

EXXON COMPANY, U.S.A.

P.O. BOX 4032, CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER
SENIOR ENGINEER

(510) 246-8776
(510) 246-8798 FAX

SHD 3601

1/15/95 05
CEP 10 PCT 03

When will add MWS in installed?

2/15/95 Berlinda McGaugh. MW locations are w/in
blk. She will have best location determined
& send revise site plan & cover letter. Told
her MWS should be placed to give best data
and not convenience of installation

February 17, 1995

Ms. Juliet Shin
Alameda County Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: Exxon RAS #7-0104/1725 Park Street, Alameda, CA

Dear Ms. Shin:

Attached for your review and comment is a report entitled *Quarterly Ground Water Monitoring Report and Remediation Status, First Quarter 1995* for the above referenced site. This report, prepared by Delta Environmental Consultants, Inc., (Delta) of Rancho Cordova, California, details the results of the January 1995 ground water monitoring and sampling event.

Please contact me at (510) 246-8776 if you have any questions or comments.

Sincerely,

Marla D. Guensler
Senior Engineer

MDG/jb

attachment: Delta Quarterly Report dated February 16, 1995

cc: w/attachment:

Mr. Richard Hiett - San Francisco Bay RWQCB
Mr. Larry Seto - Alameda Co. Dept. of Environmental Health

w/o attachment:

Mr. Todd Galati - Delta



3330 Data Drive
Suite 100
Rancho Cordova, CA 95670
916/638-2085
FAX: 916/638-8385

February 16, 1995

Ms. Marla Guensler
Exxon Company, U.S.A.
Post Office Box 4032
Concord, California 94524-2032

Subject: *Quarterly Ground Water Monitoring Report and Remediation Status, First Quarter 1995*
Exxon Retail Station No. 7-0104
1725 Park Street
Alameda, California
Delta Project No. D094-832

Dear Ms. Guensler:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Exxon Company, U.S.A. (Exxon), to conduct quarterly ground water monitoring and remediation at Exxon Retail Station No. 7-0104, located at 1725 Park Street, Alameda, California. This letter report presents the results of quarterly ground water monitoring and remediation system sampling conducted on January 13, 1995. The location of the site is shown in Figure 1 and site features are illustrated in Figure 2. Work conducted at the site by Delta was performed in accordance with the field methods and procedures described in Enclosure A.

Ground Water Elevations, Flow Direction, and Hydraulic Gradient

Ground water was present in each of the ten existing monitoring wells and the five recovery wells during the January 13, 1995, sampling event, at depths ranging from 4.29 to 14.38 feet below the top of the well casings. Ground water elevations increased in all monitoring wells during this quarter. Cumulative ground water level measurements collected by Delta are presented in Table 1. Historical ground water monitoring and sampling data collected by previous consultants (June 7, 1988 through February 25, 1994) are presented in Enclosure B.

A water table contour map constructed from the ground water level measurements recorded on January 13, 1995, is included as Figure 3. The water table contour map indicates an induced ground water flow direction toward the recovery wells. The ground water extraction system has induced a hydraulic gradient of approximately 0.8 in the vicinity of the recovery wells. Away from the recovery wells the ground water flow direction is interpreted to be to the east with an approximate hydraulic gradient of 0.02.

Subjective Analysis

Liquid-phase hydrocarbons (LPH) were present in monitoring wells MW-2 and MW-5 at a thicknesses of 0.01 and 0.02 feet, respectively, during the January 13, 1995, site visit. Monitoring wells MW-2 and MW-5 were not sampled this quarter.

Ms. Marla Guensler
Exxon Company, U.S.A.
February 16, 1995
Page 2

Analytical Results

Ground water collected from each of the sampled monitoring wells on January 13, 1995, was submitted to Curtis and Tompkins, Ltd. (a California-certified laboratory) for analyses of benzene, toluene, ethylbenzene, total xylenes (BTEX), and total volatile hydrocarbons (TVH) as gasoline. The laboratory analytical results for the January 13, 1995, sampling event and previous sampling events performed by Delta are presented in Table 2. A summary of historical analytical results for ground water samples collected by previous consultants (June 7, 1988 through February 25, 1994) is presented in Enclosure B.

Ground water samples were not collected from monitoring wells MW-2 and MW-5 due to the presence of LPH. Concentrations of TVH as gasoline have increased in ground water monitoring wells MW-1, MW-4, MW-6, and MW-7, and recovery wells EW-3 and EW-4 since the fourth quarter 1994. Concentrations of benzene have increased in monitoring wells MW-1, MW-3, MW-4, and MW-6, and recovery well EW-1 since the fourth quarter 1994 monitoring event. The most recent monitoring event reporting LPH in monitoring wells MW-2 or MW-5 was November of 1993. A dissolved benzene concentration map based on analytical results for ground water samples collected on January 13, 1995, is included as Figure 4. A copy of the laboratory analytical report is presented in Enclosure C.

Ground Water Remediation System Status

The ground water remediation system is sampled on a quarterly basis as required in the permit issued by the East Bay Municipal Utility District. Grab water samples are collected for analysis of BTEX by EPA Method 5030/8020, and TVH as gasoline by California DOHS Method. The influent sample is collected before the bioreactor tank. A mid-carbon sample is collected after the lead carbon column, and an effluent sample is collected after the last carbon column prior to sanitary sewer discharge.

Ground water remediation system influent, mid-carbon, and effluent samples were collected during the January 13, 1995, site visit. Cumulative remediation system sample analytical results are summarized in Table 3. No petroleum constituents were detected above the laboratory's method detection limits in the mid-carbon or effluent samples. Enclosure C also contains the laboratory analytical results of the remediation system samples. Historical analytical results of remediation system sampling from previous consultants (February 16, 1993 - March 30, 1994) are included in Enclosure D.

Future Work

The next quarterly monitoring event for this site is scheduled for April 1995. Delta will evaluate the past performance of the ground water system and will propose modifications to the system to improve the remediation systems effectiveness, if necessary.

Ms. Marla Guensler
Exxon Company, U.S.A.
February 16, 1995
Page 3

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 accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Delta recommends that copies of this report be forwarded to the following agencies:

Mr. Richard Hiett
Regional Water Quality Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Mr. Larry Seto
Alameda County Department of Environmental Health
Hazardous Material Division
80 Swan Way, Room 200
Oakland, California 94621

Mr. Safa Toma
East Bay Municipal Utility District
Post Office Box 24055
Oakland, California 94621

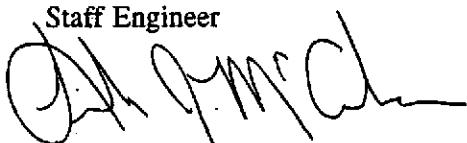
If you have any questions regarding this project, please contact Linda McGahan at (916) 638-2085.

Sincerely,

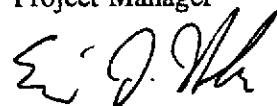
DELTA ENVIRONMENTAL CONSULTANTS, INC.



William L. Brattain
Staff Engineer



Linda J. McGahan
Project Manager



Eric J. Holm, R.G.
California Registered Geologist No. 5880

WLB (LRP440.SJS)
Enclosures

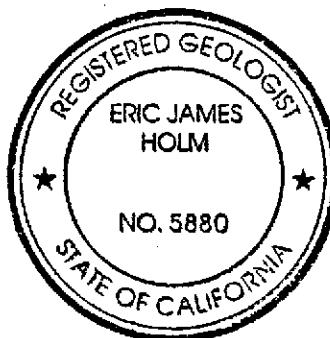


TABLE 1
GROUND WATER LEVEL MEASUREMENTS

Exxon Retail Station No. 7-0104
 1725 Park Street
 Alameda, California

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)^a</u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Comments</u>
MW-1	09/12/94	17.35	7.11	10.24	No LPH ^b or Sheen
	10/01/94		7.44	9.91	No LPH or Sheen
	01/13/95		5.13	12.22	No LPH or Sheen
MW-2	09/12/94	16.67	6.71	9.96	No LPH or Sheen
	10/01/94		7.22	9.45	Sheen
	01/13/95		4.46	12.22 ^c	LPH Thickness 0.01
MW-3	09/12/94	17.11	6.58	10.53	No LPH or Sheen
	10/01/94		6.85	10.26	No LPH or Sheen
	01/13/95		5.27	11.84	No LPH or Sheen
MW-4	09/12/94	17.34	6.80	10.54	No LPH or Sheen
	10/01/94		7.09	10.25	No LPH or Sheen
	01/13/95		4.66	12.68	No LPH or Sheen
MW-5	09/12/94	16.71	7.12	9.59	No LPH or Sheen
	10/01/94		7.06	9.65	Sheen
	01/13/95		4.85	11.88 ^c	LPH Thickness 0.02
MW-6	09/12/94	17.56	6.88	10.68	No LPH or Sheen
	10/01/94		7.15	10.41	No LPH or Sheen
	01/13/95		4.80	12.76	No LPH or Sheen
MW-7	09/12/94	17.12	6.43	10.69	No LPH or Sheen
	10/01/94		6.71	10.41	No LPH or Sheen
	01/13/95		4.29	12.83	No LPH or Sheen
MW-8	09/12/94	16.33	6.42	9.91	No LPH or Sheen
	10/01/94		6.62	9.71	No LPH or Sheen
	01/13/95		5.25	11.08	No LPH or Sheen
MW-9	09/12/94	15.62	6.84	8.78	No LPH or Sheen
	10/01/94		6.97	8.65	No LPH or Sheen
	01/13/95		6.18	9.44	No LPH or Sheen
MW-10	09/12/94	16.79	7.04	9.75	No LPH or Sheen
	10/01/94		7.30	9.49	No LPH or Sheen
	01/13/95		6.04	10.75	No LPH or Sheen
EW-1	09/12/94	16.22	6.13	10.09	No LPH or Sheen
	10/01/94		7.63	8.59	No LPH or Sheen
	01/13/95		11.46	4.76	No LPH or Sheen

TABLE 1-Continued
GROUND WATER LEVEL DATA

Exxon Retail Station No. 7-0104
 1725 Park Street
 Alameda, California

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)^a</u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Comments</u>
EW-2	09/12/94	16.05	6.09	9.96	Sheen
	10/01/94		7.32	8.73	Sheen
	01/13/95		14.38	1.67	No LPH or Sheen
EW-3	09/12/94	16.02	6.12	9.9	No LPH or Sheen
	10/01/94		10.52	5.5	No LPH or Sheen
	01/13/95		18.13	-2.11	No LPH or Sheen
EW-4	09/12/94	16.61	5.69	10.92	No LPH or Sheen
	10/01/94		7.90	8.71	No LPH or Sheen
	01/13/95		11.36	5.25	No LPH or Sheen
EW-5	09/12/94	16.51	6.30	10.21	No LPH or Sheen
	10/01/94		11.83	4.68	No LPH or Sheen
	01/13/95		12.54	3.97	No LPH or Sheen

- ^a Elevation of top of well casing has been surveyed relative to mean sea level (RESNA Industries, Inc., February 10, 1994)
- ^b Liquid-phase petroleum hydrocarbons.
- ^c Adjusted ground water elevations, based on the specific gravity of gasoline as 0.80.

TABLE 2
GROUND WATER SAMPLE RESULTS
Concentrations in parts per billion (ppb)

Exxon Retail Station No. 7-0104
1725 Park Street
Alameda, California

<u>Monitoring Well</u>	<u>Date</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TVH^a as gasoline</u>
MW-1	09/12/94	200	1.9	210	6.6	1,600
	10/01/94	200	<0.5	160	6.6	1,400
	01/13/95	410 ^b	17	280 ^b	89	2,100
MW-2	09/12/94	4,400	120	1,700	2,100	31,000
	10/01/94	4,500	250	1,800	2,400	45,000
	01/13/95	NS	NS	NS	NS	NS
MW-3	09/12/94	580	8.0	340	100	3,100
	10/01/94	640	11	230	130	3,800
	01/13/95	690	24	210	130	3,800
MW-4	09/12/94	900	57	310	490	5,200
	10/01/94	1,200	66	360	380	9,100
	01/13/95	1,300	200	550	1,000	25,000
MW-5	09/12/94	2,300	17	320	230	10,000
	10/01/94	2,300	19	220	200	11,000
	01/13/95	NS	NS	NS	NS	NS
MW-6	09/12/94	150	4.4	170	85	1,500
	10/01/94	120	<0.5	99	38	87
	01/13/95	710	220	780	1,100	9,900
MW-7	09/12/94	490	50	280	70	6,000
	10/01/94	940	670	310	160	8,900
	01/13/95	590	780	970	4,200	20,000
MW-8	09/12/94	<0.5	<0.5	<0.5	<0.5	<50
	10/01/94	<0.5	<0.5	<0.5	<0.5	<50
	01/13/95	<0.5	<0.5	<0.5	<0.5	<50
MW-9	09/12/94	<0.5	<0.5	<0.5	<0.5	<50
	10/01/94	<0.5	<0.5	<0.5	<0.5	<50
	01/13/95	<0.5	<0.5	<0.5	<0.5	<50
MW-10	09/12/94	<0.5	<0.5	1.6	<0.5	71
	10/01/94	1.1	<0.5	2.8	0.73	330
	01/13/95	<0.5	<0.5	<0.5	<0.5	90
EW-1	09/12/94	40	<0.5	10	5.4	400
	10/01/94	<0.5	4.4	30	11	3,400
	01/13/95	40	<0.5	12	16	680

TABLE 2-Continued

GROUND WATER SAMPLE RESULTS
Concentrations in parts per billion (ppb)

Exxon Retail Station No. 7-0104
1725 Park Street
Alameda, California

<u>Monitoring Well</u>	<u>Date</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TVH^a as gasoline</u>
EW-2	09/12/94	2,000	79	180	290	8,800
	10/01/94	1,400	6.7	700	310	9,500
	01/13/95	930	270	21	280	5,700
EW-3	09/12/94	44	5.9	12	31	300
	10/01/94	12	0.42	1.7	3.7	140
	01/13/95	4.6	7.6	1.2	6.6	230
EW-4	09/12/94	1,700	12	210	77	4,000
	10/01/94	100	1.5	15	11	460
	01/13/95	89	8.8	1.6	82	520
EW-5	09/12/94	26	1.7	11	12	180
	10/01/94	16	0.92	5.7	8.5	130
	01/13/95	0.6	0.8	0.6	2.9	130

^a Total volatile hydrocarbons.

^b Result obtained from a 1:10 dilution analyzed on January 17, 1995.

TABLE 3

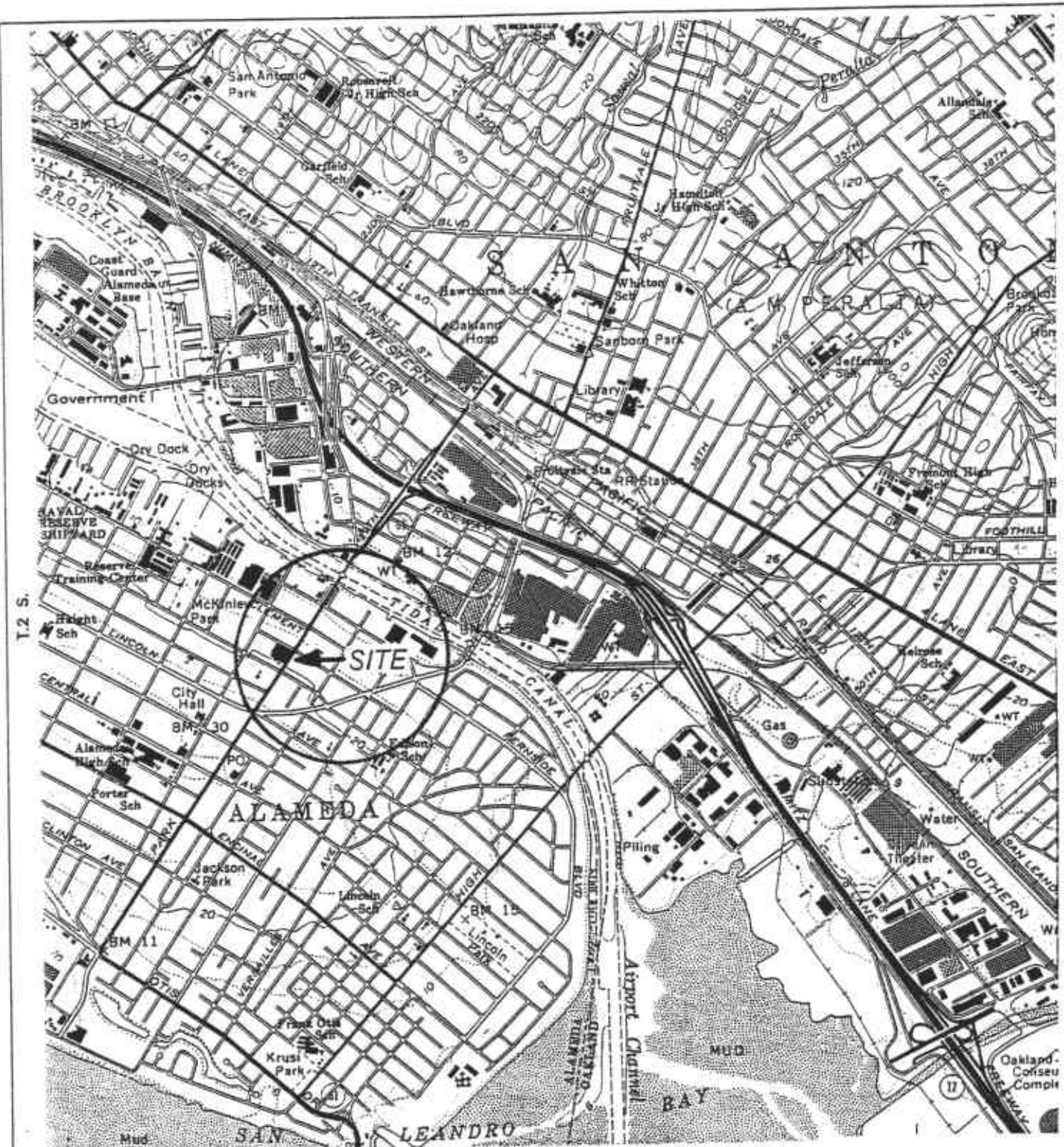
GROUND WATER REMEDIATION SYSTEM SAMPLING RESULTS
Concentrations in parts per billion (ppb)

Exxon Retail Station No. 7-0104
1725 Park Street
Alameda, California

<u>Sample ID</u>	<u>Date</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TVH^a as gasoline</u>
Effluent	09/12/94	<0.5	<0.5	<0.5	<0.5	<50
	10/10/94	<0.5	<0.5	<0.5	<0.5	<50
	01/13/95	<0.5	<0.5	<0.5	<0.5	<50
Mid GAC	01/13/95	<0.5	<0.5	<0.5	<0.5	<50
Influent	10/10/94	<0.5	<0.5	<0.5	<0.5	<50
	01/13/95	<0.5	<0.5	<0.5	<0.5	1,000 ^b

^a Total volatile hydrocarbons.

^b Sample chromatogram does not resemble gasoline standard pattern.



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



0 2000 FT
SCALE 1 : 24,000

R.3 W.



FIGURE 1
SITE LOCATION MAP
EXXON STATION NO 7-0104
1725 PARK STREET
ALAMEDA, CA.

PROJECT NO. D094-832	DRAWN BY L.H. 9/27/94
FILE NO. —	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY 1997 04/14



Delta
Environmental
Consultants, Inc.

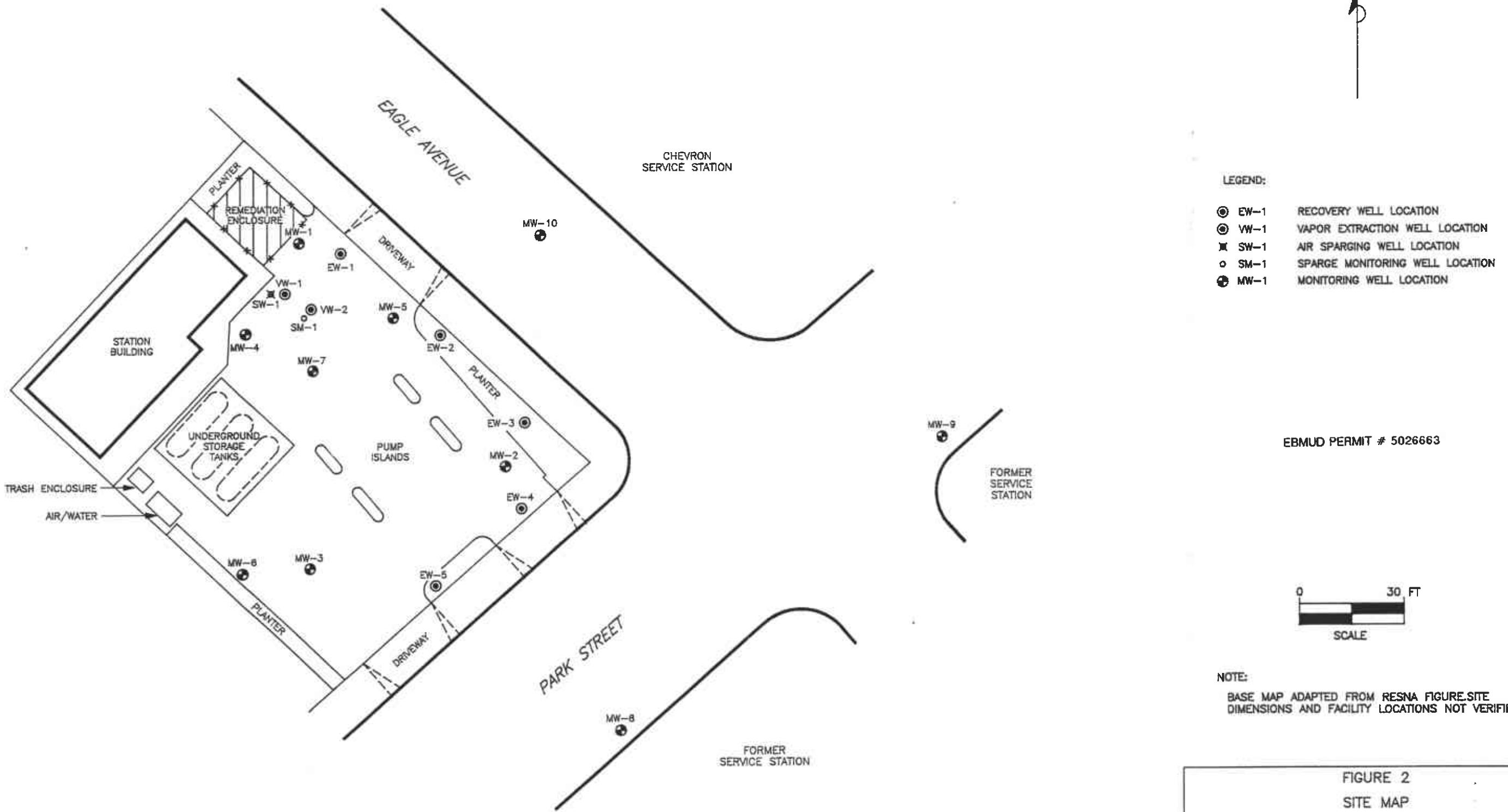


FIGURE 2
SITE MAP
EXXON STATION NO 7-0104
1725 PARK STREET
ALAMEDA, CA.

PROJECT NO. D094-832	DRAWN BY I.H. 1/17/95
FILE NO. 94-832-1	PREPARED BY WLB
REVISION NO. 3	REVIEWED BY <i>[Signature]</i>



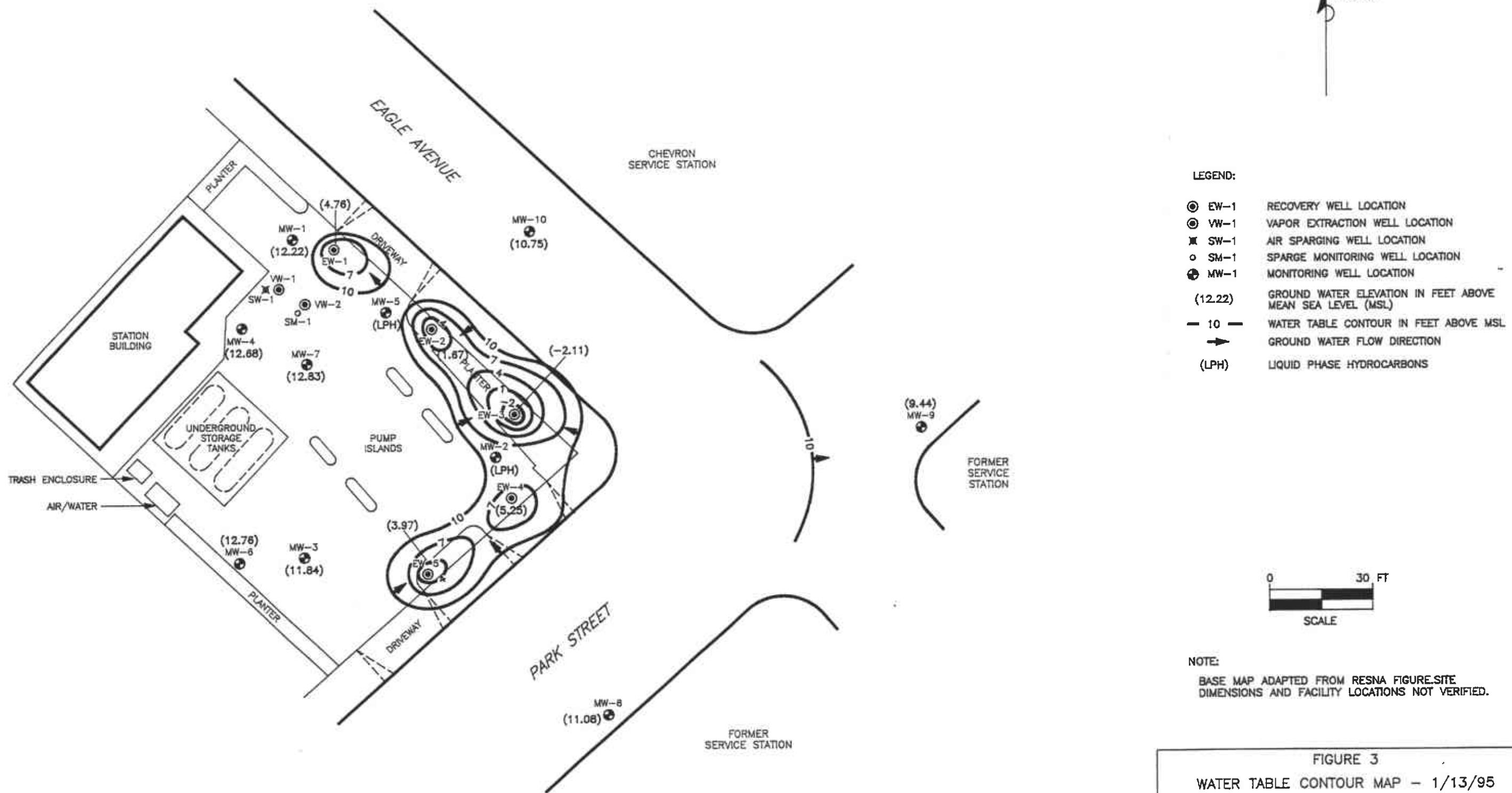
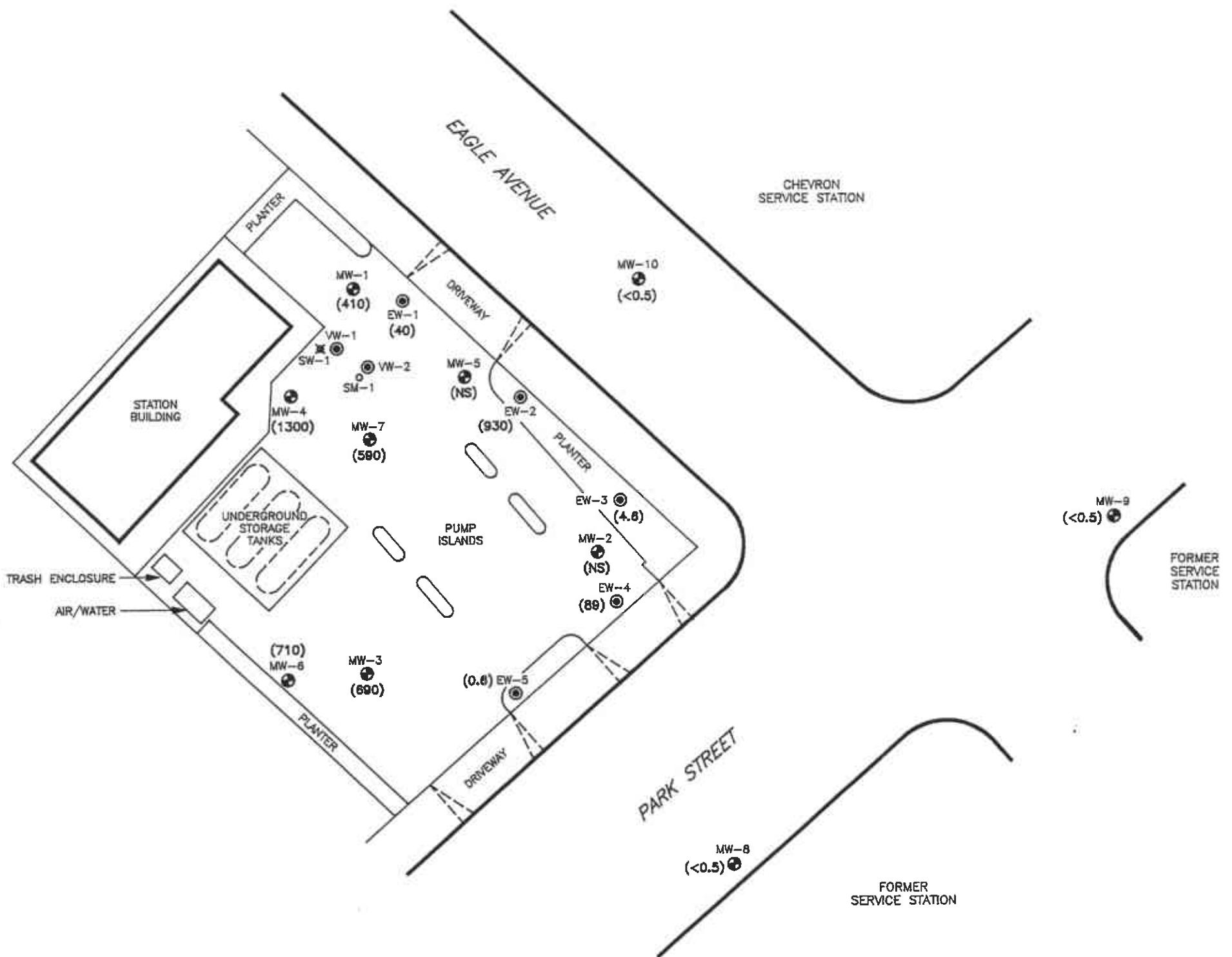


FIGURE 3
WATER TABLE CONTOUR MAP - 1/13/95

EXXON STATION NO 7-0104
1725 PARK STREET
ALAMEDA, CA.

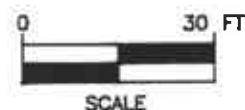
PROJECT NO. D094-832	DRAWN BY L.H. 2/16/95	Delta Environmental Consultants, Inc.
FILE NO. 94-832-1	PREPARED BY WLB	
REVISION NO. 2	REVIEWED BY <i>[Signature]</i>	





LEGEND:

- EW-1 RECOVERY WELL LOCATION
- VW-1 VAPOR EXTRACTION WELL LOCATION
- ✖ SW-1 AIR SPARGING WELL LOCATION
- SM-1 SPARGE MONITORING WELL LOCATION
- MW-1 MONITORING WELL LOCATION
- (410) DISSOLVED BENZENE CONCENTRATION IN GROUND WATER IN MICROGRAMS PER LITER
- (NS) NOT SAMPLED



NOTE:

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

FIGURE 4
DISSOLVED BENZENE CONCENTRATION MAP
1/13/95
EXXON STATION NO 7-0104
1725 PARK STREET
ALAMEDA, CA.

PROJECT NO. D094-832	DRAWN BY LH 1/30/95
FILE NO. 94-832-1	PREPARED BY WLB
REVISION NO. 1	REVIEWED BY <i>[Signature]</i>



ENCLOSURE A

Field Methods and Procedures

FIELD METHODS AND PROCEDURES

1.0 GROUND WATER AND LIQUID-PHASE HYDROCARBON DEPTH DETERMINATION

A water/hydrocarbon interface probe was used to determine the liquid-phase hydrocarbon (LPH) thickness, if present, and a water level indicator was used to measure the ground water depth in monitoring wells that do not contain LPH. Depth to ground water was measured from the top of each monitoring well casing. The tip of the water level indicator was subjectively analyzed for hydrocarbon sheen.

2.0 SUBJECTIVE ANALYSIS OF GROUND WATER

Prior to purging, a water sample was collected from the monitoring well for subjective analysis. The sample was retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer was then retrieved, and the sample contained within the bailer was examined for floating LPH and the appearance of a LPH sheen.

3.0 MONITORING WELL PURGING AND SAMPLING

Monitoring wells were purged using a centrifugal pump or bailer until pH, temperature, and conductivity of the purge water had stabilized and a minimum of three to four well volumes of water had been removed. Ground water removed from the wells was discharged into the ground water system located at the subject site. After purging, ground water levels were allowed to stabilize. A ground water sample was then removed from each of the wells using a disposable bailer. If the well was purged dry, it was allowed to sufficiently recharge and a sample was collected. Samples were collected in air-tight vials, appropriately labeled, and stored on ice from the time of collection through the time of delivery to the laboratory. A chain-of-custody form was completed to ensure sample integrity. Ground water samples were transported to the laboratory and analyzed within the EPA-specified holding times for the requested analyses. Purge water was processed and discharged to the sanitary sewer by the on-site ground water remediation system.

ENCLOSURE B

Historical Ground Water Level Data and Analytical Results
(June 7, 1988 through February 25, 1994)

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Exxon Service Station No. 7-0104

1725 Park Street

Alameda, California

(Page 1 of 11)

Well ID # (TOC)	Sampling Date	SUBJ	DTW <.....feet.....>	Elev.	TPHg <.....>	parts per billion				X
						B	T	E	>	
MW-1 (17.35)	06/07/88	NM	NM	—	27,000	5,000	77	1,100	2,700	
	06/10/88#	NLPH	6.35	11.00						
	01/17/89	NLPH	5.81	11.54	6,800	2,000	91	800	1,600	
	01/24/89#	NLPH	5.16	12.19						
	06/01/89	sheen	6.27	11.08	1,700	170	6.9	13	230	
	09/18/89	NLPH	7.11	10.24	2,100	9.0	53	18	130	
	10/20/89#	NLPH	7.28	10.07						
	11/22/89#	NLPH	7.02	10.33						
	12/11/89	NLPH	6.60	10.75	5,800	200	42	290	330	
	02/13/90#	NLPH	6.02	11.33						
	03/07/90a#	NM	NM	—						
	03/13/90	NLPH	5.91	11.44	2,300	430	14	16	220	
	04/18/90#	NLPH	6.18	11.17						
	05/23/90#	NLPH	6.29	11.06						
	06/14/90	NLPH	6.19	11.28	32,000	1,400	19	<5	120	
	08/21/90#	NLPH	7.03	10.32						
	09/19/90	NLPH	7.26	10.09	950	290	2.9	<0.5	27	
	12/17/90	NLPH	6.75	10.60	2,100	550	13	350	110	
	01/31/91#	NLPH	6.78	10.57						
	02/25/91#	NLPH	6.59	10.76						
	03/19/91	NLPH	5.35	11.50	1,400	900	45	390	150	
	04/22/91#	sheen	5.72	11.63						
	05/17/91#	NLPH	6.00	11.35						
	07/24/91	NLPH	6.79	10.58	9,700	1,300	670	950	2,100	
	09/10/91#	NLPH	7.25	10.10						
	09/23/91#	NLPH	7.33	10.02						
	10/21/91#	NLPH	7.53	9.82						
	10/22/91	NM	NM	—	540	220	1.8	110	7.8	
	11/18/91#	NLPH	7.13	10.22						
	12/11/91#	NLPH	7.25	10.10						
	01/21/92	NLPH	6.54	10.81	1,800	650	23	300	64	
	02/20/92#	NLPH	4.82	12.53						
	03/19/92#	NLPH	5.24	12.11						
	04/24/92	NLPH	5.71	11.64	4,900	1,600	78	660	250	
	05/13/92#	NLPH	5.99	11.36						
	06/24/92#	NLPH	6.65	10.70						
	07/16/92	NLPH	6.72	10.63	3,400	1,000	11	550	100	
	08/19/92#	NLPH	7.07	10.28						
	09/24/92	NLPH	7.36	9.99	3,700	1,300	21	330	<10	
	02/05/93	NLPH	5.21	12.14	11,000	2,400	160	1,400	790	
	04/30/93	NLPH	5.88	11.47	6,500	330	320	640	1,300	
	05/14/93#	NLPH	7.22	10.13						

See notes on page 11 of 11.

0311MGUE.FIN\170077.20

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California

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Well ID # (TOC)	Sampling Date	SUBJ	DTW < feet >	Elev.	TPHg < >	S	T	E	X
									>
MW-1 cont. (17.35)	07/15/93	NLPH	8.01	9.34	7,500	270	62	1,100	1,000
	10/21/93#	NM	7.83	9.52					17
	11/16/93	NLPH	8.69	8.66	340	18	1.4	72	
	11/30/93#	NM	8.38	8.69					
	12/17/93#	NM	7.42	9.93					
	01/31/93#	NM	6.37	10.98					
	02/24-25/94	NLPH	6.23	10.34	810	15	9.0	98	58
MW-2 (16.67)	06/07/88	—	—	—	110,000	12,000	12,000	2,100	7,700
	06/10/88#	NLPH	8.20	10.47					
	01/17/89	NLPH	5.96	10.71	30,000	6,600	3,300	1,500	1,200
	01/24/89#	NLPH	5.04	11.53					220
	06/01/89	sheen	6.32	10.35	8,700	330	280	680	
	09/18/89	NLPH	6.73	9.94	17,000	580	280	570	
	10/20/89#	NLPH	6.37	9.30					
	11/22/89#	NLPH	6.80	9.87					
	12/11/89	NLPH	6.57	10.10	32,000	1,000	850	310	1,200
	02/13/90#	NLPH	6.12	10.55					
	03/13/90	NLPH	6.02	10.65	39,000	3,500	1,500	2,100	3,900
	04/18/90#	NLPH	6.35	10.32					
	05/23/90#	NLPH	6.28	10.39					
	06/14/90	NLPH	6.14	10.53	34,000	3,800	730	1,500	3,900
	08/21/90#	NLPH	6.70	9.97					
	09/19/90	NLPH	6.84	9.83	63,000	670	180	390	1,000
	12/17/90	NLPH	6.46	10.21	140,000	3,700	2,500	3,000	8,300
	01/31/91#	sheen	6.66	10.01					
	02/25/91#	NLPH	6.50	10.17					
	03/19/91	sheen	5.76	10.91	48,000	4,500	1,500	2,100	5,500
	04/22/91#	NLPH	5.78	10.89					
	05/17/91#	NLPH	6.01	10.66					
	07/24/91	NLPH	6.43	10.24	49,000	3,500	2,200	2,000	6,400
	09/10/91#	NLPH	6.81	9.86					
	09/23/91#	NLPH	6.82	9.85					
	10/21/91#	NLPH	7.01	9.66					
	10/22/91	—	—	—	34,000	3,700	1,100	1,800	5,200
	11/18/91#	NLPH	6.66	10.01					
	12/11/91#	NLPH	6.85	9.32					
	01/21/92	NLPH	6.22	10.45	21,000	4,600	1,300	1,700	5,100
	02/20/92#	NLPH	5.28	11.39					
	03/19/92#	NLPH	5.34	11.33					
	04/24/92	sheen	5.75	10.92	36,000	5,000	970	2,300	5,200
	05/13/92#	NLPH	5.95	10.72					

See notes on page 11 of 11.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Services Station No. 7-0104

1725 Park Street

Alameda, California

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Well ID #	Sampling Date	SUBJ	OTW feet	Elev.	TPHg	B	T	E	X
(TOC)		< >		<	parts per billion	>	
MW-2 cont.	06/24/92#	NLPH	6.39	10.28					
(16.57)	07/16/92	sheen	6.50	10.17	42,000	3,500	490	1,300	3,700
	08/19/92#	NLPH	6.69	9.98					
	09/24/92	sheen	6.74	9.93	28,000	3,600	670	1,700	3,300
	02/05/93#	0.01	5.58	11.10					
	04/30/93	sheen	5.78	10.89	280,000	11,000	6,500	5,500	160,000
	05/14/93#	NA	NA	—					
	07/15/93#	0.01	7.39	8.79					
	10/21/93#	NM	7.24	9.43					
	11/16/93#	0.02	8.37	8.32					
	11/30/93#	NM	7.93	8.74					
	12/17/93#	NM	7.74	8.93					
	01/31/94#	NM	6.32	10.35					
	02/24-25/94	NLPH	6.93	9.74	51,000	11,000	1,700	2,700	5,500
MW-3	06/07/88	NM	NM	—	23,000	6,000	80	940	1,900
(17.11)	06/10/88#	NLPH	6.05	11.06					
	01/17/89	NLPH	5.49	11.82	5,300	2,500	230	590	1,100
	01/24/89#	NLPH	5.38	11.73					
	06/01/89	NLPH	5.96	11.15	5,400	330	300	570	680
	09/18/89	NLPH	6.65	10.46	12,000	680	170	350	860
	10/20/89#	NLPH	6.88	10.23					
	11/22/89#	NLPH	6.74	10.37					
	12/11/89	NLPH	6.37	10.74	14,000	1,100	150	670	690
	02/13/90#	NLPH	5.58	11.53					
	03/13/90	NLPH	5.48	11.63	18,000	6,300	200	1,100	1,100
	04/18/90#	NLPH	6.01	11.10					
	05/23/90#	NLPH	6.14	10.97					
	06/14/90	NLPH	5.83	11.28	9,500	1,300	880	310	1,800
	08/21/90#	NLPH	6.67	10.44					
	09/19/90	NLPH	6.88	10.23	16,000	5,000	65	1,500	450
	12/17/90	NLPH	6.46	10.65	6,700	1,500	64	650	460
	01/31/91#	NLPH	6.24	10.87					
	02/25/91#	NLPH	6.18	10.93					
	03/19/91	NLPH	5.35	11.76	18,000	4,200	2,100	1,100	1,200
	04/22/91#	NLPH	5.72	11.39					
	05/17/91#	NLPH	5.55	11.56					
	07/24/91	NLPH	6.41	10.70	38,000	6,200	990	2,900	9,600
	09/10/91#	NLPH	6.80	10.31					
	09/23/91#	NLPH	6.80	10.31					
	10/21/91#	NLPH	7.09	10.02					
	10/22/91	NM	NM	—	23,000	3,400	150	2,500	4,400

See notes on page 11 of 11.

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California

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Well ID #	Sampling Date	SUBJ	DTW < feet >	Elev.	TPHg < >	B	T	E	X
MW-3 cont. (17.11)	11/18/91#	NLPH	6.74	10.37					
	12/11/91#	NLPH	6.79	10.32					
	01/21/92	NLPH	6.16	10.95	13,000	2,700	30	1,800	740
	02/20/92#	NLPH	4.89	12.22					
	03/19/92#	NLPH	4.85	12.26					
	04/24/92	NLPH	5.28	11.83	17,000	4,200	170	1,500	600
	05/13/92#	NLPH	5.58	11.53					
	06/24/92#	NLPH	6.22	10.89					
	07/16/92	NLPH	6.36	10.75	11,000	2,700	230	1,100	570
	08/19/92#	NLPH	6.65	10.48					
	09/24/92	NLPH	6.93	10.18	7,100	2,000	44	1,000	220
	02/05/93	NLPH	4.71	12.40	13,000	3,600	110	1,300	430
	04/30/93	NLPH	5.46	11.65	13,000	1,600	370	1,500	1,800
	05/14/93#	NLPH	6.53	10.58					
	07/15/93	NLPH	7.28	9.83	2,100	310	15	230	58
	10/21/93#	NM	7.42	9.69					
	11/16/93	NLPH	8.02	9.09	4,000	400	400	120	490
	11/30/93	—	7.79	9.32	—	—	—	—	—
	12/17/93#	NM	7.13	9.98					
	01/31/94#	NM	6.32	10.79					
	02/24-25/94	NLPH	6.04	11.07	3,300	280	52	150	400
MW-4 (17.34)	01/17/89	NLPH	5.36	11.38	19,000	1,000	1,500	360	2,200
	01/24/89#	NLPH	5.46	11.38					
	06/01/89	NLPH	6.01	11.33	3,600	180	240	83	810
	09/18/89	NLPH	6.80	10.54	6,000	290	200	28	510
	10/20/89#	NLPH	7.08	10.25					
	11/22/89#	NLPH	6.82	10.52					
	12/11/89	NLPH	6.37	10.97	13,000	750	910	510	1,200
	02/13/90#	NLPH	5.49	11.35					
	03/07/90a#	NM	NM	—					
	03/13/90	NLPH	5.44	11.30	12,000	1,500	1500	470	28,000
	04/18/90#	NLPH	6.14	11.20					
	05/23/90#	NLPH	6.22	11.12					
	06/14/90	NLPH	5.92	11.42	12,000	5,700	400	1,300	760
	08/21/90#	NLPH	6.93	10.51					
	09/19/90	NLPH	7.07	10.27	5,500	670	180	390	1,000
	12/17/90	NLPH	6.50	10.84	14,000	1,400	620	540	2,100
	01/31/91#	NLPH	6.66	10.68					
	02/25/91#	NLPH	6.21	11.13					
	03/19/91	NLPH	5.29	12.05	11,000	1,500	740	620	2,100
	04/22/91#	NLPH	5.25	12.08					

See notes on page 11 of 11.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
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Well ID #	Sampling (TOC)	Date	SUBJ	DTW < feet >	Elev.	TPHg < >	B	T	E	X	>
MW-4 cont. (17.34)	05/17/91#		NLPH	5.80	11.74						
	07/24/91		NLPH	6.54	10.80	10,000	1,200	440	410	1,200	
	09/10/91#		NLPH	7.04	10.30						
	09/23/91#		NLPH	7.14	10.20						
	10/21/91#		sheen	7.30	10.04						
	10/22/91		—	—	—	4,800	750	190	350	780	
	11/18/91#		NLPH	6.90	10.44						
	12/11/91#		NLPH	7.01	10.33						
	01/21/92		NLPH	6.25	11.09	6,000	1,300	320	510	1,200	
	02/20/92#		NLPH	4.79	12.55						
	03/19/92#		NLPH	4.70	12.64						
	04/24/92		sheen	5.25	12.09	11,000	1,700	630	710	1,300	
	05/13/92#		sheen	5.62	11.72						
	06/24/92#		sheen	6.19	11.15						
	07/16/92		sheen	6.51	10.83	5,400	870	240	440	700	
	08/19/92#		NLPH	6.85	10.49						
	09/24/92		NLPH	7.17	10.17	5,900	1,300	130	530	690	
	02/05/93		NLPH	4.61	12.73	15,000	2,300	820	980	2,200	
	04/30/93		NLPH	5.59	11.75	21,000	4,000	960	1,500	2,900	
	05/14/93#		NLPH	6.50	10.34						
	07/15/93		NLPH	7.50	9.84	2,300	440	55	130	220	
	10/21/93#		NM	7.77	9.57						
	11/16/93		NLPH	8.27	9.07	5,100	320	160	260	760	
	11/30/93		—	8.02	9.32	—	—	—	—	—	
	12/17/93#		NM	7.04	10.30						
	01/31/94#		NM	6.36	10.98						
	02/24-25/94		NLPH	5.78	11.56	9,800	2,200	190	560	1,200	
MW-5 (16.71)	01/17/89		NLPH	5.39	11.32	26,000	8,700	3,900	990	5,900	
	01/24/89#		NLPH	5.51	11.20						
	06/01/89		sheen	5.93	10.88	5,200	240	220	130	690	
	09/18/89		NLPH	6.52	10.19	8,000	340	150	140	460	
	10/20/89#		NLPH	6.72	9.99						
	11/22/89#		NLPH	6.54	10.17						
	12/11/89		NLPH	6.21	10.50	15,000	720	320	450	870	
	02/13/90#		NLPH	5.80	11.11						
	03/07/90#		NM	—	—						
	03/13/90		NLPH	5.54	11.17	10,000	3,400	220	280	800	
	04/18/90#		NLPH	5.75	10.96						
	05/23/90#		NLPH	5.98	10.73						
	06/14/90		NLPH	5.81	10.90	12,000	3,300	160	350	730	
	08/21/90#		NLPH	6.51	10.20						

See notes on page 11 of 11.

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104

1725 Park Street
Alameda, California

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Well ID #	Sampling (TOC)	SUBJ	DTW <.....feet.....>	Elev.	TPHg <.....>	S	T	E	X
MW-6 cont.	09/19/90	NLPH	6.70	10.01	8,500	1,900	85	120	460
(16.71)	12/17/90	sheen	6.24	10.47	18,000	2,300	810	430	1,400
	01/31/91#	NLPH	6.31	10.40					
	02/25/91#	NLPH	6.13	10.58					
	03/19/91	NLPH	5.32	11.39	17,000	2,900	610	580	1,200
	04/22/91#	sheen	5.30	11.41					
	05/17/91#	NLPH	5.59	11.12					
	07/24/91	NLPH	6.33	10.38	16,000	3,200	320	690	1,100
	09/10/91#	NLPH	6.66	10.05					
	09/23/91#	NLPH	6.75	9.96					
	10/21/91#	sheen	6.92	9.79					
	10/22/91	NM	NM	—	8,600	2,000	64	320	430
	11/18/91#	NLPH	6.55	10.16					
	12/11/91#	NLPH	6.64	10.07					
	01/21/92	sheen	6.07	10.64	14,000	4,000	190	630	1,300
	02/20/92#	NLPH	4.83	11.38					
	03/19/92#	sheen	4.83	11.88					
	04/24/92	sheen	5.32	11.39	12,000	2,600	120	620	530
	05/13/92#	sheen	5.81	11.10					
	06/24/92#	NLPH	6.17	10.54					
	07/16/92	sheen	6.25	10.46	20,000	4,000	48	880	720
	08/19/92#	sheen	6.53	10.18					
	09/24/92	sheen	6.80	9.91	9,300	2,200	31	330	250
	02/05/93b#	NLPH	4.70	12.01					
	04/30/93	sheen	5.43	11.28	30,000	5,900	450	1,900	1,500
	05/14/93#	NLPH	7.31	9.40					
	07/15/93#	0.07	7.93	8.84					
	10/21/93#	NM	7.25	9.46					
	11/15/93#	0.04	8.42	8.32					
	11/30/93#	—	8.10	8.61					
	12/17/93#	NM	7.43	9.28					
	01/31/94#	NM	5.95	10.76					
	02/24-25/94#	sheen	6.23	10.48					
MW-6	01/17/89	NLPH	5.59	11.97	38,000	7,400	9,300	2,000	9,900
(17.56)	01/24/89#	NLPH	5.27	12.29					
	06/01/89	sheen	6.25	11.31	23,000	1,900	2,500	2,000	6,000
	09/18/89	NLPH	6.95	10.61	17,000	650	410	650	320
	10/20/89#	NLPH	7.24	10.32					
	11/22/89#	NLPH	7.05	10.51					
	12/11/89	NLPH	6.63	10.93	29,000	1,100	810	330	1,500
	02/13/90#	NLPH	5.70	11.86					

See notes on page 11 of 11.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104

1725 Park Street
Alameda, California

(Page 7 of 11)

Well ID # (TOC)	Sampling Date	SUBJ < >	DTW feet < >	Elev. < >	TPHg < >	B parts per billion	T	E	X
MW-6 cont.	03/07/90#	NM	NM	—					
(17.56)	03/13/90	NLPH	5.63	11.93	38,000	12,000	15,000	2,500	12,000
	04/18/90#	NLPH	6.26	11.30					
	05/23/90#	NLPH	6.42	11.14					
	06/14/90	NLPH	6.19	11.37	38,000	9,100	7,300	2,900	12,000
	08/21/90#	NLPH	7.01	10.55					
	09/19/90	NLPH	7.23	10.33	22,000	4,200	300	1,400	3,400
	12/17/90	NLPH	6.66	10.90	20,000	3,100	4,100	890	2,700
	01/31/91#	NLPH	6.39	11.17					
	02/25/91#	NLPH	6.39	11.17					
	03/19/91	NLPH	5.57	11.99	180,000	11,000	55,000	5,600	28,000
	04/22/91#	NLPH	5.42	12.14					
	05/17/91#	NLPH	5.73	11.83					
	07/24/91	NLPH	6.72	10.84	48,000	5,400	2,300	2,000	9,000
	09/10/91#	NLPH	7.15	10.41					
	09/23/91#	NLPH	7.25	10.31					
	10/21/91#	NLPH	7.42	10.14					
	10/22/91	NM	NM	—	18,000	3,100	700	1,400	2,900
	11/18/91#	NLPH	7.08	10.48					
	12/11/91#	NLPH	7.17	10.39					
	01/21/92	NLPH	6.40	11.16	9,400	2,100	370	1,000	1,100
	02/20/92#	NLPH	5.06	12.50					
	03/19/92#	NLPH	4.86	12.70					
	04/24/92	NLPH	5.44	12.12	42,000	3,500	8,000	2,100	8,000
	05/13/92#	NLPH	5.83	11.73					
	06/24/92#	NLPH	6.50	11.06					
	07/16/92	NLPH	6.68	10.88	14,000	1,500	1,000	1,000	2,500
	08/19/92#	NLPH	7.00	10.56					
	09/24/92	NLPH	7.28	10.28	4,700	790	97	640	540
	02/05/93	NLPH	4.84	12.72	26,000	2,500	4,300	1,700	5,300
	04/30/93	NLPH	5.69	11.87	9,600	1,000	410	1,100	1,600
	05/14/93#	NLPH	6.52	11.04					
	07/15/93	NLPH	7.51	10.05	4,600	250	72	540	650
	10/21/93#	NM	7.85	9.71					
	11/16/93	NLPH	8.29	9.27	410	41	12	47	71
	11/30/93#	NM	8.08	9.48					
	12/17/93#	NM	7.27	10.29					
	01/31/94#	NM	6.62	10.94					
	02/24-25/94	NLPH	6.23	11.33	4,300	190	190	300	460

See notes on page 11 of 11.

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TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 3 of 11)

Well ID #	Sampling Date	SUBJ	DTW	Elev.	TPHg	B	T	E	X
(TOC)		< >	feet		< >	parts per billion			>
MW-7	01/09/90	NM	NM	—	17,000	380	180	330	1,300
(17.12)	02/13/90#	NLPH	4.98	12.14					
	03/13/90	NLPH	4.94	12.18	16,000	360	270	83	460
	05/23/90#	NLPH	5.87	11.25					
	06/14/90	NLPH	5.55	11.57	14,000	1,200	2,900	75	930
	09/19/90	NLPH	6.79	10.33	16,000	2,900	95	2,500	1,700
	12/17/90	NLPH	6.15	10.97	75,000	2,600	7,000	3,300	14,000
	01/31/91#	NLPH	6.64	10.48					
	02/25/91#	NLPH	5.80	11.32					
	03/19/91	NLPH	4.96	12.16	44,000	1,600	740	3,400	8,600
	04/22/91#	NLPH	4.82	12.30					
	05/17/91#	NLPH	5.18	11.94					
	07/24/91	NLPH	6.22	10.90	18,000	1,300	160	2,700	1,000
	09/10/91#	NLPH	6.71	10.41					
	09/23/91#	NLPH	6.84	10.28					
	10/21/91#	NLPH	7.00	10.12					
	10/22/91	—	—	—	10,000	990	26	1,900	490
	11/18/91#	NLPH	6.56	10.56					
	12/11/91#	NLPH	6.68	10.44					
	01/21/92	NLPH	5.99	11.13	23,000	2,200	3,000	1,300	6,100
	02/20/92#	NLPH	4.36	12.76					
	03/19/92#	NLPH	4.22	12.90					
	04/24/92	NLPH	4.84	12.28	25,000	1,400	220	2,100	2,500
	05/13/92#	NLPH	5.24	11.38					
	06/24/92#	NLPH	6.04	11.08					
	07/16/92	NLPH	6.19	10.93	8,700	470	45	970	86
	08/19/92#	NLPH	6.55	10.57					
	09/24/92	NLPH	6.83	10.29	9,200	560	48	1,300	54
	02/05/93	NLPH	4.11	13.01	33,000	1,100	2,300	1,200	4,200
	04/30/93b	NLPH	5.29	11.83	13,000	240	85	710	320
	05/14/93#	NLPH	5.91	11.21					
	07/15/93	NLPH	7.07	10.05	6,900	200	30	500	48
	10/21/93#	NM	7.55	9.57					
	11/16/93	NLPH	7.85	9.27	7,400	300	85	480	120
	11/30/93#	NM	7.66	9.46					
	12/17/93#	NM	6.75	10.37					
	01/31/94#	NM	6.22	10.90					
	02/24-25/94	NLPH	5.52	11.60	7,200	470	120	400	330

See notes on page 11 of 11.

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California
(Page 9 of 11)

Well ID # (TOC)	Sampling Date	SUBJ	DTW < feet >	Elev.	TPHg < >	B T E X				
						parts per billion				
MW-8 (16.33)	05/14/93	NLPH	6.54	9.79	<50	<0.5	<1.0	<0.5	<0.5	<0.5
	07/15/93	NLPH	6.57	9.76	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	10/21/93#	NM	6.33	9.50						
	11/16/93	NLPH	7.15	9.18	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	11/30/93	—	6.94	9.39	—	—	—	—	—	—
	12/17/93#	NM	6.48	9.85						
	01/31/94#	NM	6.13	10.20						
	02/24-25/94	NLPH	5.80	10.53	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-9 (15.62)	05/14/93	NLPH	6.61	9.01	<50	<0.5	<1.0	<0.5	<0.5	<0.5
	07/15/93	NLPH	5.79	8.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	10/21/93#	NM	6.97	8.85						
	11/16/93	NLPH	7.12	8.50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	11/30/93	—	6.98	8.64	—	—	—	—	—	—
	12/17/93#	NM	6.73	8.87						
	01/31/94#	NM	6.71	8.91						
	02/24-25/94	NLPH	6.45	9.17	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-10 (16.79)	05/14/93	NLPH	6.91	9.88	97	<0.5	<0.5	9.8	22	
	07/15/93	NLPH	7.47	9.32	160	<0.5	<0.5	15	19	
	10/21/93#	NM	7.57	9.22						
	11/16/93	NLPH	8.17	8.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	11/30/93	—	7.96	8.83	—	—	—	—	—	—
	12/17/93#	NM	7.25	9.54						
	01/31/94#	NM	6.86	10.13						
	02/24-25/94	NLPH	6.53	10.26	280	<0.5	<0.5	12	7.0	
EW-1 (16.22)	10/21/93#	NM	6.67	9.55						
	12/17/93#	NM	10.09	8.13						
	01/31/94#	NM	5.38	10.84						
	02/24-25/94	NLPH	5.58	10.64	1,000	140	4.5	15	120	
EW-2 (16.05)	10/21/93#	NM	6.71	9.34						
	12/17/93#	NM	14.95	1.10						
	01/31/94#	NM	5.35	10.70						
	02/24-25/94	LPH	14.30	1.75	5,200	1,200	390	63	410	
EW-3 (16.02)	10/21/93#	NM	6.55	9.47						
	12/17/93#	NM	15.85	0.37						
	01/31/94#	NM	5.34	10.68						
	02/24-25/94	NLPH	21.00	4.98	91	<0.5	<0.5	<0.5	<0.5	<0.5

See notes on page 11 of 11.

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Exxon Service Station No. 7-Q104
 1725 Park Street
 Alameda, California
 (Page 10 of 11)

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	S	T	E	X
		< feet >			< parts per billion >				
EW-4 (15.51)	10/21/93# 12/17/93# 01/31/94# 02/24-25/94	NM NM NM LPH	6.13 14.60 5.08 14.88	9.48 1.01 10.53 0.73	4,600	1,900	140	13	450
EW-5 (16.51)	10/21/93# 12/17/93# 01/31/94# 02/24-25/94	NM NM NM NLPH	6.77 14.20 5.64 11.95	9.74 2.31 10.87 4.56	1,000	140	45	3.4	190
Field Blanks	12/11/89 12/17/90 03/19/91 07/24/91 10/22/91 01/21/92 07/16/92	— — — — — — —	— — — — — — —	— — — — — — —	<50 <50 <50 <50 <50 <50 <50	0.88 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	0.95 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	0.62 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	1.7 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5
Travel Blanks	06/14/90 09/19/90 04/24/92 09/24/92	— — — —	— — — —	— — — —	<50 <50 <50 230	<0.5 0.8 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 0.5 <0.5 <0.5	<0.5 1.0 <0.5 <0.5
Maximum Contaminant Levels (MCLs) (DHS)					—	1.0	—	880	1,750
Drinking Water Action Level (DWAL) (DHS)					—	—	100	—	—

See notes on page 11 of 11.

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Exxon Service Station No. 7-0104

1725 Park Street

Alameda, California

(Page 11 of 11)

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPHg	S	T	E	X
		< feet	>		< parts per billion	>			

Notes:

- TOC = Elevation of top of well casing; datum is mean sea level, revised February 10, 1994.
- SUBJ = Results of subjective evaluation, Liquid-phase product thickness (PT) in feet
- DTW = Depth to water
- Elev. = Elevation of groundwater; datum is mean sea level; adjusted for free-phase petroleum hydrocarbons when present using the equation: Elev. = TOC - [DTW + (PT * 0.8)] where PT is the product thickness
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA method 5030/8015
- STEX = Benzene, Toluene, Ethylbenzene, and total Xylenes analyzed using EPA method 5030/8020
- NM = Not Monitored
- NLPH = No liquid-phase petroleum hydrocarbons present in well
- LPH = Liquid-phase petroleum hydrocarbons present in well, thickness not measured, or not measurable.
- NA = Well not accessible on this date
- < = Less than the indicated detection limit shown by the laboratory
- = Not applicable
- # = Well not sampled on this date
- a = 03/07/90 sampling: Total Dissolved Solids were detected in samples from MW-1 and MW-4 at 910 parts-per-million (ppm) and 370 ppm, respectively.
- b = a peak sluting before benzene was present in the groundwater samples from MW-5 and MW-7, and is suspected to be methyl-tert-butyl-ether (MTBE).

ENCLOSURE C

Laboratory Analytical Report



Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

JAN 26 1995

Prepared for:

Delta Environmental Consultants, Inc
3330 Data Drive
Rancho Cordova, CA 95670

Date: 23-JAN-95
Lab Job Number: 119521
Project ID: 7-0104
Location: Alameda, CA

Reviewed by: Cynthia E. Lehman

Reviewed by: Tracy Bobyak

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LABORATORY NUMBER: 119521
CLIENT: DELTA ENVIRONMENTAL CONSULTANTS
PROJECT ID: 7-0104
LOCATION: ALAMEDA, CA

DATE SAMPLED: 01/13/95
DATE RECEIVED: 01/13/95
DATE ANALYZED: 01/17/95
DATE REPORTED: 01/23/95

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/3020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLEMES (ug/L)
119521-001	MW-1	2,100	410*	17	280*	89
119521-003	MW-3	3,800	690	24	210	130
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

* Result obtained from a 1:10 dilution analyzed on 01/17/95.

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

=====
RPD, %
RECOVERY, %
=====

1
99



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119521
CLIENT: DELTA ENVIRONMENTAL CONSULTANTS
PROJECT ID: 7-0104
LOCATION: ALAMEDA, CA

DATE SAMPLED: 01/13/95
DATE RECEIVED: 01/13/95
DATE ANALYZED: 01/17/95
DATE REPORTED: 01/23/95

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
119521-002	MW-4	25,000	1,300	200	550	1,000
119521-004	MW-6	9,900	710	220	780	1,100
119521-008	MW-10	90	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
119521-009	EW-1	680	40	ND(0.5)	12	16
119521-010	EW-2	5,700	930	270	21	280
119521-011	EW-3	230	4.6	7.6	1.2	6.6
119521-013	EW-5	130	0.6	0.8	0.6	2.9
119521-014	EFFLUENT GAC	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
119521-015	MID GAC	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
119521-016	INFLUENT GAC	1,000*	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

* Sample chromatogram does not resemble gasoline standard pattern.

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %

7

RECOVERY, %

95

LABORATORY NUMBER: 119521
 CLIENT: DELTA ENVIRONMENTAL CONSULTANTS
 PROJECT ID: 7-0104
 LOCATION: ALAMEDA, CA

DATE SAMPLED: 01/13/95
 DATE RECEIVED: 01/13/95
 DATE ANALYZED: 01/17/95
 DATE REPORTED: 01/23/95

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLEMES (ug/L)
119521-005	MW-7	20,000	590	780	970	4,200
119521-006	MW-8	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
119521-007	MW-9	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	92



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119521
CLIENT: DELTA ENVIRONMENTAL CONSULTANTS
PROJECT ID: 7-0104
LOCATION: ALAMEDA, CA

DATE SAMPLED: 01/13/95
DATE RECEIVED: 01/13/95
DATE ANALYZED: 01/19/95
DATE REPORTED: 01/23/95

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLEMES (ug/L)
119521-012	EW-4	520	89	8.8	1.6	82
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	6
RECOVERY, %	97

ct

119521

EXXON COMPANY, U.S.A.

P.O.Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

Berkeley, CA, 2323 6th St., 94710
 (510)466-0900

Irvine, CA 2495 Da Vinci, Rd. 92714
 (714)262-9700

Curtiss & Tompkins, Ltd.

Consultant's Name:

Delta Environmental: Consultant

Page 2 of 2

Address: 3330 Park Dr. Rancho Cordova

Site Location: Alameda

Project #: D094-832R 7-0104

Consultant Work Release #: 19432522

Project Contact: Todd GALAT

Laboratory Work Release #:

EXXON Contact: MARLA Gvensler

EXXON ID #: 7-0104

Sampled by (print): Tony Steggs/Martin W. Morgan

Sampler's Signature: Tony Steggs / M.W. Morgan

Shipment Method:

Air Bill #:

IAT: 24 hr 48 hr 72 hr 96 hr Standard (10 day)

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Precv	# of Cont.	C & T Sample #	TPH// GAS/ BTEX/ 8015/ 8020	TPH// Diesel EPA 8015	TPH// EPA 418.1	Temperature:
EW-1 -1	1/13/95	1120	H2O	HCl	3	X				Inbound Seal: Yes No
EW-2 -10	/	1132	/	/	/	/				
EW-3 -11	/	1134	/	/	/	/				
EW-4 -12	/	1136	/	/	/	/				
EW-5 -13	/	1138	/	/	/	/				
Effluent GAC -14		1159								
MID GAC -15		1156								
Influent GAC -16	✓	1158	✓	✓	✓	✓				

Relinquished by/Affiliation

Date

Time

Accepted/Affiliation

Date

Time

Additional comments:

Tony Steggs / M.W. Morgan / Delta

1/13/95

1:07 pm

Steggs/M.W. Morgan

1/13/95

1:07 pm



11954

EXXON COMPANY, U.S.A.

P.O.Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

Berkeley, CA, 2323 6th St., 94710
(510)486-0900

Irvine, CA 2495 Da Vinci, Rd. 92714
(714)262-9700

Curtis & Tompkins, Ltd.

Delta Environmental Consultants

Page 1 of 2

Consultant's Name:	Address: 3330 Data Dr. Rancho Cordova		Site Location:
Project #:	DO94-B32R 7-0104	Consultant Project #:	DO94-832
Project Contact:	Todd GALT	Phone #:	(916) 638-2085
EXXON Contact:	MARLA Guensler	Phone #:	(510) 246-8776
Sampled by (print):	JAY STEARS/Martin W. Morgan	Sampler's Signature:	Jay Stears/M.W. Morgan
Shipment Method:	Air Bill #:		

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Presv	# of Cont.	C & T Sample #	ANALYSIS REQUIRED			Temperature: _____
							TPII/ GAS/ BTEX/ 8015/ 8020	TPII/ Diesel EPA 8015	TRPII EPA 418.1	
MW-1 -1	1-13-95		H ₂ O	HCl	3		X			Inbound Seal: Yes No
MW-2 -2	/		/	/	/		/			Outbound Seal: Yes No
MW-3 -3	/		/	/	/		/			
MW-4 -4	/		/	/	/		/			
MW-5 -5	/		/	/	/		/			
MW-6 -6	/		/	/	/		/			
MW-7 -7	/		/	/	/		/			
MW-8 -8	✓		✓	✓	✓		✓			
MW-9 -9										
MW-10 -10										

Relinquished by/Affiliation	Date	Time	Accepted/Affiliation	Date	Time	Additional comments:
Jay Stears/M.W. Morgan/Delta	1-13-95	107pm	Edmund F. Ford	1-13-95	1107pm	

ENCLOSURE E

**Historical Remediation System Analytical Results
(February 16, 1993 through March 30, 1994)**

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 1 of 6)

Date	Total Discharge	Sample Location	TPHg <	B	T	E	X	VOCs parts per billion	EOCs	Inorganics >
02/16/93	NA	"bioreactor"	660	120	40	25	56	NA	NA	NA
02/17/93	NA	"bioreactor"	140	23	5.3	2.8	9.3	NA	NA	NA
02/18/93	NA	"bioreactor"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/22/93	0	"influent"	NS	NS	NS	NS	NS	NA	NA	NA
		"A"	150	16	11	3.7	15	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/23/93	230	"influent"	NS	NS	NS	NS	NS	NA	NA	NA
		"A"	110	12	7.4	2.7	14	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/24/93	4,165	"influent"	4,800	1,000	700	83	60	NA	NA	NA
		"A"	800	200	110	5.1	80	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
02/25/93	10,130	"Influent"	3,800	930	820	130	740	NA	NA	NA
		"A"	300	11	2.9	<0.5	33	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NA	NA	NA
		"C"	NS	NS	NS	NS	NS	NA	NA	NA

See notes on page 6 of 6

0311MGUB.RIN/170077.20

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1726 Park Street
Alameda, California
(Page 2 of 6)

Date	Total Discharge	Sample Location	TPHg <	B	T	E	X	VOCs parts per billion	EOCs	Inorganics >
Not Sampled										
02/26/93	15,440	None								
03/04/93	36,240	"influent"	3,600	760	430	45	600	NA	NA	NA
		"A"	170	5.1	2.1	<0.5	20	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
03/11/93	80,000	"influent"	3,800	480	390	84	600	NA	NA	NA
		"A"	63	0.5	<0.5	<0.5	0.8	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
03/19/93	NR	"influent"	NS	NS	NS	NS	NS	NS	NS	NS
		"A"	4,100	530	420	100	800	NA	NA	NA
		"B"	NS	NS	NS	NS	NS	NS	NS	NS
		"C"	110	0.8	<0.5	<0.5	7.6	NA	NA	NA
03/31/93	184,321	None								
04/02/93	192,874	None								
04/05/93	208,161	None								
04/07/93	214,604	None								
04/09/93	223,530	None								

See notes on page 6 of 6

0311MGUB.FIN/170077.20

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 3 of 6)

Date	Total Discharge	Sample Location	TPHg <	B	T	E	X	VOCs parts per billion	EOCs	Inorganics >
04/13/93	238,370	None								
04/16/93	260,860	None								
04/30/93	270,400	"Influent"	2,700	240	140	35	500	NA	NA	NA
		"A"	380	31	22	14	81	NA	NA	NA
		"B"	56	1.3	<0.6	<0.6	2.3	NA	NA	NA
		"C"	<50	1.5	0.9	<0.6	2.4	NA	NA	NA
05/11/93	308,840	None								
05/20/93	346,407	None								
06/14/93	346,407	"Influent"	3,300	540	340	88	730	NA	NA	NA
		"A"	<50	<0.5	<0.5	<0.5	1.1	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
06/24/93	393,810	None								
06/29/93	415,739	None								
07/08/93	465,820	"Influent"	1,600	310	24	11	130	NA	NA	NA
		"A"	110	2.2	0.7	<0.5	1.4	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA

See notes on page 6 of 6

0311MGUB.FIN/170077.20

TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1726 Park Street
Alameda, California
(Page 4 of 6)

Date	Total Discharge	Sample Location	TPHg <	B	T	E	X	VOCs parts per billion	EOCs	Inorganics >
08/06/93	569,132	"influent"	2,900	510	180	56	710	NA	NA	NA
		"A"	94	1.9	<0.5	<0.5	1.1	NA	NA	NA
		"B"	61	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
09/08/93	675,360	"influent"	2,200	330	51	21	210	NA	NA	NA
		"A"	<50	2.1	<0.5	<0.5	<0.5	NA	NA	NA
		"B"	60	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
10/06/93	772,440	"influent"	6,000	810	56	100	460	NA	NA	NA
		"A"	740	18	1.3	<0.5	39	NA	NA	NA
		"B"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	390	7.6	0.6	<0.5	18	NA	NA	NA
10/15/93	810,448	"influent"	2,300	770	38	40	220	NA	NA	NA
		"A"	630	17	3.0	<0.5	33	NA	NA	NA
		"B"	69	0.5	<0.5	<0.5	<0.5	NA	NA	NA
		"C"	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
11/09/93	851,840	"A"	550	20	<0.5	<0.5	19	86 ^a	ND	270 ^a
		"B"	<50	(16)	<0.5	<0.5	<0.5	(20)	ND	ND
		"C"	<50	<0.5	<0.5	<0.5	<0.5	ND	ND	ND

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TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
 Exxon Service Station 7-0104
 1726 Park Street
 Alameda, California
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Date	Total Discharge	Sample Location	TPHg <	B	T	E	X parts per billion	VOCs	EOCs	Inorganics >
12/09/93	932,828	"A"	1,500	130	350	10	82	NA	NA	NA
		"B"	<50	<0.6	<0.6	<0.6	<0.6	NA	NA	NA
		"C"	<50	3.6	9.6	<0.6	<0.6	NA	NA	NA
12/22/93	---	"Eff"	190	1.9	1.6	<0.6	10	NA	NA	NA
01/10/94	1,039,530	"A"	340	17 (19)	2.3	<0.6	7.6 (8)	120 ² 7 ³ 120 ¹	ND	6 ^a 330 ^b 300 ^c
		"B1"	120	2.3	<0.6	<0.6	<0.6	NA	NA	NA
		"B2"	61	0.6	<0.6	<0.6	<0.5	NA	NA	NA
		"C"	55	<0.6	<0.5	<0.5	<0.5	ND	ND	220 ^e
02/24/94	1,152,290	"A"	1400	310	22	<0.6	99	NA	NA	NA
		"B1"	<50	<0.6	<0.6	<0.5	<0.5	NA	NA	NA
		"B2"	<50	<0.6	<0.6	<0.5	<0.5	NA	NA	NA
		"C"	75	1.3	<0.6	<0.5	<0.5	NA	NA	NA
03/07/94	---	"C"	<50	<0.6	<0.6	<0.5	<0.6	NA	NA	NA
03/30/94	1,267,720	"A"	180	0.8	0.8	<0.6	<0.5	NA	NA	NA
		"B1"	55	<0.6	<0.6	<0.6	<0.6	NA	NA	NA
		"B2"	<50	<0.6	<0.6	<0.6	<0.6	NA	NA	NA
		"C"	<50	<0.6	<0.6	<0.6	<0.6	NA	NA	NA
MCLs	---	---	---	1.0	---	---	680	1,750	See Notes	
DWAL	---	---	---	---	---	100	---	---	See Notes	

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TABLE 2
CUMULATIVE ANALYTICAL RESULTS OF WATER SAMPLES
FROM THE REMEDIATION SYSTEM
Exxon Service Station 7-0104
1725 Park Street
Alameda, California
(Page 6 of 6)

Date	Total Discharge	Sample Location	TPHg <	B	T	E	X	VOCs	EOCs	Inorganics	>
<hr/>											
Notes:				"B1"	:	effluent from first GAC canister, influent to second GAC canister					
gal	:	Gallons		"B2"	:	effluent from second GAC canister, influent to third GAC canister					
TPHg	:	Total petroleum hydrocarbons as gasoline analyzed using modified EPA method 5030/8015		"C"	:	effluent from third GAC canister into sanitary sewer					
BTEX	:	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA method 5030/8020		(1)	:	Analyzed using EPA method 624					
VOC	:	Volatile organic compounds analyzed using EPA method 624		<	:	Less than the laboratory method detection limit					
EOC	:	Extractable organic compounds analyzed using EPA method 625		1	:	Tetrachloroethene (MCL = 5 ppb)					
Inorganics	:	Arsenic analyzed using EPA method 7060; Cadmium, Chromium, Copper, Iron, Lead, Nickel, Silver, and Zinc analyzed using EPA method 6010/200.7; Mercury analyzed using EPA method 7470; and total Cyanides analyzed using EPA 335.2		2	:	2-Butanone (MEK)					
NA	:	Not analyzed		3	:	Trichloroethene (TCE) (MCL = 5 ppb)					
NS	:	Not sampled		4	:	Zinc (MCL = 5000 ppb)					
NR	:	Not recorded		5	:	Iron (MCL = 300 ppb)					
ND	:	Non detected at or above the method detection limit		MCL	:	Arsenic (MCL = 50 ppb)					
"influent"	:	composite sample from recovery wells		DWAL	:	Maximum Contaminant Level					
"bioreactor"	:	water sample from the first compartment of the bioreactor				Drinking Water Action Level					
"Eff"	:	effluent from bioreactor, influent to first granular activated carbon (GAC) canister									
"A"	:	effluent from bioreactor, influent to first GAC canister									
"B"	:	effluent from second GAC canister, influent to third GAC canister									