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Alameda County
Environmental Health

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November 2, 2009

Mr. Paresh Khatri
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

**Subject: Work Plan for Delineation of Vertical and Lateral
Extent of Contamination Plume, Addendum**

**Site: 76 Station 6419/5748
6401 Dublin Blvd.
Dublin, CA 94568
Alameda County Case No. RO0000459**

Dear Mr. Khatri;

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
2603 Camino Ramon, Suite 350
San Ramon, California 94583
Tel: (925) 884-0860
Fax: (925) 867-4687
lbermudez@pcandf.com

Sincerely,

PACIFIC CONVENIENCE & FUEL

LIZ BERMUDEZ
Senior Paralegal

Attachment

October 15, 2009

Mr. Paresh Khatri
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

**Work Plan for Delineation of Vertical and Lateral
Extent of Contamination Plume, Addendum**

76 Service Station 6419/ 5748
6401 Dublin Blvd
Dublin, CA 94568



Dear Mr. Khatri:

The following work plan is prepared in accordance with a meeting on August 20, 2009 between yourself, Don Pinkerton of Delta Consultants, and Terry Grayson of ConocoPhillips. The work plan supersedes the previously submitted *Work Plan for Delineation of Vertical and Lateral Extent of Contaminant Plume* dated January 14, 2009 and an addendum dated March 25, 2009.

BACKGROUND

The project is located at 6410 Dublin Boulevard, Dublin, California (**Figure 1**). A station site plan with current and past features is presented as **Figure 2**.

The following work plan addresses issues contains in letters from the Alameda County Health Care Services Agency (ACEH) dated October 16, 2008 and February 19, 2009. The letters request definition of the extent of the soil and groundwater contaminants beneath and downgradient of the site. The letters also asked for an evaluation of the integrity of well MW1.

SITE HYDROGEOLOGIC CONDITIONS

The site is underlain to a depth of approximately 5 feet by clayey gravel, silt, and clay. The site is underlain primarily by clay from 5 feet to a depth of at least 20 feet below ground surface (bgs).

Groundwater was encountered in only two of four borings drilled in 1999 (MW-4 through MW-7). Groundwater was encountered in the boring for well MW-4 at approximately 12 feet bgs and in the boring for MW-7 at approximately 6 feet bgs. Groundwater monitoring wells have typically been constructed with the casing screened from 4 to 19 feet bgs. Depth to water in wells has ranged from 5 to 10 feet bgs. Depth to water in the three existing wells (MW-1, MW-3, and MW-5) on March 6, 2009 ranged from 5 to 6 feet below top of casing.

The groundwater flow direction between 1994 and 2007 was consistently to the south-southwest. The flow direction between 2007 and 2009 has been primarily to the west-northwest. On September 21, 2007, the flow direction was to the south-southeast. Selected groundwater elevation contour maps from 2007 to 2009 are provided as **Attachment A**.

PROPOSED SCOPE OF WORK

The following sections described the proposed scope of work to be performed;

Delta proposes to install three groundwater monitoring wells at the site as shown on **Figure 2**. The locations of the proposed monitoring wells were based on analyte concentrations reported in Well MW-5 and the historic and more recent groundwater flow direction. Proposed monitoring well locations are as follows:

- Wells MW-10 and MW-11 will be installed in locations historically downgradient of well MW-5.
- Well MW-12 will be installed a location recently downgradient of well MW-5 and the former dispenser islands.

Pre-field Activities

Prior to drilling, Delta will mark the locations of all proposed borings and wells, contact Underground Services Alert 48 hours prior to drilling, obtain all required drill permits, arrange the drilling schedule, and mobilize drilling equipment and materials. In addition, a utility locator contractor will be retained to perform a geophysical survey of the proposed boring locations. Each location will be air-knifed to a depth of approximately 5 feet to minimize the possibility of drilling equipment encountering underground utilities.

Delta will prepare a site-specific health and safety plan prior to initiating field activities.

Well Installations

The borings for the wells will be advanced to approximately 20 feet bgs using a hollow-stem auger drilling rig equipped with 8-inch outer diameter auger flights. The wells will be screened from approximately 5 feet bg to 20 feet bgs. This construction will allow the groundwater table to intersect the screened interval of the well. Historic water level data indicates that depth to water in previous wells ranged from approximately 5 to 10 feet below TOC.

The wells will be constructed using 2-inch diameter PVC casing with 0.010-inch slotted casing in the screen interval due to anticipated fine grained soils. 2/16 Monterey sand filter packing will be installed in the annular space to one foot above the top of the screened interval, overlain by a 2-foot thick bentonite seal (saturated in place). Each well will be capped with Portland cement grout and boxed at grade with a locking, water-tight cap and traffic-rated well box.

During drilling, soil samples will be collected at five-foot intervals and screened for the presence of VOCs using a photoionization detector (PID). A lithologic description of each soil sample will be recorded by a Delta geologist on a boring log form. From the boring, three soil samples will be collected for laboratory analysis from the depth that exhibits the highest PID value or at depths exhibiting significant change in lithology. Should all collected samples indicate PID readings below the instrument's detection limit, then the deepest unsaturated soil sample will be submitted to the laboratory for analysis.

Well Destruction and Replacement

The total depth of well MW-1 was reported at 9.28 feet below top of casing in September 19, 2008 *Semi-annual Monitoring Report*. The original depth of the well is believed to be approximately 20 feet based on construction of other site wells. Delta proposed to destroy well MW-1 under permit from the ACEH. A new well, designated MW-1A, will be installed at the same location. The new well will be constructed as described above for the three new wells.

Well Development and Sampling

Following a minimum of 72 hours after completion of the well installations, the wells will be properly developed in accordance with ACEH guidelines to ensure the collection of a representative groundwater sample. Following a minimum of 72 hours after development, the new wells will be purged of three well-casing volumes and sampled.

October 15, 2009

Laboratory Analyses

Delta will request that the soil and groundwater samples collected for laboratory analysis be analyzed for TPH-GRO, BTEX compounds, fuel oxygenates—MTBE, TBA, lead scavengers -1,2-DCA and 1,2-DBA, and ethanol, by EPA Method 8260B, total petroleum hydrocarbons-diesel range organics (TPH-DRO) with silica gel clean by EPA Method 8015B Modified. The groundwater sample collected from nearest the former clarifier and former waste oil tank will be analyzed additionally for total oil and grease (TOG) by EPA Method 9070.

Groundwater samples and soil samples selected for laboratory analysis will be individually labeled, registered on a chain-of-custody form, and placed on ice pending delivery to a certified analytical laboratory. Strict chain-of-custody protocols will be followed during the transport of the samples.

Report

Delta will prepare a summary report containing a map showing well locations, borings logs with field data, tables with soil and groundwater analytical data, and copies of well permits and laboratory reports.

Schedule

Delta estimates that the well installation fieldwork portion of this work plan can be implemented no later than 35 days following the work plan approval by the ACEH and obtain off-site access agreements. It is further estimated that the final report will be ready for submittal by no later than 45 days after receipt of analytical results.

REMARKS

The descriptions, conclusions, and recommendations contained in this document represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Delta, the data from those reports is used "as is" and is assumed to be accurate. Delta does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This document 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 conducted. This document is intended only for the use of Delta's Client and anyone else specifically listed on this document. 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 document.

If you have any questions regarding this work plan or need and additional information about this Site, please do not hesitate to contact the undersigned at (408) 826-1867.

Sincerely,

DELTA CONSULTANTS



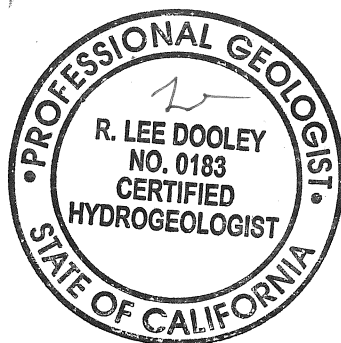
Tony Perini

Senior Project Manager



R. Lee Dooley

California Hydrogeologist 183



Figures:

Figure 1 - Site Location Map

Figure 2 - Site Plan

Attachments:

Attachment A - Groundwater Elevation Contour Maps

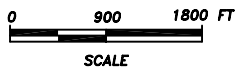
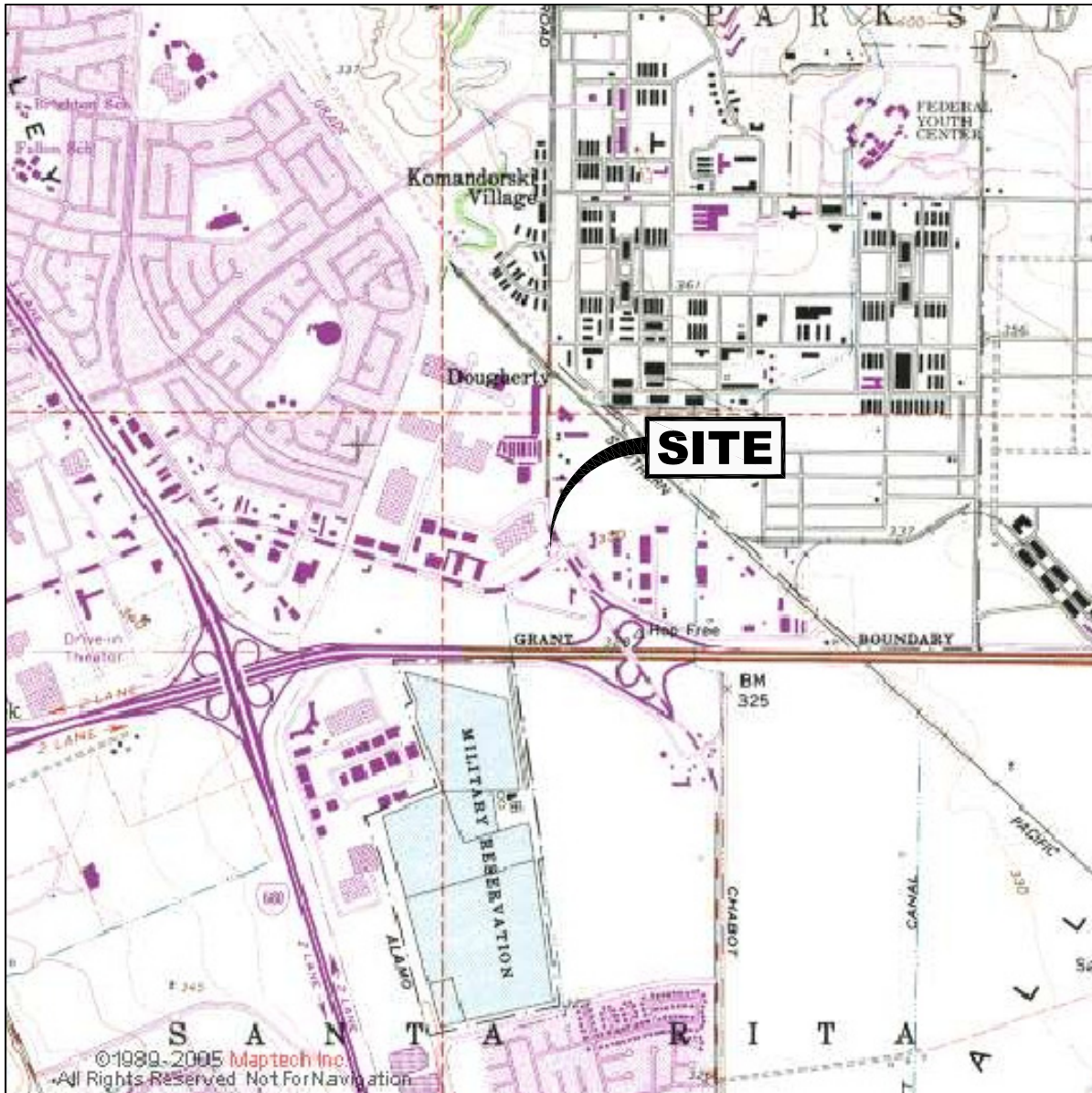


FIGURE 1

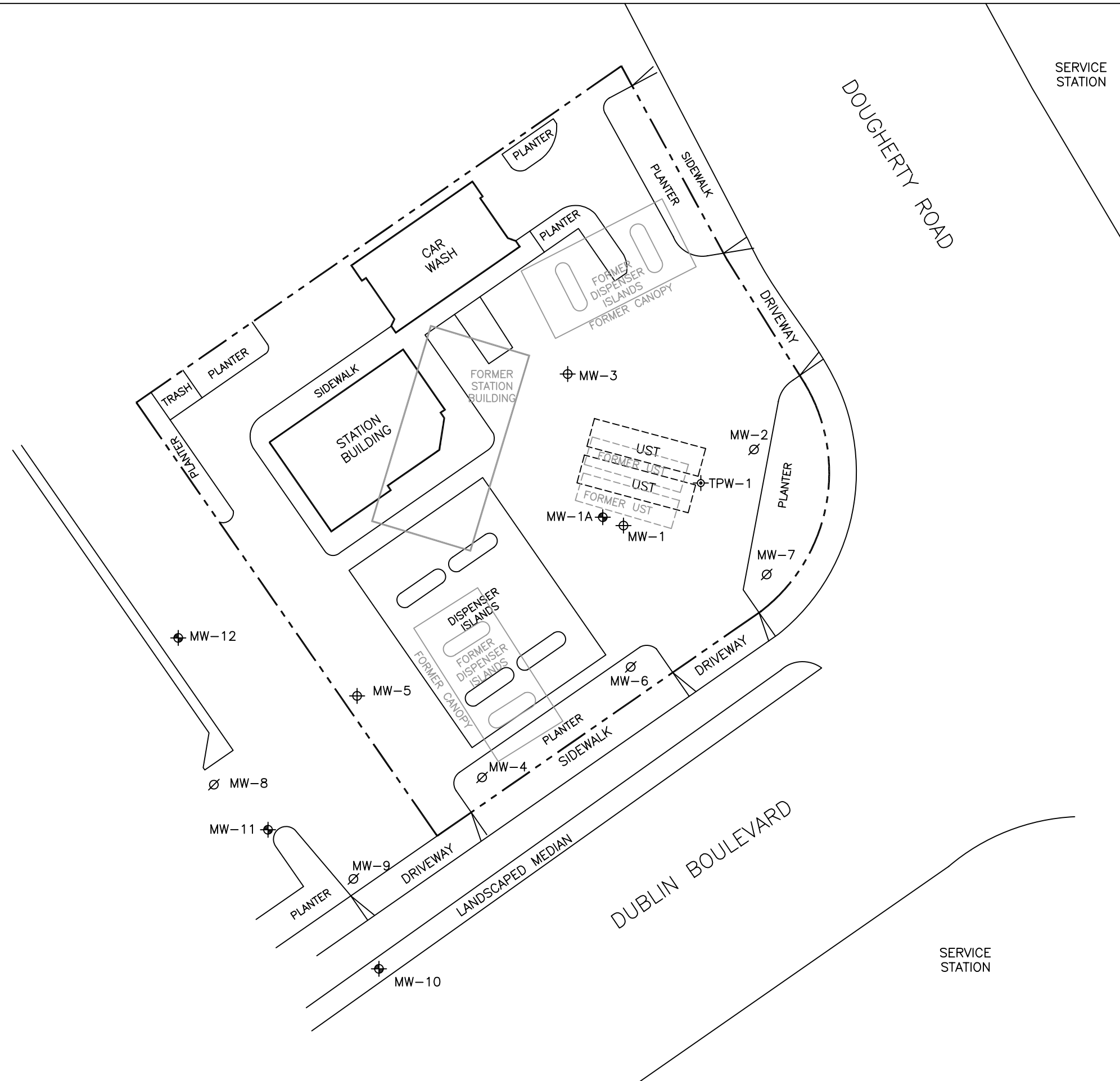
SITE LOCATION MAP

76 SERVICE STATION NO. 6419 (5748)
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

PROJECT NO. C105748	DRAWN BY DR 12/31/08
FILE NO. 5748-SiteLocator	PREPARED BY JH
REVISION NO.	REVIEWED BY EC



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, LAS TRAMPAS RIDGE (1969) & DIABLO (1953) QUADRANGLES



- LEGEND:**
- APPROXIMATE PROPERTY BOUNDARY
 - ⊕ MONITORING WELL
 - ∅ ABANDONED MONITORING WELL
 - ⊕ UST BACKFILL WELL
 - ⊕ PROPOSED MONITORING WELL

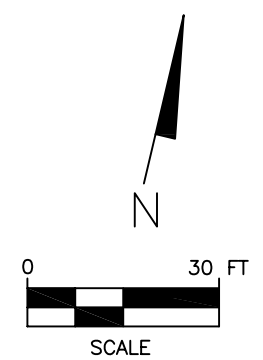




FIGURE 2 SITE PLAN 76 SERVICE STATION NO. 6419 (5748) 6401 DUBLIN BOULEVARD DUBLIN, CALIFORNIA			
PROJECT NO. C105748	PREPARED BY LD	DRAWN BY JH	
DATE 09/15/09	REVIEWED BY TP	FILE NAME 76-5748	


ATTACHMENT A


Groundwater Elevation Contour Maps

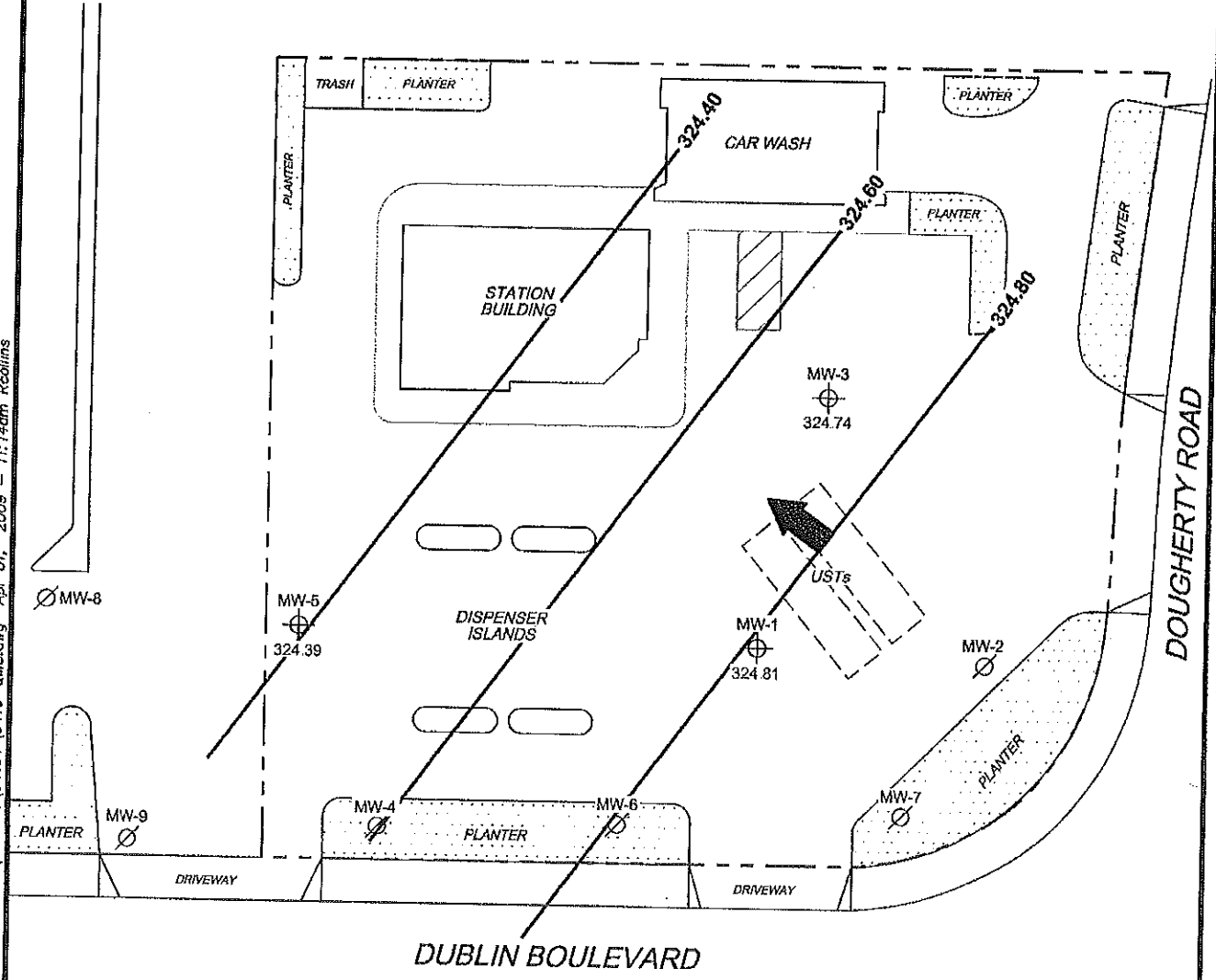
LEGEND

MW-5  Monitoring Well with Groundwater Elevation (feet)

MW-9  Abandoned Monitoring Well

324.80  Groundwater Elevation Contour

 General Direction of Groundwater Flow



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

SCALE (FEET)



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MS-130 6419-003





PROJECT: 165521
 FACILITY:
 76 STATION 6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA


**GROUNDWATER ELEVATION
 CONTOUR MAP**
 March 6, 2009


FIGURE 2

LEGEND

MW-5  Monitoring Well with Groundwater Elevation (feet)

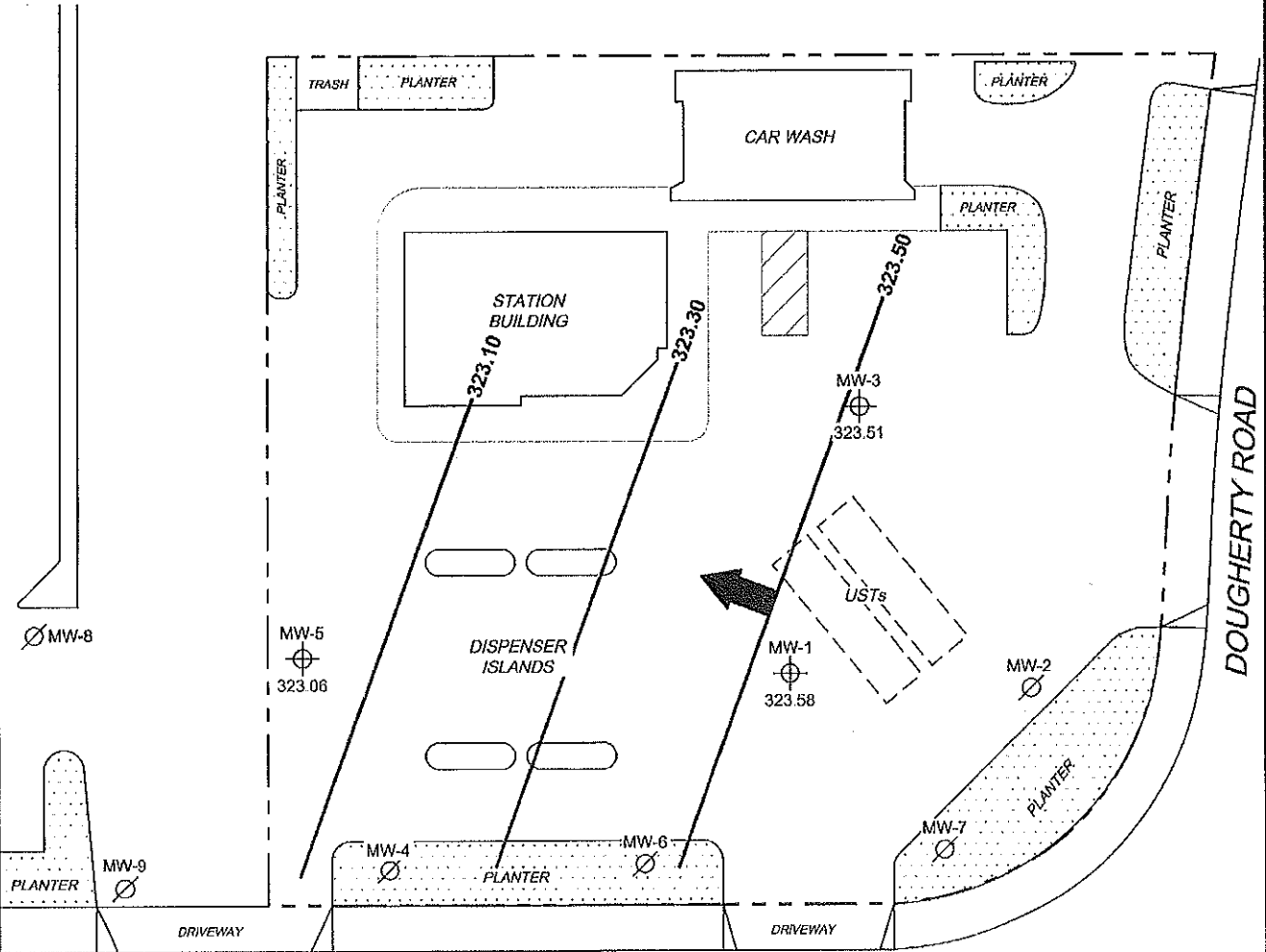
MW-9  Abandoned Monitoring Well

323.50  Groundwater Elevation Contour

 General Direction of Groundwater Flow



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DUBLIN BOULEVARD

NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

SCALE (FEET)





PROJECT: 154771
 FACILITY:
 76 STATION 6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

**GROUNDWATER ELEVATION
 CONTOUR MAP
 March 27, 2008**


FIGURE 2

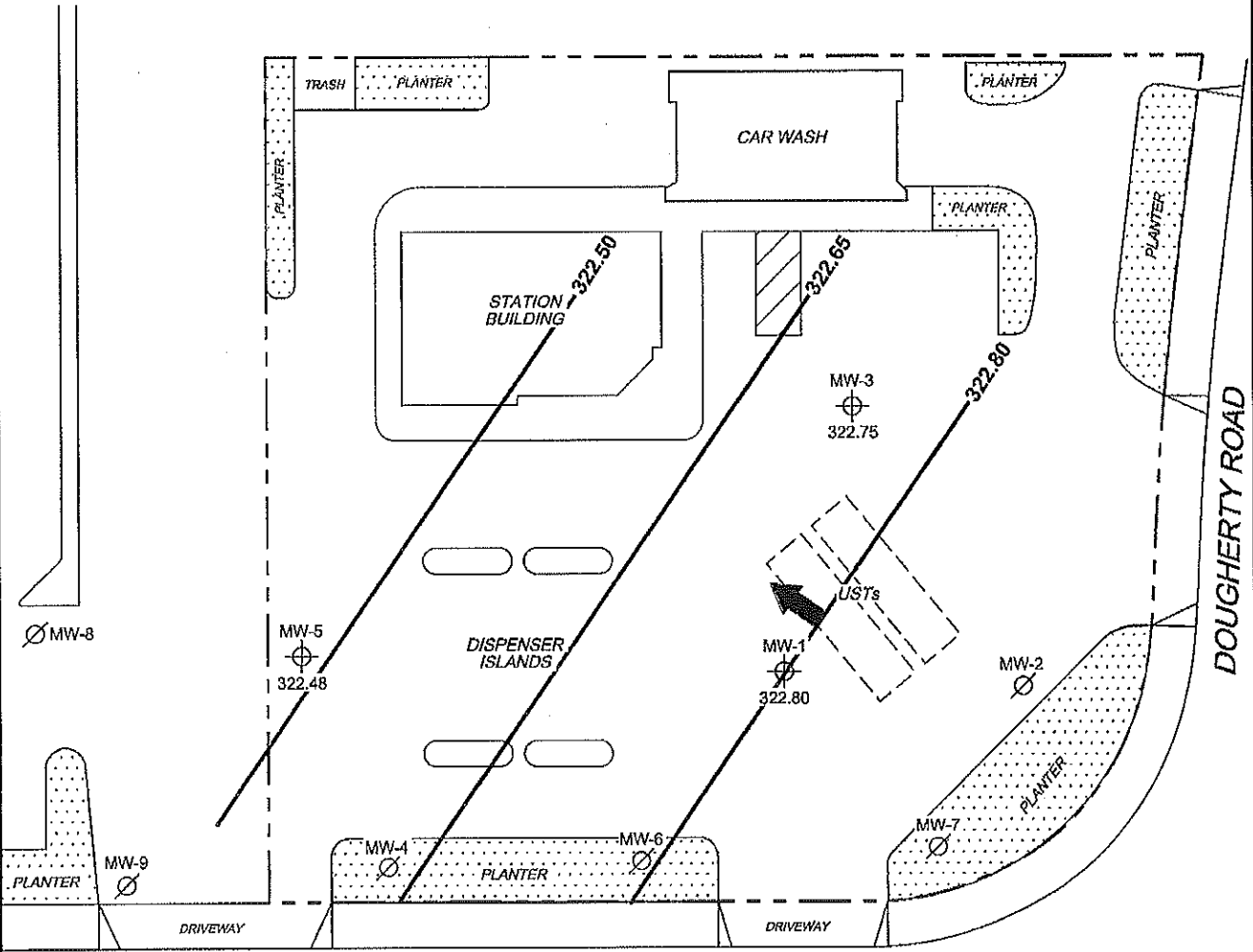
LEGEND

MW-5  Monitoring Well with Groundwater Elevation (feet)

MW-9  Abandoned Monitoring Well

322.80  Groundwater Elevation Contour

 General Direction of Groundwater Flow



DUBLIN BOULEVARD

NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

SCALE (FEET)



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PROJECT: 154771
 FACILITY:
 78 STATION 6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA


**GROUNDWATER ELEVATION
 CONTOUR MAP
 September 2, 2008**


FIGURE 2

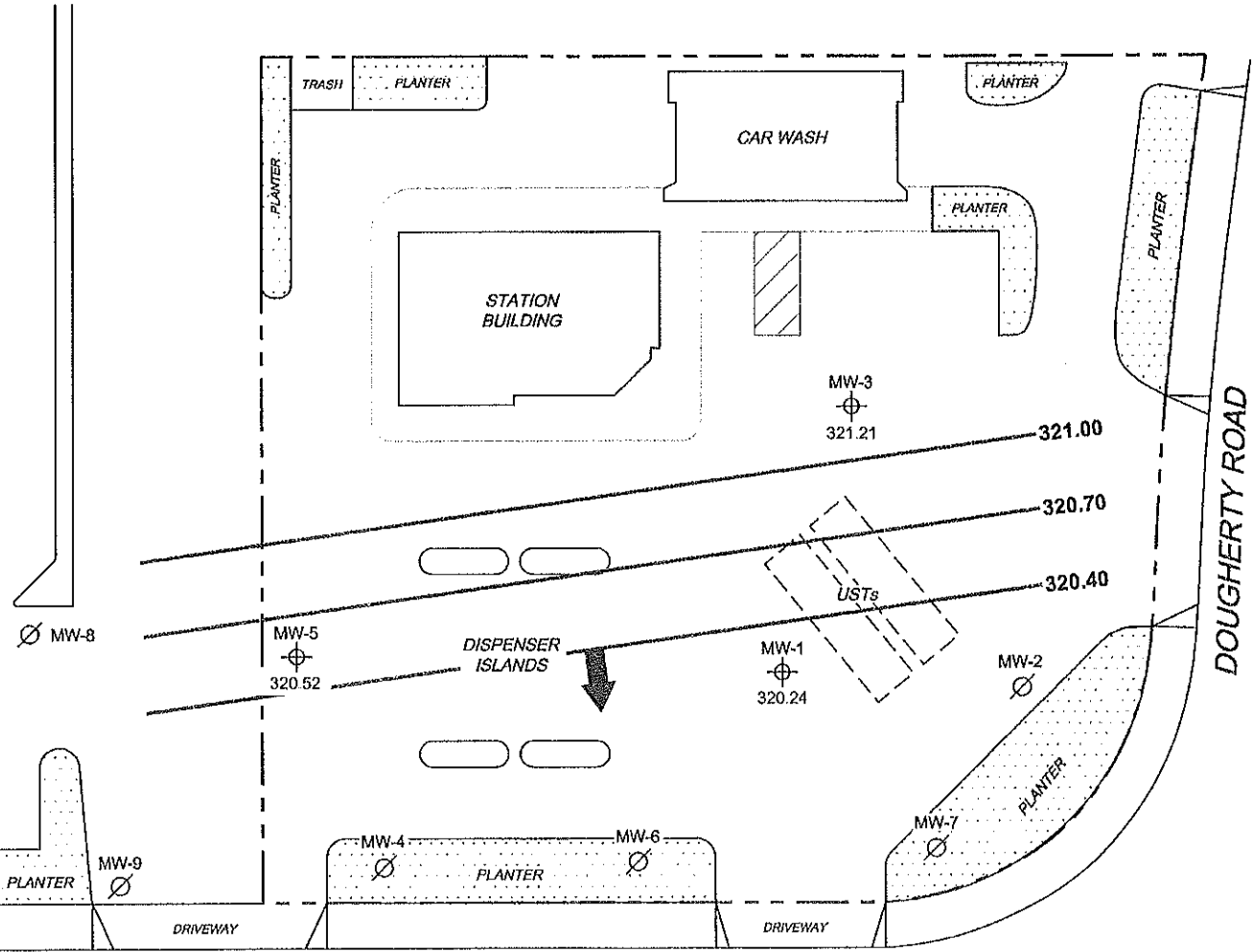
LEGEND

MW-5  Monitoring Well with Groundwater Elevation (feet)

MW-9  Abandoned Monitoring Well

321.00  Groundwater Elevation Contour

 General Direction of Groundwater Flow



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.



MS-1:30 6419-003 L:\a\graphics\CMS NORTH-SOUTH-6419+06419-QMS.dwg Oct 09, 2007 - 8:21am cvuong

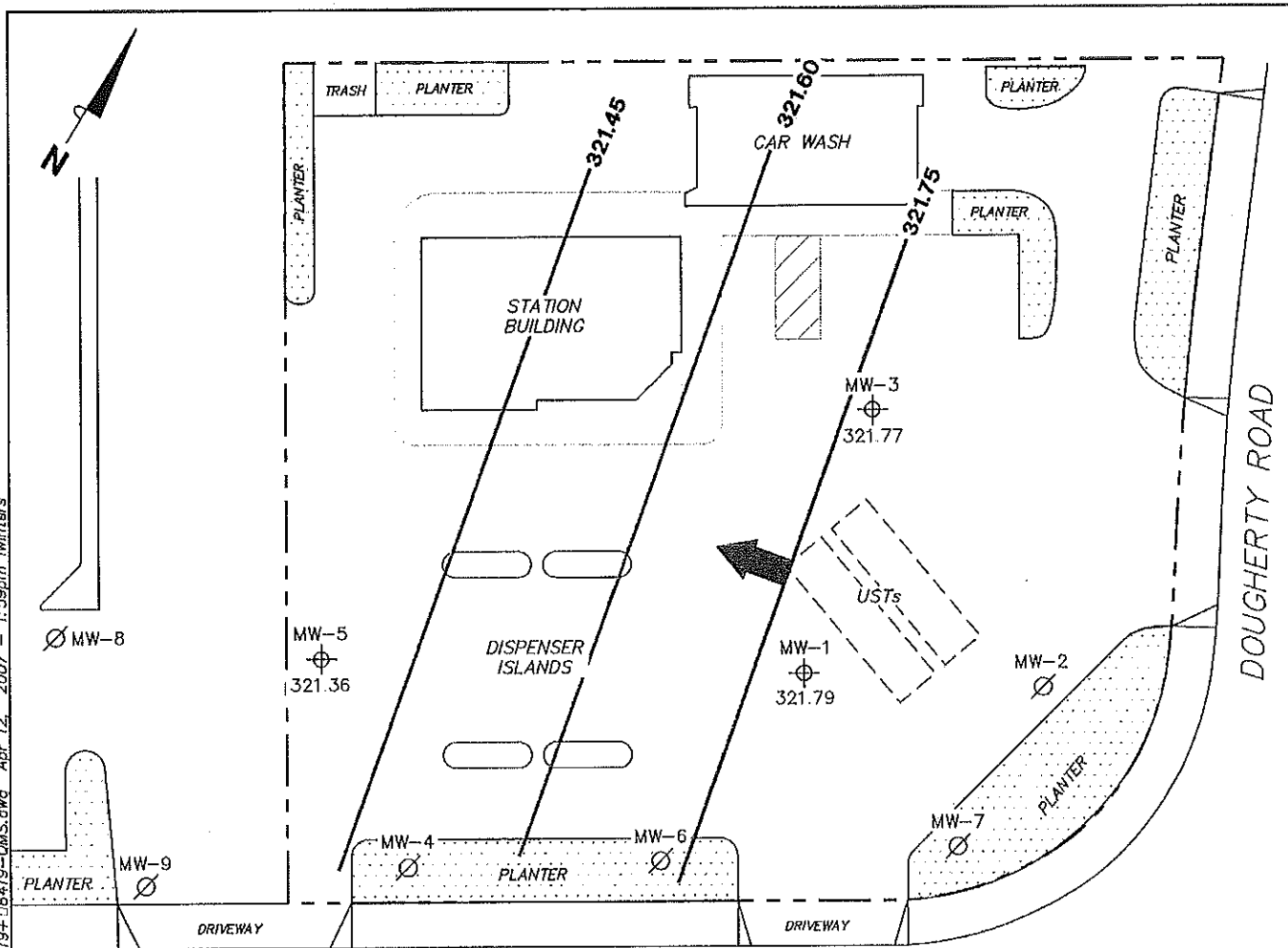


PROJECT: 125703
 FACILITY:
 76 STATION 6419
 6401 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

**GROUNDWATER ELEVATION
 CONTOUR MAP**
 September 21, 2007

FIGURE 2

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DUBLIN BOULEVARD

DOUGHERTY ROAD

NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level UST = underground storage tank.

LEGEND

- MW-5 ⊕ Monitoring Well with Groundwater Elevation (feet)
- MW-9 ∅ Abandoned Monitoring Well
- 321.75 — Groundwater Elevation Contour
- ➔ General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
March 29, 2007

76 Station 6419
 6401 Dublin Boulevard
 Dublin, California



FIGURE 2

**Historical Groundwater Flow Directions
for Tosco (76) Service Station No. 6419
September 1994 through June 2007**

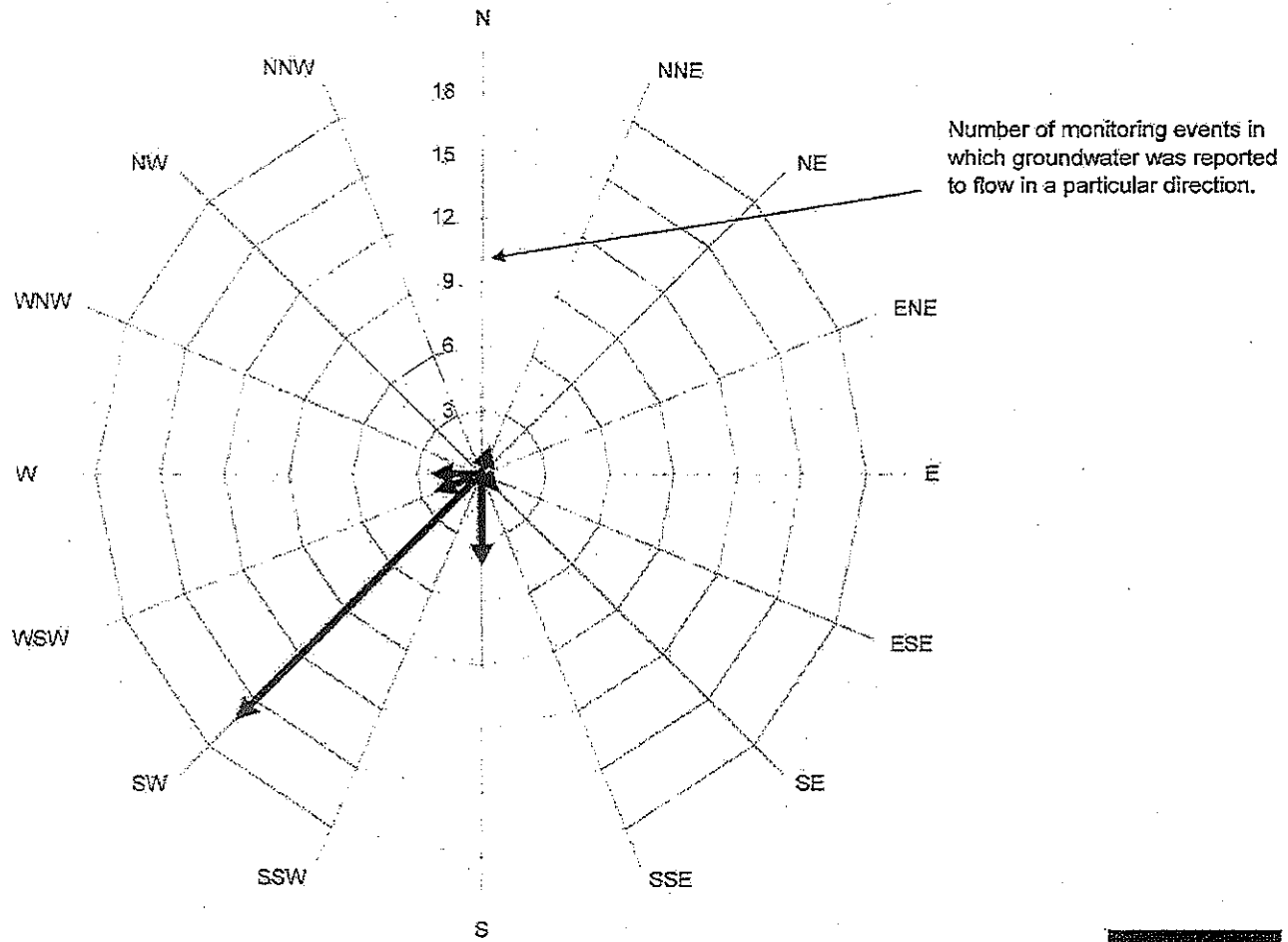


Figure 3

