

EXXON COMPANY, U.S.A.

ENVIRONMENTAL
PROTECTION

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P.O. BOX 4032 • CONCORD, CALIFORNIA 94524-4032
MARKETING DEPARTMENT • ENVIRONMENTAL ENGINEERING

DARIN L. ROUSE
SENIOR ENGINEER

(925) 246-8768
(925) 246-8798 FAX

October 5, 1999

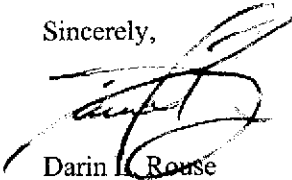
RE: EXXON RAS No. 7-3399/2991 Hopyard Road, Pleasanton, California

Dear Mr. Seery:

Attached for your review and comment is a document entitled *Workplan for Onsite Soil Borings and Well Destruction* for the above referenced site. This document was prepared by Delta Environmental Consultants, Inc., of Rancho Cordova, California, and summarizes the proposed installation of investigation soil borings and destruction of two vapor extraction wells at the subject site.

If you have any questions or comments, please contact me at (925) 246-8768.

Sincerely,



Darin L. Rouse
Senior Engineer

DLR/tjm

attachment: Delta's entitled, *Workplan for Onsite Soil borings and Well Destruction* dated September 30, 1999.

cc: w/attachment

Mr. Steve Asmann - Station Operator

Mr. Chuck Healdlee - California Regional Water Quality Control Board, San Francisco Bay Region

Mr. Steve Cusenza - City of Pleasanton Public Works Department

Mr. Matthew Katen - Alameda County Flood Control (Zone 7)

Ms. Kathy Simonelli - Geological Services Corporation

w/o attachment

Mr. James Brownell - Delta Environmental Consultants, Inc.

Note: work plan
implemented ~ 10/26/99
prior to receipt of approval
from this office. Plan
looks acceptable, however.
SOS

**WORKPLAN FOR ONSITE
SOIL BORINGS AND
WELL DESTRUCTION**

**EXXON SERVICE STATION No. 7-3399
2991 HOPYARD ROAD
PLEASANTON, CALIFORNIA
DELTA PROJECT NO. D094-836**

September 30, 1999

Prepared By

**DELTA ENVIRONMENTAL CONSULTANTS, INC.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
(916) 638-2085**



3164 Gold Camp Drive
Suite 200
Rancho Cordova, CA 95670-6021
U.S.A.
916/638-2085
FAX: 916/638-8385

September 30, 1999

Mr. Darin Rouse
Exxon Company, U.S.A.
2300 Clayton Road, Suite 1250
Concord, California 94520

Subject: *Workplan for Onsite Soil borings and Well Destruction*
Exxon Service Station No. 7-3399
2991 Hopyard Road
Pleasanton, California
Delta Project No. D094-836

Dear Mr. Rouse:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Exxon Company, U.S.A. (Exxon), to prepare a workplan for additional hydrogeologic investigation activities at the subject site. The location of the site is presented in Figure 1, and a Site Map is included in Figure 2. This workplan proposes the installation of onsite soil borings and the destruction of vapor extraction wells VR-3 and VR-4. Field methods and procedures to be used while caring out the proposed work are summarized in Enclosure A.

Proposed Scope of Work

? map shows 4 borings

Delta proposes to advance between 15 and 20 soil borings onsite for the collection of soil and ground water samples. Each boring will be advanced to an approximate depth of 15 feet below surface grade (bsg). The locations of the proposed soil borings are shown on Figure 3. The soil borings will be continuously logged using the Unified Soil Classification System (USCS) visual and manual method to the total depth of each boring. Soil samples will be screened in the field for the presence of organic vapors using a photoionization detector (PID). Regardless of staining, soil samples will be screened at 5-foot intervals in each boring. Boring logs containing USCS descriptions of soil types encountered, PID readings, and other pertinent drilling information will be maintained.

Selected soil samples maybe submitted for chemical analysis. Samples submitted will be analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020, total purgeable petroleum hydrocarbons (TPPH) as gasoline using EPA Method 8015 Modified, and methyl tertiary butyl ether (MTBE) using EPA Method 8260B. Ground water samples will be analyzed for BTEX, TPPH as gasoline and MTBE using the previously described methods.

Vapor extraction wells VR-3 and VR-4 are proposed to be destroyed by over-drilling with a hollow stem auger rig. Each well will be over-drilled destroying the casing to its' original installed depth. The borings will be backfilled with neat cement from their base to within approximately 6-inches of the surface. The surface will be capped with concrete to match existing grade. Current well completion diagrams for VR-3 and VR-4 is included in Enclosure B.

Mr. Darin Rouse
Exxon Company, U.S.A.
September 30, 1999
Page 2

Prior to initiation of drilling activities Delta will contract a utility locating service to locate onsite underground services. Water, gas, electrical, sewer, and storm drain lines will be located to assist in positioning of soil borings. Also a licensed land surveyor will be contracted to survey well casings, elevations, located utilities, and relevant site features.

Soil Stockpile

Soil generated from drilling activities will be temporarily stockpiled on-site. Soil samples will be collected from the stockpile and submitted for chemical analysis to assess disposal options. Following receipt of soil analytical results, and acceptance by the designated disposal facility a licensed waste transporter will be contracted to remove the soil.

Schedule

Following approval of the workplan and necessary permit the proposed soil borings and well destruction activities will be scheduled.

Remarks/Signatures

The interpretations contained in this document represent our professional opinions, and are based in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Delta recommends that a copy of this document be forwarded to:

Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, Ca. 94502-5577

Mr. Chuck Headlee
California Regional Water Quality Control Board,
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland Ca. 94612

Mr. Matthew Katen
Alameda County Flood Control and
Water Conversation District (Zone 7)
5997 Parkside Drive
Pleasanton, Ca. 94566

Mr. Steve Cusenza
City of Pleasanton Public Works Department
Post Office box 520
Pleasanton, Ca. 94566

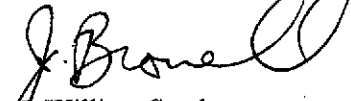
Mr. Steve Asmann
Steve's Exxon
2991 Hopyard Road
Pleasanton, Ca. 94588

Mr. Darin Rouse
Exxon Company, U.S.A.
September 30, 1999
Page 3

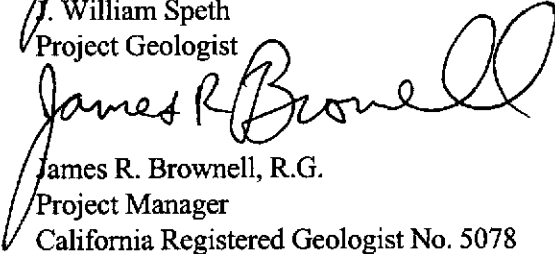
If you have any questions regarding this project, please contact Jim Brownell at (916) 638-2765.

Sincerely,

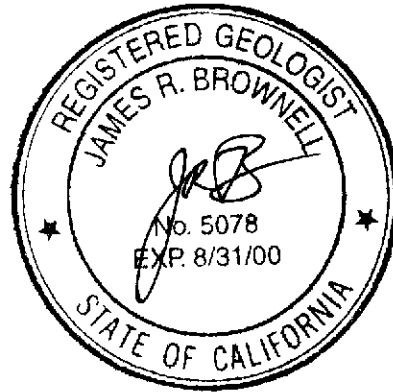
DELTA ENVIRONMENTAL CONSULTANTS, INC.



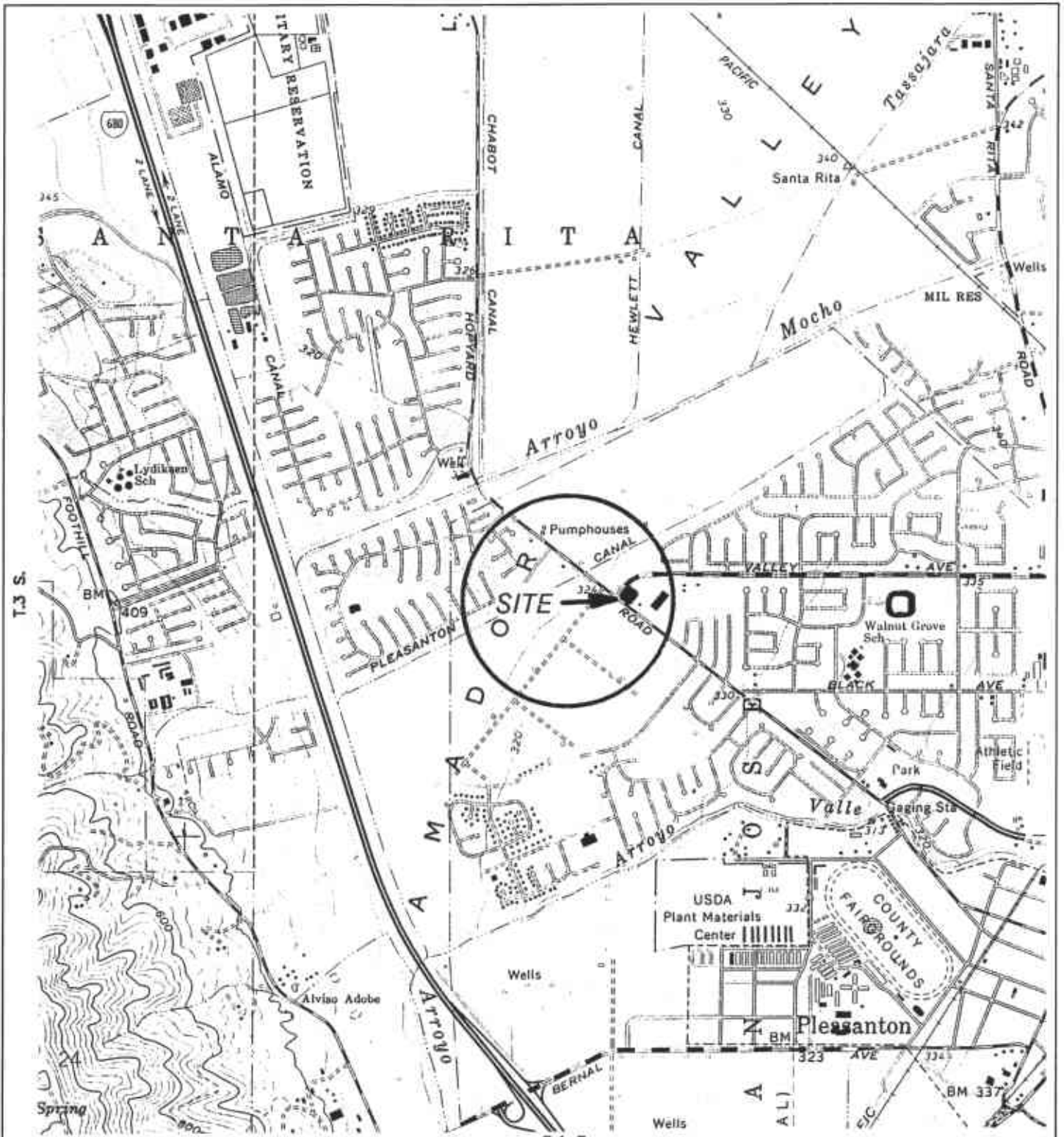
J. William Speth
Project Geologist



James R. Brownell, R.G.
Project Manager
California Registered Geologist No. 5078



JWS (Lrp027.836)
Enclosures



GENERAL NOTES:
 BASE MAP FROM U.S.G.S.
 DUBLIN, CA
 7.5 MINUTE TOPOGRAPHIC
 PHOTOREVISED 1980

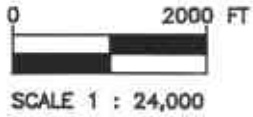
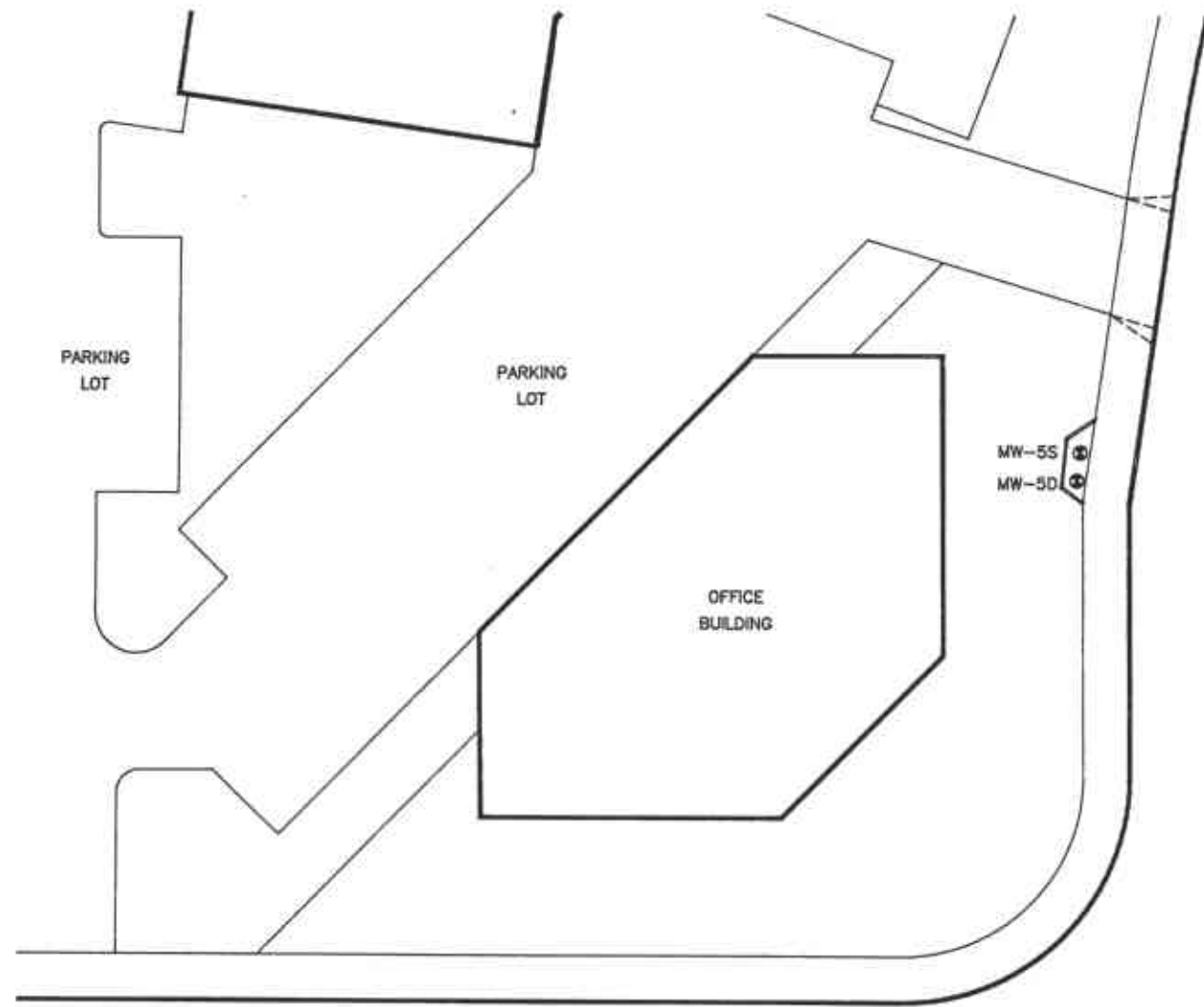


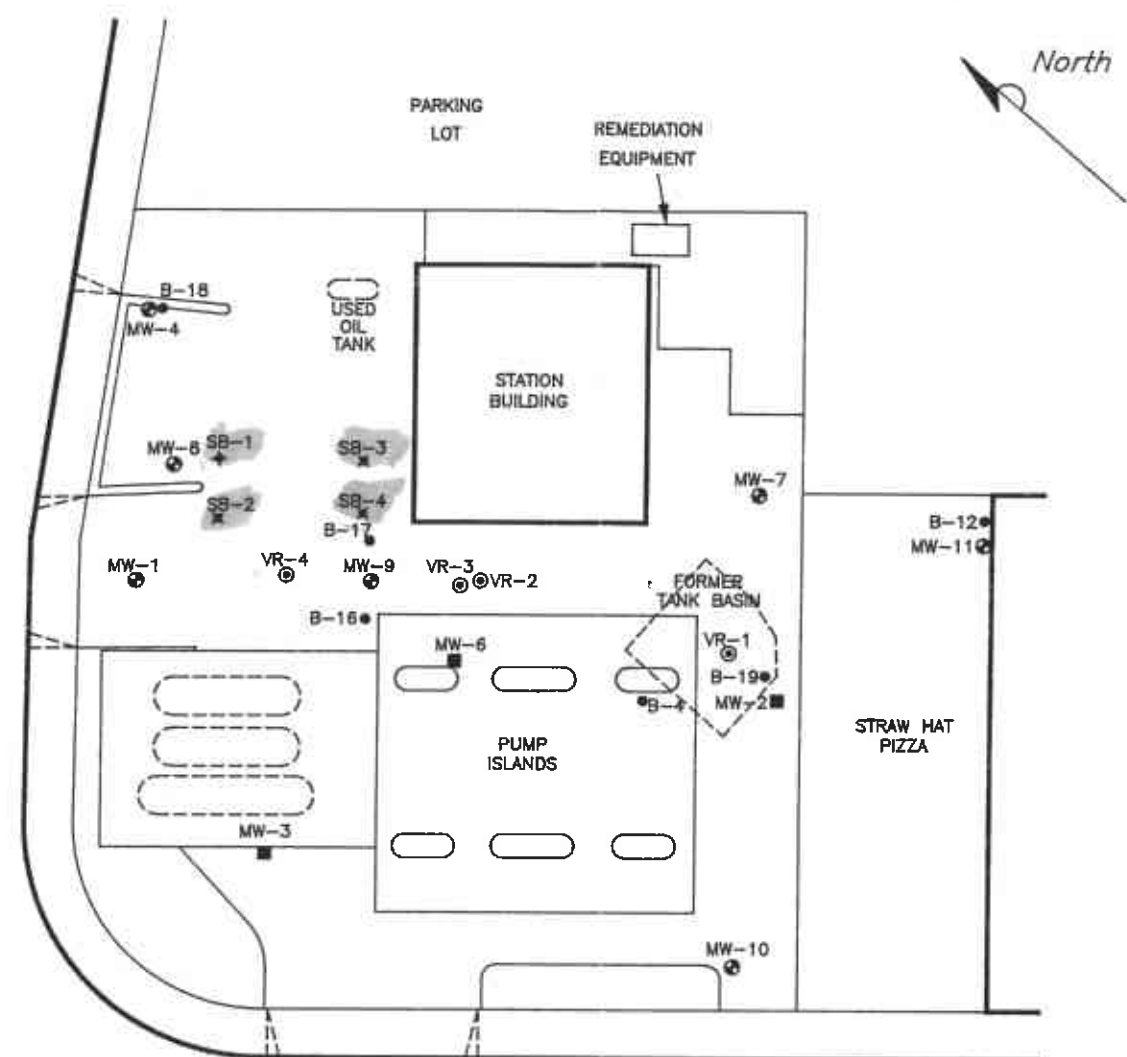
FIGURE 1
 SITE LOCATION MAP
 EXXON STATION NO 7-3399
 2991 HOPYARD ROAD
 PLEASANTON, CA.

PROJECT NO. D094-836	DRAWN BY L.H. 9/22/94
FILE NO. —	PREPARED BY TMG
REVISION NO. 1	REVIEWED BY [Signature]





VALLEY AVENUE



HOPYARD ROAD

- LEGEND:
- B-12 SOIL BORING LOCATION
 - ⊙ VR-1 VAPOR EXTRACTION WELL LOCATION
 - MW-2 DESTROYED MONITORING WELL
 - ⊙ MW-1 MONITORING WELL LOCATION
 - ⊙ SOIL BORING LOCATION

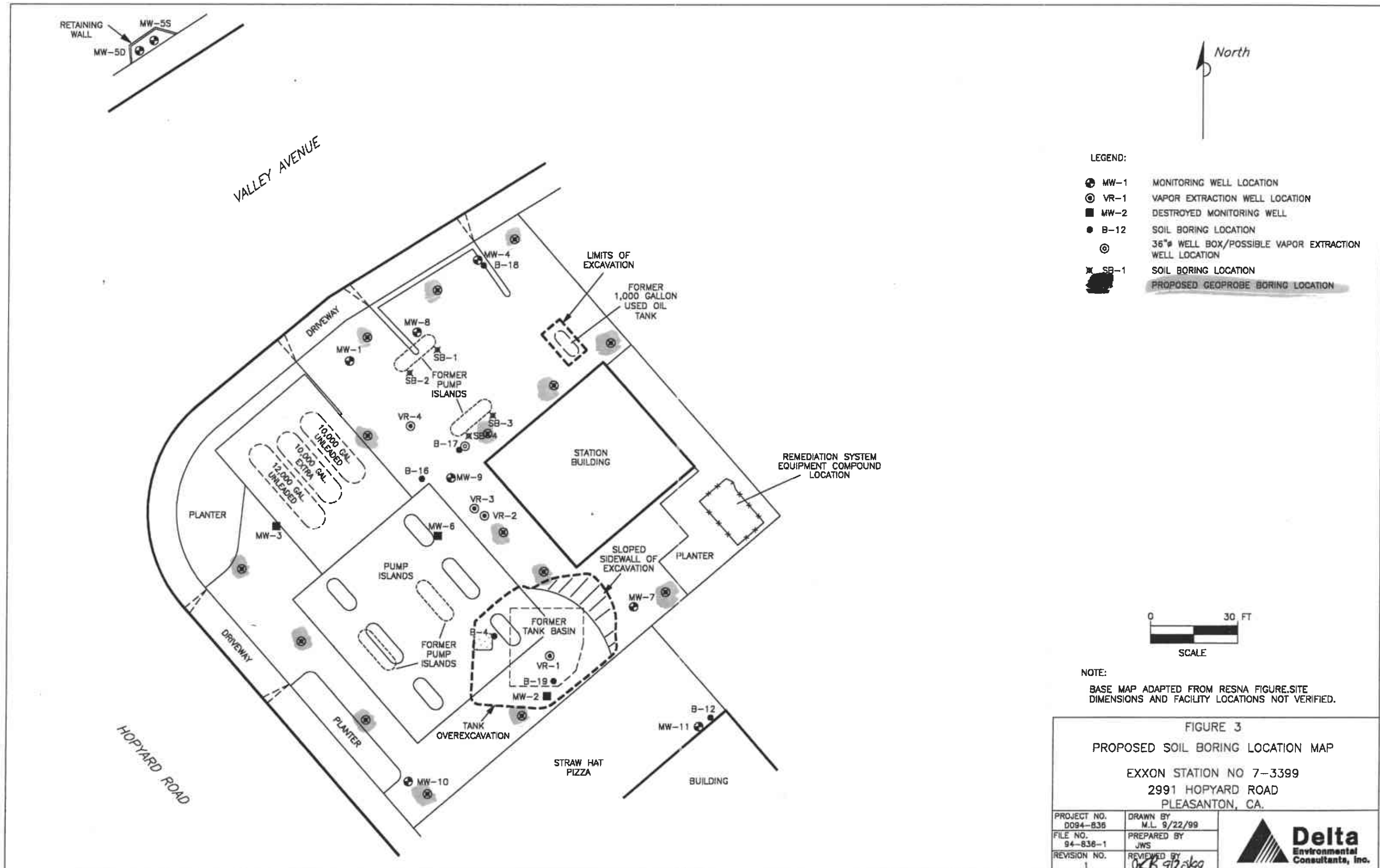


FIGURE 2
SITE VICINITY MAP
EXXON STATION NO 7-3399
2991 HOPYARD ROAD
PLEASANTON, CA.

PROJECT NO. D094-B36	DRAWN BY M.L. 4/24/97
FILE NO. 94-836-5	PREPARED BY CKA
REVISION NO. 2	REVIEWED BY CKA

Delta
Environmental
Consultants, Inc.

NOTE:
BASE MAP ADAPTED FROM RESNA FIGURE. SITE
DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.



1.0 METHODS AND PROCEDURES

1.1 Health and Safety Plan

Field work performed by Delta and Delta's subcontractors at the site is conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document which describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the SHSP is at the site and available for reference by appropriate parties during work at the site.

1.2 Locating Underground Utilities

Prior to commencement of work on-site, Delta researches the location of all underground utilities with the assistance of Underground Service Alert (USA). USA contacts the owners of the various utilities in the vicinity of the site to have the utility owners mark the locations of their underground utilities. Work associated with the boring and monitoring well installation is preceded by manual hand auguring to a minimum depth of 5 feet below surface grade (bsg) to avoid contact with underground utilities and structures.

1.3 Soil Sampling and Contamination Reduction

Soil borings and soil sampling will be performed under the direction of a Delta geologist. The soil borings will be advanced using a GeoProbe[®] rig which employs hydraulic push and roto-percussion force to advance the sampling device.

To reduce the chances of cross-contamination between boreholes, all downhole drilling equipment will be steam-cleaned between each boring. To reduce cross-contamination between samples, the barrel sampler is washed in a soap solution and double-rinsed between each sampling event.

Upon recovery, a portion of the soil sample will be placed into a plastic bag and sealed for later screening with a photoionization detector (PID). Another portion of the soil sample will be used for classification and description. That part of the soil sample collected in the leading brass tube within sampler will be stored at approximately 4°C for transport to the laboratory.

1.4 Soil Classification

As the samples are obtained in the field, they will be classified by the geologist in accordance with the Unified Soil Classification System (USCS). Representative portions of the samples will then be retained for further examination and for verification of the field classification. Logs of the borings indicating the depth

and identification of the various strata, the N value, and pertinent information regarding the method of maintaining and advancing the borehole will be made.

1.5 Soil Sample Screening/hNu Portable Photoionization Detector Method

After the soil sample plastic bags have been brought to ambient temperature, the headspace vapors of the soil sample in the bag will be screened with a PID equipped with a 10.2 eV lamp. The sample corner of the bag will be opened and the detector probe immediately placed within the headspace. The highest observed reading will be recorded.

1.6 Ground Water Sampling

Upon reaching the water bearing zone, a PVC casing screened with 0.020 slots will be temporarily inserted into the boring for the collection of a water sample. A liquid sample will be collected from each boring with a clean disposable bailer and transferred into a laboratory supplied sampling container. Each sample will be appropriately labeled and stored on ice from the time of collection through the time of delivery to the laboratory. Ground water samples will be transported to the laboratory and analyzed within the EPA-specified holding times for the requested analyses.

1.7 Liquid-Phase Petroleum Hydrocarbons

If liquid-phase petroleum hydrocarbons are present in a boring, the thickness of the petroleum layer will be measured by collecting a sample in a transparent disposable bailer with a check valve at the bottom, or by measurement using appropriate fluid-level sounding equipment.

2.0 ANALYTICAL PROCEDURES

Selected soil samples submitted to the laboratory will be analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020, total purgeable petroleum hydrocarbons (TPPH) as gasoline using EPA Method 8015 Modified, and (methyl tertiary butyl ether) MTBE using EPA Method 8260B. Ground water samples submitted to the laboratory will be analyzed for BTEX using EPA Method 8020, TPPH as gasoline using EPA Method 8015 Modified, and MTBE using EPA Method 8260B.

3.0 QUALITY ASSURANCE PLAN

This section describes the field and analytical procedures to be followed throughout the investigation.

3.1 General Sample Collection and Handling Procedures

Proper collection and handling are essential to ensure the quality of a sample. Each sample will be collected in a suitable container, preserved correctly for the intended analysis, and stored prior to analysis for no

longer than the maximum allowable holding time. Details on the procedures for collection and handling of soil samples used on this project can be found in Section 1.0 (Methods).

3.2 Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures ensure sample integrity and document sample possession from the time of collection to its ultimate disposal. Each sample container submitted for analysis will have a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, will be recorded on the borehole log or in the field records. Samples will be analyzed by a California-certified laboratory.

A chain-of-custody form will be used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them will relinquish the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory will verify sample integrity and confirm that it was collected in the proper container, preserved correctly, and that there is an adequate volume for analysis.

If these conditions are met, the sample will be assigned a unique log number for identification throughout analysis and reporting. The log number will be recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory in the laboratory. The sample description, date received, client's name, and other relevant information will also be recorded.

Total depth of boring: 35-1/2 feet. Diameter of boring: 8 inches Date drilled: 11-20-89
 Casing diameter: 2 inches Length: 35 feet Slot size: 0.020-inch
 Screen diameter: 2 inches Length: 30 feet Material type: Sch 40 PVC
 Drilling Company: Grega Drilling and Testing, Inc. Driller: Jim and Richard
 Method Used: Hallow-Stem Auger Field Geologist: Russell Bak

Depth	Sample No.	Blows	P.J.D.	USCS Code	Description	Well Const.
0					See lithologic description of Log of Boring VR-2.	
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						



PROJECT NO. 18034-7

LOG OF BORING VR-3
 Exxon Station No. 7-3399
 2991 Hopyard Road
 Pleasanton, California

PLATE
 P - 24

Depth	Sample No.	BLOWS	P.L.D.	USCS Code	Description	Well Const.		
-22					See lithologic description of Log of Boring VR-3.			
-24								
-26								
-28								
-30								
-32								
-34								
-36							Total Depth = 35-1/2 feet.	
-38								
-40								
-42								
-44								
-46								
-48								
-50								



PROJECT NO. 18034-7

LOG OF BORING VR-3

Exxon Station No. 7-3399
 2991 Hopyard Road
 Pleasanton, California

PLATE

P - 2

Total depth of boring: 35-1/2 feet Diameter of boring: 8 inches Date drilled: 11-24-89
 Casing diameter: 2 inches Length: 32-1/2 feet Slot size: 0.020-inch
 Screen diameter: 2 inches Length: 20 feet Material type: Sch 40 PVC
 Drilling Company: Greag Drilling and Testing, Inc. Drillers: Jim and Richard
 Method Used: Hollow-Stem Auger Field Geologist: Russell Bak

Depth	Sample No.	Blows	P.L.D.	USCS Code	Description	Well Const.
0					Concrete (6 inches) underlain by sand (3 inches).	
2				CL	Silty clay, trace medium to coarse sand, dark gray with red-brown and light gray mottling, damp, medium plasticity, stiff.	
4	S-5	5 5 7	5.4			
8				SM	Silty very fine to medium sand, brown to gray, damp, loose.	
10	S-10	3 2 6	1	ML	Clayey silt, blue-gray and gray-brown mottled, damp, medium plasticity, medium stiff.	
14	S-15	3 3 5	1	CH	Silty clay, green-gray to gray-black, damp, high plasticity, medium stiff, some partially decomposed rootlets and other plant material.	
20	S-20	11 5 6	1.4			

(Section continues downward)



PROJECT NO. 18034-7

LOG OF BORING VR-4
 Exxon Station No. 7-3399
 2991 Hopyard Road
 Pleasanton, California

PLATE
 P - 2

Depth	Sample No.	BLOWS	P.L.D.	USCS Code	Description	Well Const.
-22				CH	Silty clay, dark gray, moist, high plasticity, stiff, some partially decomposed rootlets and other plant material.	[Well Const. Column]
-24		3			Green-gray with minute specks and thin streaks of carbonaceous material, trace plant fragments.	
-25	S-25	4	0.6	CL	Silty clay, blue-gray with red-brown mottling, damp, medium plasticity, stiff.	
-26		5				
-28				CH	Silty clay, gray-brown with red-brown mottling, damp, high plasticity, stiff.	[Well Const. Column]
-30	S-30	3	0.6		Brown with red-brown staining and specks, streaks, and small patches of black carbonaceous material including decomposed seeds, trace rootlets.	
-32		4				
-34		7				
-35	S-35	5	1.2		Brown with black and red-brown streaks.	[Well Const. Column]
-36		7			Total Depth = 35-1/2 feet.	
-38		15				
-40						
-42						
-44						
-46						
-48						
-50						



PROJECT NO. 18034-7

LOG OF BORING VR-4

Exxon Station No. 7-3399
2991 Hopyard Road
Pleasanton, California

PLATE

P - 2