Delta Environmental Consultants, Inc.

3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
Phone: (916) 638-2085
Fax: (916) 638-8385

FAX TRANSMITTAL FORM

DATE:	April 7, 1997
RECIPIENT:	Scott Seery
COMPANY:	Alameda County Health Services
RECIPIENT FAX NO:	510/337-9335
SENDER:	Keoni Almeida
NO. OF PAGES TO FOLLOW:	21
SUBJECT:	349 Main Street, Pleasanton, CA
DELTA PROJECT NO:	
MESSAGE:	

Marla Guensler requested that we fax the attached work plan to you. Upon your approval we will permit the destruction of the wells with Zone 7.

Have a nice day.

Keoni Almeida

Project Manager

Delta
Environmental
Consultants, Inc.

3164 Gold Camp Drive
Suite 200
Rancho Cordova, CA 95670
916/638-2085
FAX: 916/638-8385

April 7, 1997

Ms. Marla Guensler
Exxon Company, U.S.A.
2300 Clayton Road, Suite 640
Concord, California 94520

Subject: *Proposed Well Destruction and Well Repair*
Exxon Service Station No. 7-7003
349 Main Street
Pleasanton, California
Delta Project No. D094-838

Dear Ms. Guensler:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Exxon Company, U.S.A. (Exxon), to conduct on-going investigation of petroleum hydrocarbon impacted soil and ground water at Exxon Service Station No. 7-7003, located at 349 Main Street, Pleasanton, California. The location of the site is shown in Figure 1 and the site features are illustrated in Figure 2.

Delta conducted a site visit on March 18, 1997. The Delta representative discovered that monitoring wells MW-1, MW-3, MW-4, MW-5, and vapor extraction wells VE-1 through VE-3 were damaged or inaccessible due to construction grading activities. The flush grade well boxes and approximately 12 inches of well casings had been sheared off of MW-1 and vapor extraction wells VE-1 through VE-3. The well box for monitoring well MW-4 had also been damaged, but the well casing appears to be undamaged. Soil and debris discovered inside well covers and well casings was removed from MW-1, MW-4, and VE-1 through VE-3 as much as possible. Monitoring wells MW-3 and MW-5 could not be located due to an elevation change from grading activities and stockpiled debris.

Proposed Scope of Work

Delta is proposing to locate and uncover monitoring wells MW-3 and MW-5, and properly destroy monitoring wells MW-3, MW-5, and vapor extraction wells VE-1 through VE-3 located on-site. The location of the wells are shown in Figure 2. Well construction details for MW-3, MW-5, and VE-1 through VE-3 are included in Enclosure A. Monitoring wells MW-1 and MW-4 will be rehabilitated by using vacuum extraction and over-purging to remove soil and debris within the casings. New well boxes will be installed and set in concrete to protect the monitoring wells. Work conducted at this site will be performed in accordance with the methods described in Enclosure B.

① MW-4 all "ND" for 2+ yrs - destroy also

Monitoring wells MW-3 and MW-5, and vapor extraction wells VE-1 through VE-3 will be destroyed by over-drilling each well to its total depth; 40.5 feet (MW-3), 35 feet (MW-5), 25 feet (VE-1 and VE-2), and 25.5 feet (VE-3) with a truck-mounted, 12-inch diameter hollow stem auger, drilling rig. Upon completion, the over-drilled monitoring wells and vapor extraction well boreholes will immediately be backfilled to within one foot of surface grade with a cement grout slurry, as required by Alameda County Flood Control and Water Conservation District (Alameda County Flood Control). Upon approval of the proposed work, the required permits will be submitted to Alameda County Flood Control.

Remarks/Signatures

The interpretations contained in this report 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 the accordance with currently accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

It is recommended that a copy of this report be forwarded to:

Mr. Scott Seery
Alameda County Health Service
1131 Harbor Bay Parkway
Alameda, California

If you have any questions regarding this project, please contact Keoni Almeida at (916) 638-2085.

Sincerely,

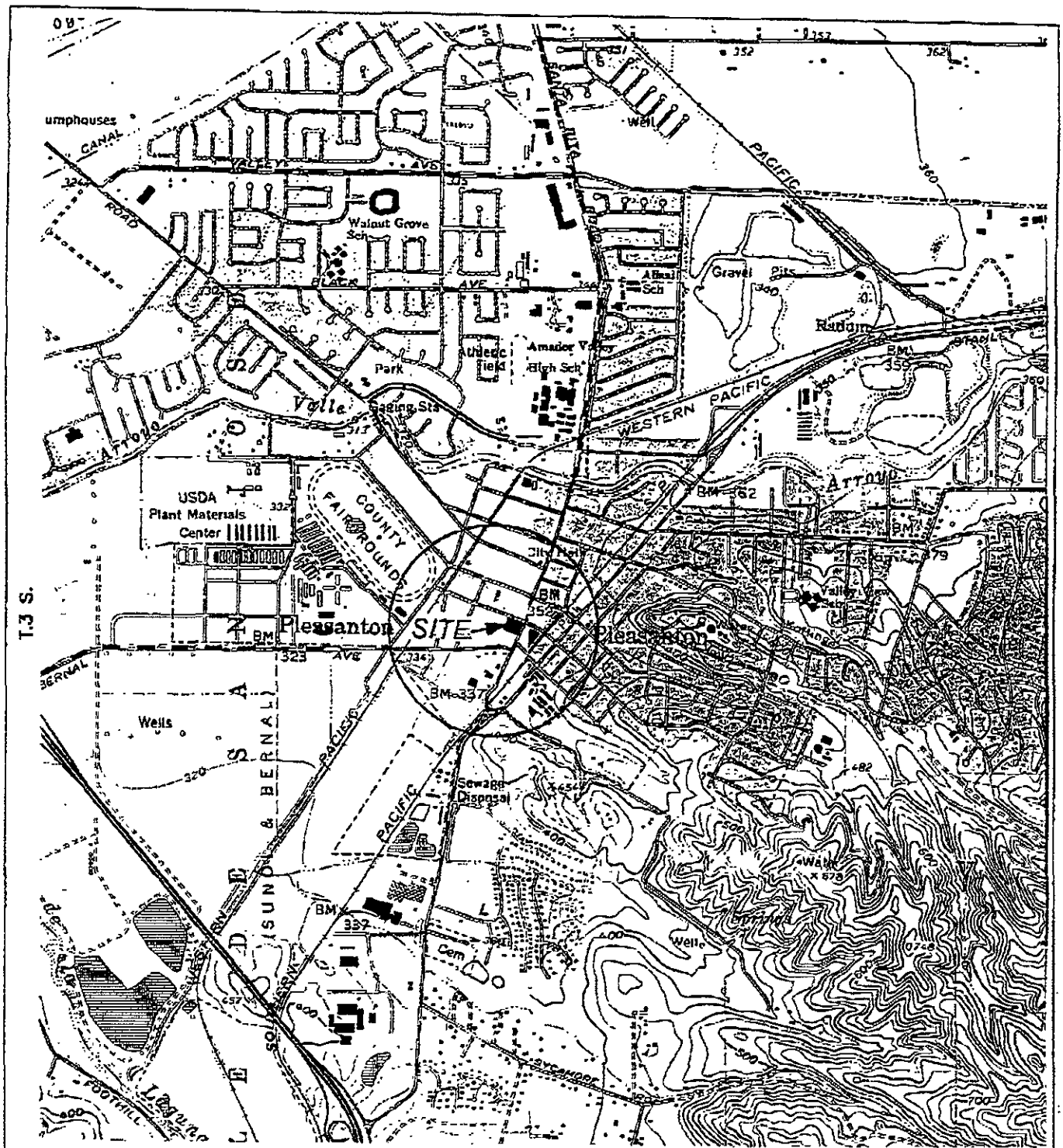
DELTA ENVIRONMENTAL CONSULTANTS, INC.

J. William Speth
Staff Geologist

Charles Keoni Almeida
Project Manager

JWS (CL002.838)
Enclosures

cc: Mr. David Lunn, Alameda County Flood Control and Water Conservation District (Zone 7)
Mr. Sum Arigalia, California Regional Water Quality Control Board, San Francisco Bay Region

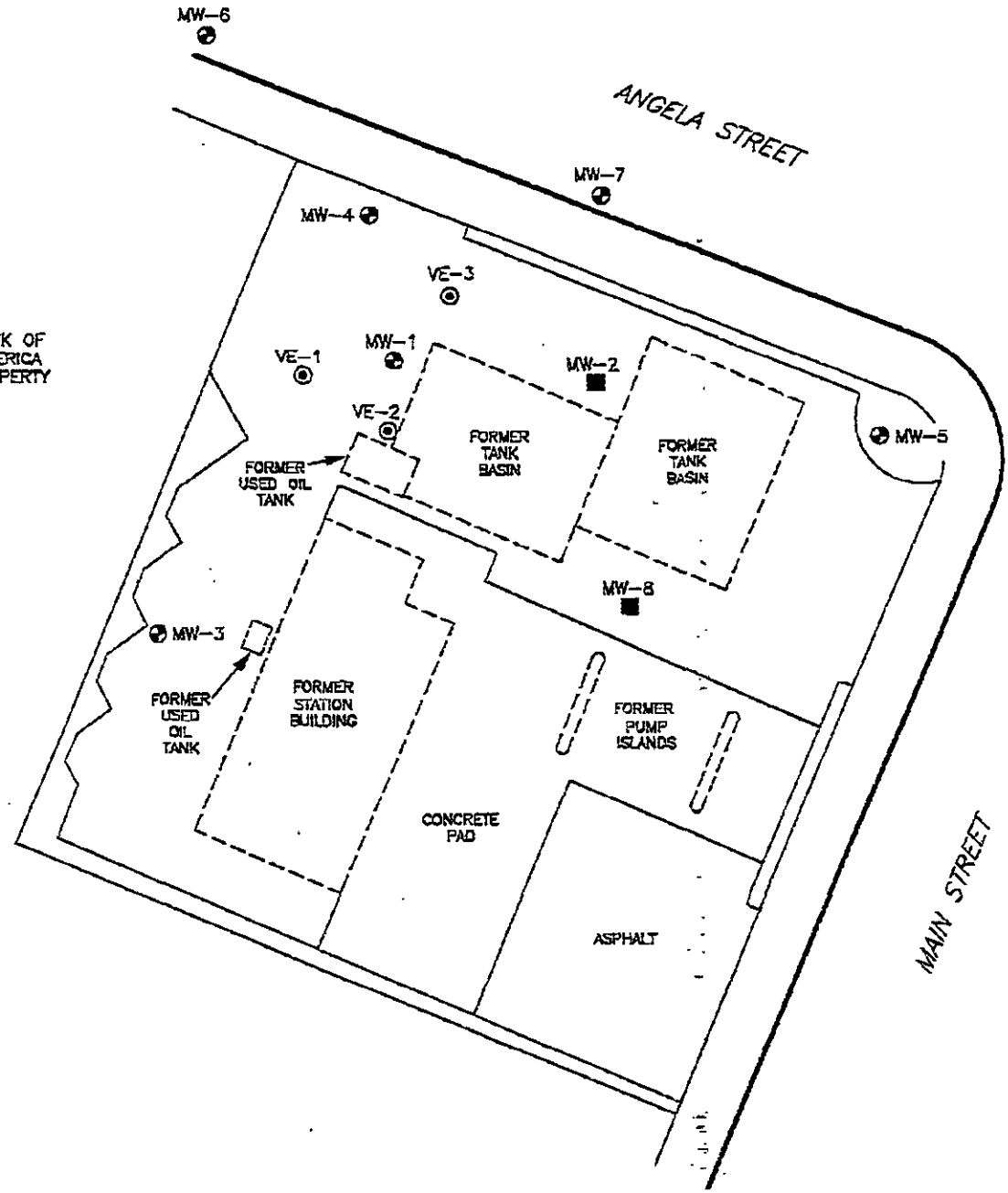


GENERAL NOTES:
BASE MAP FROM U.S.G.S.
DUBLIN & LIVERMORE, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980

FIGURE 1
SITE LOCATION MAP
EXXON STATION NO. 7-7003
349 MAIN STREET
PLEASANTON, CA.

PROJECT NO. 0094-838	DRAWN BY LH 8/24/94
FILE NO. —	PREPARED BY REC
REVISION NO. 1	REVIEWED BY JRB 10/14/94

Delta Environmental Consultants, Inc.



LEGEND:

- VE-1 VAPOR EXTRACTION WELL LOCATION
- MW-1 MONITORING WELL LOCATION
- MW-2 DESTROYED MONITORING WELL LOCATION

0 30 FT

SCALE

FIGURE 2
SITE MAP

EXXON STATION NO. 7-7003
349 MAIN STREET
PLEASANTON, CA.

PROJECT NO. 0094-838	DRAWN BY M.L. 1/21/97
FILE NO. 94-838-1	PREPARED BY BH
REVISION NO. 5	REVIEWED BY

Delta Environmental Consultants, Inc.

ENCLOSURE A

Well Construction Details

Total depth of boring: 40 feet **Diameter of boring:** 10 inches **Date drilled:** 2-15-90
Casing diameter: 4 inches **Length:** 39 feet **Slot size:** 0.020-inch
Screen diameter: 4 inches **Length:** 15 feet **Material type:** Sch 40 PVC
Drilling Company: Kvilhaug Well Drilling, Inc. **Driller:** Rod and Paul
Method Used: Hollow-Stem Auger **Field Geologist:** Keith and Steve

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt (3 inches).	
2				SW	Gravelly sand.	
4				SM	Silty, fine-grained sand, trace gravel, brown, damp, medium dense.	
		8				
6	S-6	10 8	0.1			
8				ML	Clayey silt, dark brown, moist, medium plasticity, hard.	
10		20				
	S-11	30 35	0.1			
12						
14						
		20				
16	S-16	20 25	0.1		Light brown, slight plasticity.	
18						
20		20				
		25			Some gravel, dark gray, very stiff.	
	S-21	31	42		(Section continues downward)	

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PROJECT NO. 19025-2

LOG OF BORING B-1A/MW-1

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE
C - 4

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
				ML	Clayey silt, some sand, dark gray, moist, slight plasticity, very stiff.	
22				CL	Silty clay, trace sand, green–gray, moist, medium plasticity, hard.	
		20				
	S–23	50	6.1	ML	Clayey silt, with trace gravel.	
24				GC	Sandy, clayey gravel, brown, moist, very dense.	
		35				
26	S–25.5	50	124			
		50				
28	S–27.5	6	35		More sand than clay.	
30		35				
	S–30.5	50	5.1		Very moist to wet.	
32				ML ▽	Clayey silt, with trace sand and gravel, brown, moist, hard.	
		15				
		25				
34	S–33.5	30	0.3			
		10				
36		15				
	S–36	30	0.3		More clay.	
		18		GP	Clayey, sandy gravel, brown, very moist.	
38		20				
	S–38.5	25	0.3	CL	Sandy, silty clay, with trace sand, light brown, moist, medium plasticity, hard, carbonaceous.	
40	S–39.5	90			Total Depth = 40 feet.	
42						
44						
46						
48						
50						

Applied GeoSystems

PROJECT NO. 18096-4

LOG OF BORING B-1A/MW-1

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE

C - 5

Total depth of boring: 40 feet **Diameter of boring:** 10 inches **Date drilled:** 2-14-90
Casing diameter: 4 inches **Length:** 39-1/2 feet **Slot size:** 0.020-inch
Screen diameter: 4 inches **Length:** 15 feet **Material type:** Sch 40 PVC
Drilling Company: Kvilhaug Well Drilling, Inc. **Driller:** Rod and Paul
Method Used: Hollow-Stem Auger **Field Geologist:** Keith and Steve

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt (3 inches).	
				SW	Sand and gravelly sand.	
4				ML	Fine sandy silt, brown, damp, very stiff.	
6	S-6	5, 8, 10	0			
8				CL	Silty clay, trace gravel, dark brown, damp, slight plasticity, very stiff.	
10		20				
	S-11	27, 30	0.6			
12				GP	Clayey, sandy gravel, dark brown, damp, medium dense.	
14		15				
16	S-16	10, 20	0.3	ML	Sandy, clayey silt, some gravel, dark brown, moist, low plasticity, hard.	
18						
20	S-20	12, 22, 35	0			

(Section continues downward)

Applied GeoSystems

PROJECT NO. 19025-2

LOG OF BORING B-3/MW-3

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE C-8

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22		25		ML	Sandy, clayey silt, some gravel, dark brown, moist, low plasticity, hard.	
	S-22.5	30	0		Brown, with clay lens.	
24		25		SM	Clayey, silty sand, trace gravel, brown, moist, very dense.	
	S-25	50	0.3			
26		30		ML	Sandy silt, some clay, brown, damp, low plasticity, hard, with carbonaceous material.	
	S-27	50	0.1			
28				GP	Sandy gravel, some silt, brown, damp, dense.	
30	S-29.5	50	0.1			
32		20		ML	Clayey, sandy silt, brown, moist, low plasticity, hard, with a lens of sandy gravel.	
		30			▽	
	S-33	31	0.1			
34		10		CL	Silty clay, with trace gravel, brown, wet, medium plasticity, hard.	
		20				
36	S-35.5	15	0.1			
		20		GP	Clayey, sandy gravel, brown, very wet, medium plasticity, hard, grades to clayey sand with gravel.	
38		30				
	S-38	50	0.1			
40	S-39.5	50	0.1	CL	Sandy clay, with gravel, very moist.	
					Total Depth = 40-1/2 feet.	
42						
44						
46						
48						
50						

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PROJECT NO. 19025-2

LOG OF BORING B-3/MW-3

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE C-9

Total depth of boring: 48-1/2 feet **Diameter of boring:** 10 inches **Date drilled:** 5-31-90
Casing diameter: 4 inches **Length:** 47-1/2 feet **Slot size:** 0.010-inch
Screen diameter: 4 inches **Length:** 10 feet **Material type:** Sch 40 PVC
Drilling Company: Jcon Exploration **Driller:** Jim and Greg
Method Used: Hollow-Stem Auger **Field Geologist:** Tom Delon

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Aphalt (3 inches) over road base (3 inches).	
				SM	Silty, fine-grained sand, trace of gravel, brown, damp, loose.	
2						
					Light brown, more gravel.	
4						
		9				
		10				
6	S-6	12	0		Light brown, medium dense.	
		21				
8		26				
	S-8.5	26	0.5	ML	Fine-grained, sandy, clayey silt, trace gravel, trace organic material, brown with trace yellow staining, damp, no plasticity, hard.	
10		12				
		26				
	S-11	19	0		Trace rootlets	
12						
		18				
		27				
14	S-13.5	32	1.2	SP	Clayey, fine- to medium-grained sand, some gravel, brown, damp, very loose.	
		16				
		18				
16	S-16	23	0.3	CL	Fine- to medium grained sandy clay, trace organic material, brown with red and yellow staining, damp, medium plasticity, hard, rootlets.	
		18				
18		21				
	S-18.5	26				
20		15				
		26				
	S-21		2.5		Color change to green with tan mottling	
					(Section continues downward)	

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PROJECT NO. 19025-2

LOG OF BORING B-10/MW-4

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE C-22

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22		50		CL	Fine– to medium–grained sandy clay, trace organic material, green with tan mottling, damp, medium plasticity, hard, rootlets.	
24	S–23.5		33.4		Some gravel, green–gray mottled.	
26	S–26	26 30 37	0			
28	S–28.5		0			
30		17 18		CH	Silty clay, trace of fine– to medium–grained sand, trace gravel, tan, brown mottled, damp, high plasticity, hard.	
32	S–31	27	1.2			
34	S–33.5	12 26 27	0	CL	Fine– to medium–grained sandy, clayey silt, light brown damp, medium plasticity, hard.	
36	S–36	12 16 30	0	ML	Clayey silt, trace sand and small gravel, light brown, damp medium plasticity, very stiff.	
38	S–38.5	27 30 34	0		Trace organic material, hard	
40	S–38.5	16 18 22	▽0		Gravel, gray mottling, moist.	
42				SP	Gravelly, clayey, fine– to medium–grained sand, brown, wet to moist, dense.	
44	S–38.5	13 18 20	0			
46	S–38.5	14 18 28	0			
48	S–38.5	12 16 18	0	CL	Silty clay, trace gravel, light brown, trace organic material, moist, medium plasticity, hard.	
50					Total Depth = 48–1/2 feet.	

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PROJECT NO. 19025-2

LOG OF BORING B-10/MW-4

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE C-23

Total depth of boring: 35 feet **Diameter of boring:** 10 inches **Date drilled:** 6-4-90

Casing diameter: 4 inches **Length:** 33-1/2 feet **Slot size:** 0.010-inch

Screen diameter: 4 inches **Length:** 10 feet **Material type:** Sch 40 PVC

Drilling Company: Jcon Exploration **Driller:** Jim and Greg

Method Used: Hollow-Stem Auger **Field Geologist:** Tom Delon

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Aphalt (3 inches) over road base (3 inches).	
				SM	Silty gravelly fine-grained sand, dark brown, damp, very loose.	
2						
					Light brown, less gravel.	
4						
		6				
6	S-6	9	0			
		9				
8						
10		12				
		15		ML	Fine-grained, sandy, clayey silt, trace gravel, dark brown, damp, medium plasticity, hard.	
	S-11	25	0			
12						
		10				
		15				
14	S-13.5	21	0		Clayey silt, trace organic material, trace rootlets, trace red streaks.	
		9				
		10			Fine-grained sandy, gravelly silt, brown, low plasticity, very stiff.	
16	S-16	13	0			
		13		SP	Gravelly fine- to medium-grained sand, dense.	
18		15				
	S-18.5	16	0			
20		21		ML	Fine- to medium-grained sandy, gravelly silt, brown, some yellow streaks, no plasticity, hard, damp.	
		24				
	S-21	26	0		(Section continues downward)	

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PROJECT NO. 19025-2

LOG OF BORING B-12/MW-5

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE C-26

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
		21		ML	Fine- to medium-grained sandy, gravelly silt, brown,	
	S-21	24 26	0		some yellow streaks, no plasticity, hard, damp.	
22		26		SP	Gravelly, fine- to medium-grained sand, light brown	
		26			and tan mottling, moist, dense.	
	S-23.5	35	0			
24		14				
		20				
26	S-26	28	0		Some clay, some medium-grained sand, some gravel.	
		20				
28		28				
	S-28.5	34	0			
		40				
30	S-31		0 ▽		Wet	
		18				
32		22				
	S-33.5	29	0	CH	Silty clay, trace gravel, light brown, damp,	
34					high plasticity, very stiff.	
					Total Depth = 35 feet.	
36						
38						
40						
42						
44						
46						
48						
50						

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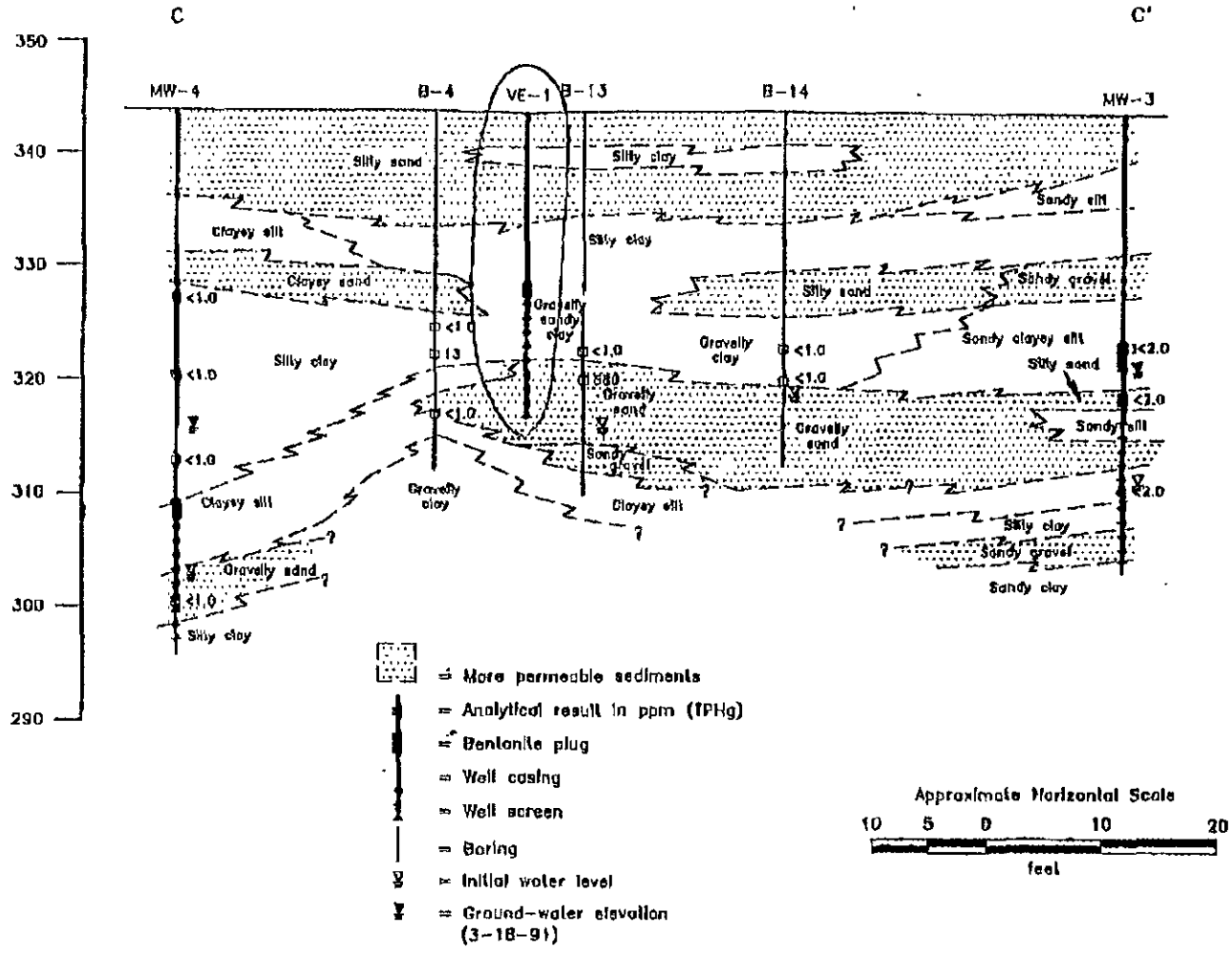
LOG OF BORING B-12/MW-5

Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE C-27

PROJECT NO. 19025-2



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PROJECT NO. 19025-2

GEOLOGIC CROSS SECTION C - C'
Exxon Station No. 7-7003
349 Main Street
Pleasanton, California

PLATE 5

Depth of boring: 25 feet Diameter of boring: 12 inches Date drilled: 05/03/93
Well depth: 24 feet Material type: Sch 40 PVC Casing diameter: 4 inches
Screen interval: 11 to 24 feet Slot size: 0.010-inch
Drilling Company: Exploration Geoservices Driller: Dave and Dennis
Method Used: Hollow-Stem Auger Field Geologist: B. Sieminski
Signature of Registered Professional:
Registration No.: RG 5023 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt (10 inches).	
2				ML	Sandy silt with clay, dark brown, moist, low plasticity, firm; roots; moisture from water seeping from gravel fill of waste-oil tank.	
4				SM	Silty sand, fine grained, trace gravel, light brown, moist, loose.	
	S-5	3 3	2.2			
6						
8				ML	Sandy silt with clay, brown, moist, low plasticity, very stiff.	
10	S-10	4 7	0			
12						
14				SC	Clayey sand, finw to medium grained, with gravel, light brown, damp, dense.	
	S-15	10 13 18	0		Color change to brown; with gray and red mottling, some yellow staining; becoming moist.	
16						
		5				
18	S-18	9 12	5	CL	Sandy clay, trace gravel, brown mottled gray and red, damp to moist, medium plasticity, very stiff; noticeable product odor.	
				▽ SC	Clayey sand with gravel, gray, wet, medium dense; obvious product odor.	
20		7				
	S-20	9 13	277			

(Section continues downward)

RESNA Working to Restore Nature

PROJECT: 130015.05

LOG OF BORING B-20/VE-2
Exxon Station 7-7003
349 Main Street
Pleasanton, California

PLATE C-4

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
				SC	Clayey sand with gravel, gray, wet, medium dense; obvious product odor.	
22		6 9		GP-GC	Sandy gravel with clay, gray, damp, dense; obvious product odor.	
	S-23	12	17	CL	Gravelly clay with sand, brown mottled gray, moist, low plasticity, very stiff; noticeable product odor.	
24		12 17				
	S-24.5	25	33		Increasing sand, becoming damp.	
					Total Depth = 25 feet.	
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

RESNA
Working to Restore Nature

PROJECT 130015.05

LOG OF BORING B-20/VE-2
Exxon Station 7-7003
349 Main Street
Pleasanton, California

PLATE
C-5

Depth of boring: 25-1/2 feet Diameter of boring: 12 inches Date drilled: 05/03/93
Well depth: 23-1/2 feet Material type: Sch 40 PVC Casing diameter: 4 inches
Screen interval: 13 to 23-1/2 feet Slot size: 0.010-inch
Drilling Company: Exploration Geoservices Driller: Dave and Dennis
Method Used: Hollow-Stem Auger Field Geologist: B. Sieminski
Signature of Registered Professional:
Registration No.: RG 5023 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0				GP	Asphalt (4 inches).	
				SM	Gravel, brown, damp, dense; baserock.	
2					Silty sand fine grained, with gravel, dark brown, damp, medium dense.	
4					Color change to brown; increasing gravel.	
	S-5	6 8	2			
6						
8				ML	Sandy silt, brown, damp, low plasticity, hard.	
10	S-10	10 27	3			
12						
14				SM	Silty sand, fine to medium grained, with gravel, light brown, damp, dense.	
	S-15	12 17 22	2.5			
16						
	S-17.5	12 11 19	4			
18				CL	Sandy clay, trace gravel, brown mottled gray and black, moist, medium plasticity, very stiff.	
20	S-20	10 12 18	1.8	▽		
					(Section continues downward)	

RESNA Working to Restore Nature

PROJECT: 130015.05

LOG OF BORING B-21/VE-3
Exxon Station 7-7003
349 Main Street
Pleasanton, California

PLATE C-6

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				CL	With wet clayey sand lenses.	
24						
	S-25	33/50	11	GP-GC	Sandy gravel with clay, gray, wet, very dense.	
26					Total Depth = 25-1/2 feet.	
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

RESNA
Working to Restore Nature

PROJECT 130015.05

LOG OF BORING B-21/VE-3
Exxon Station 7-7003
349 Main Street
Pleasanton, California

PLATE
C-7

ENCLOSURE B

Field Methods and Procedures

PRE-FIELD WORK ACTIVITIES

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.

Locating Underground Utilities

Prior to commencement of any work that is to be below surface grade, the location of the excavation, boring, etc., is marked with white paint as required by law. An underground locating service such as Underground Service Alert (USA) is contacted. The locating company 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. Any invasive work is preceded by manual hand augering to a minimum depth of five feet below surface grade to avoid contact with underground utilities.

FIELD METHODS AND PROCEDURES

Soil Cuttings From Drilling Operations

Soil generated during drilling operations will be stockpiled on-site. The stockpile is typically set on asphalt and covered by plastic sheeting in a manner to prevent rain water from coming in contact with the soil. If no asphalt is available the soil is placed on plastic sheeting and covered in the above method. The soil will remain on-site until the proper method for disposal is assessed.

Stockpile Soil Sampling

Stockpile soil sampling is performed under the direction of a registered geologist or civil engineer. Prior to collecting soil samples Delta personnel will measure and calculate the volume of soil in the stockpile(s). The stockpile(s) is then divided into sections containing the predetermined volume sampling interval (50, 100, 200, 500 yd^3, etc.). Soil samples are typically collected from 0.5 to 2 feet below the surface of the stockpile. In some instances two to four soil samples may be collected from each sampling interval and composited into one prior to laboratory analysis. The soil samples are collected in cleaned, brass or stainless tubes of varying diameter and lengths (typically 2 x 6 inches) or other appropriately cleaned sample containers. A hand-driven sampler holding the sample container may be used. To reduce the potential for cross-contamination between samples, the sampler is cleaned between each sampling event. Upon recovery, the sample container is sealed to minimize the potential

of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with a Teflon® sheet and plastic caps. The soil sample is collected, labeled, and handled according to the Quality Assurance Plan.