.5					
12	0						
15	0						
18							
21						Bottom of boring at 20 feet bgs.	

Gettler-Ryan, Inc.

Log of Boring MW-9

PROJECT: *Tosco (76) Service Station No. 6419*

LOCATION: *6401 Dublin Boulevard, Dublin, California*

GR PROJECT NO.: *140101.04*

CASING ELEVATION:

DATE STARTED: *09/28/01*

WL (ft. bgs): *18.5* DATE: *09/28/01* TIME: *13:15*

DATE FINISHED: *09/28/01*

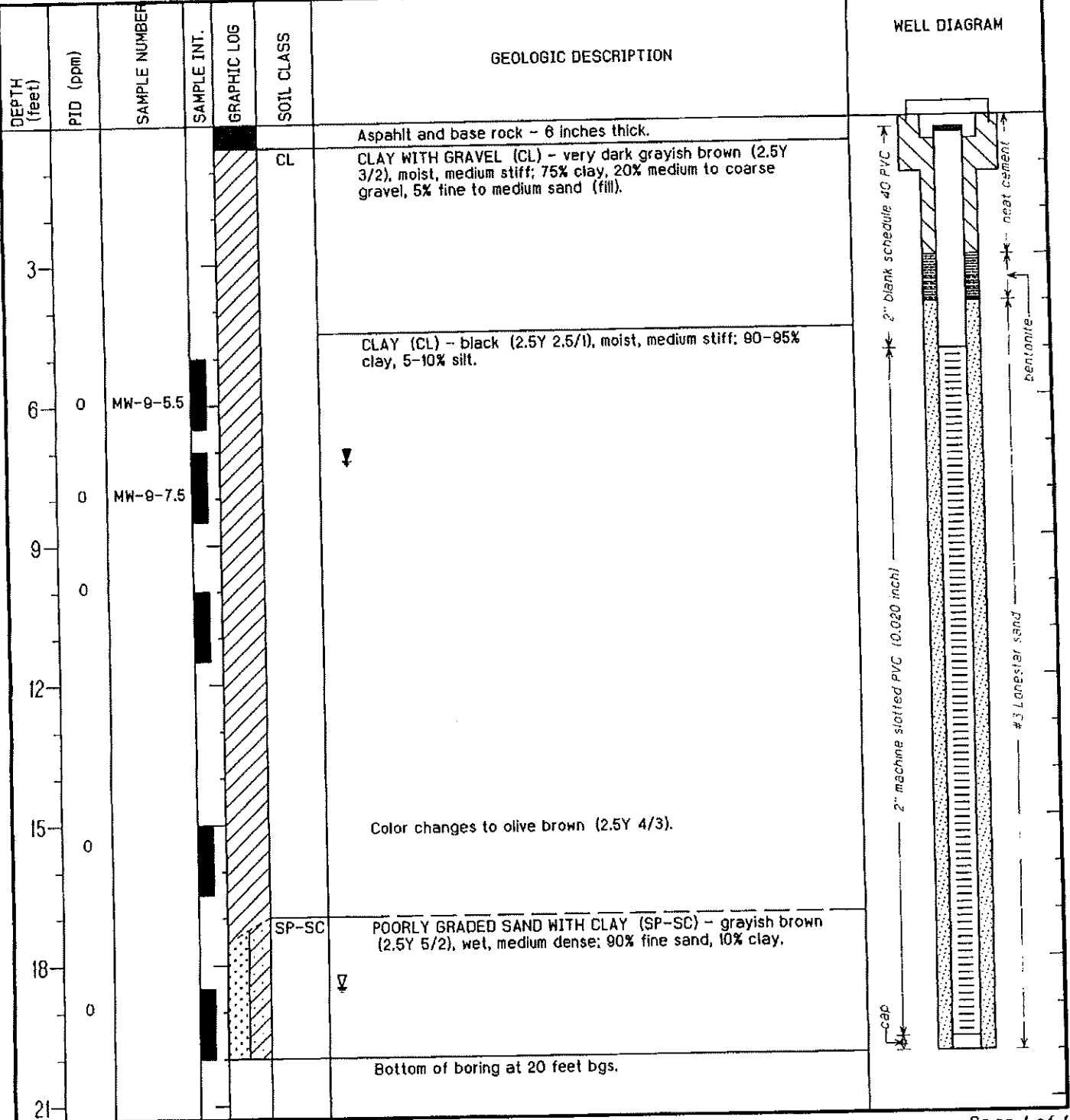
WL (ft. bgs): *7.24* DATE: *09/28/01* TIME: *13:50*

DRILLING METHOD: *8" Hollow stem auger*

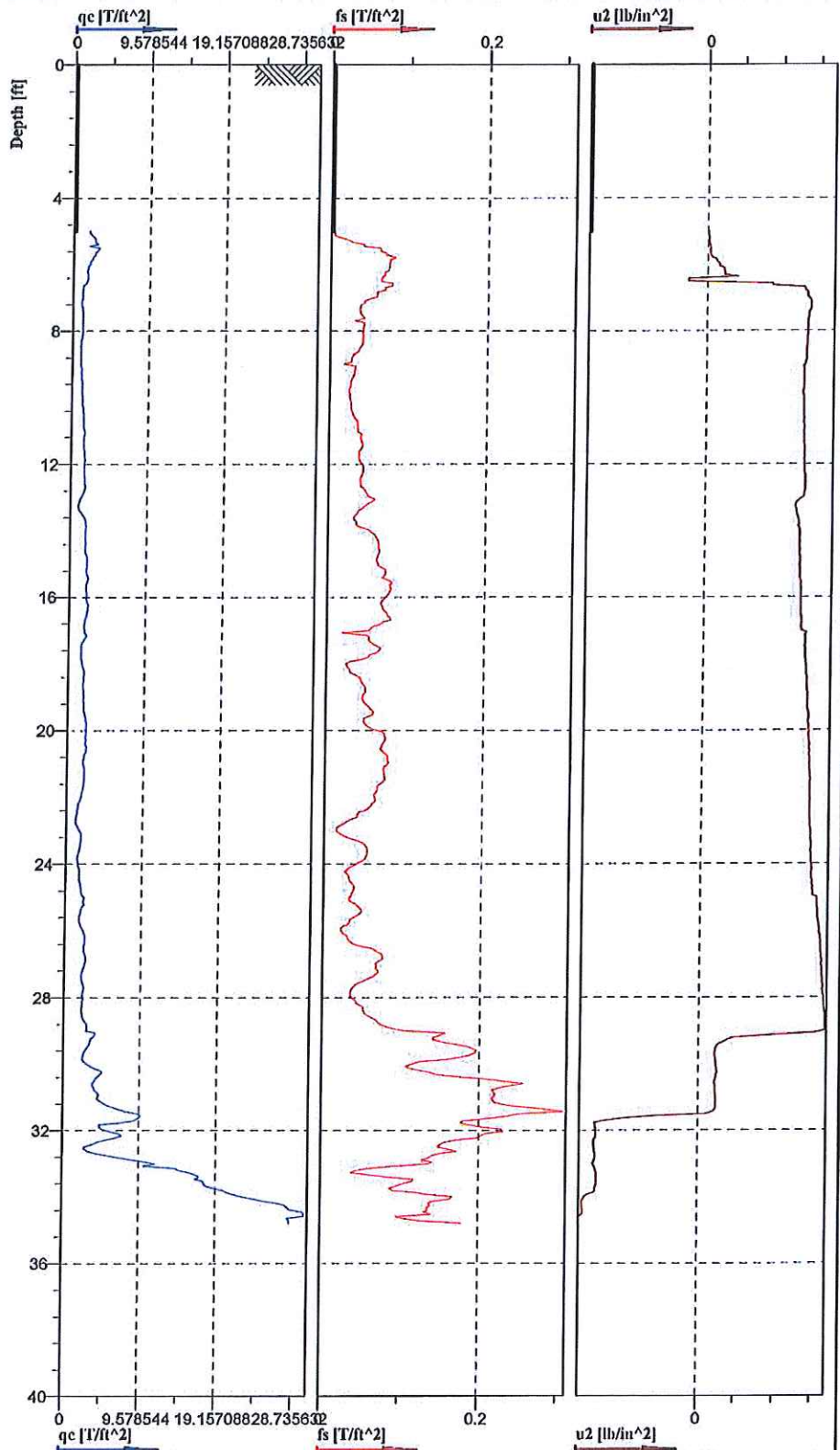
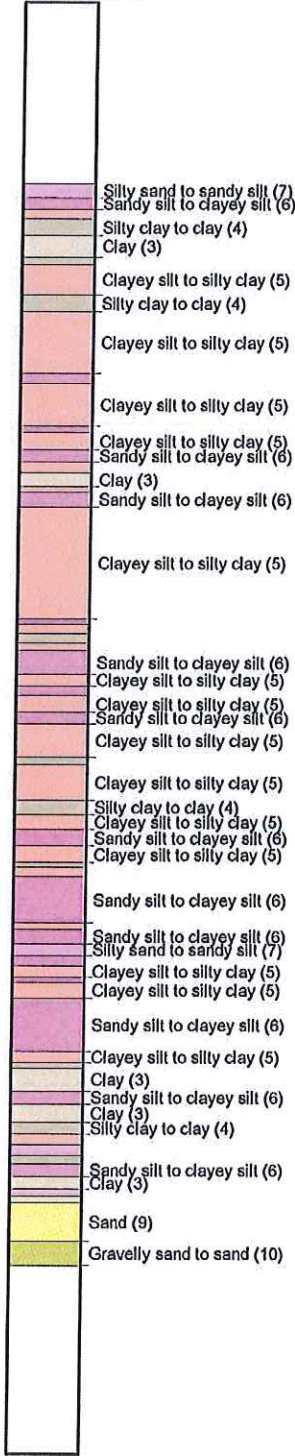
TOTAL DEPTH: *20 feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Andrew Smith*



Classification by
Robertson 1986

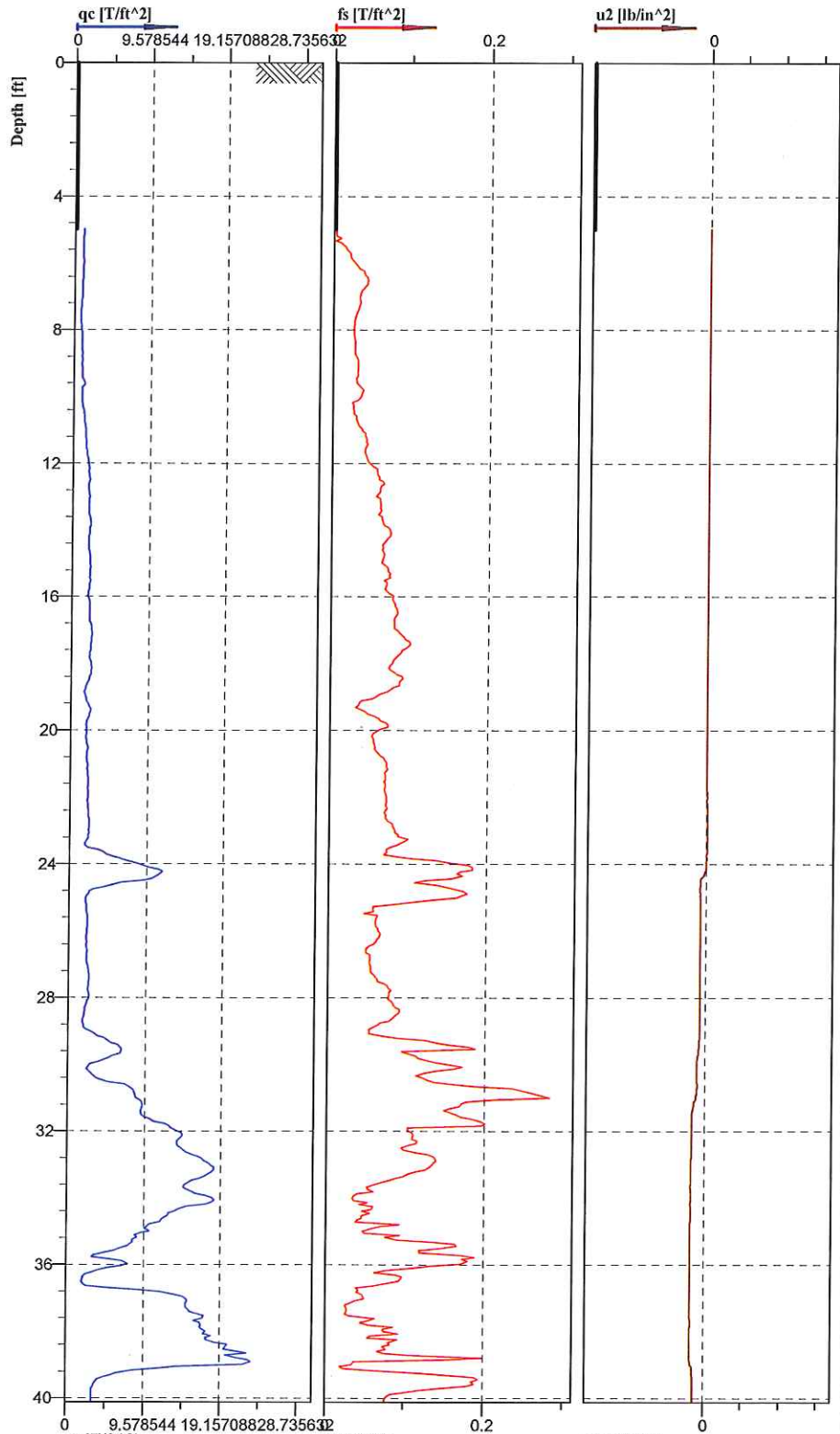
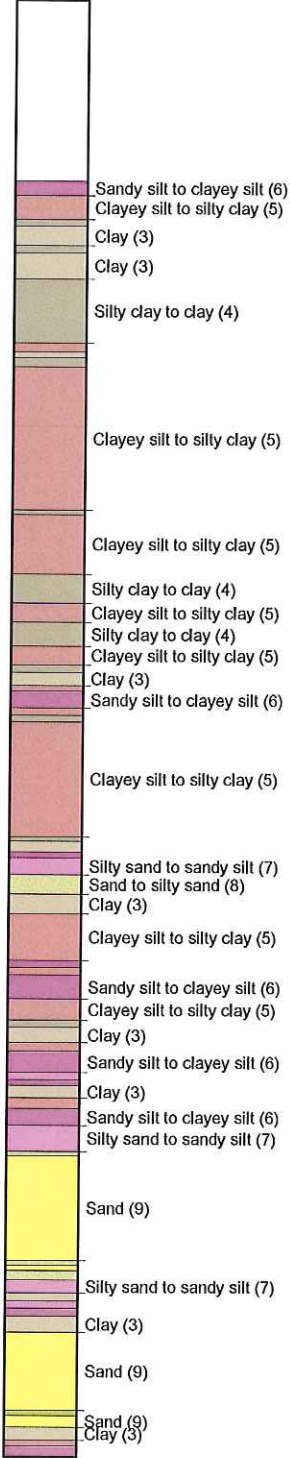


Cone No: 4280
Tip area [cm2]: 10
Sleeve area [cm2]: 150



Location: Dublin, CA	Position: X: 0.00 ft, Y: 0.00 ft	Ground level: 0.00	Test no: CPT1
Project ID:	Client: Antea Group	Date: 8/10/2011	Scale: 1 : 61
Project: S11154		Page: 1/1	Fig:
		File: CPT1Graph.cpd	

Classification by
Robertson 1986



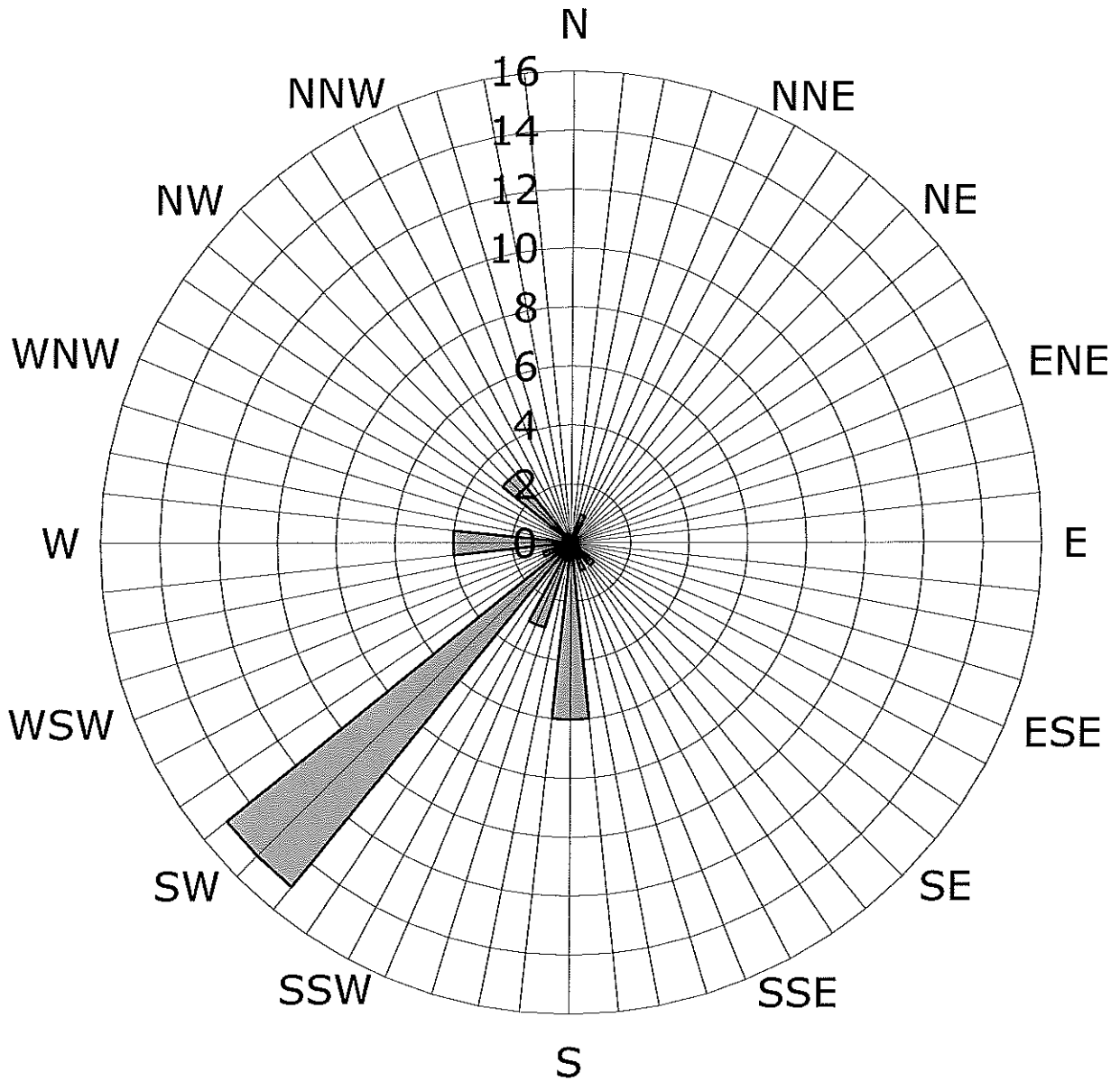
Cone No: 4280
Tip area [cm²]: 10
Sleeve area [cm²]: 150

Location: Dublin, CA	Position: X: 0.00 ft, Y: 0.00 ft	Ground level: 0.00	Test no: CT2
Project ID: S111054.01B	Client: Antea Group	Date: 8/11/2011	Scale: 1 : 61
Project: S111054.01B		Page: 1/1	Fig:
		File: CPT2.cpt	

Appendix B

Historical Groundwater Flow Direction and Gradient Data and Rose Diagram

Figure 5
Historic Groundwater Flow Directions
76 Station No. 5748/6419
 6401 Dublin Blvd.
 Dublin, California



Legend

Groundwater flow directions are based on data from third quarter 1994 to first quarter 2011. 34 data points shown.

■ Groundwater Flow Direction

TABLE 4
Groundwater Gradient and Flow Direction Data

76 Station No. 5748/6419
6401 Dublin Blvd.
Dublin, California

Site	Monitoring Date	Groundwater Gradient (feet per foot)	Groundwater Flow Direction																
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
5748	08/25/94	0.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	11/18/94	0.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02/15/95	0.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	05/17/95	0.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	08/25/95	0.01	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	11/28/95	0.004	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	02/26/96	0.006	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	08/23/96	0.01	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	02/17/97	0.003	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	08/18/97	0.0005	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	02/02/98	0.001	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	08/24/98	0.002	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	02/10/99	0.003	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	08/02/99	0.004	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	02/11/00	0.007	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	07/26/00	0.006	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	02/02/01	0.004 ; 0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	08/24/01	0.005 ; 0.02	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	02/06/02	0.003 ; 0.01	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	07/30/02	0.002 ; 0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02/17/03	0.005 ; 0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	08/18/03	0.003	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	02/24/04	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	09/17/04	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	03/22/05	0.020	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	09/29/05	0.007	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	01/09/06	0.010	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	09/27/06	0.010	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	03/27/07	0.010	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	09/21/07	0.020	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	03/27/08	0.007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	09/02/08	0.005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	03/06/09	0.005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	08/21/09	0.005	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	03/12/10	0.003	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
09/24/10	0.006	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
03/08/11	0.003	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
09/01/11	0.006	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
		0.006 Average	0	1	0	0	0	0	0	1	1	6	3	15	1	4	0	3	0

Explanation

NA = Not available
Number of Events = 35