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October 25, 2005  
Project No. SJ11-989-T

Mr. Robert Weston  
Alameda County Health Care Services Agency  
Environmental Health Services – Environmental Protection  
1131 Harbor Bay Parkway  
Alameda, California 94502

**Re:    Underground Storage Tank, Product Piping, and Dispenser Removals Report  
      Shell-branded Service Station  
      11989 Dublin Boulevard  
      Dublin, California**

Dear Mr. Weston,

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared this report documenting soil sampling performed in association with the removal of four fuel underground storage tanks (USTs), four fuel dispensers, and the associated product piping at the above-referenced site (Figure 1).

Soil sampling at the base of the fuel UST tank pit excavation, beneath the former product piping lines, and beneath the former dispensers, was performed by Delta under the direction of Mr. Robert Weston, Senior Hazardous Materials Specialist for the Alameda County Health Care Services Agency, Environmental Health Services Department (ACHCSA).

## **BACKGROUND**

The subject property is located on the southwest corner of the intersection of Dublin Boulevard and San Ramon Road in Dublin, California (Figure 2). The property is currently the site of an active Shell-branded service station.

The Shell service station prior to reconstruction had three gasoline USTs, one diesel UST, and four fuel dispenser islands (Figure 2). The site is located in a commercial area with retail businesses adjacent to the station.

A member of:



The ACHCSA currently manages environmental activities at this site. During removal of the previous former fuel system in May and June 1997, petroleum hydrocarbon impacted soils were discovered beneath the site. A site assessment investigation, including soil borings and groundwater monitoring well installations, was conducted from 1997 to 2000. Additional site assessment, including borings, has been approved by ACHCSA.

#### **Underground Storage tank Unauthorized release Report – November 2004**

The following is a summary of site activities and observations related to the issuance by Shell of an Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report (URR) to the ACHCSA dated November 11, 2004 (Attachment A). The summary is based on notes and conversations with Aura Sibley, Shell's Compliance Coordinator, and Rod Brownlee of Able Maintenance, Inc. (Able Maintenance), and from field notes prepared by Containment Solutions, Inc. (CSI).

On October 22, 2004, Shell received a Periodic Test fail alarm for the regular grade UST. On October 25, 2004, the UST was emptied. A precision tank test was performed by AffordaTest on October 29, 2004. The UST did not pass the tightness test. Shell's contractor Able Maintenance applied for an Emergency Tank Repair permit from ACHCSA and the City of Dublin Fire Department. Based on the test failure, Shell submitted an URR to the ACHCSA dated November 11, 2004.

On November 11, 2004, the UST was washed and triple rinsed. On December 8, 2004, representatives of CSI entered the regular grade tank to make an inspection and make any required repairs. Robert Weston from ACHSCA was on-site during the inspection. CSI field notes state "Entered and inspected one single wall tank. Inspection found two small 'star crazes' in shell wall." Rod Brownlee of Able Maintenance reports that "star crazes" are small radial imperfections in the tank wall and are not necessarily associated with a product release. As a precautionary measure, CSI placed a fiberglass patch on the two "star crazes." During its inspection, CSI was unable to locate any tank damage that might have caused the tank to fail the tightness test.

While the tank was empty, CSI sealed the center wrap seam and installed seven deflector plates on the bottom of the tank beneath openings along the top of the tank. Deflector plates consist of a ¼-inch thick steel plate and are now standard on all USTs. A copy of CSI's field report dated December 8, 2004 is provided as Attachment C. After tank upgrades, the UST was retested and passed the tightness test. The results of the UST test were forwarded to ACHSCA and the City of Dublin Fire Department and the tank was approved for filling. The UST was placed back in service on December 15, 2004.

#### **FUEL UST REMOVALS, SAMPLING, AND ANALYSES**

The four fuel USTs were removed by Paradiso Mechanical, Incorporated (Paradiso) on August 18, 2005. The USTs were cleaned, rinsed, and inerted, by Adams Services prior to their removal. Each UST was loaded onto a separate truck provided by Adams Services. All tanks were transported to the Republic Waste Landfill in Livermore, California. Mr. Andrew Persio and Ms. Heather Buckingham of Delta and Mr. Robert Weston of the ACHCSA examined each UST as it was hoisted out of the tank pit excavation. No visible holes or cracks were observed in the USTs.

On August 18, 2005, Delta collected eight soil samples (T-1 through T-8) from beneath the former fuel USTs, each at a depth of approximately 15 feet below grade (bg). Soil samples were screened for discoloration, odor and presence of petroleum hydrocarbons using a photo-ionization detector (PID). Based on field observations including product staining, odor and elevated PID readings, over-excavation activities were performed in order to investigate the extent of impacted soil. An additional four samples were collected at locations T-2, T-3, T-5 and T-8 at depths of 19 ft, 17 ft, 17 ft, and 20 ft bg, respectively. Sample locations are shown on Figure 2. Soil samples were collected utilizing the bucket of the excavator.

Samples were collected by pushing a brass tube into soil within the excavator bucket. The brass tube was then removed, sealed with Teflon sheeting and tight fitting plastic end caps, and clearly labeled. Samples were placed on ice for transportation to Severn Trent Laboratories, Inc. (STL) in Pleasanton, California.

Mr. Weston requested that the soil samples be analyzed for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), five fuel oxygenates methyl tert-butyl ether (MTBE), tert-butanol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), ethylene dibromide (EDB) 1,2-dichloroethane (1,2-DCA) and ethanol by EPA Method 8260B. In addition, Mr. Weston requested that samples also be tested for total petroleum hydrocarbons as diesel (TPH-D) and total lead. TPH-D analysis was performed by EPA Method 8015M and total lead was performed using EPA Method 6010B. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B. Analytical results are summarized on Table 1.

Soil encountered at the base of the fuel UST excavation consisted of a mixture of clayey sand and gravel to a depth of approximately 19 feet bg. A clay layer was encountered below a depth of approximately 19 feet bg. Groundwater was not encountered within the UST pit during initial excavation activities to a depth of approximately 20 feet bg. TPH-G, TPH-D, BTEX compounds, MTBE, TBA and total lead were detected in UST tank pit samples. TPH-G was detected at a maximum concentration of 4,600 milligrams per kilogram (mg/kg) in Sample T-8 @ 15 ft. In Sample T-8 @ 20 ft TPH-G was below the laboratory detection limit of 50 mg/kg. BTEX compound concentrations ranged from 0.68 mg/kg (xylenes) to 45 mg/kg (xylenes). TPH-D was detected at a maximum concentration of 700 mg/kg in Sample T-8 @ 15 ft. In Sample T-8 @ 20 ft TPH-D was detected at a concentration of 5.3 mg/kg. All detections of TPH-D did not match the laboratory diesel standards. MTBE was only detected in Sample T-5 @ 15 ft at a concentration of 1.4 mg/kg. TBA was detected at a maximum concentration of 21 mg/kg in Sample T-7 @ 15 ft (Table 1).

## **DISPENSER SOIL SAMPLING AND ANALYSES**

The site's four fuel dispensers were removed by Paradiso prior to Delta's arrival on-site, exposing underlying soil. On August 18, 2005, Delta collected a soil sample from beneath each former dispenser location (S-1, S-2, S-4 and S-6). Sample locations are shown on Figure 2. The upper 3 to 4 feet of pea gravel backfill and native soil was excavated below the former dispenser locations. The soil samples were collected utilizing the bucket of the excavator. Samples were collected by pushing a brass tube into soil within the excavator bucket. The brass tube was then removed, sealed with Teflon sheeting and tight fitting plastic end caps, and clearly labeled. Samples were placed on ice for transportation to STL. The soil samples were analyzed for TPH-G, BTEX compounds, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol by EPA Method 8260B. Samples were also tested for TPH-D by method EPA 8015M and total lead by EPA Method 6010B. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B. Analytical results are summarized on Table 1.

Native soils encountered beneath the dispenser locations consisted primarily of clay. TPH-D was detected in all dispenser samples at concentrations ranging from 17 mg/kg to 46 mg/kg. All detections of TPH-D did not match the laboratory diesel standards. Total lead was detected in all samples at concentrations ranging from 5.7 mg/kg to 10 mg/kg. All other analytes were below the laboratory reporting limit in all four soil samples collected beneath former dispensers (Table 1).

## **PRODUCT PIPING SOIL SAMPLING AND ANALYSES**

Fuel system product piping was removed by Paradiso prior to Delta's arrival on-site. On August 18, 2005, Delta collected four soil samples (S-3, S-5, S-7 and S-8) from native material within product piping trenches connecting the fuel USTs with dispensers. On September 26, 2005, when concrete activities

warranted access, Delta collected a fifth sample associated with the piping (S-9 @ 4 ft). Sampling locations were directed by Mr. Robert Weston and are shown on Figure 2. Soil samples were collected utilizing the bucket of the excavator. Samples were collected by pushing a brass tube into soil within the excavator bucket. The soil sample collected at location S-9 was completed by advancing a brass tube into native materials utilizing soil sampling tools equipped with a slide hammer. The brass tube was then removed, sealed with Teflon sheeting and tight fitting plastic end caps, and clearly labeled. The samples were placed on ice for transportation to STL. The samples were analyzed for TPH-G, BTEX compounds, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol by EPA Method 8260B. Soil samples were also analyzed for TPH-D by EPA Method 8015M and total lead by EPA Method 6010B as directed by Mr. Weston. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B. Analytical results are summarized on Table 1.

Native soils encountered at the base of the piping trench consisted primarily of clay. TPH-D was detected in Sample S-5 @ 4.5ft. Total lead was detected in all soil samples at concentrations ranging from 5.2 mg/kg to 6 mg/kg. All other analytes were below the laboratory reporting limit in all five soil samples collected beneath former product lines (Table 1).

## OVER EXCAVATION ACTIVITIES

The UST upgrades included replacing the four 10,000 gallon USTs with two 20,000 gallon USTs. The increased size of the tanks warranted a small area of shoring and minimal over-excavation. Due to petroleum hydrocarbon detections and observed odors and discoloration beneath former site UST's, Delta directed Paradiso to over-excavate additional native soil within the former UST tank pit. Due to the extent and depth of the proposed additional over-excavation, additional shoring was required to stabilize the excavation walls. Approximately 1,000 cubic yards (yd<sup>3</sup>) of soil was removed from former UST tank pit. The excavated soil was transported off-site by Phillipwest Industrial Services (PSC) for disposal at the Forward Landfill in Stockton, California.

On August 25, 2005, after installation of the shoring was complete, Delta returned to the site to direct and oversee the excavation activities and collect confirmation soil samples. The base of the excavation was a maximum depth of 24.5 feet bg. Groundwater was encountered at approximately 23 feet bg. At approximately 19 feet bg a light grey clay layer was encountered. Soil was excavated below this layer to a depth of approximately 22 feet bg in the area of over-excavation Samples OX-1 through OX-4. Delta along with Mr. Weston, after consideration of the clay layer, decided to excavate just below the clay layer to a depth of approximately 20 feet bg in the other two thirds of the excavation. In the area of Sample OX-11 and OX-12, the excavation was increased to 24.5 feet bg and 22 feet bg, respectively based on field observations and PID readings. The soil samples were collected utilizing the bucket of the excavator. Samples were collected by pushing a brass tube into soil within the excavator bucket. Sampling tubes were sealed with Teflon sheeting and tight fitting plastic end caps, and clearly labeled. The samples were analyzed for TPH-G, BTEX compounds, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol by EPA Method 8260B. Soil samples were also analyzed for TPH-D by EPA Method 8015M and total lead by EPA Method 6010B. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B. Analytical results are summarized on Table 1.

TPH-G, TPH-D, MTBE and TBA were detected in the confirmation samples ranging in concentrations from 2.2 mg/kg to 420 mg/kg, 2.3 mg/kg to 600 mg/kg, 0.012 mg/kg to 0.59 mg/kg, and 0.018 mg/kg to 6 mg/kg, respectively (Table 1).

## HISTORIC PRODUCT PIPING SOIL SAMPLING AND ANALYSES

During piping excavation activities, former fuel system piping was uncovered midway between the dispenser islands. Under the direction of Mr. Robert Weston Delta instructed Paradiso to excavate around the area of the historic piping and collected soil samples. On September 26 and 27, 2005, Delta collected two soil samples (S-10 and S-11) from native material within the assumed historic product piping trenches. Sampling locations were directed by Mr. Robert Weston and are shown on Figure 2. The soil samples were collected utilizing the bucket of the excavator. Samples were collected by pushing a brass tube into soil within the excavator bucket. The brass tube was then removed, sealed with Teflon sheeting and tight fitting plastic end caps, and clearly labeled. The samples were placed on ice for transportation to STL. The samples were analyzed for TPH-G, BTEX compounds, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol by EPA Method 8260B. Soil samples were also analyzed for TPH-D by EPA Method 8015M and total lead by EPA Method 6010B as directed by Mr. Weston. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B. Analytical results are summarized on Table 1. The results were all below the laboratory detection limits for TPH-G, TPH-D, BTEX compounds, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol. Lead was detected in Samples S-10 and S-11 at concentrations of 6.4 and 6.9 mg/kg, respectively.

## SOIL PRE-PROFILING AND STOCKPILE SAMPLING AND ANALYSES

All soil excavated was placed in a stockpile located next to the UST complex (Figure 2). As part of the disposal process Delta completed five on-site borings (B-1 through B-5) for the process of pre-profiling the soil to be removed during the tank, product piping and dispenser replacement. Boring locations are represented on Figure 2. Analytical results are summarized in Table 1. The samples collected were composited and analyzed for lead by EPA Method 6010B and TPH-G and BTEX Compounds by EPA Method 8260B. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B. A detailed description of the soil borings will be presented in a separate site assessment report to be submitted to the ACHCSA. Excavated soils were transported off-site for disposal at Forward Landfill in Manteca, California.

## SUMMARY AND CONCLUSIONS

Petroleum hydrocarbon impacts were observed in site soils beneath former fuel USTs, former dispensers, and former product piping. Based on field observations and lab data collected, Delta concluded that over-excavation was warranted beneath the former fuel UST's. The most significant petroleum hydrocarbon impact (TPH-G = 4,600 mg/kg) was detected in soils in the southwest corner (T-7 and T-8) of the former UST tank pit. Petroleum hydrocarbon impacts decreased with depth. Delta believes the encountered clay layer inhibits further downward migration of petroleum hydrocarbons. Soils in this location were remediated by over-excavation activities based on confirmation over-excavation samples collected (OX-3 and OX-4). Confirmation samples collected at the base of the excavation indicate successful removal of the petroleum hydrocarbon impacts. Based on the over-excavation samples collected in the area of UST Sample T-3 (OX-7 and OX-11) hydrocarbon impacts remain in site soils. Over-excavation activities were primarily limited due to the presence of groundwater at approximately 21 to 23 feet bg. Delta is currently conducting on-going site assessment activities on and off-site to determine the full extent of the impacts. Results from the assessment activities will be submitted to Mr. Jerry Wickham with ACHCSA in separate reports. No groundwater samples were collected due to the presence of on-site monitoring wells.

Delta did not file an Unauthorized Release Report concerning the detections stated above, as the site is already an open environmental case managed by the ACHCSA. Delta did not consider the detections to represent a new fuel release.

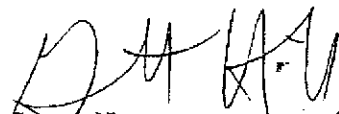
## REMARKS


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

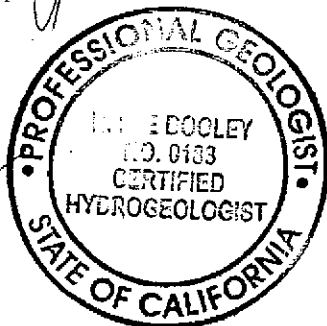
If you have any questions regarding this report, please contact R. Lee Dooley (Delta) at (408) 826-1880.

Sincerely,

**Delta Environmental Consultants, Inc.**

  
Garrett Haertel  
Project Engineer

  
R. Lee Dooley  
Senior Hydrogeologist  
CHG 0183



## ATTACHMENTS:

Table 1 – Summary of Soil Analytical Data

Figure 1 – Site Location Map

Figure 2 – Site Map

Attachment A – Unauthorized Release Report – November 2004

Attachment B – Laboratory Certified Analytical Reports and Chain-of-Custody Documentation

Attachment C – Containment Solutions, Inc. Report; December 8, 2004

Cc: Denis Brown, Shell Oil Products US, Carson CA  
Jim Martin, Shell Oil Products US, San Ramon, CA  
Jerry Wickham, ACHCSA, Alameda, CA

**Table 1**  
**Summary of Soil Analytical Data**  
Shell-branded Service Station  
11989 Dublin Boulevard  
Dublin, California

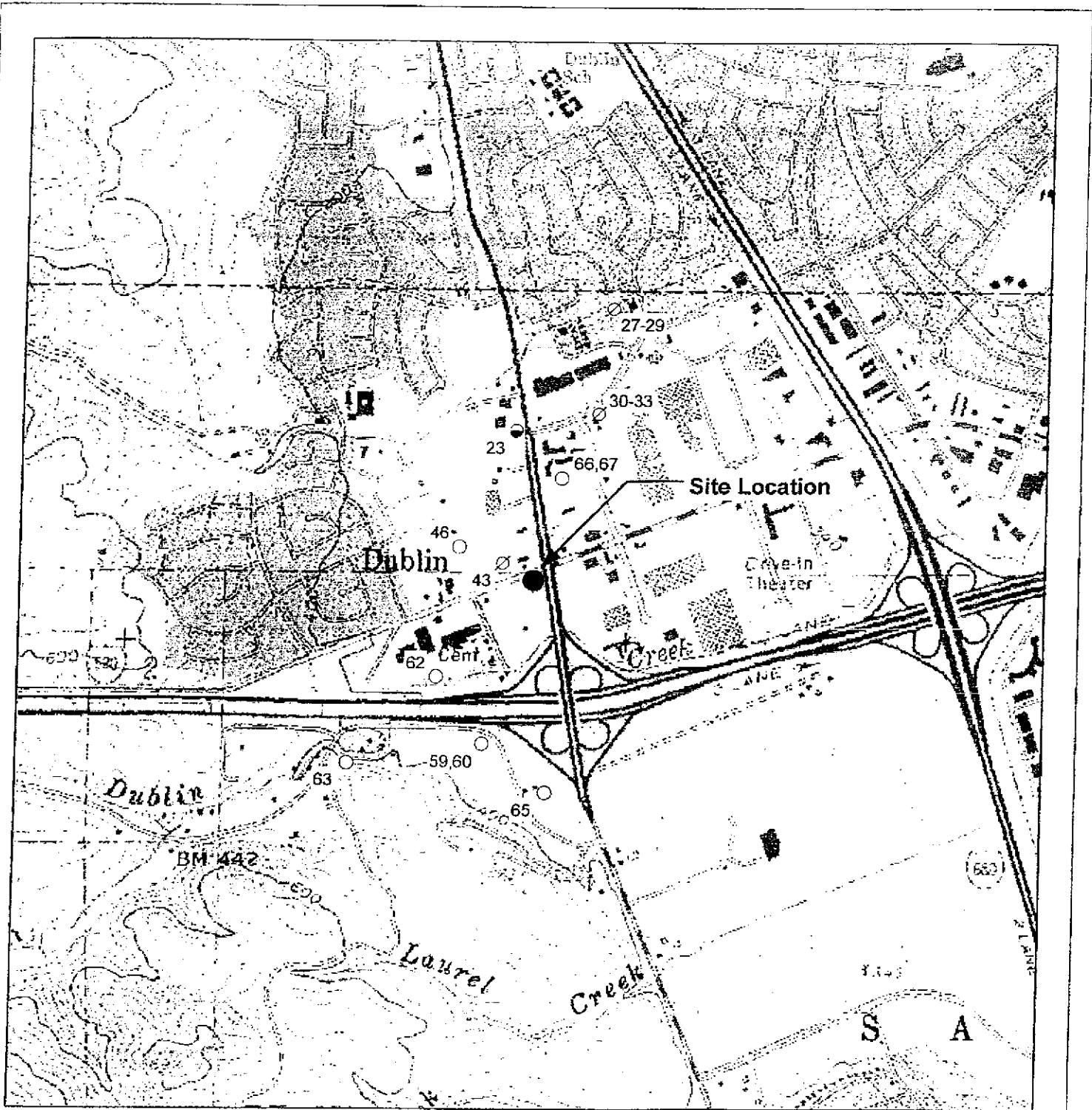
Sample Designation	Date Sampled	Depth (feet)	TPH-G (mg/kg)	TPH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	Total Lead (mg/kg)
<b>Pre-Profile Soil Boring Samples</b>													
B-1@5'	7/8/05	5	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NA	NA	NA
B-1@10'	7/11/05	10	<1.0	1.5 *	<0.0050	<0.0050	<0.0050	<0.0050	0.011	<0.010	NA	NA	NA
B-2@20'	7/11/05	20	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	0.017	NA	NA	NA	NA
B-4@5'	7/8/05	5	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NA	NA	NA
B-4@15'	7/11/05	15	<5.0	2.3 *	<0.025	<0.025	<0.025	<0.025	0.29	0.55	NA	NA	NA
B-4@20'	7/11/05	20	<1.0	15 *	<0.0050	<0.0050	<0.0050	<0.0050	0.0052	2.5	NA	NA	NA
B-5@15'	7/11/05	15	<4.8	NA	<0.024	<0.024	<0.024	<0.024	0.47	NA	NA	NA	NA
B-5@20'	7/11/05	20	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	0.017	NA	NA	NA	NA
<b>Composite Soil Samples</b>													
COMPOSITE(B-1,2,3,4,@5')	7/11/05	5	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	7.3
COMPOSITE(B-5@5', B-5@15', B-5, 2@20')	7/11/05		<1.0	NA	<0.0050	<0.0050	<0.0060	<0.0050	0.12	NA	NA	NA	7.1
<b>Fuel UST Pit Samples</b>													
T-1@15'	8/18/05	15	<5.0	<1.0	<0.025	<0.025	<0.025	<0.025	<0.025	11	<0.025	<0.50	6.5
T-2@15'	8/18/05	15	<5.0	<1.0	<0.025	<0.025	<0.025	<0.025	<0.025	7.5	<0.025	<0.50	6.3
T-3@15'	8/18/05	15	<5.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	<0.50	<25	4.3
T-4@15'	8/18/05	15	<5.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	5.9	<0.50	<25	5.7
T-5@15'	8/18/05	15	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.013	1.4	<0.0050	<0.1	5.3
T-6@15'	8/18/05	15	<5.0	7.2 *	<0.50	<0.50	<0.50	<0.50	<0.50	12	<0.50	<25	5.4
T-7@15'	8/18/05	15	2,400	48 **	<2.5	<2.5	9.3	11	<2.5	21	<2.5	<130	6.4
T-8@15'	8/18/05	15	4,600	700 **	<2.5	<2.5	8.8	45	<2.5	16	<2.5	<130	5.6
T-2@19'	8/18/05	19	<5.0	1.4 *	<0.50	<0.50	<0.50	<0.50	<0.50	3.8	<0.50	<25	6.1
T-3@17'	8/18/05	17	<5.0	21 **	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<25	6.6
T-5@17'	8/18/05	17	<5.0	<1.0	<0.50	<0.50	<0.50	0.68	<0.50	<2.5	<0.50	<25	5.7
T-8@20'	8/18/05	20	<5.0	5.3 *	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<25	4
<b>Dispenser Samples</b>													
S-1@3'	8/18/05	3	<1.0	17 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	5.8
S-2@3'	8/18/05	3	<1.0	25 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	10
S-4@3.5'	8/18/05	3.5	<1.0	46 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	6.8
S-6@4'	8/18/05	4	<1.0	28 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	5.7
<b>Producing Piping Samples</b>													
S-3@4'	8/18/05	4	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	5.5
S-5@4.5'	8/18/05	4.5	<1.0	1.3 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	6
S-7@3'	8/18/05	3	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	6.3
S-8@4'	8/18/05	4	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	5.2
S-9@4'	9/26/05	4	<1.0	4.4 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	5.9
S-10@42"	9/27/05	3.5	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	6.4
S-11@39"	9/27/05	3.25	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.1	6.9

**Table 1**  
**Summary of Soil Analytical Data**  
Shell-branded Service Station  
11989 Dublin Boulevard  
Dublin, California

Sample Designation	Date Sampled	Depth (feet)	TPH-G (mg/kg)	TPH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	Total Lead (mg/kg)
<b>Over Excavation Samples</b>													
OX-1@22'	8/25/05	22	<4.7	41 *	<0.024	<0.024	<0.024	<0.024	<0.024	<0.047	<0.024	NA	6.5
OX-2@22'	8/25/05	22.5	2.2	32 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.018	<0.0050	NA	7.7
OX-3@22'	8/25/05	22	2.3	2.3 *	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.031	<0.0050	NA	7.1
OX-4@22'	8/25/05	22	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.081	<0.0050	NA	7.3
OX-5@20'	8/26/05	20	<6.0	<1.0	<0.023	<0.023	<0.023	<0.023	<0.023	0.10	<0.023	NA	6.5
OX-6@20'	8/26/05	20	<4.6	<1.0	<0.023	<0.023	<0.023	<0.023	<0.023	0.38	<0.023	NA	4.3
OX-8@20'	8/26/05	20	420	6.9 **	<0.50	<0.50	1.4	<0.50	0.59	6	<0.50	NA	5.9
OX-9@20'	8/26/05	20	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.012	0.91	<0.0050	NA	6.7
OX-10@20'	8/30/05	20	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.17	<0.01	NA	6.4
OX-11@20'	8/30/05	20	<50	12 **	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	NA	6.6
OX-11@22'	8/30/05	22	<50	600 **	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	NA	4.8
OX-11@24.5'	8/30/05	24.5	340	240 *	<0.50	<0.50	1	<0.50	<0.50	<2.5	<0.50	NA	5.7
OX-12@20'	8/30/05	20	<50	79 *	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	NA	5.6
OX-12@22'	8/30/05	22	<50	51 *	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	<0.50	NA	6.5
										<2.5	<0.50	NA	6.3

**Notes:**  
mg/kg = milligrams per kilogram  
TPH-G = Total petroleum hydrocarbons as gasoline  
TPH-D = Total petroleum hydrocarbons as diesel  
MTBE = Methyl tert-butyl ether  
TBA = tert butanol  
EDB = ethylene dibromide  
\* = ndp flag - Hydrocarbon reported does not match the pattern of the laboratory Diesel standard  
\*\* = edr flag - Hydrocarbon reported is in the early Diesel range, and does not match laboratory Diesel standard





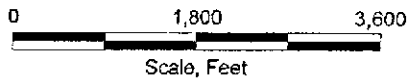
**GENERAL NOTES:**

Base Map from: DeLorme Yarmouth, ME 04096  
 Source Data: USGS



**Legend**

- Domestic Well
- Irrigation Well
- ⊗ Destroyed/Abandoned Well



QUADRANGLE LOCATION

**FIGURE 1**  
**SITE LOCATION MAP**





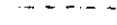
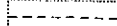
**SHELL-BRANDED SERVICE STATION**  
 11989 Dublin Blvd.  
 Dublin, California

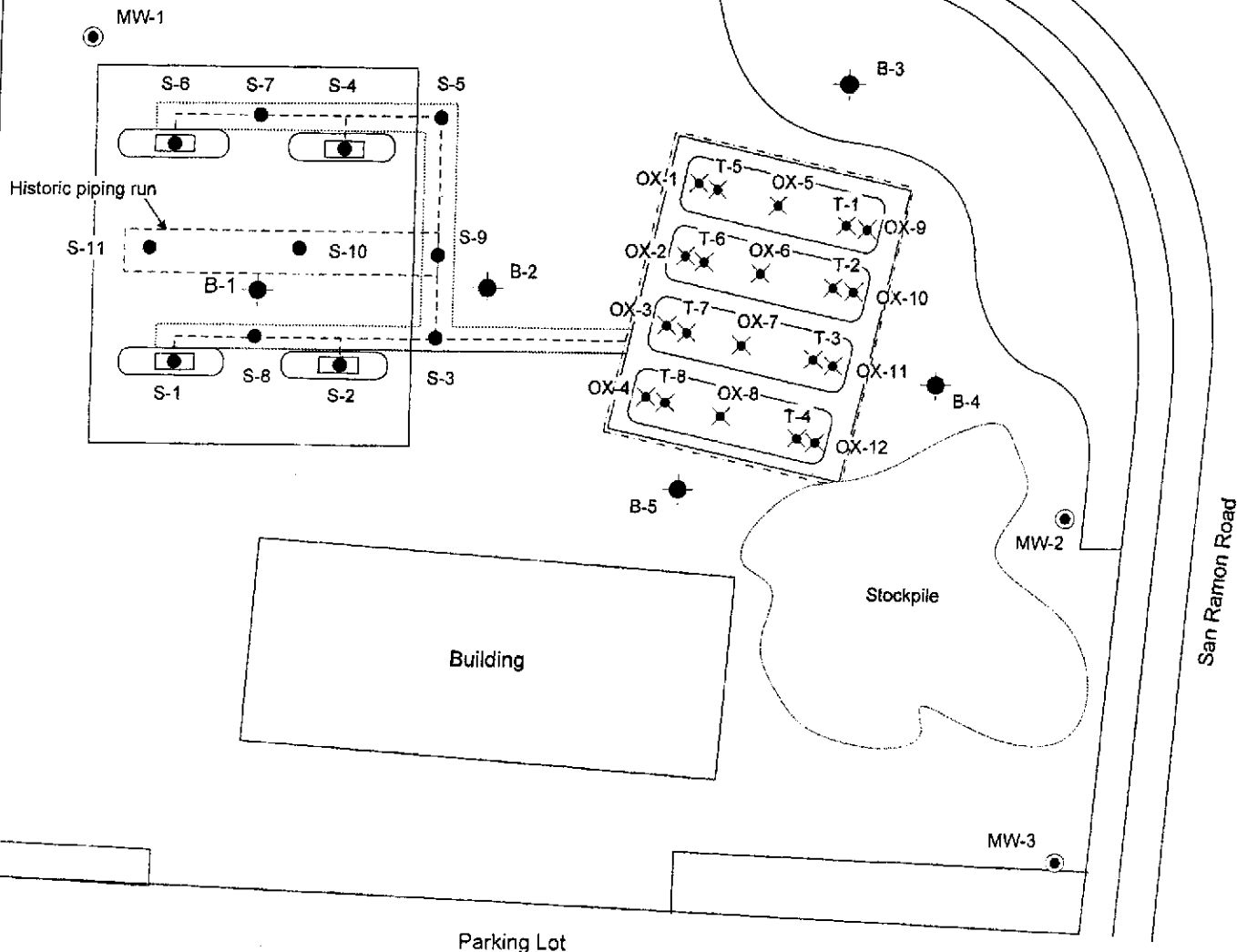
PROJECT NO. SJ11-989-1.2005	DRAWN BY VF 10/22/03
FILE NO. SJ11-989-1.2005	PREPARED BY VF
REVISION NO.	REVIEWED BY



Dublin Boulevard

**LEGEND**

- MW-2  **GROUNDWATER MONITORING WELL**
- B-3  **SOIL BORING LOCATION**
- S-5  **DISPENSER PIPING SOIL SAMPLE LOCATION**
- OX-9  **OVER-EXCAVATION SOIL SAMPLE LOCATION**
-  **SHORING**
-  **DISPENSER PIPING AND TRENCHES**



SAMPLE ID	PID.(ppmy)
OX-2	6.4
OX-3	8.2
OX-4	29.3
OX-5	7.3
OX-6	14.6
OX-7	218
OX-8	6.9
OX-9	3.8
OX-10	60.2
OX-11@20'	539
OX-11@22'	568
OX-11@24.5'	810
OX-12@20'	164
OX-12@22'	155

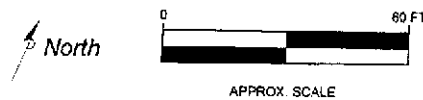



FIGURE 2  
SOIL SAMPLING LOCATION MAP  
SHELL-BRANDED SERVICE STATION  
11989 Dublin Blvd.  
Dublin, California

PROJECT NO. SJ11-989-1.202E	DRAWN BY JL 10/27/06	
FILE NO. SJ11-989-1.230S	PREPARED BY JL	
REVISION NO. 5	REVIEWED BY	

**Attachment A**

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**UNAUTHORIZED RELEASE REPORT**

**NOVEMBER 2004**

# UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? <input type="checkbox"/> YES <input type="checkbox"/> NO	FOR LOCAL AGENCY USE ONLY I HEREBY CERTIFY THAT I HAVE DISTRIBUTED THIS INFORMATION ACCORDING TO THE DISTRIBUTION SCHEDULE INSTRUCTION SHEET ON THE BACK PAGE OF THIS FORM.
REPORT DATE 1.1.03.04	PAGE # 1	SITES _____

REPORTED BY	NAME OF INDIVIDUAL FILING REPORT MURR SIBLEY	PHONE (916) 240-1610	SIGNATURE Murr Sibley for Shell
	REPRESENTING <input type="checkbox"/> LOCAL AGENCY <input checked="" type="checkbox"/> OTHER	COMPANY OR AGENCY NAME Shell Oil Products US	
	ADDRESS 20995 J. Wilmington, Carson CA 90810		

RESPONSIBLE PARTY	NAME Shell Oil Products US	CONTACT PERSON Murr Sibley	PHONE (916) 240-1610
	ADDRESS (see above)		

SITE LOCATION	FACILITY NAME (IF APPLICABLE) Shell Branded Service Station	OPERATOR Ben Maghwood	PHONE (916) 828-2710
	ADDRESS 11989 Dublin San Ramon Road	CITY Dublin	COUNTY Alameda

REGULATING AGENCIES	LOCAL AGENCY Alameda County Health	AGENCY NAME Health	CONTACT PERSON Rob. Weston
	REGIONAL BOARD LFBKW QCB		PHONE (916) 277-2558

SUBSTANCES INVOLVED	NAME Gasoline	QUANTITY LOST (GALLONS) <input checked="" type="checkbox"/> UNKNOWN
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DATE DISCOVERED 1.0.29.04	HOW DISCOVERED <input checked="" type="checkbox"/> TANK TEST	<input type="checkbox"/> INVENTORY MONIT'G <input type="checkbox"/> TANK REMOVAL	<input type="checkbox"/> SURFACE MONITORING <input type="checkbox"/> OTHER Precision Tank Test
DATE DISCHARGE BEGAN _____	METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY) <input checked="" type="checkbox"/> RELIEVE CONTENTS	<input type="checkbox"/> INVENTORY MONIT'G <input type="checkbox"/> TANK REMOVAL	<input type="checkbox"/> SURFACE MONITORING <input type="checkbox"/> OTHER Precision Tank Test

SOURCE OF DISCHARGE	CAUSE(S) <input checked="" type="checkbox"/> TANK LEAK <input type="checkbox"/> PIPING LEAK <input type="checkbox"/> OTHER	<input type="checkbox"/> OVERFILL <input type="checkbox"/> CORROSION <input checked="" type="checkbox"/> UNKNOWN <input type="checkbox"/> SPILL <input type="checkbox"/> OTHER
---------------------	---	--

CASE TYPE	CHECK ONE ONLY <input checked="" type="checkbox"/> UNDETERMINED <input type="checkbox"/> SOIL ONLY <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> DRINKING WATER - CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED
-----------	--

CURRENT STATUS	CHECK ONE ONLY <input checked="" type="checkbox"/> NO ACTION TAKEN <input type="checkbox"/> LEAK BEING CONFIRMED <input type="checkbox"/> REMEDIATION PLAN <input type="checkbox"/> PRELIMINARY SITE ASSESSMENT WORK PLAN SUBMITTED <input type="checkbox"/> PRELIMINARY SITE ASSESSMENT UNDERWAY <input type="checkbox"/> CASE CLOSED OR CLEANUP COMPLETED OR UNNECESSARY <input type="checkbox"/> POLLUTION CHARACTERIZATION <input type="checkbox"/> POST-CLEANUP MONITORING IN PROGRESS <input type="checkbox"/> CLEANUP UNDERWAY
----------------	--

REMEDIAL ACTION	CHECK APPROPRIATE ACTION(S) (SEE BACK PAGE) <input type="checkbox"/> EXCAVATE & DISPOSE (G) <input type="checkbox"/> EXCAVATE & TREAT (G) <input type="checkbox"/> NO ACTION REQUIRED (NA) <input type="checkbox"/> OTHER (G) <input type="checkbox"/> REMOVE FREE PRODUCT (G) <input type="checkbox"/> PUMP & TREAT GROUNDWATER (G) <input type="checkbox"/> TREATMENT AT HEADQUARTERS <input type="checkbox"/> ON-SITE BIO-DEGRADATION (G) <input type="checkbox"/> REPLACE SUPPLY (G) <input type="checkbox"/> GENT SOIL (G)
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COMMENTS: Based on preliminary vesicles. Root testing results a confirmation procedure that w/ Afforda-Subt was scheduled. Afforda-Subt could not do test until 1/29; tank was emptied on 1/26.