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8:17 am, May 02, 2007

Alameda County
Environmental Health

April 2, 2007
DELTA Project SJ18-01S-1
SAP: 135783

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Work Plan
Shell-Branded Service Station
1801 Santa Rita Road
Pleasanton, California

Dear Mr. Wickham,

DELTA

Delta Consultants (Delta), on behalf of Shell Oil Products US (Shell), has prepared a work plan for the site referenced above (Figure 1). Delta, in the Third Quarter 2006, groundwater monitoring proposed additional site assessment as a response to elevated petroleum hydrocarbon concentrations detected in Well MW-4A. Delta has been monitoring the petroleum hydrocarbon concentrations in site wells since the Third Quarter 2006 and now proposes installation of a groundwater monitoring well downgradient of Well MW-4A.

BACKGROUND

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

Site Description The site is located on the northwest corner of Santa Rita Road and Valley Avenue Drive in Pleasanton, California (Figure 1). The property is currently the site of an active Shell-branded service station. The Shell service station has three 12,000-gallon gasoline underground storage tanks (USTs) and four separate fuel dispensers (Figure 2). A building housing service bays and a convenience store is located in the northwestern portion of the property. The site is located in an area characterized as mixed commercial and residential.

Previous Investigations In October 2002, four groundwater monitoring wells were installed on the site by KHM Environmental Management, Inc. (KHM) as part of the Groundwater Assessment Program (GRASP) initiated by Shell (Figure 2). Borings for the wells encountered primarily clay and clayey sand from the ground surface to a depth of approximately 25 feet. Clay and silty clay were encountered from approximately 25 to 55 feet; and well graded sand and gravels were encountered from approximately 55 feet to 97.5 feet, the maximum depth explored. Groundwater was encountered in borings at a depth of approximately 85 feet below grade surface (bgs). The wells were screened from 77 to 97 feet bgs.

The four groundwater monitoring wells have historically been monitored quarterly. Groundwater has risen in wells from approximately 85 feet bgs in 2002 to approximately 40 feet bgs in 2006. Since the installation of the four

GRASP groundwater monitoring wells, total petroleum hydrocarbons as gasoline (TPH-G) and methyl-tert butyl ether (MTBE) have not been detected. Benzene, toluene, ethyl benzene, and total xylenes (BTEX compounds) have been detected ranging from 0.64 micrograms per liter (ug/l) to 1.3 ug/l. Total extractable hydrocarbons (diesel) have sporadically been detected in wells.

In response to the rise in groundwater beneath the site, Delta in February 2006, installed wells MW-1A, MW-4A, and MW-5 screened from approximately 45 to 55 feet bgs and advanced Borings B-1, B-2 and B-4. The well and boring locations are shown on Figure 2. First groundwater (apparently under confined conditions) was encountered at approximately 55 feet bgs during installation of all three new wells. The initial water sample from Well MW-1A contained diesel at 55.9 micrograms per liter (ug/l), benzene at 4.04 ug/l, MTBE at 3.32 ug/l, and tert-butanol (TBA) at 12 ug/l. Well MW-4A contained TPH-G at 3,280 ug/l, diesel at 246 ug/l, benzene at 232 ug/l, and MTBE at 10.2 ug/l.

Groundwater was first encountered in Boring B-1 and B-4 at depths ranging between 50 and 55 feet bgs, and stabilized at a depth of approximately 45 feet bgs in both borings. Grab groundwater samples were collected from the two borings. The only detection in the sample from Boring B-1, located on the downgradient perimeter of the site, was toluene at 0.83 ug/l. MTBE (12 ug/l) and 1,2-dichloroethane (3.9 ug/l) were the only detections in the water sample from Boring B-4 located in the central portion of the site.

WORK PLAN

Delta proposes to install an additional well downgradient of existing Well MW-4A which in July 2006 contained 25,900 ug/l of TPH-G and 3,790 ug/l benzene. The well, as of January 19, 2007, contained 3,700 ug/l of TPH-G and 1,300 ug/l of benzene.

Shell proposes to install one new monitoring well (MW-6, Figure 3) to define the downgradient extent of petroleum hydrocarbons in first encountered groundwater. The well will be installed using hollow-stem auger drilling equipment provided by Test America Drilling Corporation (License C57-819548).

Prior to drilling, Delta will mark all boring locations and contact Underground Services Alert a minimum of 48 hours beforehand. In addition, a private utility locator will be retained to perform a geophysical survey of the proposed boring locations. Each location will then be air-knifed to a depth of approximately seven feet to minimize the possibility of encountering underground utilities during drilling activities. Delta will obtain all required drilling permits from the Zone 7 Water Agency. ACHCSA will be notified a minimum of 72 hours prior to any drilling activities. Prior to conducting any field work at the site, Delta will prepare a site specific Health and Safety Plan (HASP). The Delta field geologist on-site will review the HASP with site subcontractors at the start of each work day.

Soil samples will be collected from the boring for the well in brass liners at five foot intervals to the total depth of the boring. Soil types will be logged by a Delta field geologist. Soil will be analyzed in the field with a photo-ionization detector (PID), and readings from the soil will be recorded on the field logs. Soil samples with elevated PID readings (>10 parts per million by volume) will be retained for laboratory analysis. The retained soil samples will be capped with Teflon tape and tight fitting end caps and placed on ice for transport to Test America Sequoia Analytical in Morgan Hill, California. Additional soil samples may also be selected from site borings for laboratory analysis based on PID readings, field observations, and lithology. Any soil samples retained will be analyzed for TPH-G, BTEX compounds, MTBE, and TBA by EPA Method 8260B. The well will be constructed of 4-inch diameter PVC casing and well screens. Well depth will be approximately 55 feet bg with well screens from 45 feet to 55 feet bg and sand pack from 43 feet to 55 feet bg. The well will be developed by cycles of surging followed by pumping until clear water is obtained. Wells will be sampled by Blaine Tech Services (Blaine) a minimum of 24 hours after development. The location and top of casing elevation of each well will be established by a California licensed surveyor.

Groundwater samples will be analyzed for TPH-G, TPH-D, BTEX compounds, and fuel oxygenates MTBE and TBA. All analyses, with the exception of TPH-D, will be performed by EPA Method 8260B. Analysis for TPH-D will be performed by EPA Method 8015M.

GROUNDWATER MONITORING

Groundwater monitoring will be performed on a quarterly basis for Wells MW-1, MW-1A, MW-4, MW-4A, MW-5, and the proposed Well MW-6. Wells MW-2 and MW-3 will continue to be monitored on an annual basis. All groundwater monitoring wells will be gauged, purged, and sampled by Blaine Tech Services, Inc. Groundwater samples will be analyzed for TPH-G, TPH-D, BTEX compounds, MTBE, and TBA. A second quarter 2007 groundwater monitoring report will be submitted to the ACHCSA within 60 days of the end of the second quarter.

SUMMARY

Shell proposes the following site assessment activities:

- Install an additional shallow groundwater monitoring well (MW-6, Figure 3) to define the lateral downgradient of extent of petroleum hydrocarbons.

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.

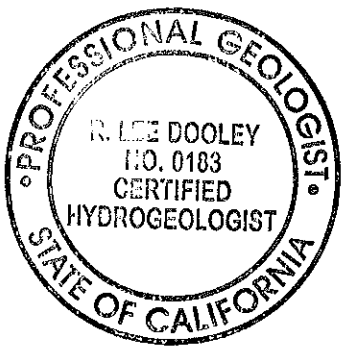
If you have any questions, please call Eric Frohnapple of Delta at (408) 826-1867 or Denis Brown of Shell at (707) 865-0251.

Sincerely,
Delta Consultants, Inc.

Andy Persio
Staff Geologist

Eric Frohnapple, P.E.
Portfolio Manager
CH 6221

R. Lee Dooley
Senior Hydrogeologist
CHG 183

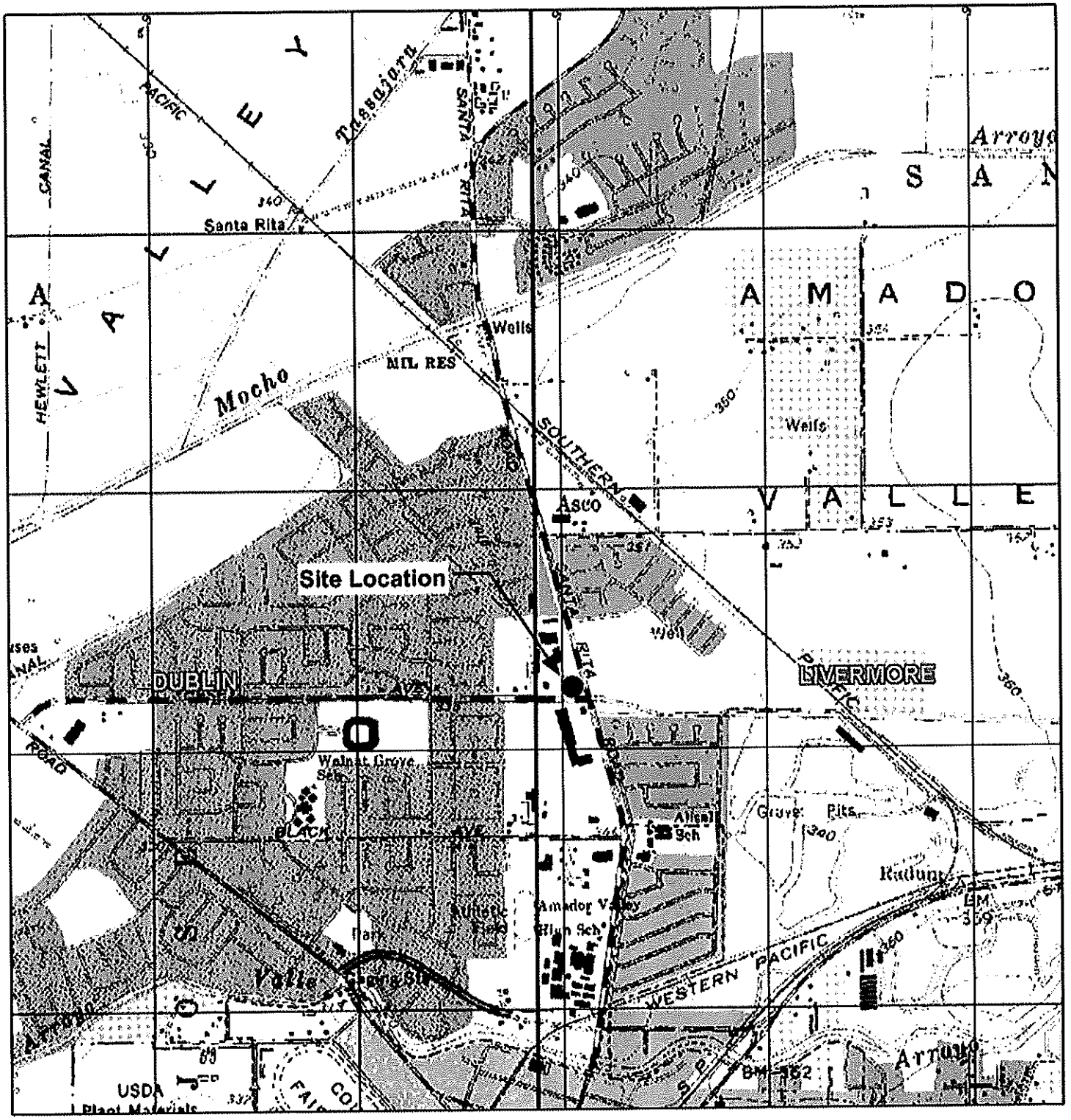


Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Proposed Well Location Map

cc: Denis Brown, Shell Oil Products US, Carson

FIGURES



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

North

QUADRANGLE LOCATION

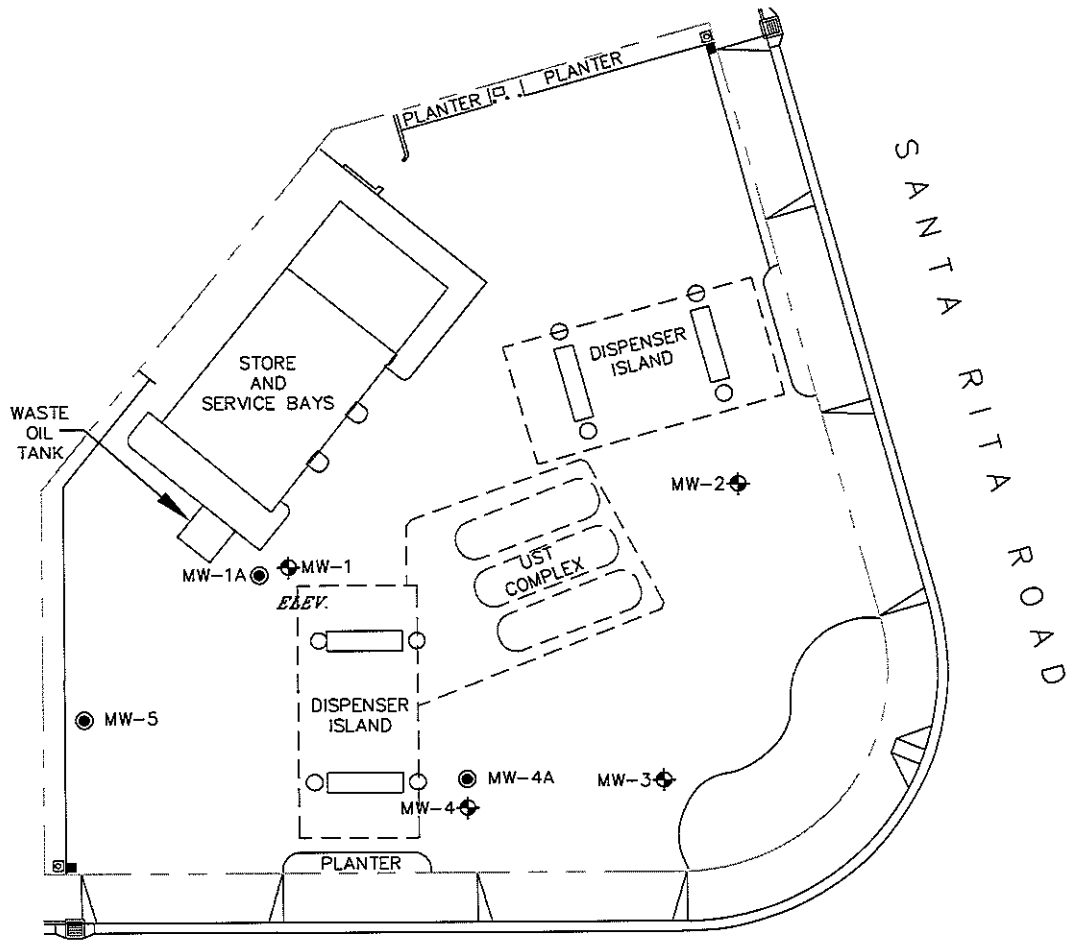
0 1,800 3,600
Scale, Feet

FIGURE 1
SITE LOCATION MAP

SHELL-BRANDED SERVICE STATION
1801 Santa Rita Road
Pleasanton, California

PROJECT NO. SJ18-01S-G.2004	DRAWN BY VF 10/23/03
FILE NO. SJ18-01S-G.2004	PREPARED BY VF
REVISION NO.	REVIEWED BY

Delta
Environmental Consultants, Inc.



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LEGEND

MW-1 ⊕ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION MEASURING 80-95 FOOT INTERVALS

MW-1A ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION MEASURING 45-55 FOOT INTERVALS

SCALE IN FEET

DRAWN BY J.F. | CHECKED BY | APPROVED BY | PROJECT NUMBER SJ18-01S-X

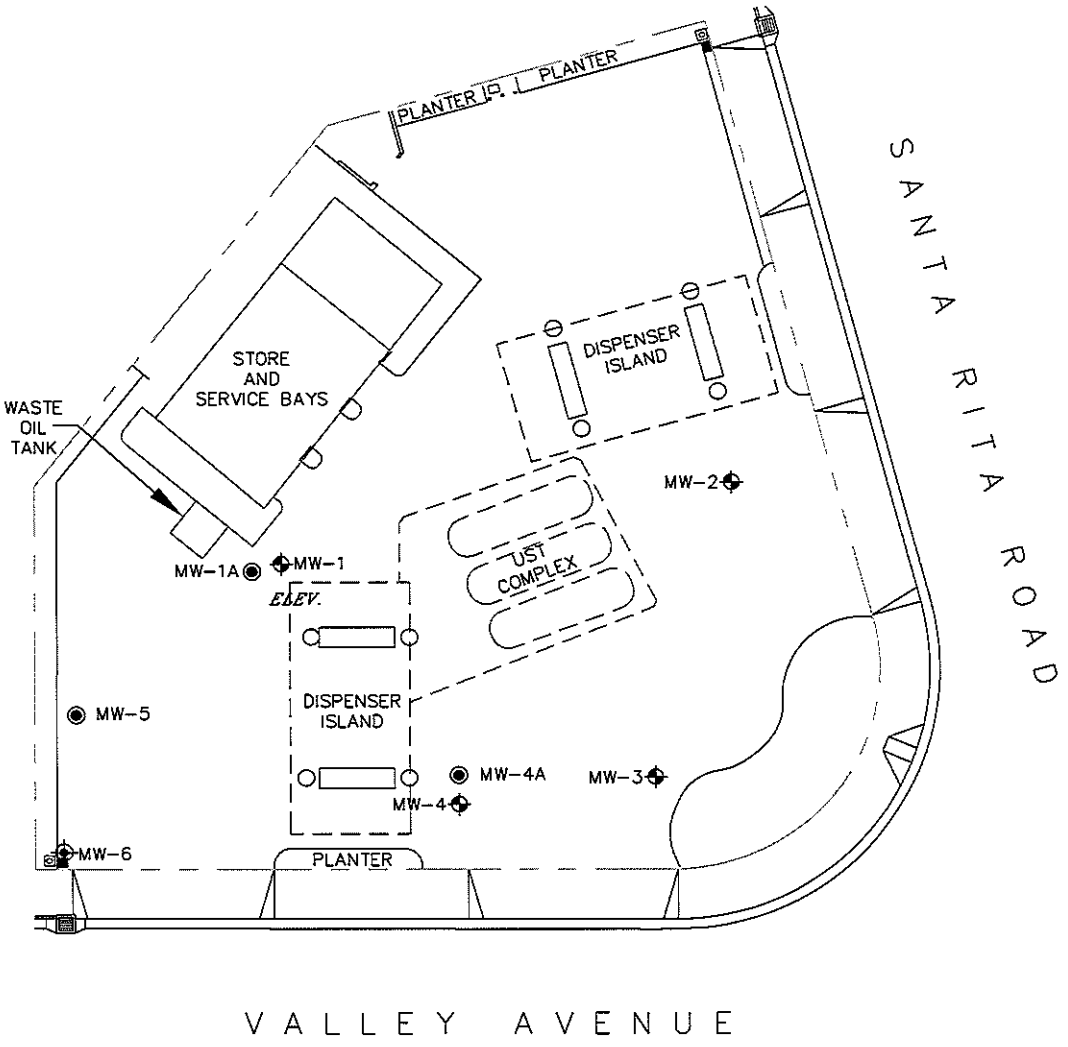
DELTA CONSULTANTS

SHELL OIL PRODUCTS US
SHELL-BRANDED SERVICE STATION
PLEASANTON, CLAIFORNIA

FIGURE 2

SITE MAP

1801 SANTA RITA ROAD
PLEASANTON, CALIFORNIA



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LEGEND

- MW-1 ⊕ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION MEASURING 80-95 FOOT INTERVALS
- MW-1A ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION MEASURING 45-55 FOOT INTERVALS
- MW-6 ⊕ PROPOSED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

SCALE IN FEET

PROJECT NUMBER SJ18-01S-X
APPROVED BY
CHECKED BY
DRAWN BY J.F.F.

DELTA CONSULTANTS

SHELL OIL PRODUCTS US
SHELL-BRANDED SERVICE STATION
PLEASANTON, CALIFORNIA

FIGURE 3

PROPOSED WELL LOCATION MAP

1801 SANTA RITA ROAD
PLEASANTON, CALIFORNIA