Ultramar

Ultramar Inc.
P.O. Box 466
525 W. Third Street
Hanford, CA 93232-0466
(209) 582-0241

Telecopy: 209-583-5685 Credit
209-583-3330 Administrative
209-583-3302 Information Services
209-583-3358 Accounting

January 6, 1999

Mr. Scott Seery
Department of Environmental Health
Alameda County Health Care Agency
1131 Harbor Parkway, Room 250
Alameda, CA 94502-6577

SUBJECT: BEACON STATION NO. 720, 1088 MARINA BLVD., SAN LEANDRO, CALIFORNIA

Dear Mr. Seery:

Enclosed is a copy of the ***Quarterly Ground Water Monitoring and Remediation System Status Report, Fourth Quarter 1998*** for the above-referenced Ultramar facility. Also included is a copy of the Quarterly Status Report.

Please call if you have any questions.

Sincerely,

ULTRAMAR INC.

Terrence A. Fox
Senior Project Manager
Marketing Environmental Department

Enclosure

Ultramar

Ultramar Inc.
P.O. Box 466
525 W. Third Street
Hanford, CA 93232-0466
(209) 582-0241

Telecopy: 209-585-5685 Credit
209-583-3330 Administrative
209-583-3302 Information Services
209-583-3358 Accounting

ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: January 6, 1999
QUARTER ENDING: December 31, 1998

SERVICE STATION NO.: 720
ADDRESS: 1088 Marina Blvd., San Leandro, CA
COUNTY: Alameda

ULTRAMAR CONTACT: Terrence A. Fox **TEL. NO:** 559-583-3345

BACKGROUND:

In January 1987, three underground gasoline storage tanks and one waste oil tank were excavated and removed from two tank cavities. Samples collected from beneath the former tanks indicated that hydrocarbons were present in the soil. In March 1987, five monitoring wells (MW-1 through MW-5) were installed by Conoco. Hydrocarbons were detected in soil and ground-water samples collected from the wells with the highest concentrations being detected in the area of MW-4. In July 1987, four soil borings were drilled in the vicinity of MW-4 to further characterize the soil contamination in that area. TPH concentrations above 100 ppm were detected in each boring. The site has been on a monitoring program since June 1987.

In July 1990, the site was purchased by Ultramar Inc. from Conoco. The monitoring program has continued.

In August 1991, perform shallow ground water study as screening tool to locate wells.

In October 1991, installed three additional wells to further define the extent of the dissolved hydrocarbon plume.

In October 1993, performed a ground-water pump test, a vapor extraction test, and a air sparging test.

In May 1994, submitted Problem Assessment Report/Remedial Action Plan.

In December 1994, installed one additional monitoring well, six air sparging points, and one vapor extraction well.

In June 1997, began operation of vapor extraction system.

In July 1997, the ground water recovery system and the air sparging system began operation.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on November 19, 1998. Continued to operate the vapor extraction and air sparging systems. The ground-water system did not operate during the quarter.

RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that the benzene concentrations were not detected in MW-4, MW-6, and MW-7. Benzene concentrations were detected in MW-1, MW-2, MW-3, MW-5, MW-8, and MW-9.

The ground water extraction system has processed approximately 228,400 gallons of water. Approximately 1,728 pounds of hydrocarbons have been removed by the vapor extraction system.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY	ESTIMATED COMPLETION DATE
Continue quarterly monitoring program.	
Continue operation of the vapor extraction and air sparging remediation systems.	

Delta
Environmental
Consultants, Inc.

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

January 6, 1999

Mr. Terrence A. Fox
Ultramar, Inc.
525 West Third Street
Hanford, California 93230

Subject: *Quarterly Ground Water Monitoring and Remediation System Status Report, Fourth Quarter 1998*
Beacon Station No. 720
1088 Marina Boulevard
San Leandro, California
Delta Project No. D095-971

Dear Mr. Fox:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Ultramar, Inc. (Ultramar), to perform quarterly ground water monitoring reporting for the subject site (Figure 1). The quarterly ground water monitoring is intended to evaluate the distribution of dissolved petroleum hydrocarbons in ground water beneath the site. This report summarizes ground water monitoring activities performed by Doulos Environmental Company (Doulos) at the site on November 19, 1998, and reports remediation system activities performed by Delta.

Ground Water Elevation Measurements, Flow Direction, and Hydraulic Gradient

Depth to ground water measurements were recorded by Doulos on November 19, 1998, in monitoring wells MW-1 through MW-9. The location of the wells are shown on Figure 2. On November 19, 1998, ground water was present between 10.88 (MW-6) and 14.56 (MW-8) feet below the top of the monitoring well casings. The ground water level decreased an average of 0.71 feet since the previous quarterly monitoring event on August 31, 1998. Ground water level data for the November 19, 1998, monitoring event is presented in Table 1. Ground water sampling information sheets recorded by Doulos are included in Enclosure A. Cumulative ground water level data reported previously by El Dorado Environmental, Inc. (El Dorado) are included in Enclosure B. The air sparging and soil vapor extraction (SVE) systems were operating. The ground water pumping system was turned off and was not operating during the November 19, 1998, sampling event.

The ground water elevation measurements recorded on November 19, 1998, were used to construct a ground water elevation contour map (Figure 3). The ground water table elevations suggest a flow direction off-site, generally toward the southwest with an average hydraulic gradient of approximately 0.01. Historically, ground water generally flows toward the southwest under non-pumping conditions.

Ground Water Analytical Results

Ground water samples were collected from monitoring wells MW-1 through MW-9 on November 19, 1998. Ground water samples were submitted to Kiff Analytical (Kiff), a California-certified laboratory in Davis, California, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8020, and total petroleum hydrocarbons (TPH) as gasoline by EPA Method 8015 Modified. Ground water sampling information sheets for the fourth quarter 1998 sampling event are included in Enclosure A.

Huge ↑ in MW-8

No free product or sheen was detected in the wells during the November 1998 sampling event. Benzene concentrations were reported in the ground water samples collected from monitoring wells MW-1 through MW-3, MW-5, MW-8, and MW-9 ranging from concentrations of 0.75 micrograms per liter (µg/L) in MW-1 to 510 µg/L in MW-8. Benzene was not detected in monitoring wells MW-4, MW-6, and MW-7. Concentrations of all analytes in ground water samples collected from MW-6 and MW-7 not detected. A benzene isoconcentration map for the November 19, 1998 sampling event is included as Figure 4. Ground water analytical results for the samples collected during the November 19, 1998, monitoring event are summarized in Table 1. Cumulative ground water analytical results reported previously by El Dorado are included in Enclosure B. A copy of the certified laboratory analytical report for the fourth quarter 1998 sampling event with chain-of-custody documentation is included in Enclosure C.

Status of Ground Water Remediation, Soil Vapor Extraction, and Air Sparging Systems

The ground water treatment system consists of monitoring wells MW-4, MW-5, and MW-9, a 250-gallon surge tank, a diffused aeration tank (DAT), two transfer pumps, two 200-pound aqueous phase granular activated carbon (GAC) columns placed in series, a 500-gallon holding tank and a flow totalizer meter. Ground water is pumped from the recovery wells to the surge tank, and is then gravity fed to the DAT. The DAT strips the dissolved petroleum hydrocarbons from the ground water. From the DAT, the ground water is pumped through the two GAC columns in series to the holding tank where the treated ground water is pumped to the sanitary sewer. The GAC columns adsorb dissolved petroleum hydrocarbons that are not removed by the DAT. The effluent air stream from the DAT containing petroleum hydrocarbon vapors stripped from the ground water stream is routed through the SVE system prior to atmospheric discharge. The ground water system was turned off in March 1998, and has only processed purge water since this time. The ground water system was not operating during the November 19, 1998, monitoring event.

The current SVE system consists of monitoring wells MW-1 through MW-5, MW-8, and MW-9, SVE well VW-1, and the effluent vapor stream from the diffused aeration tank which are manifolded to a 250 standard cubic feet per minute vacuum blower, and two Calgon 600-pound vapor phase GAC columns which replaced a 250 standard cubic feet per minute EVAX catalytic oxidizer. The EVAX catalytic oxidizer was disconnected in February 1998 due to low TPH as gasoline vapor concentrations and the GAC columns were delivered during March 1998. The SVE system was restarted during April 1998. The air discharge is permitted under Bay Area Air Quality Management District (BAAQMD) permit to operate No. 25627.

The air sparging system consists of air sparging wells SP-1 through SP-6, a GAST Model No. P6066 compressor, and six air rotometers. The compressor injects air through the air rotometers and then into air sparging wells SP-1 through SP-6. **Air sparging was installed to monitoring wells MW-5 and MW-9 on October 15, 1998, on a temporary basis.**

The locations of the SVE well, monitoring wells, air sparging wells, and equipment compound are illustrated on Figure 2. The remediation equipment layout is illustrated on Figure 5, and the remediation system schematic is presented on Figure 6.

Delta collects monthly influent, mid-carbon, and effluent samples from the ground water treatment system during the months the system is operating and submits them to Kiff for analysis of BTEX and TPH as gasoline. Cumulative analytical results are summarized in Table 2. As of December 31, 1998, the ground water treatment system has processed and discharged approximately 228,850 gallons of water to the sanitary sewer. The ground water treatment system was shut down in March, 1998, and did not operate during the fourth quarter 1998. The cumulative volume of ground water treated is summarized in Table 3.

During the operation of the SVE system with GAC, Delta collects monthly influent, mid-carbon, and effluent vapor samples. The samples were submitted to Kiff for analysis of BTEX and TPH as gasoline. Cumulative sampling results for air samples collected from the SVE system during its operation are summarized in Table 4. As of November 30, 1998, the SVE system has extracted approximately 1,728 pounds of vapor equivalent gasoline. A copy of the October 20, 1998 laboratory analytical report is included in Enclosure D. **The SVE system was turned off after the October 20, 1998, laboratory analytical results were received by Delta, and due to moisture build-up in the vapor stream and vapor carbon canisters. The SVE unit was operated on ambient air for the month of November 1998 to dry out the carbon vapor.** Soil vapor samples were not collected during the month of November due to water in the vapor carbon.

Remarks/Signature

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 a copy of this report be forwarded to:

Mr. Scott Seery
Department of Environmental Health
Alameda County Health Care Agency
1131 Harbor Parkway, Room 250
Alameda, California 94502-6577

California Regional Water Quality Control Board,
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

If you have any questions concerning this project, please contact Richard Munsch at (916) 638-2164.

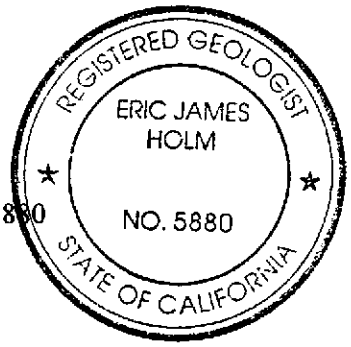
Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Trevor L. Atkinson
Project Engineer

Richard D. Munsch
Project Manager

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



TLA (LRP008.971)
Enclosures

TABLE 1

GROUND WATER MONITORING DATA

Beacon Station No. 720
1088 Marina Boulevard
San Leandro, California

Monitoring Well	Date	Reference Elevation (ft)	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Comments
MW-1	03/12/98	33.10	11.09	22.01	<0.5	<0.5	5.0	2.8	100	<5.0	No sheen
	05/28/98		11.36	21.74	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	08/31/98		12.61	20.49	<0.5	<0.5	6.4	1.4	130	<5.0	No sheen
	11/19/98		13.84	19.26	0.75	<0.5	<0.5	3.0	120	<5.0	No sheen
MW-2	03/12/98	32.80	10.92	21.88	32	1.0	12	6.5	440	20	No sheen
	05/28/98		10.41	22.39	<0.5	<0.5	<0.5	<0.5	<50	27	No sheen
	08/31/98		12.29	20.51	9.3	0.95	4.9	8.8	270	20	No sheen
	11/19/98		13.47	19.33	16	0.72	<0.5	4.3	180	7.4	No sheen
MW-3	03/12/98	32.30	10.81	21.49	0.67	<0.5	7.1	3.4	1,200	7.3	No sheen
	05/28/98		11.45	20.85	<0.5	0.5	<0.5	<0.5	350	<5.0	No sheen
	08/31/98		12.21	20.09	<0.5	0.89	0.69	<0.5	240	<5.0	No sheen
	11/19/98		13.26	19.04	5.3	0.72	0.86	4.2	440	<5.0	No sheen
MW-4	03/12/98	32.90	11.31	21.59	2,200	1,500	630	3,000	14,000	440	No sheen
	05/28/98		10.40	22.50	<0.5	0.75	0.68	6.9	67	26	No sheen
	08/31/98		12.54	20.36	1.8	2.5	0.65	3.4	<50	<5.0	No sheen
	11/19/98		13.99	18.91	<0.5	<0.5	<0.5	0.61	<50	17	No sheen
MW-5	03/12/98	32.70	11.11	21.59	2,600	160	470	2,200	12,000	<250	No sheen
	05/28/98		10.92	21.78	480	99	160	730	4,700	<250	No sheen
	08/31/98		12.79	19.91	200	14	55	220	1,400	180	No sheen
	11/19/98		13.39	19.31	1.4	<0.5	<0.5	<0.5	<50	39	No sheen
MW-6	03/12/98	30.40	10.49	19.91	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	05/28/98		10.58	19.82	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	08/31/98		10.85	19.55	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	11/19/98		10.88	19.52	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
MW-7	03/12/98	31.20	10.14	21.06	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	05/28/98		10.93	20.27	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	08/31/98		12.01	19.19	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	11/19/98		12.54	18.66	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
MW-8	03/12/98	33.80	11.81	21.99	1.4	<0.5	<0.5	<0.5	72	<5.0	No sheen
	05/28/98		12.14	21.66	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	08/31/98		13.16	20.64	<0.5	<0.5	<0.5	<0.5	<50	<5.0	No sheen
	~~11/19/98~~		**14.56**	**19.24**	**510**	**24**	**1,200**	**2,800**	**14,000**	**<5.0**	**No sheen**
MW-9	03/12/98	32.56	10.93	21.63	320	23	180	720	3,700	190	No sheen
	05/28/98		11.31	21.25	110	6.4	87	300	2,200	220	No sheen
	08/31/98		12.16	20.40	240	23	690	1,900	11,000	<50	No sheen
	11/19/98		11.04	21.52	7.7	<0.5	10	22	280	67	No sheen

TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.
µg/L = Micrograms per liter.

TABLE 2

GROUND WATER TREATMENT SYSTEM ANALYTICAL RESULTS

Beacon Station No. 720
1088 Marina Boulevard
San Leandro, California

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)
Influent	06/05/97	3,500	900	910	2,700	16,000
	08/07/97	5,400	1,300	1,500	4,200	26,000
	09/04/97	3,100	530	1,400	5,400	23,000
	10/24/97	1,400	170	910	3,000	13,000
	12/29/97	840	98	650	1,900	11,000
	01/12/98	1,600	190	1,400	4,900	25,000
	02/23/98	830	42	34	1,600	8,800
	03/23/98	NS	NS	NS	NS	NS
	07/07/98	550	14	610	1,300	10,000
DAT Effluent	06/05/97	2,600	910	570	2,000	12,000
	08/07/97	510	80	38	320	2,200
	09/04/97	1,100	150	290	1,800	7,800
	10/24/97	900	83	190	1,700	6,900
	12/29/97	230	27	91	770	3,800
	01/12/98	26	3.6	<2.5	210	1,100
	02/23/98	NS	NS	NS	NS	NS
	03/23/98	NS	NS	NS	NS	NS
	07/07/98	NS	NS	NS	NS	NS
Mid	06/05/97	<0.5	<0.5	<0.5	<0.5	<50
	08/07/97	0.66	<0.5	<0.5	<0.5	<50
	09/04/97	1,000	99	74	660	4,100
	10/24/97	0.84	<0.5	0.56	4.8	350
	12/29/97	<0.5	<0.5	<0.5	<0.5	<50
	01/12/98	<0.5	<0.5	<0.5	<0.5	<50
	02/23/98	<0.5	<0.5	<0.5	<0.5	<50
	03/23/98	NS	NS	NS	NS	NS
	07/07/98	<0.5	<0.5	<0.5	<0.5	<50
Effluent	06/05/97	<0.5	<0.5	<0.5	<0.5	<50
	08/07/97	<0.5	<0.5	<0.5	<0.5	<50
	09/04/97	<0.5	<0.5	<0.5	<0.5	<50
	09/18/97	<0.5	<0.5	<0.5	<0.5	<50
	10/24/97	<0.5	<0.5	<0.5	<0.5	<50
	12/29/97	<0.5	<0.5	<0.5	<0.5	<50
	01/12/98	<0.5	<0.5	<0.5	0.5	<50
	02/23/98	<0.5	<0.5	<0.5	<0.5	<50
	03/23/98	<0.5	<0.5	<0.5	<0.5	64
	07/07/98	<0.5	<0.5	<0.5	<0.5	<50

TPH = Total petroleum hydrocarbons.
µg/L = Micrograms per liter.
NS = Not sampled.

TABLE 3

GROUND WATER TREATMENT SYSTEM
CUMULATIVE DISCHARGE VOLUMES

Beacon Station No. 720
1088 Marina Boulevard
San Leandro, California

Date	Cumulative Discharge Volume (gallons)
07/03/97	550
07/22/97	1,470
08/07/97	3,180
08/18/97	11,690
09/04/97	72,710
09/17/97	88,990
09/18/97	91,280
10/09/97	136,130
10/24/97	153,370
11/06/97	153,370
11/26/97	153,370
12/10/97	153,370
12/29/97	188,870
01/12/98	200,280
01/26/98	206,490
02/19/98	217,210
02/23/98	219,900
03/09/98	228,400
03/23/98	228,400
04/06/98	228,400
04/24/98	228,400
05/12/98	228,400
05/21/98	228,400
06/09/98	228,400
07/07/98	228,610
07/21/98	228,850
10/20/98	228,850

TABLE 4

SVE SYSTEM ANALYTICAL RESULTS

Beacon Station No. 720
1088 Marina Boulevard
San Leandro, California

Sample ID	Date	Benzene (ppmv)	Toluene (ppmv)	Ethyl-benzene (ppmv)	Total Xylenes (ppmv)	TPH as gasoline (ppmv)
Influent	06/05/97	3.2	0.72	1.2	2.5	220
	07/03/97	0.30	0.67	0.23	1.8	86
	07/22/97	0.76	1.6	0.92	5.3	270
	08/07/97	2.0	1.3	0.53	2.7	130
	09/04/97	1.8	0.73	1.3	5.9	190
	10/24/97	0.49	0.52	0.35	2.3	54
	11/26//97	0.13	0.43	0.072	0.35	9.2
	12/10/97	<0.05	0.44	0.076	0.37	5.8
	12/12/97	0.59	0.17	0.49	2.0	26
	01/12/98	<0.05	<0.05	<0.05	<0.05	<5.0
	04/23/98	0.18	0.32	0.072	0.47	18
	06/09/98	<0.05	<0.05	<0.05	<0.05	<5.0
	07/07/98	0.067	<0.05	<0.05	<0.05	<5.0
	08/11/98	<0.05	0.06	<0.05	0.071	<5.0
	09/10/98	0.16	0.46	0.062	0.20	16
	09/23/98	0.16	0.32	<0.05	0.20	9.4
	10/20/98	0.63	0.19	0.062	0.17	28
Mid-Carbon	04/23/98	<0.05	<0.05	<0.05	<0.05	<5.0
	06/09/98	<0.05	<0.05	<0.05	<0.05	<5.0
	07/07/98	<0.05	<0.05	<0.05	<0.05	<5.0
	07/21/98	<0.05	<0.05	<0.05	<0.05	<5.0
	08/11/98	<0.05	<0.05	<0.05	<0.05	<5.0
	09/10/98	<0.05	<0.05	<0.05	<0.05	<5.0
	09/23/98	<0.05	<0.05	<0.05	<0.05	<5.0
	10/20/98	0.79	0.37	<0.05	0.088	48
Effluent	06/05/97	<0.05	<0.05	<0.05	<0.05	<5.0
	07/03/97	<0.05	0.054	<0.05	0.13	<5.0
	07/22/97	<0.05	<0.05	<0.05	<0.05	<5.0
	08/07/97	<0.05	<0.05	<0.05	<0.05	<5.0
	09/04/97	<0.05	<0.05	<0.05	<0.05	<5.0
	10/24/97	<0.05	<0.05	<0.05	0.057	<5.0
	11/26/97	0.094	0.089	<0.05	0.062	5.3
	12/10/97	<0.05	0.062	<0.05	<0.05	<5.0
	12/12/97	<0.05	<0.05	<0.05	<0.05	<5.0
	01/12/98	<0.05	<0.05	<0.05	<0.05	<5.0
	04/13/98	<0.05	<0.05	<0.05	<0.05	<5.0
	06/09/98	<0.05	<0.05	<0.05	<0.05	<5.0
	07/07/98	<0.05	<0.05	<0.05	<0.05	<5.0
	08/11/98	<0.05	<0.05	<0.05	<0.05	<5.0
	09/10/98	<0.05	<0.05	<0.05	<0.05	<5.0
	10/20/98	<0.05	<0.05	<0.05	<0.05	<5.0

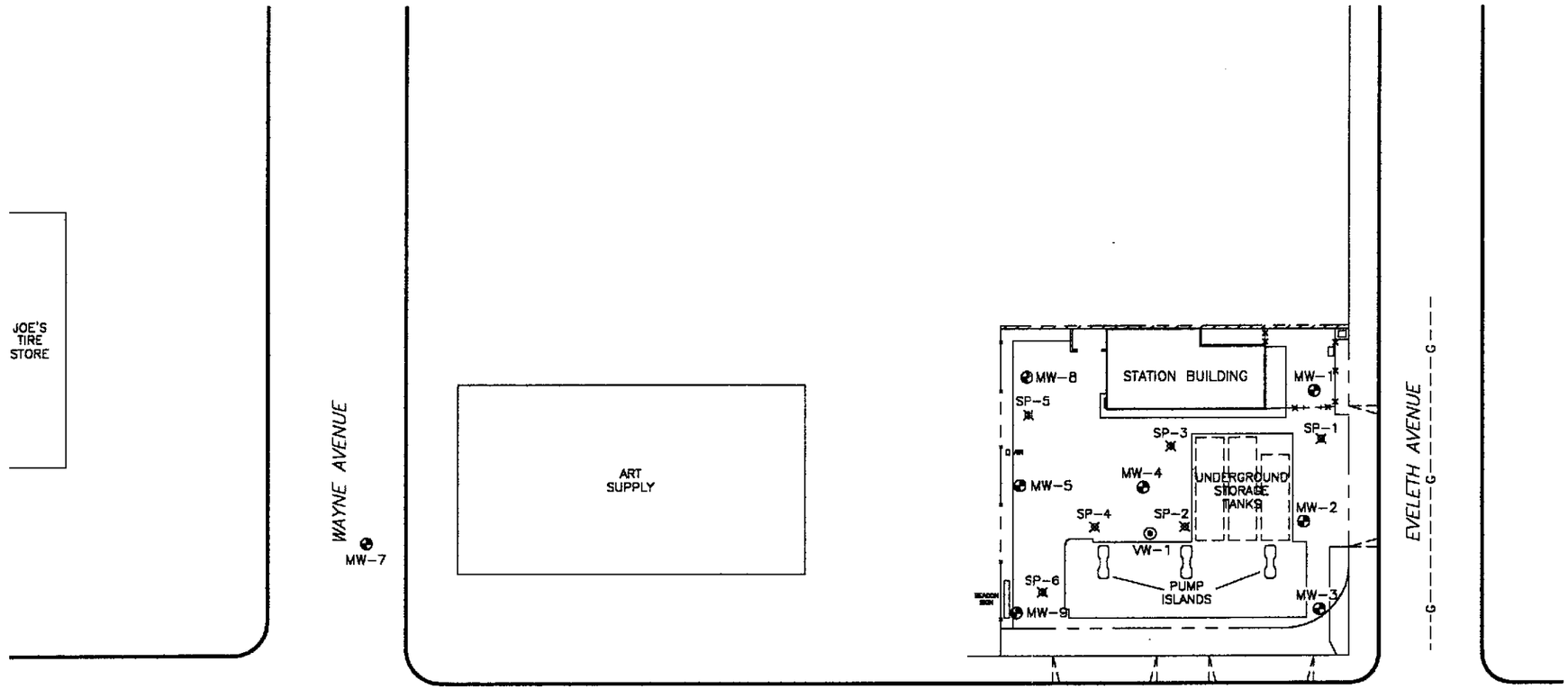
TPH = Total petroleum hydrocarbons.
µg/L = Micrograms per liter.
ppmv = parts per million by volume.

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

FIGURE 1
SITE LOCATION MAP
BEACON STATION NO. 720
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

PROJECT NO. D095-971	DRAWN BY I.H. 5/30/96
FILE NO. 95-971-1	PREPARED BY SWN
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

- PROPERTY LINE
- FENCE
- MW-1 MONITORING WELL LOCATION
- VW-1 VAPOR EXTRACTION WELL LOCATION
- SP-1 AIR SPARGING WELL LOCATION

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

North

0 40 FT

SCALE

FIGURE 2

SITE MAP

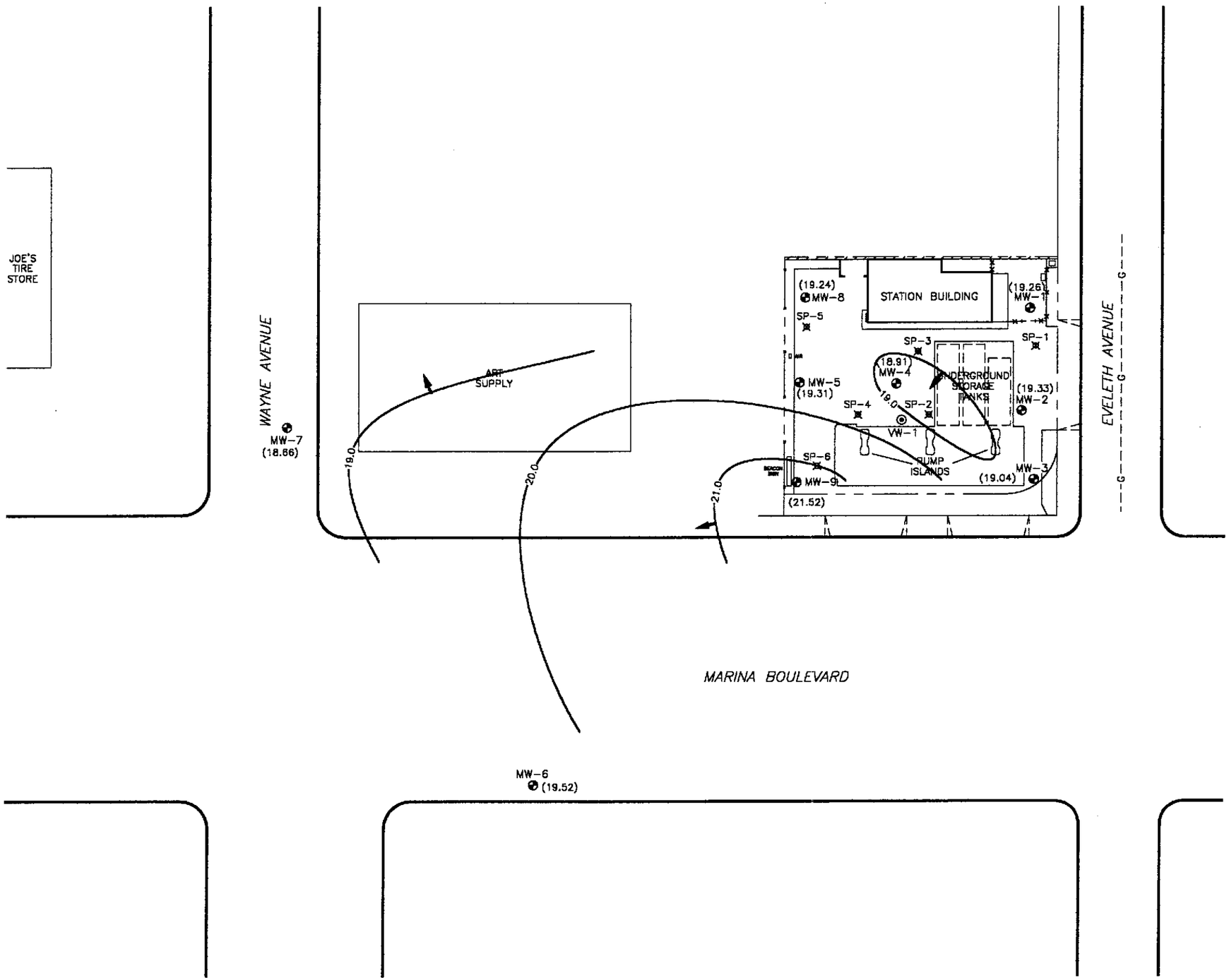
BEACON STATION NO. 720

1088 MARINA BOULEVARD

SAN LEANDRO, CA.

PROJECT NO. D095-971	DRAWN BY M.L. 4/8/98
FILE NO. 95-971-5	PREPARED BY MAB
REVISION NO. 5	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

— - - —	PROPERTY LINE
—x—x—	FENCE
⊕ MW-1	MONITORING WELL LOCATION
⊙ VW-1	VAPOR EXTRACTION WELL LOCATION
⊠ SP-1	AIR SPARGING WELL LOCATION
(21.52)	GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
-21.0-	WATER ELEVATION CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
⬅	GROUND WATER FLOW DIRECTION

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

North

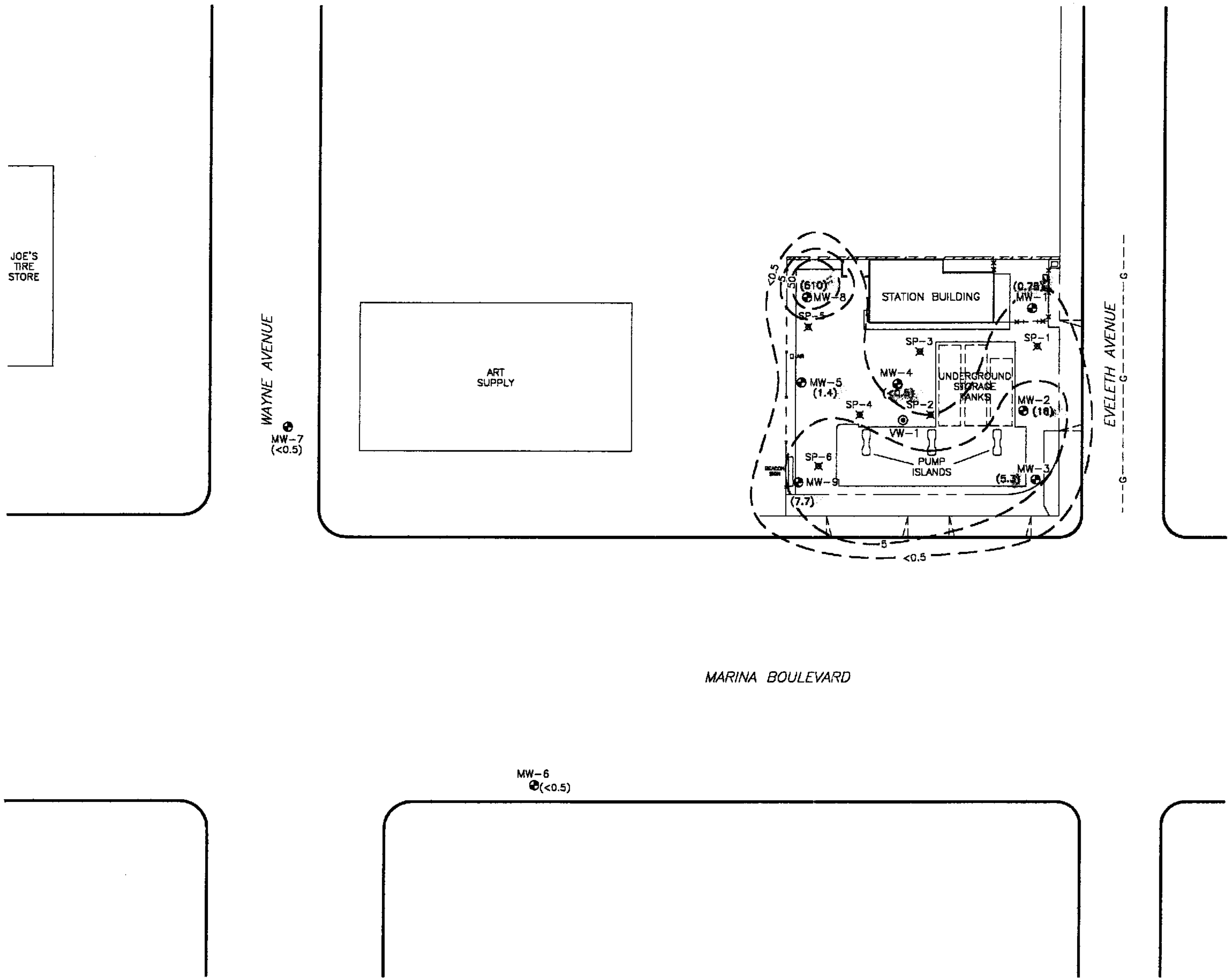
0 40 FT

SCALE

FIGURE 3
GROUND WATER ELEVATION CONTOUR MAP
11/19/98
BEACON STATION NO. 720
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

PROJECT NO. D095-971	DRAWN BY M.L. 12/30/98
FILE NO. 95-971-5	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

- - - -	PROPERTY LINE
—x—x—	FENCE
MW-1	MONITORING WELL LOCATION
VW-1	VAPOR EXTRACTION WELL LOCATION
SP-1	AIR SPARGING WELL LOCATION
(1.4)	BENZENE CONCENTRATION IN MICROGRAMS PER LITER

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

North

0 40 FT
SCALE

FIGURE 4
BENZENE ISOCONCENTRATION MAP
11/19/98
BEACON STATION NO. 720
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

PROJECT NO. D095-971	DRAWN BY M.L. 12/30/98	Delta Environmental Consultants, Inc.
FILE NO. 95-971-5	PREPARED BY RDM	
REVISION NO. 1	REVIEWED BY	

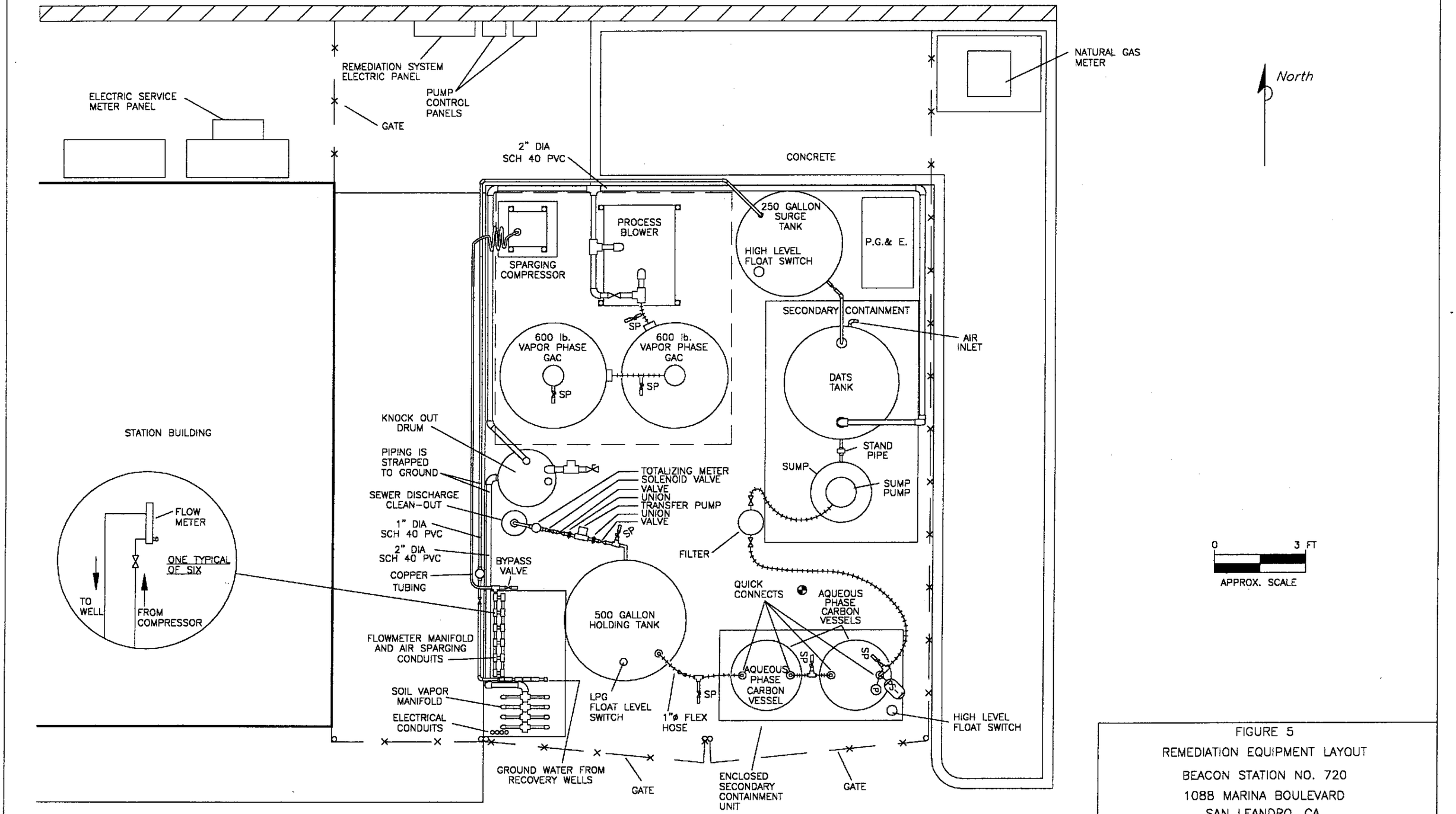


FIGURE 5

REMEDIATION EQUIPMENT LAYOUT

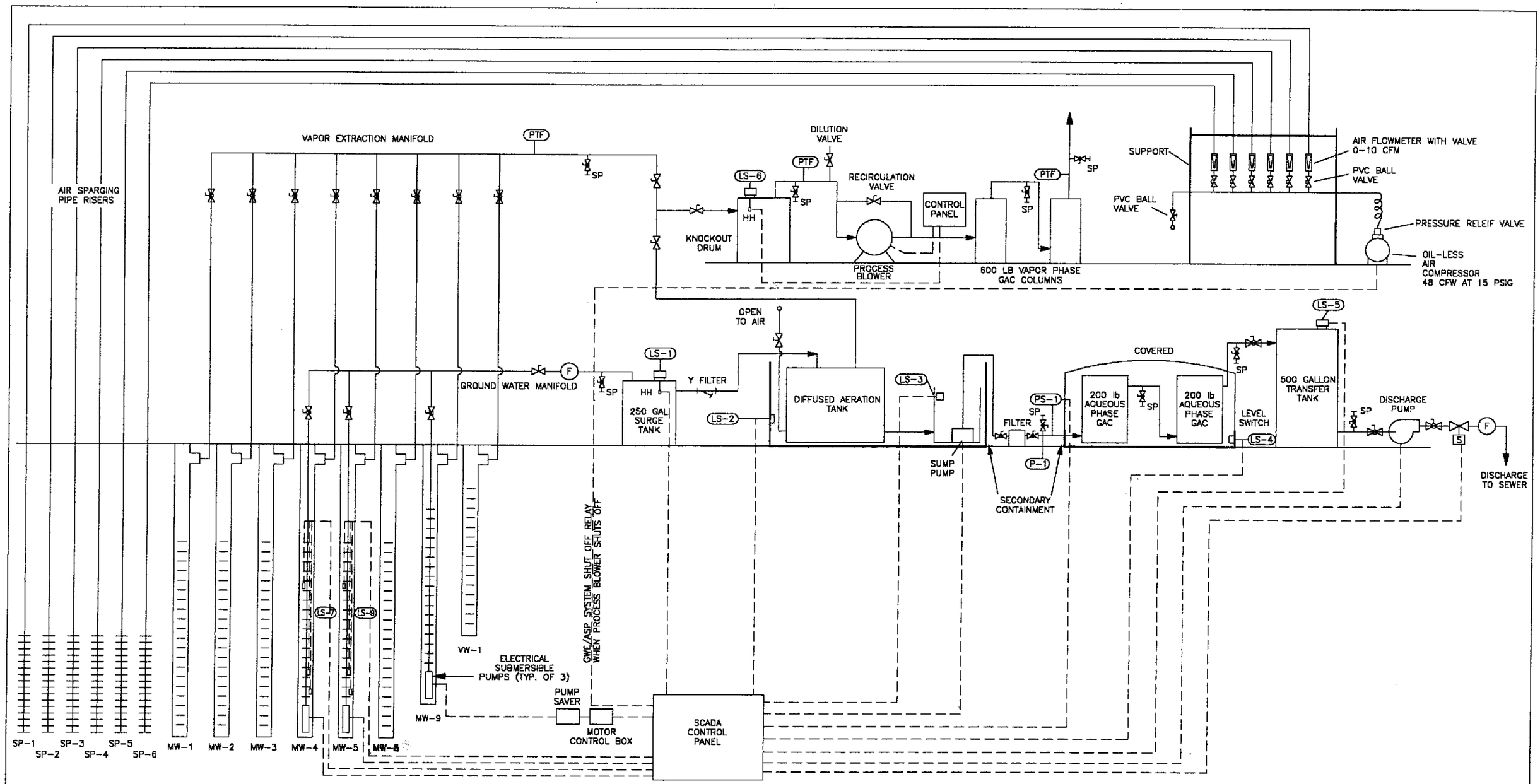
BEACON STATION NO. 720

1088 MARINA BOULEVARD

SAN LEANDRO, CA.

PROJECT NO. D095-971	DRAWN BY M.L. 4/8/98
FILE NO. 95-971-2	PREPARED BY SWM
REVISION NO. 4	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

- BALL VALVE
- GATE VALVE
- SOLENOID VALVE
- SP — SAMPLE PORT
- PTF — PRESSURE, TEMPERATURE, FLOW MONITORING POINT
- F — FLOW TOTALIZER
- P-1 — PRESSURE GAUGE
- PS-1 — AQUEOUS PHASE CARBON PRESSURE SWITCH-PRESSURE SWITCH-SHUTS DATS/SUMP PUMP AND WELL PUMPS (W/REMOTE RESET)

- LS-1 — SURGE TANK: HIGH HIGH-SHUTS OFF WELL PUMPS (W/REMOTE RESET)
- LS-2 — SECONDARY CONTAINMENT VESSEL FOR DATS: HIGH HIGH SHUTS OFF WELL PUMPS
- LS-3 — DATS/SUMP: HIGH HIGH-SHUTS OFF WELL PUMPS; HIGH-TURNS ON DATS SUMP PUMP; LOW-TURNS OFF DATS SUMP PUMP
- LS-4 — SECONDARY CONTAINMENT VESSEL FOR AQUEOUS PHASE CARBON: HIGH HIGH-SHUTS OFF DATS/SUMP PUMP AND WELL PUMPS
- LS-5 — DISCHARGE HOLDING TANK: HIGH HIGH-SHUTS OFF DATS SUMP PUMP (W/REMOTE RESET); HIGH-TURNS ON TRANSFER PUMP AND OPENS SEWER SOLENOID VALVE; LOW-TURNS OFF TRANSFER PUMP AND CLOSES SEWER SOLENOID VALVE
- LS-7 — RECOVERY WELL PROBES: HIGH-TURNS ON SUBMERSIBLE WELL PUMP (MW-4)-TO BE CONTROLLED BY RELAY IN PANEL; LOW-TURNS OFF SUBMERSIBLE WELL PUMP (MW-4)-TO BE CONTROLLED BY RELAY IN PANEL
- LS-8 — RECOVERY WELL PROBES: HIGH-TURNS ON SUBMERSIBLE WELL PUMP (MW-5)-TO BE CONTROLLED BY RELAY IN PANEL; LOW-TURNS OFF SUBMERSIBLE WELL PUMP (MW-5)-TO BE CONTROLLED BY RELAY IN PANEL

FIGURE 6
SOIL VAPOR EXTRACTION, AIR SPARGING,
& GROUNDWATER PUMPING SYSTEM SCHEMATIC
BEACON STATION 720
1088 MARINA BLVD.
SAN LEANDRO, CA.

PROJECT NO. 0095-971	DRAWN BY M.L. 4/8/98
FILE NO. 95-971-3	PREPARED BY SWM
REVISION NO. 3	REVIEWED BY

Delta Environmental Consultants, Inc.

ENCLOSURE A

Ground Water Sampling Information Sheets by Doulos

DOULOS ENVIRONMENTAL COMPANY
GROUNDWATER/LIQUID LEVEL DATA
(measurements in feet)

Project Address: Beacon #720, 1088 Marina Blvd. Date: 11-19-98

San Leandro, CA Project No.: 94-720-01

Recorded by: Hal Hansen

Well No	Time	Well Elev. TOC	Depth to Gr. Water	Measured Total Depth	Gr. Water Elevation	Depth to Product	Product Thickness	Comments
MW-1	9:54		13.84	17.10				UNDER VAC no odor no sheen
MW-2	9:50		13.47	22.71				UNDER VAC no odor no sheen
MW-3	9:47		13.26	28.41				UNDER VAC slight odor no sheen
MW-4	10:10		13.99	27.46				UNDER VAC petroleum odor no sheen
MW-5	10:02		13.39	28.86				UNDER PRESSURE petroleum odor no sheen
MW-6	9:44		10.88	14.90				no odor no sheen
MW-7	9:40		12.54	25.52				no odor no sheen
MW-8	9:59		14.56	27.90				UNDER VAC slight odor no sheen
MW-9	10:04		11.04	24.66				UNDER PRESSURE petroleum odor no sheen

Notes:

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 1

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"___ 6"___ 8"___

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 9:54
Depth of well: 17.10
Depth to water: 13.84

Recharge Measurement
Time: 10:36
Depth to water: 14.10

Calculated purge: 2.0 gal
Actual purge: 2.0 gal

Start purge: 10:26 Sampling time: 10:39

Time	Temp.	E.C.	pH	Turbidity	Volume
10:27	61.0	1210	7.17	—	1
10:28	60.7	1149	7.14	—	2
10:29	61.8	1140	7.12	—	3
10:30	62.7	1130	7.10	—	4

Sample appearance: clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW-2

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 9:50
Depth of well: 22.71
Depth to water: 13.47

Recharge Measurement
Time: 10:20
Depth to water: 14.11

Calculated purge: 5.9 gal
Actual purge: 5.9 gal

Start purge: 10:10 Sampling time: 10:21

Time	Temp.	E.C.	pH	Turbidity	Volume
10:11	62.0	1210	7.30	——	1
10:12	61.9	1150	7.21	——	2
10:14	61.4	1138	7.16	——	3
10:15	60.7	1130	7.14	——	4

Sample appearance: clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 3

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"___ 6"___ 8"___

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 9:47
Depth of well: 28.41
Depth to water: 13.26

Recharge Measurement
Time: 11:04
Depth to water: 14.08

Calculated purge: 9.6 gal
Actual purge: 9.6 gal

Start purge: 10:55 Sampling time: 11:06

Time	Temp.	E.C.	pH	Turbidity	Volume
10:56	61.4	1245	7.26	—	1
10:57	62.8	1230	7.20	—	2
10:58	63.0	1150	7.16	—	3
10:59	63.1	1141	7.14	—	4

Sample appearance: Clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 4

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 8
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ ~~12"~~ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 10:10
Depth of well: 27.46
Depth to water: 13.99

Recharge Measurement
Time: 11:59
Depth to water: 14.08

Calculated purge: 8.6 gal
Actual purge: 8.6 gal

Start purge: 11:50 Sampling time: 12:02

Time	Temp.	E.C.	pH	Turbidity	Volume
11:51	63.0	1310	7.01	———	1
11:52	63.0	1251	6.99	———	2
11:53	62.7	1247	6.99	———	3
11:54	62.0	1240	6.98	———	4

Sample appearance: Clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 5

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 6
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 10:02
Depth of well: 28.86
Depth to water: 13.39

Recharge Measurement
Time: 11:14
Depth to water: 13.84

Calculated purge: 9.9 gal
Actual purge: 9.9 gal

Start purge: 10:59 Sampling time: 11:15

Time	Temp.	E.C.	pH	Turbidity	Volume
11:00	58.1	1360	7.04	—	1
11:01	59.4	1310	6.99	—	2
11:03	59.6	1250	6.98	—	3
11:04	58.7	1240	6.91	—	4

Sample appearance: Clear Lock: NONE

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 6

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 6
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other 12" POMFCO
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 9:44
Depth of well: 14.90
Depth to water: 10.88

Recharge Measurement
Time: 10:50
Depth to water: 11.40

Calculated purge: 2.5 gal.
Actual purge: 2.5 gal.

Start purge: 10:30 Sampling time: 10:51

Time	Temp.	E.C.	pH	Turbidity	Volume
10:31	60.1	1146	7.24	———	1
10:32	59.4	1110	7.20	———	2
10:34	58.1	1058	7.18	———	3
10:34	58.4	1050	7.14	———	4

Sample appearance: Clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 7

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 6
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other 12" POMECO
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 9:40
Depth of well: 25.52
Depth to water: 12.54

Recharge Measurement
Time: 10:26
Depth to water: 13.06

Calculated purge: 8.3 gal
Actual purge: 8.3 gal

Start purge: 10:18 Sampling time: 10:27

Time	Temp.	E.C.	pH	Turbidity	Volume
10:19	62.0	1680	7.44	—	1
10:20	62.8	1610	7.39	—	2
10:21	62.6	1560	7.30	—	3
10:22	61.4	1551	7.24	—	4

Sample appearance: Clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 11-19-98

Site: Beacon #720 Project No.: 94-720-01

1088 Marina Boulevard Well Designation: MW- 8

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 5
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer: _____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 9:59
Depth of well: 27.90
Depth to water: 14.56

Recharge Measurement
Time: 10:54
Depth to water: 15.21

Calculated purge: 8.5 gal
Actual purge: 8.5 gal

Start purge: 10:44 Sampling time: 10:55

Time	Temp.	E.C.	pH	Turbidity	Volume
10:45	63.0	1146	7.39	———	1
10:46	62.8	1110	7.34	———	2
10:47	62.9	1053	7.30	———	3
10:48	61.4	1046	7.26	———	4

Sample appearance: Clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY — SAMPLING INFORMATION SHEET

Client: Ultramar — Sampling Date: 11-19-98

Site: Beacon #720 — Project No.: 94-720-01

1088 Marina Boulevard — Well Designation: MW- 9

San Leandro, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 2
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ ~~12"~~ 24" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 10:04
Depth of well: 24.66
Depth to water: 11.04

Recharge Measurement
Time: 11:41
Depth to water: 11.70

Calculated purge: 35.4 gal
Actual purge: 35.4 gal

Start purge: 11:21 Sampling time: 11:40

Time	Temp.	E.C.	pH	Turbidity	Volume
11:22	63.4	1260	7.40	———	1
11:23	63.0	1240	7.33	———	2
11:28	62.7	1170	7.20	———	3
11:31	62.0	1150	7.16	———	4

Sample appearance: Clear Lock: NONE

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

ENCLOSURE B

Cumulative Ground Water Level Data and Analytical
Results previously Reported by El Dorado Environmental

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-1	03/30/92	33.10	13.58	19.52	—	
	07/01/92		14.80	18.30	—	
	09/30/92		16.12	16.98	—	
	11/19/92		16.34	16.76	27.76	
	02/03/93		12.61	20.49	27.72	
	05/25/93		13.12	19.98	27.70	
	09/22/93		14.18	18.92	27.73	
	12/21/93		14.36	18.74	27.70	
	03/18/94		13.64	19.46	27.67	
	06/15/94		14.30	18.80	27.69	
	09/14/94		15.18	17.92	27.66	
	12/19/94		13.79	19.31	27.70	
	12/21/95		13.86	19.24	—	
	03/07/95		12.74	20.36	29.51	
	06/08/95		12.95	20.15	29.54	
	09/22/95		13.94	19.16	29.54	
	12/27/95		13.57	19.53	29.92	
	03/26/96		12.13	20.97	29.90	
	06/13/96		13.10	20.00	17.02	
	09/10/96		14.08	19.02	17.03	
	12/05/96		13.41	19.69	17.05	
	03/10/97		12.70	20.40	17.04	
	06/12/97		13.68	19.42	17.04	
	08/19/97		14.31	18.79	17.01	
	12/13/97		13.19	19.91	17.01	
MW-2	03/30/92	32.80	13.32	19.48	—	
	07/01/92		14.42	18.38	—	
	09/30/92		15.78	17.02	—	
	11/19/92		15.99	16.81	24.56	
	02/03/93		12.31	20.49	25.37	
	05/25/93		12.97	19.83	25.31	
	09/22/93		14.32	18.48	25.34	
	12/21/93		14.52	18.28	25.31	
	03/18/94		13.45	19.35	25.49	
	06/15/94		14.07	18.73	25.50	
	09/14/94		14.96	17.84	25.50	
	12/19/94		13.64	19.16	25.52	
	12/21/95		13.71	19.09	—	
	03/07/95		12.54	20.26	25.87	
	06/08/95		12.81	19.99	25.86	
	09/22/95		13.66	19.14	25.80	
	12/27/95		13.42	19.38	25.83	
	03/26/96		12.05	20.75	25.83	
	06/13/96		12.79	20.01	26.39	
	09/10/96		13.73	19.07	26.43	
	12/05/96		13.29	19.51	26.45	
	03/10/97		12.42	20.38	26.48	
	06/12/97		13.18	19.62	26.50	
	08/19/97		13.94	18.86	26.52	
	12/13/97		12.91	19.89	19.02	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.
— = Not measured.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-3	03/30/92	32.30	12.96	19.34	—	
	07/01/92		14.00	18.30	—	
	09/30/92		15.36	16.94	—	
	11/19/92		15.57	16.73	24.45	
	02/03/93		11.96	20.34	24.54	
	05/25/93		14.12	18.18	24.50	
	09/22/93		13.88	18.42	24.50	
	12/21/93		14.12	18.18	24.50	
	03/18/94		13.04	19.26	24.57	
	06/15/94		13.65	18.65	24.78	
	09/14/94		14.54	17.76	24.59	
	12/19/94		13.28	19.02	24.71	
	12/21/95		13.30	19.00	—	
	03/07/95		12.26	20.04	26.03	
	06/08/95		12.42	19.88	26.02	
	09/22/95		13.25	19.05	26.00	
	12/27/95		13.04	19.26	26.00	
	03/26/96		11.62	20.68	26.01	
	06/13/96		12.61	19.69	28.45	
	09/10/96		13.49	18.81	28.42	
	12/05/96		13.07	19.23	28.42	
	03/10/97		12.23	20.07	28.41	
	06/12/97		12.94	19.36	28.44	
	08/19/97		12.85	19.45	28.45	
	12/13/97		12.45	19.85	28.43	
MW-4	03/30/92	32.90	13.60	19.30	—	
	07/01/92		15.72	17.18	—	
	09/30/92		16.04	16.86	—	
	11/19/92		16.21	16.69	26.92	
	02/03/93		12.70	20.20	27.00	
	05/25/93		12.97	19.93	26.88	
	09/22/93		14.51	18.39	26.90	
	12/21/93		14.75	18.15	26.90	
	03/18/94		13.68	19.22	27.24	
	06/15/94		14.37	18.53	28.54	
	09/14/94		15.23	17.67	27.25	
	12/19/94		13.93	18.97	28.61	
	12/21/95		13.99	18.91	—	
	03/07/95		12.86	20.04	28.64	
	06/08/95		13.10	19.80	28.68	
	09/22/95		13.98	18.92	28.71	
	12/27/95		13.74	19.16	28.71	
	03/26/96		12.30	20.60	28.70	
	06/13/96		13.18	19.72	27.36	
	09/10/96		14.22	18.68	27.40	
	12/05/96		13.65	19.25	27.40	
	03/10/97		12.79	20.11	27.42	
	06/12/97		13.51	19.39	27.40	
	08/19/97		14.29	18.61	27.40	
	12/13/97		13.43	19.47	27.43	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.
— = Not measured

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-5	03/30/92	32.70	13.48	19.22	—	
	07/01/92		14.58	18.12	—	
	09/30/92		15.82	16.88	—	
	11/19/92		16.00	16.70	27.56	
	02/03/93		12.40	20.30	27.61	
	05/25/93		13.01	19.69	27.61	
	09/22/93		14.37	18.33	27.64	
	12/21/93		14.58	18.12	27.01	
	03/18/94		13.53	19.17	28.70	
	06/15/94		14.18	18.52	28.74	
	09/14/94		15.07	17.63	28.70	
	12/19/94		13.74	18.96	28.76	
	12/21/95		13.84	18.86	—	
	03/07/95		12.73	19.97	28.88	
	06/08/95		12.99	19.71	28.87	
	09/22/95		13.83	18.87	28.85	
	12/27/95		13.59	19.11	28.85	
	03/26/96		12.20	20.50	28.84	
	06/13/96		12.98	19.72	28.84	
	09/10/96		13.96	18.74	28.87	
	12/05/96		13.36	19.34	28.87	
	03/10/97		12.74	19.96	28.86	
	06/12/97		13.06	19.64	28.83	
	08/19/97		14.21	18.49	28.82	
	12/13/97		13.51	19.19	28.85	
MW-6	03/30/92	30.40	12.62	17.78	—	
	07/01/92		12.70	17.70	—	
	09/30/92		13.40	17.00	—	
	11/19/92		13.59	16.81	15.10	
	02/03/93		12.43	17.97	15.01	
	05/25/93		—	—	—	
	10/11/93		12.82	17.58	15.10	
	12/21/93		13.06	17.34	15.10	
	03/18/94		12.16	18.24	15.16	
	06/15/94		12.59	17.81	15.17	
	09/14/94		12.86	17.54	14.97	
	12/19/94		12.48	17.92	15.19	
	12/21/95		11.61	18.79	—	
	03/07/95		12.37	18.03	14.98	
	06/08/95		11.14	19.26	15.00	
	09/22/95		12.44	17.96	15.00	
	12/27/95		12.21	18.19	14.98	
	03/26/96		12.26	18.14	14.97	
	06/13/96		12.55	17.85	14.98	
	09/10/96		12.31	18.09	15.01	
	12/05/96		12.22	18.18	15.00	
	03/10/97		12.19	18.21	15.01	
	06/12/97		12.28	18.12	14.97	
	08/19/97		12.30	18.10	14.98	
	12/13/97		11.93	18.47	14.93	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-7	03/30/92	31.20	12.34	18.86	—	
	07/01/92		15.54	15.66	—	
	09/30/92		14.64	16.56	—	
	11/19/92		14.80	16.40	25.10	
	02/03/93		11.36	19.84	25.02	
	05/25/93		—	—	—	
	09/22/93		13.18	18.02	25.01	
	12/21/93		13.42	17.78	25.02	
	03/18/94		12.36	18.84	25.13	
	06/15/94		13.01	18.19	25.21	
	09/14/94		13.88	17.32	25.13	
	12/19/94		12.61	18.59	25.23	
	12/21/95		12.38	18.82	—	
	03/07/95		11.56	19.64	25.22	
	06/08/95		11.82	19.38	25.20	
	09/22/95		12.67	18.53	25.23	
	12/27/95		12.34	18.86	25.23	
	03/26/96		11.03	20.17	25.21	
	06/13/96		11.76	19.44	25.20	
	09/10/96		12.71	18.49	24.56	
	12/05/96		12.32	18.88	24.56	
	03/10/97		11.38	19.82	24.53	
	06/12/97		12.28	18.92	24.52	
	08/19/97		12.92	18.28	24.52	
	12/13/97		11.69	19.51	24.50	
MW-8	03/30/92	33.80	14.66	19.14	—	
	07/01/92		15.74	18.06	—	
	09/30/92		17.00	16.80	—	
	11/19/92		17.01	16.79	29.75	
	02/03/93		13.83	19.97	29.88	
	05/25/93		13.01	20.79	29.86	
	09/22/93		15.81	17.99	24.52	
	12/21/93		16.05	17.75	29.86	
	03/18/94		14.62	19.18	29.87	
	06/15/94		15.29	18.51	30.07	
	09/14/94		16.22	17.58	29.87	
	12/19/94		14.81	18.99	30.05	
	12/21/95		14.89	18.91	—	
	03/07/95		13.75	20.05	29.94	
	06/08/95		13.98	19.82	29.93	
	09/22/95		14.92	18.88	29.95	
	12/27/95		14.61	19.19	29.92	
	03/26/96		13.09	20.71	29.73	
	06/13/96		13.81	19.99	27.92	
	09/10/96		14.80	19.00	27.95	
	12/05/96		14.05	19.75	27.96	
	03/10/97		13.40	20.40	27.98	
	06/12/97		14.31	19.49	27.95	
	08/19/97		13.85	19.95	27.94	
	12/13/97		13.92	19.88	27.93	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-9	12/21/95	32.56	13.76	18.80	—	
	03/07/95		12.79	19.77	24.71	
	06/08/95		12.96	19.60	24.70	
	09/22/95		13.73	18.83	24.72	
	12/27/95		13.53	19.03	24.71	
	03/26/96		12.27	20.29	24.70	
	06/13/96		12.84	19.72	24.53	
	09/10/96		13.49	19.07	24.58	
	12/05/96		13.18	19.38	24.60	
	03/10/97		12.25	20.31	24.66	
	06/12/97		12.70	19.86	24.66	
	08/19/97		17.89	14.67	24.68	
	12/13/97		15.79	16.77	24.68	

NOTES: 1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-1	03/30/92	27,000		630	550	540	1,900
	07/01/92	55,000		840	1,000	830	3,600
	09/30/92	6,400		150	95	120	470
	11/19/92	1,300		90	11	50	87
	02/03/93	53,000		750	560	950	5,700
	05/25/93	9,400		200	86	470	1,500
	09/22/93	41,000		1,000	510	850	1,100
	12/21/93	41,000		1,000	490	2,700	13,000
	03/18/94	9,500		320	160	830	2,900
	06/15/94	8,000		310	80	990	2,300
	09/14/94	3,600		130	31	390	630
	12/19/94	17,000		350	150	1,500	5,200
	03/07/95	12,000		180	62	1,200	3,200
	06/08/95	6,300		76	8.0	560	860
	09/22/95	12,000		140	55	1,500	2,500
	12/27/95	3,900		60	13	480	870
	03/26/96	6,400		42	4.9	560	600
	06/13/96	9,600	<50	86	39	1,100	1,700
	09/10/96	16,000	<50	65	35	1,500	2,700
	12/05/96	6,400	<25	25	11	570	930
	03/10/97	15,000	<50	42	<5.0	1,400	1,500
	06/12/97	16,000	<100	33	34	1,100	1,700
	08/19/97	17,000	<100	47	14	1,300	2,200
	12/13/97	5,800	<100	20	35	360	470
MW-2	03/30/92	52,000		2,300	1,700	940	3,300
	07/01/92	130,000		3,500	2,900	1,900	7,900
	09/30/92	24,000		890	350	500	1,700
	11/19/92	32,000		1,900	1,700	870	3,400
	02/03/93	64,000		1,900	2,200	860	4,100
	05/25/93	34,000		3,300	1,500	1,300	5,900
	09/22/93	8,000		640	150	270	2,000
	12/21/93	18,000		1,500	410	1,300	5,000
	03/18/94	14,000		1,600	790	1,100	3,700
	06/15/94	13,000		1,600	580	1,200	4,100
	09/14/94	20,000		1,600	560	1,800	6,400
	12/19/94	19,000		1,700	750	1,600	5,800
	03/07/95	17,000		1,900	980	1,300	5,100
	06/08/95	19,000		2,100	740	1,500	4,900
	09/22/95	12,000		840	170	1,100	3,400
	12/27/95	16,000		1,100	540	1,400	5,100
	03/26/96	11,000		930	520	970	3,000
	06/13/96	11,000	1,200	1,800	1,400	1,500	4,500
	09/10/96	19,000	1,100	1,600	600	1,600	5,000
	12/05/96	12,000	180	650	180	1,000	2,800
	03/10/97	6,800	69	430	95	590	1,800
	06/12/97	20,000	100	610	140	1,500	4,300
	08/19/97	3,600	<100	250	10	250	250
	12/13/97	8,300	75	370	150	450	1,600

NOTES: < = Below indicated detection limit.
ND = Reported as "nondetect" by previous consultant.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-3	03/30/92	21,000		560	50	630	980
	07/01/92	13,000		150	20	22	300
	09/30/92	4,500		53	2.6	84	96
	11/19/92	4,700		73	6.2	140	120
	02/03/93	23,000		220	40	430	740
	05/25/93	9,900		120	26	370	520
	09/22/93	10,000		370	71	320	640
	12/21/93	7,800		130	8.5	430	380
	03/18/94	3,100		22	1.3	78	41
	06/15/94	1,700		8.6	1.4	22	15
	09/14/94	1,400		3.8	<1.3	13	18
	12/19/94	3,800		70	1.7	140	110
	03/07/95	2,200		9.4	<1.3	30	21
	06/08/95	1,700		5.8	<1.3	2.3	14
	09/22/95	1,200		<1.3	<1.3	1.3	<1.3
	12/27/95	1,300		2.4	<1.3	3.3	3.6
	03/26/96	1,200		4.3	<1.3	4.2	2.0
	06/13/96	1,300	28	5.1	<0.50	21	6.5
	09/10/96	810	<5.0	1.4	4.8	1.6	2.1
	12/05/96	590	<5.0	<0.50	3.2	0.79	0.52
	03/10/97	650	<5.0	0.73	3.8	2.4	1.6
	06/12/97	710	<5.0	<0.50	3.5	2.9	3.6
	08/19/97	1,400	13	2.2	0.58	11	34
	12/13/97	810	<5.0	0.96	<0.50	0.54	1.8
MW-4	03/30/92	76,000		8,000	4,400	730	2,500
	07/01/92	95,000		6,900	2,200	70	880
	09/30/92	58,000		7,100	1,500	650	2,700
	11/19/92	33,000		5,500	840	400	1,400
	02/03/93	130,000		8,200	6,700	940	4,400
	05/25/93	63,000		16,000	6,600	1,700	8,100
	09/22/93	23,000		6,900	940	150	3,000
	12/21/93	28,000		6,900	1,900	1,100	5,500
	03/18/94	58,000		17,000	6,300	2,500	10,000
	06/15/94	59,000		20,000	4,900	2,500	9,100
	09/14/94	73,000		22,000	6,800	2,700	10,000
	12/19/94	67,000		20,000	8,300	2,300	9,100
	03/07/95	57,000		19,000	7,900	2,200	8,700
	06/08/95	61,000		17,000	6,300	2,700	9,000
	09/22/95	37,000		12,000	2,200	1,400	3,500
	12/27/95	39,000		12,000	6,000	1,800	5,800
	03/26/96	31,000		9,600	3,700	2,300	6,200
	06/13/96	240	89	64	0.93	1.8	2.7
	09/10/96	91,000	2,900	13,000	20,000	3,200	16,000
	12/05/96	16,000	1,200	3,700	3,100	580	2,300
	03/10/97	630	530	91	<0.50	<0.50	0.80
	06/12/97	36,000	1,100	4,600	5,300	1,200	5,500
	08/19/97	12,000	390	420	88	61	320
	12/13/97	4,800	360	560	740	130	1,100

NOTES: < = Below indicated detection limit.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-5	03/30/92	29,000		2,600	980	390	1,100
	07/01/92	52,000		2,400	1,000	5,200	2,000
	09/30/92	32,000		1,800	780	370	1,700
	11/19/92	7,800		1,000	280	120	370
	02/03/93	74,000		3,500	3,000	780	3,200
	05/25/93	57,000		7,900	4,700	1,900	7,800
	09/22/93	52,000		7,600	2,400	1,200	8,800
	12/21/93	23,000		3,600	1,200	970	3,600
	03/18/94	47,000		8,200	5,000	1,400	6,100
	06/15/94	28,000		7,900	4,000	1,200	5,200
	09/14/94	32,000		8,000	5,100	1,400	5,600
	12/19/94	29,000		7,000	3,400	1,200	5,200
	03/07/95	36,000		9,800	5,800	1,800	7,800
	06/08/95	33,000		7,700	3,800	1,500	6,200
	09/22/95	39,000		9,500	3,800	1,900	7,000
	12/27/95	42,000		9,700	5,000	2,200	8,800
	03/26/96	37,000		9,800	4,900	2,300	8,800
	06/13/96	18,000	1,400	5,500	2,200	1,500	5,300
	09/10/96	22,000	860	5,600	1,400	1,100	3,500
	12/05/96	24,000	650	5,100	2,500	1,400	4,700
	03/10/97	28,000	760	6,800	2,700	1,300	5,700
	06/12/97	49,000	700	7,500	3,200	2,300	9,200
	08/19/97	24,000	1,600	4,700	990	1,400	4,500
	12/13/97	18,000	360	2,700	760	630	4,200
MW-6	03/30/92	73		2.1	1.1	ND	0.6
	07/01/92	ND		ND	ND	ND	ND
	09/30/92	ND		0.73	ND	ND	0.58
	11/19/92	96		1.5	<0.5	<0.5	0.9
	02/03/93	73		0.6	<0.5	<0.5	<0.5
	05/25/93	NS		NS	NS	NS	NS
	10/11/93	<50		<0.5	<0.5	<0.5	<0.5
	12/21/93	<50		<0.5	<0.5	<0.5	<0.5
	03/18/94	<50		<0.5	<0.5	<0.5	<0.5
	06/15/94	<50		<0.5	<0.5	<0.5	<0.5
	09/14/94	<50		<0.5	<0.5	<0.5	<0.5
	12/19/94	<50		<0.5	<0.5	<0.5	<0.5
	03/07/95	<50		<0.5	<0.5	<0.5	<0.5
	06/08/95	<50		<0.5	<0.5	<0.5	<0.5
	09/22/95	<50		<0.50	<0.50	<0.50	<0.50
	12/27/95	<50		<0.50	<0.50	<0.50	<0.50
	03/26/96	<50		<0.50	<0.50	<0.50	<0.50
	06/13/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/10/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/05/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/10/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	06/12/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	08/19/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/13/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50

NOTES: 1 = Below indicated detection limit.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-7	03/30/92	ND		ND	ND	ND	ND
	07/01/92	ND		ND	ND	ND	ND
	09/30/92	ND		ND	ND	ND	ND
	11/19/92	<50		<0.5	<0.5	<0.5	<0.5
	02/03/93	<50		<0.5	<0.5	<0.5	<0.5
	05/25/93	NS		NS	NS	NS	NS
	09/22/93	<50		0.51	0.82	<0.5	0.81
	12/21/93	<50		<0.5	<0.5	<0.5	<0.5
	03/18/94	<50		<0.5	<0.5	<0.5	<0.5
	06/15/94	<50		<0.5	<0.5	<0.5	<0.5
	09/14/94	<50		<0.5	<0.5	<0.5	<0.5
	12/19/94	<50		<0.5	<0.5	<0.5	<0.5
	03/07/95	<50		<0.5	<0.5	<0.5	<0.5
	06/08/95	<50		<0.5	<0.5	<0.5	<0.5
	09/22/95	<50		<0.50	<0.50	<0.50	<0.50
	12/27/95	<50		<0.50	<0.50	<0.50	<0.50
	03/26/96	<50		<0.50	<0.50	<0.50	<0.50
	06/13/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/10/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/05/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/07/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	06/12/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	08/19/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/13/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
MW-8	03/30/92	3,000		1,700	880	970	1,900
	07/01/92	72,000		1,800	550	520	2,200
	09/30/92	12,000		680	140	140	560
	11/19/92	9,600		530	310	130	560
	02/03/93	44,000		1,500	1,300	490	2,300
	05/25/93	7,400		580	160	170	480
	09/22/93	2,400		490	45	37	140
	12/21/93	1,400		240	7.5	<2.5	82
	03/18/94	8,600		1,600	680	470	1,900
	06/15/94	4,800		980	380	260	1,200
	09/14/94	6,600		1,200	280	330	1,100
	12/19/94	8,400		1,800	390	500	2,000
	03/07/95	7,400		1,400	370	440	2,000
	06/08/95	6,000		790	220	290	1,400
	09/22/95	4,100		750	93	230	860
	12/27/95	5,400		860	140	350	1,400
	03/26/96	1,700		180	27	100	370
	06/13/96	2,400	42	500	67	220	850
	09/10/96	7,000	<50	1,300	100	410	1,600
	12/05/96	6,300	<50	1,100	78	410	1,600
	03/07/97	6,500	<130	840	67	330	1,500
	06/12/97	7,500	<50	1,000	79	390	1,400
	08/19/97	1,100	<20	170	14	38	220
	12/13/97	4,100	24	300	29	190	860

NOTES: < = Below indicated detection limit.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #720
1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	MTBE'	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-9	12/20/94	16,000		2,500	1,400	690	2,300
	03/07/95	5,200		1,600	250	320	520
	06/08/95	4,900		1,000	98	300	200
	09/22/95	4,000		1,100	82	190	200
	12/27/95	2,300		960	100	200	250
	03/26/96	1,600		380	44	96	110
	06/13/96	1,800	750	540	71	140	180
	09/10/96	2,400	810	860	70	190	210
	12/05/96	5,300	960	2,100	420	380	720
	03/07/97	4,200	720	1,300	170	260	440
	06/12/97	11,000	1,000	2,500	490	560	1,300
	08/19/97	42,000	<1,000	7,700	3,500	2,000	8,300
	12/13/97	13,000	710	1,300	280	960	3,100

NOTES: < = Below indicated detection limit

TABLE 1

GROUNDWATER ELEVATIONS

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
Groundwater Monitoring Well MW-1:		Elevation of Top of Casing = 29.89
June 23, 1987	14.79	15.10
July 06, 1987	14.93	14.96
August 06, 1987	14.22	15.67
November 04, 1987	15.74	14.15
February 02, 1988	13.99	15.90
May 02, 1988	14.99	14.90
November 21, 1988	13.03	16.86
February 14, 1989	15.86	14.03
May 02, 1989	14.77	15.12
August 10, 1989	16.35	13.54
November 08, 1989	16.46	13.43
February 20, 1990	15.58	14.31
May 18, 1990	16.40	13.49
September 15, 1990	16.83	13.06
November 26, 1990	17.16	12.73
February 07, 1991	16.43	13.46
May 14, 1991	14.93	14.96
August 16, 1991	16.35	13.54
Groundwater Monitoring Well MW-1:		New Elevation of Top of Casing = 33.10 fee
December 24, 1991	17.20	15.90
March 30, 1992	13.58	19.52
Groundwater Monitoring Well MW-2:		Elevation of Top of Casing = 29.57 fee
June 23, 1987	14.51	15.06

TABLE 1

GROUNDWATER ELEVATIONS

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
July 06, 1987	14.63	14.94
August 06, 1987	14.95	14.62
November 04, 1987	15.45	14.12
February 02, 1988	13.74	15.83
May 02, 1988	14.63	14.94
November 21, 1988	12.99	16.58
February 14, 1989	15.66	13.91
May 02, 1989	14.56	15.01
August 10, 1989	16.22	13.35
November 08, 1989	16.19	13.38
February 20, 1990	15.34	14.23
May 18, 1990	16.20	13.37
September 15, 1990	16.42	13.05
November 26, 1990	16.83	12.74
February 07, 1991	16.13	13.44
May 14, 1991	14.62	14.95
August 16, 1991	16.00	13.57
Groundwater Monitoring Well MW-2:	New Elevation of Top of Casing = 32.80 fee	
December 24, 1991	16.90	15.90
March 30, 1992	13.32	19.48
Groundwater Monitoring Well MW-3:	Elevation of Top of Casing = 29.13 fee	
June 23, 1987	14.13	15.00
July 06, 1987	14.24	14.89
August 06, 1987	14.52	14.61
November 04, 19887	15.09	14.04
February 02, 1988	13.37	15.76

TABLE 1

GROUNDWATER ELEVATIONS

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
May 02, 1988	14.22	14.91
November 21, 1988	13.01	16.12
February 14, 1989	15.22	13.91
May 02, 1989	14.16	14.97
August 10, 1989	15.61	13.52
November 08, 1989	15.75	13.38
February 20, 1990	14.95	14.18
May 18, 1990	15.79	13.34
September 15, 1990	16.07	13.06
November 26, 1990	16.36	12.77
February 07, 1991	15.74	13.39
May 14, 1991	14.19	14.94
August 16, 1991	15.55	13.58
Groundwater Monitoring Well MW-3:	New Elevation of Top of Casing = 32.30 fe	
December 24, 1991	16.40	15.90
March 30, 1992	12.96	19.34
Groundwater Monitoring Well MW-4:	Elevation of Top of Casing = 29.72 fe	
June 23, 1987	14.77	14.95
July 06, 1987	14.91	14.81
August 06, 1987	15.19	14.53
November 04, 1987	15.72	14.00
February 02, 1088	14.03	15.69
May 02, 1988	14.89	14.83
November 21, 1988	12.88	16.84
February 14, 1989	15.83	13.89
May 02, 1989	14.75	14.97

TABLE 1

GROUNDWATER ELEVATIONS

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
August 10, 1989	16.30	13.42
November 08, 1989	16.29	13.43
February 20, 1990	15.62	14.10
May 18, 1990	16.34	13.38
September 15, 1990	16.79	12.93
November 26, 1990	17.08	12.64
February 07, 1991	16.37	13.35
May 14, 1991	14.87	14.85
August 16, 1991	16.25	13.47
Groundwater Monitoring Well MW-4:	New Elevation of Top of Casing = 32.90 fe	
December 24, 1991	17.10	15.80
March 30, 1992	13.60	19.30
Groundwater Monitoring Well MW-5:	Elevation of Top of Casing = 29.55 fe	
June 23, 1987	14.63	14.92
July 06, 1987	14.79	14.76
August 06, 1987	15.07	14.48
November 04, 1987	15.61	13.94
February 02, 1988	13.84	15.71
May 02, 1988	14.77	14.78
November 21, 1988	12.84	16.71
February 14, 1989	15.72	13.83
May 02, 1989	14.68	14.87
August 10, 1989	16.03	13.52
November 08, 1989	16.33	13.22
February 20, 1990	15.44	14.11

TABLE 1

GROUNDWATER ELEVATIONS

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
May 18, 1990	16.22	13.33
September 15, 1990	16.65	12.90
November 26, 1990	16.95	12.60
February 07, 1991	16.20	13.35
May 14, 1991	14.72	14.38
August 16, 1991	16.10	13.45
Groundwater Monitoring Well MW-5:	New Elevation of Top of Casing = 32.70 fe	
December 24, 1991	16.92	15.78
March 30, 1992	13.48	19.22
Groundwater Monitoring Well MW-6:	Elevation of Top of Casing = 30.40 fe	
December 24, 1991	14.12	16.28
March 30, 1992	12.62	17.78
Groundwater Monitoring Well MW-7:	Elevation of Top of Casing = 31.20 fee	
December 24, 1991	15.70	15.50
March 30, 1992	12.34	18.86
Groundwater Monitoring Well MW-8:	Elevation of Top of Casing = 33.80 fee	
December 24, 1991	18.00	15.80
March 30, 1992	14.66	19.14

Notes:
1) All elevations surveyed to an arbitrary datum
2) Elevations and depths are given in feet
3) Groundwater Technology, Inc., made measurements until February 1989
4) Du Pont Environmental Services collected samples from February 1989 through February 1991
5) Environmental Geotechnical Consultants, Inc., made measurements beginning in May 1991

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-G (µg/L)	Comments
MW-1	Apr. 16, 1987	2,313	3,770	664.1	3,331	17,276	
	June 23, 1987	1,887	2,141	466.7	1,652	26,027	
	July 06, 1987	778.2	943.7	133.2	422.1	3,938	
	Aug. 06, 1987	1,270	1,576	288.7	873.7	6,079	
	Nov. 04, 1987	1,700	4,000	720	2,200	15,000	
	Feb. 02, 1988	1,500	1,700	230	740	14,000	
	May 02, 1988	3,500	700	4,900	2,700	33,000	
	Nov. 21, 1988	2,200	560	2,800	2,200	15,000	
	Feb. 14, 1989	1,700	1,700	340	1,500	12,000	Odor
	May 02, 1989	1,500	2,400	510	2,400	18,000	Odor, Slight Sheen
	Aug. 10, 1989	1,400	1,500	360	1,600	10,000	Odor
	Nov. 08, 1989	920	470	190	360	7,200	Odor
	Feb. 20, 1990	810	540	270	800	3,300	
	May 18, 1990	1,900	500	560	1,600	5,600	
	Sep. 15, 1990	320	110	150	520	5,200	Odor
	Nov. 26, 1990	370	59	150	370	3,000	Odor
	Feb. 07, 1991	750	570	480	1,800	14,000	
	May 14, 1991	1,000	1,400	600	2,500	41,000	
	Aug. 16, 1991	310	210	150	480	4,000	Odor
	Dec. 24, 1991	530	95	310	680	11,000	Moderate Odor
	Mar. 30, 1992	630	550	540	1,900	27,000	Odor
MW-2	Apr. 16, 1987	3,131	4,239	1,067	4,608	17,920	
	June 23, 1987	2,188	2,622	1,047	4,699	49,354	
	July 06, 1987	1,575	1,729	457	1,702	8,676	
	Aug. 06, 1987	2,623	3,722	702	2,882	14,376	
	Nov. 04, 1987	2,200	4,100	900	3,500	19,000	

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-G (µg/L)	Comments
MW-2	Feb. 02, 1988	6,200	6,500	1,000	4,000	54,000	
	May 02, 1988	6,800	1,300	7,100	5,400	53,000	
	Nov. 21, 1988	–	–	–	–	–	Free product
	Feb. 14, 1989	6,900	4,300	1,100	5,200	48,000	Film of free produc
	May 02, 1989	6,100	8,800	2,100	16,000	111,000	Odor, sheen
	Aug. 10, 1989	4,200	2,900	1,000	5,800	39,000	Odor, sheen
	Nov. 08, 1989	3,700	1,500	740	2,200	45,000	Odor, heavy sheen
	Feb. 20, 1990	5,000	8,200	1,600	11,000	60,000	
	May 18, 1990	6,200	1,900	1,300	610	19,000	
	Sep. 15, 1990	1,400	820	660	3,000	27,000	Odor, sheen
	Nov. 26, 1990	1,100	880	700	3,800	28,000	Odor, sheen
	Feb. 07, 1991	2,100	1,900	1,300	6,200	63,000	Odor, sheen
	May 14, 1991	2,200	2,700	1,100	5,900	100,000	Moderate odor Slight sheen
	Aug. 16, 1991	1800	950	990	3900	32,000	Slight odor, sheen
	Dec. 24, 1991	1,100	550	750	2,700	30,000	Odor, sheen
	Mar. 30, 1992	2,300	1,700	940	3,300	52,000	Odor, sheen
MW-3	Apr. 16, 1987	1,371	2,438	472.3	2,617	9,967	
	June 23, 1987	646.2	822.9	320.9	1,280	16,824	
	July 06, 1987	340.3	384.2	116.5	420.2	3,395	
	Aug. 06, 1987	441.9	436.3	118.2	417.3	3,107	
	Nov. 04, 1987	320	280	74	250	2,600	
	Feb. 02, 1988	2,200	2,300	500	2,300	44,000	
	May 02, 1988	1,600	450	840	1,700	14,000	
	Nov. 21, 1988	1,200	220	560	810	8,100	
	Feb. 14, 1989	1,500	220	220	500	5,500	Odor

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-G (µg/L)	Comments
	Aug. 10, 1989	750	10	190	210	2,700	Odor
	Nov. 08, 1989	370	90	ND	58	2,400	Odor
	Feb. 20, 1990	1,200	810	77	460	3,700	
	May 18, 1990	980	ND	330	250	2,300	
	Sep. 15, 1990	240	36	150	230	4,700	Odor
	Nov. 26, 1990	170	8.4	86	120	1,400	Odor
	Feb. 07, 1991	220	20	120	230	2,900	
	May 14, 1991	370	39	220	820	15,000	
	Aug. 16, 1991	480	50	360	680	7,200	Slight Odor
	Dec. 24, 1991	150	20	100	140	4,900	Slight Odor
	Mar. 30, 1992	560	50	630	980	21,000	Odor
MW-4	Apr. 16, 1987	5,896	3,797	893.9	4,106	19,309	
	June 23, 1987	4,030	1,842	850.0	3,254	31,429	
	July 06, 1987	2,710	1,247	308.2	1,312	8,117	
	Aug. 06, 1987	3,992	1,589	447.9	1,611	10,464	
	Nov. 04, 1987	9,500	17,000	2,800	11,000	55,000	
	Feb. 02, 1988	11,000	7,400	1,400	6,200	47,000	
	May 02, 1988	9,200	1,300	6,100	6,400	58,000	
	Nov. 21, 1988	5,700	1,600	3,100	7,600	48,000	
	Feb. 14, 1989	8,700	2,500	900	3,800	29,000	Odor & sheen
	May 02, 1989	4,800	5,600	1,800	8,800	69,000	Odor, slight sheen
	Aug. 10, 1989	15,000	6,600	1,800	12,000	67,000	Odor, slight sheen
	Nov. 08, 1989	11,000	3,200	1,100	4,400	71,000	Odor, slight sheen
	Feb. 20, 1990	8,100	4,500	930	3,500	19,000	
	May 18, 1990	45,000	12,000	5,000	27,000	100,000	
	Sep. 15, 1990	4,200	1,200	740	3,000	38,000	

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-G (µg/L)	Comments
MW-4	Nov. 26, 1990	2,800	650	810	2,600	19,000	Odor
	Feb. 07, 1991	4,600	1,100	1,600	4,600	41,000	Odor, sheen
	May 14, 1991	7,300	830	3,900	3,600	100,000	Slight odor, sheen
	Aug. 16, 1991	8,000	2,500	1,100	4,000	45,000	Strong odor, sheen
	Dec. 24, 1991	6,000	1,200	1,100	3,700	79,000	Odor, sheen
	Mar. 30, 1992	8,000	4,400	730	2,500	76,000	Odor, sheen
MW-5	Apr. 16 1987	2,267	921.2	3,277	4,536	17,733	
	June 23, 1987	2,239	516.8	953.9	1,587	19,555	
	July 06, 1987	1,335	313.7	799.2	923.9	5,631	
	Aug. 06, 1987	1,890	881.2	576.8	93.4	6,450	
	Nov. 04, 1987	1,300	500	270	640	4,600	
	Feb. 02, 1988	3,100	1,500	550	1,400	24,000	
	May 02, 1988	4,400	490	1,200	1,500	17,000	
	Nov. 21, 1988	5,600	590	870	2,200	19,000	
	Feb. 14, 1989	4,300	810	410	1,300	13,000	Odor
	May 02, 1989	2,900	1,500	690	3,200	24,000	Odor, slight sheen
	Aug. 10, 1989	6,700	2,300	860	4,700	36,000	Odor, slight sheen
	Nov. 08, 1989	5,300	860	460	600	30,000	Odor
	Feb. 20, 1990	1,700	220	120	370	3,400	
	May 18, 1990	18,000	2,000	1,500	5,600	24,000	
	Sep. 15, 1990	2,600	2,200	1,000	4,900	42,000	Odor, sheen
	Nov. 26, 1990	1,900	280	260	800	8,500	Odor, sheen

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-G (µg/L)	Comments
	Feb. 07, 1991	1,500	1,200	610	2,700	24,000	Odor
	May 14, 1991	3,800	4,400	1,400	6,400	120,000	Odor, sheen
	Aug. 16, 1991	4,200	1,900	760	2,900	29,000	Moderate odor, sheen
	Dec. 24, 1991	3,900	1,500	880	3,200	63,000	Odor, sheen
	Mar. 30, 1992	2,600	980	390	1,100	29,000	Odor, sheen
MW-6	Dec. 24, 1991	ND	ND	ND	ND	79	
	Mar. 30, 1992	2.1	1.1	ND	0.6	73	
MW-7	Dec. 24, 1991	ND	ND	ND	ND	ND	
	Mar. 30, 1992	ND	ND	ND	ND	ND	
MW-8	Dec. 24, 1991	1,700	2,400	1,200	6,100	81,000	Odor, sheen
	Mar. 30, 1992	1,700	880	970	1,900	3,000	Odor, sheen

Notes:
1) TPH-G = Total Petroleum Hydrocarbons as gasoline
2) Odor refers to petroleum hydrocarbon odor
3) All results are presented in parts per billion
4) Groundwater Technology, Inc., collected samples prior to February 1989
5) Du Pont Environmental Services collected samples from February 1989 through February 1991
6) Environmental Geotechnical Consultants, Inc. collected samples beginning in May 1991
7) ND = Non Detect
8) See analytical results for detection limits (Appendix B)

ENCLOSURE C

Ground Water Monitoring Analytical Results

KIFF ANALYTICAL LLC

Report Number : 12805
Date : 12/08/98

Richard Munsch
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

RECEIVED
DEC 10 1998
By

Subject : 9 Water Samples
Project Name : Beacon 720
Project Number : 94-720-01

Dear Mr. Munsch,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 12805
Date : 12/08/98

Subject : 9 Water Samples
Project Name : Beacon 720
Project Number : 94-720-01

Case Narrative

The quantitation of TPH as Gasoline for samples MW-4 and MW-5 does not include the compound Methyl-t-butyl ether.

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 916-297-4800

KIFF ANALYTICAL LLC

Report Number : 12805

Date : 12/08/98

Project Name : **Beacon 720**

Project Number : **94-720-01**

Sample : **MW-1** Matrix : Water

Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.75**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Total Xylenes	**3.0**	0.50	ug/L	EPA 8020	11/26/98
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**120**	50	ug/L	M EPA 8015	11/26/98
aaa-Trifluorotoluene (8020 Surrogate)	104		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	93.8		% Recovery	M EPA 8015	11/26/98

Sample : **MW-2** Matrix : Water

Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**16**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**0.72**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Total Xylenes	**4.3**	0.50	ug/L	EPA 8020	11/26/98
Methyl-t-butyl ether	**7.4**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**180**	50	ug/L	M EPA 8015	11/26/98
aaa-Trifluorotoluene (8020 Surrogate)	107		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	90.3		% Recovery	M EPA 8015	11/26/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 12805
Date : 12/08/98

Project Name : **Beacon 720**
Project Number : **94-720-01**

Sample : **MW-3** Matrix : Water
Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**5.3**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**0.72**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**0.86**	0.50	ug/L	EPA 8020	11/26/98
Total Xylenes	**4.2**	0.50	ug/L	EPA 8020	11/26/98
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**440**	50	ug/L	M EPA 8015	11/26/98
aaa-Trifluorotoluene (8020 Surrogate)	97.8		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	104		% Recovery	M EPA 8015	11/26/98

Sample : **MW-4** Matrix : Water
Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Total Xylenes	**0.61**	0.50	ug/L	EPA 8020	11/26/98
Methyl-t-butyl ether	**17**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	11/26/98
aaa-Trifluorotoluene (8020 Surrogate)	106		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	90.2		% Recovery	M EPA 8015	11/26/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 12805

Date : 12/08/98

Project Name : **Beacon 720**

Project Number : **94-720-01**

Sample : **MW-5** Matrix : Water

Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1.4**	0.50	ug/L	EPA 8020	11/28/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	11/28/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	11/28/98
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8020	11/28/98
Methyl-t-butyl ether	**39**	5.0	ug/L	EPA 8020	11/28/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	11/28/98
aaa-Trifluorotoluene (8020 Surrogate)	104		% Recovery	EPA 8020	11/28/98
aaa-Trifluorotoluene (Gasoline Surrogate)	89.4		% Recovery	M EPA 8015	11/28/98

Sample : **MW-6** Matrix : Water

Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	11/26/98
aaa-Trifluorotoluene (8020 Surrogate)	105		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	88.5		% Recovery	M EPA 8015	11/26/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 12805
Date : 12/08/98

Project Name : **Beacon 720**
Project Number : **94-720-01**

Sample : **MW-7** Matrix : Water
Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8020	11/26/98
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	11/26/98
aaa-Trifluorotoluene (8020 Surrogate)	106		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	89.9		% Recovery	M EPA 8015	11/26/98

Sample : **MW-8** Matrix : Water
Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**510**	0.50	ug/L	EPA 8020	11/26/98
Toluene	**24**	0.50	ug/L	EPA 8020	11/26/98
Ethylbenzene	**1200**	10	ug/L	EPA 8020	11/30/98
Total Xylenes	**2800**	10	ug/L	EPA 8020	11/30/98
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8020	11/26/98
TPH as Gasoline	**14000**	1000	ug/L	M EPA 8015	11/30/98
aaa-Trifluorotoluene (8020 Surrogate)	111		% Recovery	EPA 8020	11/26/98
aaa-Trifluorotoluene (Gasoline Surrogate)	94.6		% Recovery	M EPA 8015	11/26/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 12805
Date : 12/08/98

Project Name : **Beacon 720**
Project Number : **94-720-01**

Sample : **MW-9** Matrix : Water
Sample Date :11/19/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	7.7	0.50	ug/L	EPA 8020	11/28/98
Toluene	< 0.50	0.50	ug/L	EPA 8020	11/28/98
Ethylbenzene	10	0.50	ug/L	EPA 8020	11/28/98
Total Xylenes	22	0.50	ug/L	EPA 8020	11/28/98
Methyl-t-butyl ether	67	5.0	ug/L	EPA 8020	11/28/98
TPH as Gasoline	280	50	ug/L	M EPA 8015	11/28/98
aaa-Trifluorotoluene (8020 Surrogate)	102		% Recovery	EPA 8020	11/28/98
aaa-Trifluorotoluene (Gasoline Surrogate)	89.8		% Recovery	M EPA 8015	11/28/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

12805

Beacon Station No.	Sampler (Print Name)			ANALYSES									Date	Form No.
720	Hal Hansen												11-19-98	1 of 2
Project No.	Sampler (Signature)												Standard TAT	
94.720-01	Hal Hansen													
Project Location	Affiliation													
San Leandro	Douglas Env.													
Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)						No. of Containers	REMARKS	
MW-1	11-19-98	1039	-01	X	X							2		
MW-2		1021	-02											
MW-3		1106	-03											
MW-4		1202	-04											
MW-5		1115	-05											
MW-6		1051	-06											
MW-7		1027	-07											
MW-8		1055	-08											

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen Douglas Env.	11/23	1000			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			Nadine Lee	11/23	1000

Report To: Richard Mirosch

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Terry Fox

WHITE: Return to Client with Report YELLOW: Laboratory Copy PINK: Originator Copy

32-8003 1/90

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

12805

Beacon Station No.	Sampler (Print Name)	ANALYSES									Date	Form No.
~~9~~ 720 ~~1~~	Hal Hansen										11-19-98	2 of 2
Project No.	**Sampler (Signature)**										Standard TAT	
94.720-01	Hal Hansen											
Project Location	**Affiliation**											
San Leandro	Douba Env.											
Sample No./Identification	**Date**	**Time**	**Lab No.**	BTEX	TPH (gasoline)	TPH (diesel)					No. of Containers	REMARKS
MW-9	11-19-98	1146	-09	X	X						2	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen Douba Env.	11/23	1000			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			Nadine Lu	11/23	1600

Report To: Richard Mersch

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Terry Fox

WHITE: Return to Client with Report YELLOW: Laboratory Copy PINK: Originator Copy

32-8003 1/00

ENCLOSURE D

SVE System Analytical Reports

KIFF ANALYTICAL LLC

Report Number : 12543
Date : 10/29/98

Richard Munsch
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Subject : 3 Air Samples
Project Name : Beacon 720
Project Number : D095-971

Dear Mr. Munsch,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 12543
Date : 10/29/98

Project Name : **Beacon 720**
Project Number : **D095-971**

Sample : **EFFLUENT AIR** Matrix : Air
Sample Date :10/20/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.050**	0.050	Molar ppm	EPA 8020	10/23/98
Toluene	**< 0.050**	0.050	Molar ppm	EPA 8020	10/23/98
Ethylbenzene	**< 0.050**	0.050	Molar ppm	EPA 8020	10/23/98
Total Xylenes	**< 0.050**	0.050	Molar ppm	EPA 8020	10/23/98
TPH as Gasoline	**< 5.0**	5.0	Molar ppm	M EPA 8015	10/23/98
aaa-Trifluorotoluene (8020 Surrogate)	103		% Recovery	EPA 8020	10/23/98
aaa-Trifluorotoluene (Gasoline Surrogate)	90.1		% Recovery	M EPA 8015	10/23/98

Sample : **MID AIR** Matrix : Air
Sample Date :10/20/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.79**	0.050	Molar ppm	EPA 8020	10/23/98
Toluene	**0.37**	0.050	Molar ppm	EPA 8020	10/23/98
Ethylbenzene	**< 0.050**	0.050	Molar ppm	EPA 8020	10/23/98
Total Xylenes	**0.088**	0.050	Molar ppm	EPA 8020	10/23/98
TPH as Gasoline	**48**	5.0	Molar ppm	M EPA 8015	10/23/98
aaa-Trifluorotoluene (8020 Surrogate)	106		% Recovery	EPA 8020	10/23/98
aaa-Trifluorotoluene (Gasoline Surrogate)	82.4		% Recovery	M EPA 8015	10/23/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 12543

Date : 10/29/98

Project Name : **Beacon 720**

Project Number : **D095-971**

Sample : **INFLUENT AIR** Matrix : Air

Sample Date :10/20/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.63**	0.050	Molar ppm	EPA 8020	10/23/98
Toluene	**0.19**	0.050	Molar ppm	EPA 8020	10/23/98
Ethylbenzene	**0.062**	0.050	Molar ppm	EPA 8020	10/23/98
Total Xylenes	**0.17**	0.050	Molar ppm	EPA 8020	10/23/98
TPH as Gasoline	**28**	5.0	Molar ppm	M EPA 8015	10/23/98
aaa-Trifluorotoluene (8020 Surrogate)	92.6		% Recovery	EPA 8020	10/23/98
aaa-Trifluorotoluene (Gasoline Surrogate)	90.7		% Recovery	M EPA 8015	10/23/98

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Ultramar Inc.
CHAIN OF CUSTODY REPORT 12543

BEACON

Beacon Station No.	Sampler (Print Name)			ANALYSES									Date	Form No.
720	Martin Morgan												10/20/98	1 of 1
Project No.	Sampler (Signature)												Kiff Analytical	
D095-971													530 297 4800	
Project Location	Affiliation													
San Leandro, CA	Delta Env.												Standard TAT	
Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)						No. of Containers	REMARKS	
effluent Air	10/20/98	0902	-01	X	X							1		
Mid Air	10/20/98	0904	-02	X	X							1		
Influent Air	10/20/98	0906	-03	X	X							1		

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Delta	10/20/98	2:26pm			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			Mary Cobrt / Kiff	10/20/98	2:26pm

Report To: Richard Munsch
916 638 2085

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Terry Fox

WHITE: Return to Client with Report YELLOW: Laboratory Copy PINK: Originator Copy

32-8003 1/90