KHM
ENVIRONMENTAL
MANAGEMENT, INC.

...COMBINING OUR
RESOURCES TO
ENHANCE OUR
SERVICES...

Delta
Environmental
Consultants, Inc.

May 27, 2003
KHM Project C85-809 Stanley

Mr. Scott Seery
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Site Assessment Work Plan**
Shell Service Station
809 East Stanley Avenue
Livermore, California

Dear Mr. Seery,

KHM Environmental Management, Inc. (KHM), on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), has prepared a groundwater assessment work plan for the site referenced above (Figure 1). In a letter dated March 7, 2003, the Alameda County Health Care Services Agency (ACHCSA) notified Shell that the above referenced site had been placed in the Local Oversight Program. Shell was identified as the primary Responsible Party.

BACKGROUND

The following sections present a description of the current service station and a brief summary of previous site soil and groundwater investigations.

Site Description

The site is located on the southeastern corner of the intersection of East Stanley and Murrieta Boulevards in Livermore, California (Figure 1). The site is the location of a Shell-branded service station. The service station consists of a convenience store, car wash, four fuel dispenser islands, and three underground fuel storage tanks (UST's). A station plan is presented on Figure 2.

6284 San Ignacio Avenue • Suite E
San Jose, California 95119 USA
408.224.4724 • Fax 408 224 4518

800.477 7411

911 South Primrose Avenue • Suite K
Monrovia, California 91016 USA
626.256.6662 • Fax 626 256.6263

Previous Site Investigations

In September 1986, four soil borings were drilled adjacent to the fuel USTs and a waste oil UST scheduled for removal and replacement. Soil samples were collected from the borings and analyzed for petroleum hydrocarbons. Petroleum hydrocarbons were not detected in any of the samples analyzed. The USTs were removed and replaced in November 1986. Soil samples were collected from beneath each UST. Petroleum hydrocarbons were not detected in any of the soil samples analyzed. The new waste oil tank was subsequently removed and not replaced in 1989. Petroleum hydrocarbons were not detected in soil samples from beneath the waste oil tank.

GRASP Well Installations

Shell's Groundwater Assessment Program (GRASP) initially revealed detectable concentrations of methyl tert-butyl ether (MTBE) in groundwater beneath the site. GRASP is a voluntary initiative by Shell to install groundwater monitoring wells at numerous retail service stations nationwide that do not have any active release cases but have been identified to be in close proximity to one or more public water supply wells.

On September 21 through 25, 2001, IT Corporation (IT) supervised the drilling and installation of four groundwater monitoring wells (MW-1, MW-2, MW-3 and MW-4). Well locations are shown on Figure 2. Borings for wells encountered primarily clays and gravels to their total depths 47.5 feet below grade (bg). Groundwater was encountered in borings at a depth of approximately 37 to 38 feet bg. The location and elevation of the four site wells was established by a licensed surveyor. Depth to water in wells was measured on September 25, 2003. The groundwater flow direction was determined to be to the northeast.

Soil samples from borings were field screened for the presence of petroleum hydrocarbons by a photo ionization detector. One soil sample, well MW-4 at 35.5 to 36 feet bg, was retained for chemical testing. Petroleum hydrocarbons and fuel oxygenates were not detected in the sample. MTBE was detected in the initial groundwater samples (9/25/01) from well MW-3 at 3.6 micrograms per liter (ug/l).

Groundwater Monitoring

Site wells have been sampled five times since installation. The only analyte detected has been MTBE. MTBE has been detected in only three samples, all from Well MW-3 (3.6 ug/l, 0.83 ug/l, and 0.71 ug/l). Groundwater analytical data is summarized on Table 1. The wells were last sampled in April 2003.

WORK PLAN

KHM, on behalf of Shell, has prepared the following work plan to address the presence of MTBE in groundwater.

Work Plan for Site Assessment

No additional assessment activities are proposed at this time. Detections of MTBE have always been below the State primary and secondary maximum contaminant levels (13 ug/l and 5 ug/l, respectively). The presence of MTBE in shallow groundwater does not appear to pose a threat to municipal water supplies. Based on the California State Water Resources Control Board GeoTracker Database, the nearest

water municipal supply well is located approximately 1,700 feet northeast of the site, California Water Service Co. Well 03-01-03S/02E-08P02 M (Figure 3).

KHM proposes to continue the sampling and analysis of groundwater from the four site wells on a quarterly basis for the remainder of 2003. The next sampling event would be in June 2003. Samples will be analyzed for total purgeable petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and the fuel oxygenate MTBE, using EPA Method 8260B. A quarterly monitoring report will be issued to ACEHS. The fourth quarter 2003 report will contain a recommendation regarding the frequency of future sampling events.

Record Owners

KHM has identified the property owner as:

Equilon Enterprises LLC
Care of Stewart Title Company
1980 Post Oak Blvd. #110
Houston, TX 77056

Equilon Enterprises LLC dba Shell Oil Products US will be represented by Ms. Karen Petryna, the Shell environmental engineer for the site area. Ms. Petryna will receive copies of all documents related to the existence of petroleum hydrocarbons in soil and groundwater beneath the subject property.

If you have any questions regarding this site, please contact Lee Dooley (KHM) at (408) 224-4724.

Sincerely,

KHM Environmental Management, Inc.

R. Lee Dooley, CHG 183
Senior Hydrogeologist

REGISTERED GEOLOGIST
R. LEE DOOLEY
No. 0183
CERTIFIED
HYDROGEOLOGIST
EXP. 04/05
STATE OF CALIFORNIA

ATTACHMENTS:

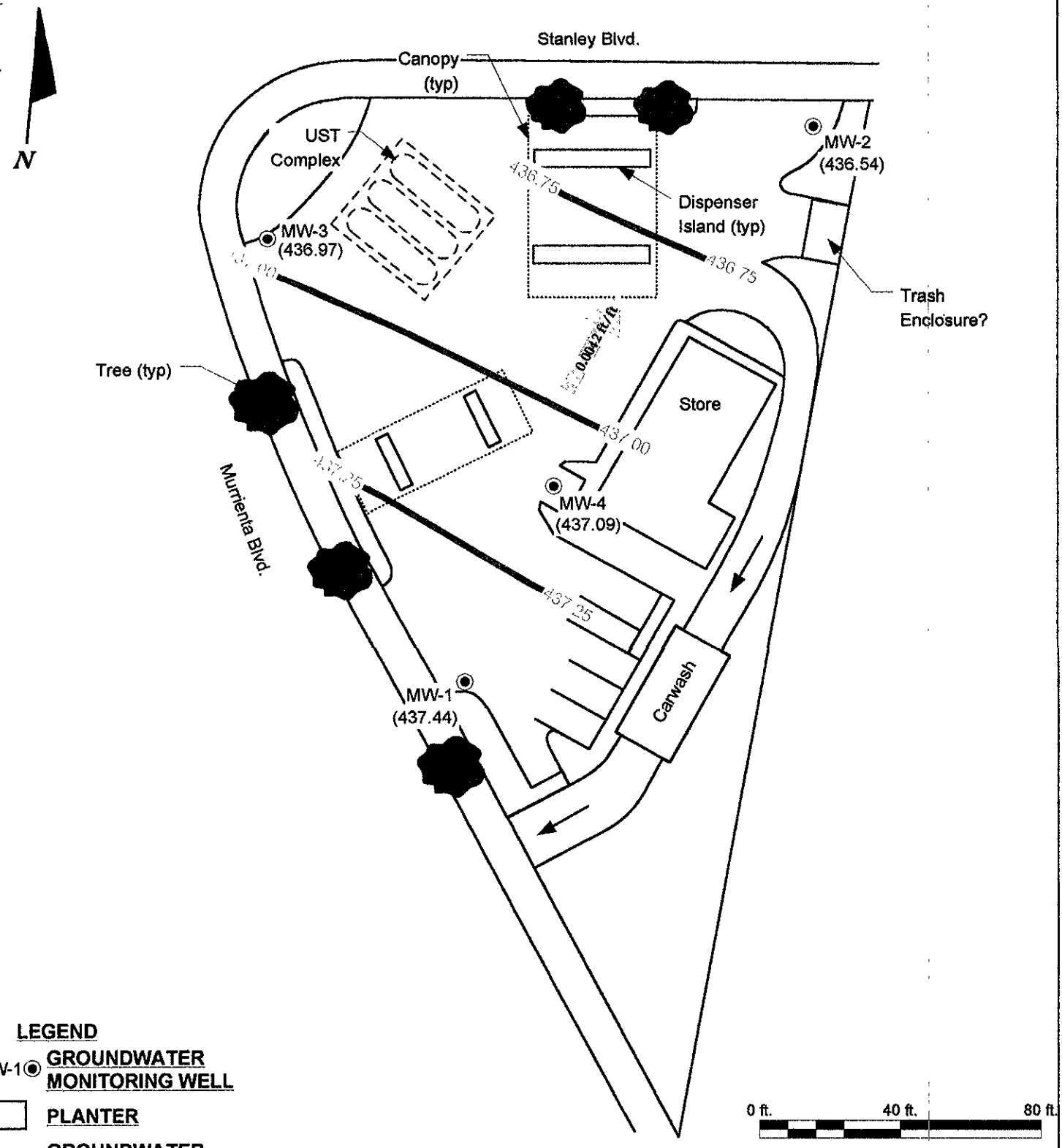
Table 1 – Groundwater Gauging and Analytical Data
Figure 1 – Site Location Map
Figure 2 – Groundwater Elevation Contour Map, January 24, 2003
Figure 3 – Site Area Map

cc. Karen Petryna, Shell Oil Products US

Table 1
Groundwater Gauging and Analytical Data
Shell Service Station
809 East Stanley Blvd.
Livermore, California

Well Designation	Date Sampled	TPH-g (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethlybenzene (ug/l)	Xylene (ug/l)	MTBE (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	TOC (MSL)	Depth to Water (ft.)	GW Elev. (MSL)
MW-1	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NM	NM	NM
	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	20.06	435.43
	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	19.71	435.78
	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	18.05	437.44
	4/22/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	455.49	17.57	437.92
MW-2	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NM	NM	NM
	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	20.40	434.44
	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	20.17	434.67
	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	18.30	436.54
	4/22/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.84	17.93	436.91
MW-3	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	**3.6**	<2.0	<2.0	<2.0	<50	NM	NM	NM
	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.87	19.95	434.92
	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	**0.83**	<2.0	<2.0	<2.0	<50	454.87	19.63	435.24
	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	454.87	17.90	436.97
	4/22/2003	<50	<0.50	<0.50	<0.50	<0.50	**0.71**	<2.0	<2.0	<2.0	<50	454.87	17.45	437.42
MW-4	9/25/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NM	NM	NM
	7/9/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	21.15	435.09
	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	20.85	435.39
	1/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	19.15	437.09
	4/22/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	456.24	18.65	437.59

Notes:
All analysis performed by EPA Method 8260B
ug/l = micrograms per liter
TPH-g = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
DIPE = Diisopropyl ether
ETBE = Ethyl-t-butyl ether
TAME = Tert-amyl methyl ether
TBA = Tert-Butanol
TOC = Top of Well Casing
NM = Not measured
NA = Not analyzed



LEGEND

- MW-1 ◉ **GROUNDWATER MONITORING WELL**
- ☐ **PLANTER**
- (435.09) **GROUNDWATER ELEVATION (FEET-MSL), 1/24/03**
- 435.00 **GROUNDWATER ELEVATION CONTOUR**
- 0.0042 ft/ft **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**

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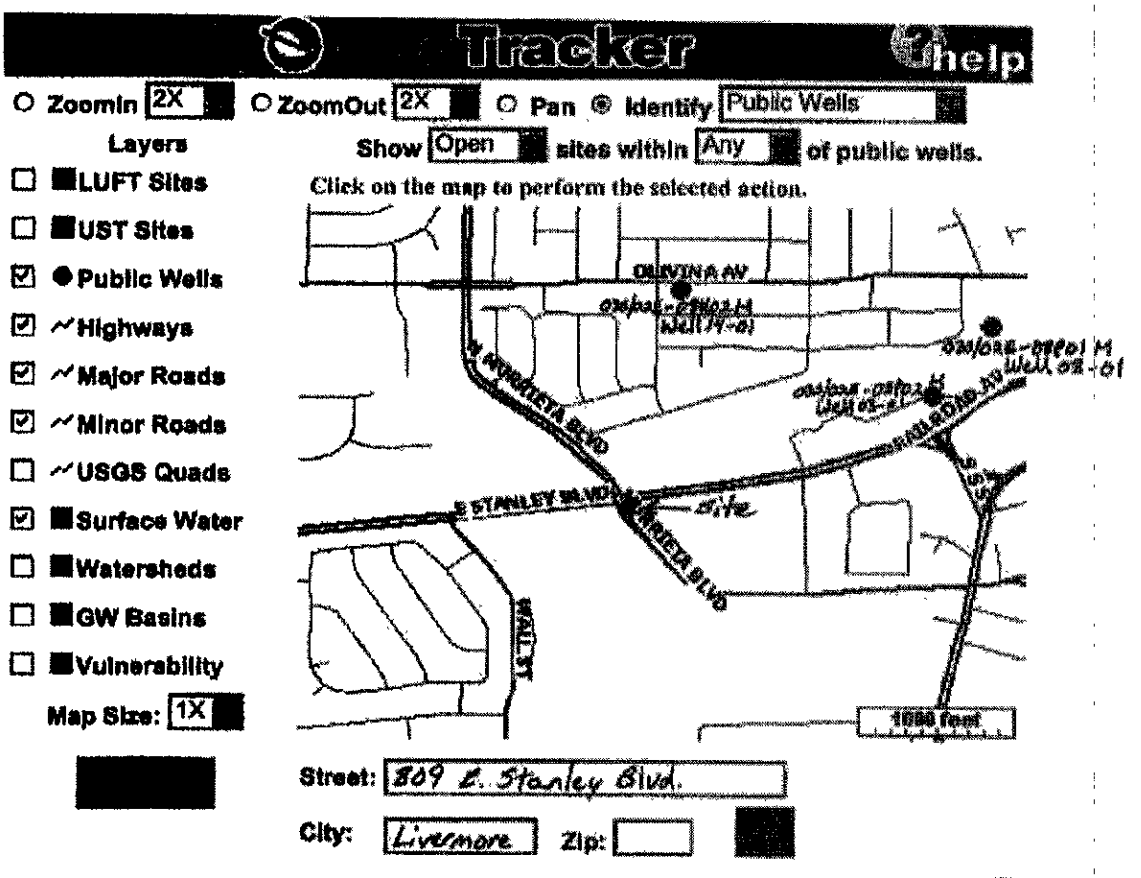
GROUNDWATER ELEVATION CONTOUR MAP, JANUARY 24, 2003

Shell Service Station
809 East Stanley Blvd
Livermore, California

DATE	PROJECT	FIGURE
3/12/03	C85-809 Stanley	2

N



- LUFT SITES
- UST SITES
- PUBLIC WELLS
- HIGHWAYS
- MAJOR ROADS
- MINOR ROADS

Map and Well Information Source: GeoTracker Database
http://geotracker.swrcb.ca.gov

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SITE AREA MAP

Shell Service Station
809 East Stanley Blvd.
Livermore, California

DATE	PROJECT	FIGURE
5/08/03	C85-809 Stanley	3