ALCO
HAZMAT

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Ultramar

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

Telecopy:
209-584-6113 Credit & Wholesale
209-583-3330 Administrative
209-583-3302 Information Services
209-583-3358 Accounting

November 17, 1993

Ms. Juliet Shin
Hazardous Materials Program
Department of Environmental Health
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94612

SUBJECT: BEACON STATION NO. 721, 44 LEWELLING BLVD., SAN LORENZO, CALIFORNIA

Dear Ms. Shin:

Enclosed is a copy of the ground-water monitoring report for the second quarter 1993 for the above-referenced Ultramar facility. Also included is a copy of the Quarterly Status Report which describes the work completed this quarter and the work anticipated to be completed next quarter.

The gas line for the vapor extraction unit is presently being installed and the Authority to Construct Permit has been recently approved. It is anticipated that the source test will be performed this month.

Please call if you have any questions regarding this project.

Sincerely,

ULTRAMAR INC.

Terrence A. Fox
Senior Project Manager
Marketing Environmental Department

Enclosures

cc w/encl: Mr. Steven Ritchie, San Francisco Bay Region, RWQCB

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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: November 17, 1993
QUARTER ENDING: September 30, 1993

SERVICE STATION NO.: 721
ADDRESS: 44 Lewelling Blvd., San Lorenzo, CA
COUNTY: Alameda

ULTRAMAR CONTACT: Terrence A. Fox **TEL. NO:** 209-583-5545

BACKGROUND:

In April 1987, three underground gasoline storage tanks were excavated and removed. Samples collected from beneath the former tanks indicated that hydrocarbons were present in the soil. In May 1987, three monitoring wells (MW-1 through MW-3) were installed by Conoco. Hydrocarbons were detected in soil and ground-water samples collected from the wells. In December 1988, four additional wells (MW-4 through MW-7) were installed. Dissolved-phase hydrocarbons were detected in the new wells. In September 1989, two additional wells (MW-8 and MW-9) were installed. The site has been on a monitoring program since May 1987.

In July 1990, the site was purchased by Ultramar Inc. from Conoco. The monitoring program has continued. Submitted work plan for additional assessment on March 14, 1991.

In October 1991, drilled two additional offsite wells (MW-10 and MW-11) southwest of the site and one onsite recovery well (RW-1). In November 1991, performed ground-water pump test and vapor extraction test.

In April 1992, Ultramar submitted an Interim Remediation Plan. The plan was approved in June 1992.

In March 1993, installed the subsurface piping for the remediation system. Completed installation of ground-water remediation system in April 1993. Began operation in June 1993.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on September 22, 1993. Continued to operate the ground-water extraction system. Continued attempts to acquire the Authority to Construct Permit for the vapor extraction system.

RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that free product was not detected in any well this quarter. Benzene concentrations remained not detected in wells MW-2, MW-4, MW-8, MW-9, and MW-11. The benzene concentration increased in MW-1 from 2,400 ppb to 3,000 ppb, in MW-3 from 3,200 ppb to 12,000 ppb, in MW-5 from not detected to 0.66 ppb, in MW-6 from not detected to 2.2 ppb, in MW-7 from 20 ppb to 71 ppb, in MW-10 from 21 ppb to 22 ppb, and in RW-1 from 30 ppb to 800 ppb.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY	ESTIMATED COMPLETION DATE
Continue quarterly ground-water monitoring.	Ongoing
Continue operation of ground-water remediation system.	Ongoing
Begin operation of Vapor extraction system.	November 30, 1993

Delta
Environmental
Consultants, Inc.

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

November 9, 1993

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

Subject: *Quarterly Ground Water Monitoring Report, Third Quarter 1993, and Status of Remediation System, through September, 1993*
Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California
Delta Project No. 40-93-936

Dear Mr. Fox:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Ultramar Inc. (Ultramar) to conduct quarterly monitoring at the above-mentioned site. The monitoring is intended to evaluate the presence and concentration of petroleum hydrocarbon constituents in ground water in the vicinity of the subject site and evaluate the effectiveness of the remediation system currently in operation. This letter report summarizes the results of ground water monitoring and sampling activities performed at the site on September 22, 1993, and the remediation system status through September 1993. The site location is shown in Figure 1, and site features are illustrated in Figure 2.

Quarterly ground water monitoring conducted on September 22, 1993, included measurement of depth to water in six on-site monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5 and MW-6), five off-site monitoring wells (MW-7, MW-8, MW-9, MW-10 and MW-11), and one ground water recovery well (RW-1), subjective analyses of water samples to evaluate the presence of free petroleum product or product sheen in the monitoring wells, and collection of ground water samples for chemical analysis. Methods used in the performance of these tasks are described in Enclosure A.

Water Table Elevation Measurements, Flow Direction, and Hydraulic Gradient

Depth to ground water in the monitoring wells was measured on September 22, 1993. Depth to ground water ranged from 15.92 (MW-7) to 19.63 (MW-11) feet below the top of well casings. The water table elevation measurements indicate an inferred direction of ground water flow beneath the site towards the west with recovery well RW-1 affecting the water level locally due to pumping activities discussed later in this report. Ground water levels decreased approximately 1.5 feet from previous quarter monitoring activities. The approximate hydraulic gradient across the site ranges from 0.01 to 0.001. Ground water table measurements recorded at the site on September 22, 1993, are compiled in Table 1, along with measurements recorded since February 1992. A water table contour map prepared from the September 1993 data is included as Figure 3.

Free Petroleum Product or Product Sheen

The presence of separate phase petroleum product or product sheen in the monitoring wells was evaluated using procedures described in Enclosure A. On September 22, 1993, separate phase petroleum product or product sheen was not observed in any of the wells at the site (Table 1).

Ground Water Analytical Results

Ground water samples were collected from monitoring wells MW-1 through MW-11 and ground water recovery well RW-1 on September 22, 1993. Sampling procedures are described in Enclosure A, and copies of the sampling information data sheets are included in Enclosure B.

The ground water samples were submitted for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH) as gasoline. Analytical results indicate no detectable TPH as gasoline or BTEX concentrations in monitoring wells MW-8 and MW-9. Benzene was not detected in monitoring wells MW-2, MW-4, MW-8, MW-9, and MW-11. Detectable benzene concentrations ranged from 0.66 parts per billion (ppb) (MW-5) to 12,000 ppb (MW-3). A comparison of the analytical results for the samples collected in June and September 1993 indicate that the benzene concentrations increased in MW-1 (2,400 to 3,000 ppb), MW-3 (3,200 to 12,000 ppb), MW-5 (<0.5 to 0.66 ppb), MW-6 (<0.5 to 2.2 ppb), MW-7 (20 to 71 ppb), MW-10 (21 to 22 ppb), and RW-1 (30 to 800 ppb). Results of the chemical analyses for the September 22, 1993, sampling event are summarized in Table 2, and copies of the certified analytical reports are included in Enclosure C. A benzene isoconcentration contour map is included as Figure 4.

Status of Remediation System

Delta was authorized to perform operation and maintenance on the ground water remediation system at the site in April 1993. The system pumps ground water from recovery well RW-1 and is designed to remove petroleum hydrocarbon constituents through treatment in an air stripper. Treated ground water is discharged to the Oro Loma Sanitary District.

The ground water treatment system was not operational during the period of August 14, 1993, through September 21, 1993, due to change out of the air stripper tower packing replacement. The ground water treatment system was restarted on September 22, 1993. The ground water treatment system was restarted just prior to sampling activities, and therefore, the cone of depression illustrated in Figure 3 is not indicative of steady state conditions.

The volume of ground water treated by the remediation system through September 29, 1993, is 255,241 gallons, shown in Table 3.

Remediation System Analytical Results

In order to evaluate the effectiveness of the remediation system, water samples were collected at the sewer discharge location. Water samples were collected on October 1, 1993, and were submitted for analysis of BTEX and TPH as gasoline. Analytical results indicate that BTEX and TPH as gasoline concentrations were below the allowable discharge concentrations for the Oro Loma Sanitary Sewer

District. Results of the chemical analysis are summarized in Table 4, and copies of certified analytical reports are included in Enclosure D.

Future Work

Delta will continue to monitor the operation of the remediation system and will perform monthly sampling of the remediation system effluent. The next quarterly sampling of ground water monitoring wells is scheduled for December 1993.

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.

It is recommended that copies of this letter report be forwarded to:

Mr. Steven Ritchie
California Regional Water Quality Control Board,
Region 2
2101 Webster Street
Oakland, California 94612

Ms. Juliet Shin
Alameda County Environmental
Health Dept.
470 27th Street, Room 322
Oakland, California 94612

If you have any questions, please call me at (916) 638-2085.

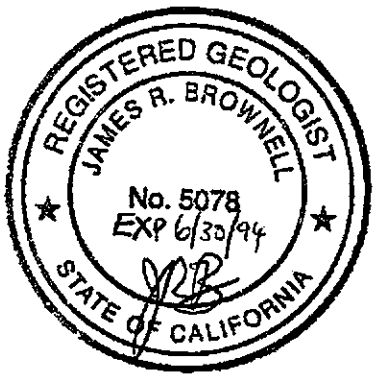
Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

JRB for Kevin Almeida
Charles K. Almeida
Project Hydrogeologist

JRB for Todd Galati
Todd M. Galati
Project Manager

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



cc\enc: Mr. Jon Black, Delta Environmental Consultants, Inc. - Sacramento

CKA (LRP151.SJH)
Enclosures

TABLE 1

GROUND WATER ELEVATIONS

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Monitoring Well	Date	Top of Riser Elevation (ft)[a]	Depth to Water (ft)	Ground Water Elevation (ft)	Physical Observation of Free Product or Sheen
MW-1	02/18/92	43.67	16.42	27.25	
	05/14/92		17.28	26.39	
	08/27/92		19.48	24.19	
	11/19/92		20.57	23.10	
	02/03/93		15.91	27.76	
	06/23/93		16.21	27.46	No free product or sheen
	09/22/93		17.85	25.82	No free product or sheen
MW-2	02/18/92	43.09	16.65	26.44	
	05/14/92		16.64	26.45	
	08/27/92		16.61	26.28	
	11/19/92		19.91	23.18	
	02/03/93		15.23	27.86	
	06/23/93		15.55	27.54	No free product or sheen
	09/22/93		17.22	25.87	No free product or sheen
MW-3	02/18/92	43.10	16.89	26.21	
	05/14/92		16.60	26.50	
	08/27/92		18.96	24.14	
	11/18/92		20.38	23.01*	
	02/03/93		15.43	27.67*	
	06/23/93		15.67	27.43	Product sheen
	09/22/93		17.20	25.90	No free product or sheen
MW-4	02/18/92	44.66	18.51	26.15	
	05/14/92		18.22	26.44	
	08/27/92		20.47	24.19	
	11/19/92		21.58	23.08	
	02/03/93		16.98	27.68	
	06/23/93		17.23	27.43	No free product or sheen
	09/22/93		18.83	25.83	No free product or sheen
MW-5	02/18/92	43.79	17.37	26.42	
	05/14/92		17.29	26.50	
	08/27/92		22.18	21.61	
	11/19/92		20.68	23.11	
	02/03/93		15.91	27.88	
	06/23/93		16.24	27.55	No free product or sheen
	09/22/93		17.93	25.86	No free product or sheen

TABLE 1-Continued

GROUND WATER ELEVATIONS

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Monitoring Well	Date	Top of Riser Elevation (ft)[a]	Depth to Water (ft)	Ground Water Elevation (ft)	Physical Observation of Free Product or Sheen
MW-6	02/18/92	42.47	15.87	26.60	
	05/14/92		16.04	26.43	
	08/27/92		18.17	24.30	
	11/19/92		19.30	23.17	
	02/03/93		14.60	27.87	
	06/23/93		15.00	27.47	No free product or sheen
	09/22/93		16.66	25.81	No free product or sheen
MW-7	02/18/92	41.54	15.51	26.03	
	05/14/92		15.41	26.13	
	08/27/92		17.45	24.09	
	11/19/92		18.54	23.00	
	02/03/93		14.10	27.44	
	06/23/93		14.33	27.21	No free product or sheen
	09/22/93		15.92	25.62	No free product or sheen
MW-8	02/18/92	42.26	16.57	25.69	
	05/14/92		16.24	26.02	
	08/27/92		18.28	23.98	
	11/19/92		19.32	22.94	
	02/03/93		14.87	27.39	
	06/23/93		15.18	27.08	No free product or sheen
	09/22/93		18.79	23.47	No free product or sheen
MW-9	02/18/92	44.94	18.87	26.07	
	05/14/92		18.55	26.39	
	08/27/92		20.80	24.14	
	11/19/92		21.90	23.04	
	02/03/93		17.25	27.69	
	06/23/93		17.61	27.33	No free product or sheen
	09/22/93		19.18	25.76	No free product or sheen
MW-10	02/18/92	42.34	16.63	25.71	
	05/14/92		15.25	27.09	
	08/27/92		18.35	23.99	
	11/19/92		19.43	22.91	
	02/03/93		15.01	27.33	
	06/23/93		15.30	27.04	No free product or sheen
	09/22/93		16.90	25.44	No free product or sheen

TABLE 1-Continued

GROUND WATER ELEVATIONS

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Monitoring Well	Date	Top of Riser Elevation (ft)[a]	Depth to Water (ft)	Ground Water Elevation (ft)	Physical Observation of Free Product or Sheen
MW-11	02/18/92	45.00	17.00	28.00	
	05/14/92		19.02	25.98	
	08/27/92		21.13	23.87	
	11/19/92		17.91	27.09	
	02/03/92		17.91	27.09	
	06/23/93		18.14	26.86	No free product or sheen
	09/22/93		19.63	25.37	No free product or sheen
RW-1	05/14/92	43.17	16.88	26.29	
	08/27/92		19.05	24.12	
	11/19/92		21.11	22.07*	
	02/03/92		15.48	27.69	
	06/23/93		28.25	14.92	No free product or sheen
	09/22/93		17.83	25.34	No free product or sheen

[a] All top of riser elevations surveyed by Aegis Environmental.
Note: Aegis Environmental, Inc., collected data prior to 06/23/93.

TABLE 2

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

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Xylenes	TPHg[a]
MW-1	02/18/92	—	—	—	—	—
	05/15/92	2,000	47	1,200	400	41,000
	08/28/92	3,800	54	850	970	110,000
	11/19/92	200	<5.0	90	140	3,600
	02/03/93	180	22	79	130	3,000
	06/23/93	2,400	74	650	510	12,000
	09/22/93	3,000	290	1,100	1,200	23,000
MW-2	02/18/92	<0.5	<0.5	1.9	<0.5	1,600
	05/14/92	1.2	1.0	1.3	<0.5	740
	08/27/92	6.5	1.1	0.6	<0.5	1,400
	11/19/92	<0.5	<0.5	2.7	<0.5	360
	02/03/93	1.2	1.6	4.5	6.4	590
	06/23/93	<0.5	<0.5	0.52	0.50	160
	09/22/93	<0.5	0.59	1.2	0.59	290
MW-3	02/18/92	—	—	—	—	—
	05/15/92	6,300	5,900	1,700	6,100	160,000
	08/28/92	25,000	40,000	6,700	44,000	1,300,000
	11/19/92	—	—	—	—	—
	02/03/93	7,200	11,000	2,900	13,000	82,000
	06/23/93	3,200	5,300	2,500	9,100	61,000
	09/22/93	12,000	14,000	3,900	18,000	94,000
MW-4	02/18/92	<0.5	<0.5	12	21	5,100
	05/14/92	<0.5	5.6	1.8	2.2	4,600
	08/28/92	6.6	1.3	1.6	3.1	1,700
	11/19/92	<0.5	<0.5	<0.5	<0.5	400
	02/03/93	<0.5	<0.5	<0.5	<0.5	1,100
	06/23/93	<0.5	<0.5	<0.5	<0.5	120
	09/22/93	<0.5	<0.5	<0.5	<0.5	110
MW-5	02/18/92	<0.5	<0.5	<0.5	<0.5	<50
	05/14/92	<0.5	<0.05	<0.5	<0.5	<50
	08/27/92	<0.5	<0.5	<0.5	<0.5	<50
	11/19/92	<0.5	<0.5	<0.5	<0.5	<50
	02/03/93	3.0	2.7	8.0	9.9	55
	06/23/93	<0.5	<0.5	<0.5	<0.5	<50
	09/22/93	0.66	1.1	<0.5	0.6	<50

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in parts per billion (ppb)

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Xylenes	TPHg[a]
MW-6	02/18/92	4.8	<0.5	<0.5	<0.5	370
	05/14/92	<0.5	<0.5	<0.5	<0.5	120
	08/27/92	1.2	<0.5	<0.5	<0.5	<50
	11/19/92	1.3	<0.5	1.0	1.1	66
	02/03/93	1.9	2.6	23	12	100
	06/23/93	<0.5	<0.5	<0.5	<0.5	<50
	09/22/93	2.2	3.8	0.53	2.7	81
MW-7	02/18/92	16	<0.5	10	16	670
	05/14/92	44	<0.5	38	88	1,500
	08/27/92	400	5.8	290	1,400	23,000
	11/19/92	29	<0.5	10	53	330
	02/03/93	200	<0.5	110	480	2,000
	06/23/93	20	<0.5	16	16	280
	09/22/93	71	2.2	33	210	860
MW-8	02/18/92	<0.5	<0.5	9.5	<0.5	1,200
	05/14/92	<0.5	<0.5	<0.5	<0.5	130
	08/28/92	<0.5	<0.5	<0.5	<0.5	140
	11/19/92	<0.5	<0.5	2.0	<0.5	320
	02/03/93	<0.5	<0.5	<0.5	<0.5	<50
	06/23/93	<0.5	<0.5	<0.5	<0.5	<50
	09/22/93	<0.5	0.67	<0.5	<0.5	<50
MW-9	02/18/92	<0.5	<0.5	<0.5	<0.5	<50
	05/14/92	<0.5	<0.5	<0.5	<0.5	<50
	08/27/92	<0.5	<0.5	<0.5	<0.5	<50
	11/19/92	<0.5	<0.5	<0.5	1.3	<50
	02/03/93	<0.5	<0.5	<0.5	<0.5	<50
	06/23/93	<0.5	<0.5	<0.5	<0.5	<50
	09/22/93	<0.5	<0.5	<0.5	<0.5	<50
MW-10	02/18/92	110	57	440	53	18,000
	05/15/92	24	9.8	97	<0.5	8,500
	08/29/92	20	2.8	40	3.5	9,600
	11/19/92	36	21	330	31	5,700
	02/03/93	15	4.6	36	9.6	2,200
	06/23/93	21	2417	540	45	8,100
	09/22/93	22		350	16	6,200

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in parts per billion (ppb)

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Xylenes	TPHg[a]
MW-11	02/18/92	<0.5	<0.5	<0.5	<0.5	2,400
	05/15/92	<0.5	1.9	1.3	0.7	1,600
	08/27/92	15	2	0.6	1.2	2,100
	11/19/92	<0.5	<0.5	<0.5	<0.5	490
	02/03/93	<0.5	<0.5	0.55	<0.5	500
	06/23/93	<0.5	<0.5	<0.5	<0.5	350
	09/22/936	<0.5	0.65	<0.5	0.71	200
RW-1	05/15/92	270	62	29	140	790
	08/29/92	1,300	200	68	810	24,000
	11/19/92	—	—	—	—	—
	02/03/93	71	35	22	110	620
	06/23/93	30	33	9.8	35	220
	09/22/93	800	400	170	910	4,100

[a] Total petroleum hydrocarbons as gasoline.
Note: Aegis Environmental, Inc., collected data prior to 06/23/93.

TABLE 3

VOLUME OF GROUND WATER TREATED
by Remediation System

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Date	Volume[a] (gallons)
06/21/93	2,120
07/14/93	117,367
08/14/93	210,470
09/22/93	255,241

[a] Cumulative volume of water discharged to sanitary sewer at the indicated date.

TABLE 4

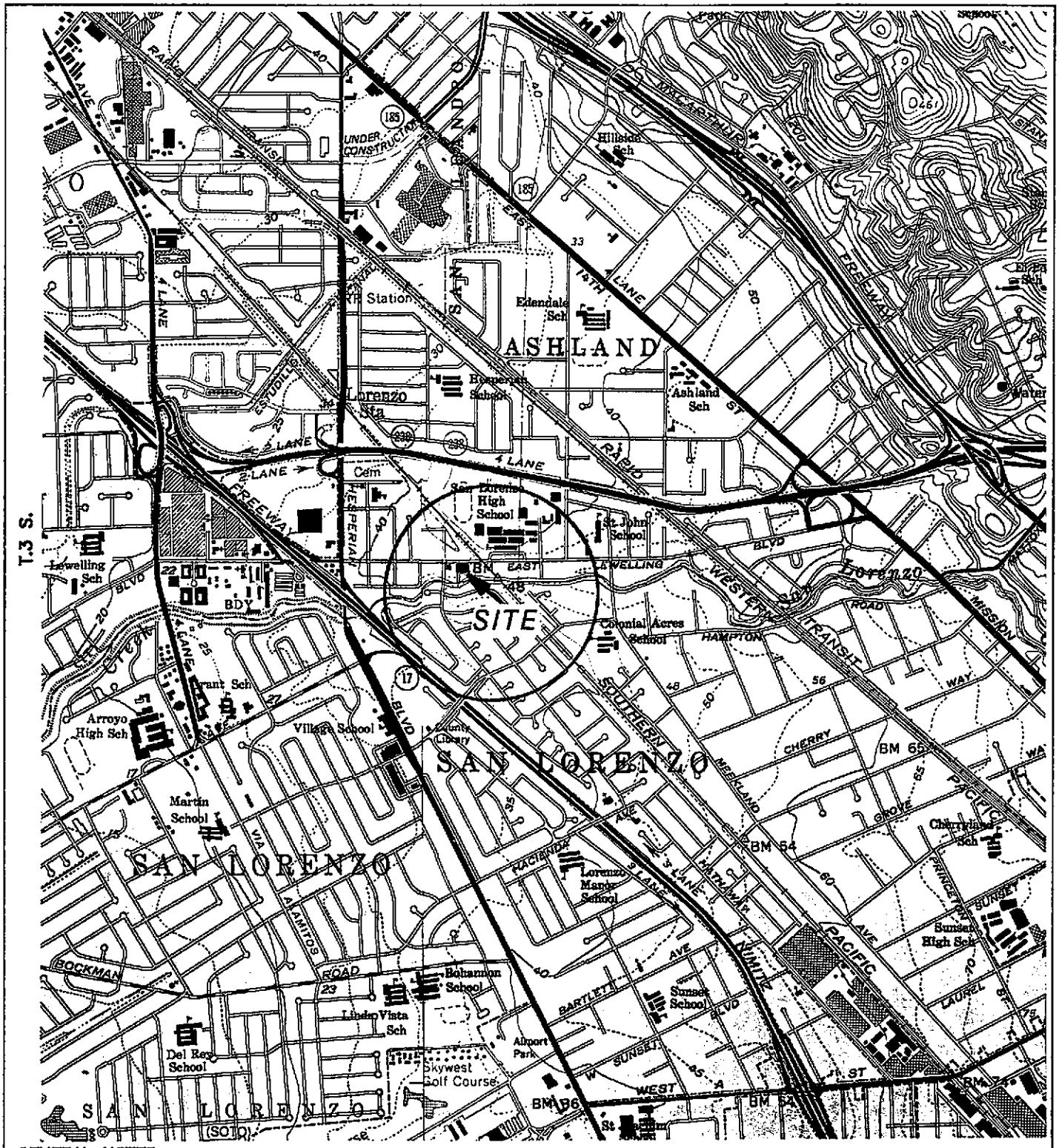
ANALYTICAL RESULTS OF SYSTEM WATER SAMPLES

Concentrations in parts per billion (ppb)

Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California

Sample	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH[a] as gasoline
Effluent	05/28/93	<0.5	<0.5	<0.5	<0.5	<50
	10/01/93	<0.5	<0.5	<0.5	<0.5	<50

[a] Total petroleum hydrocarbons as gasoline.



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

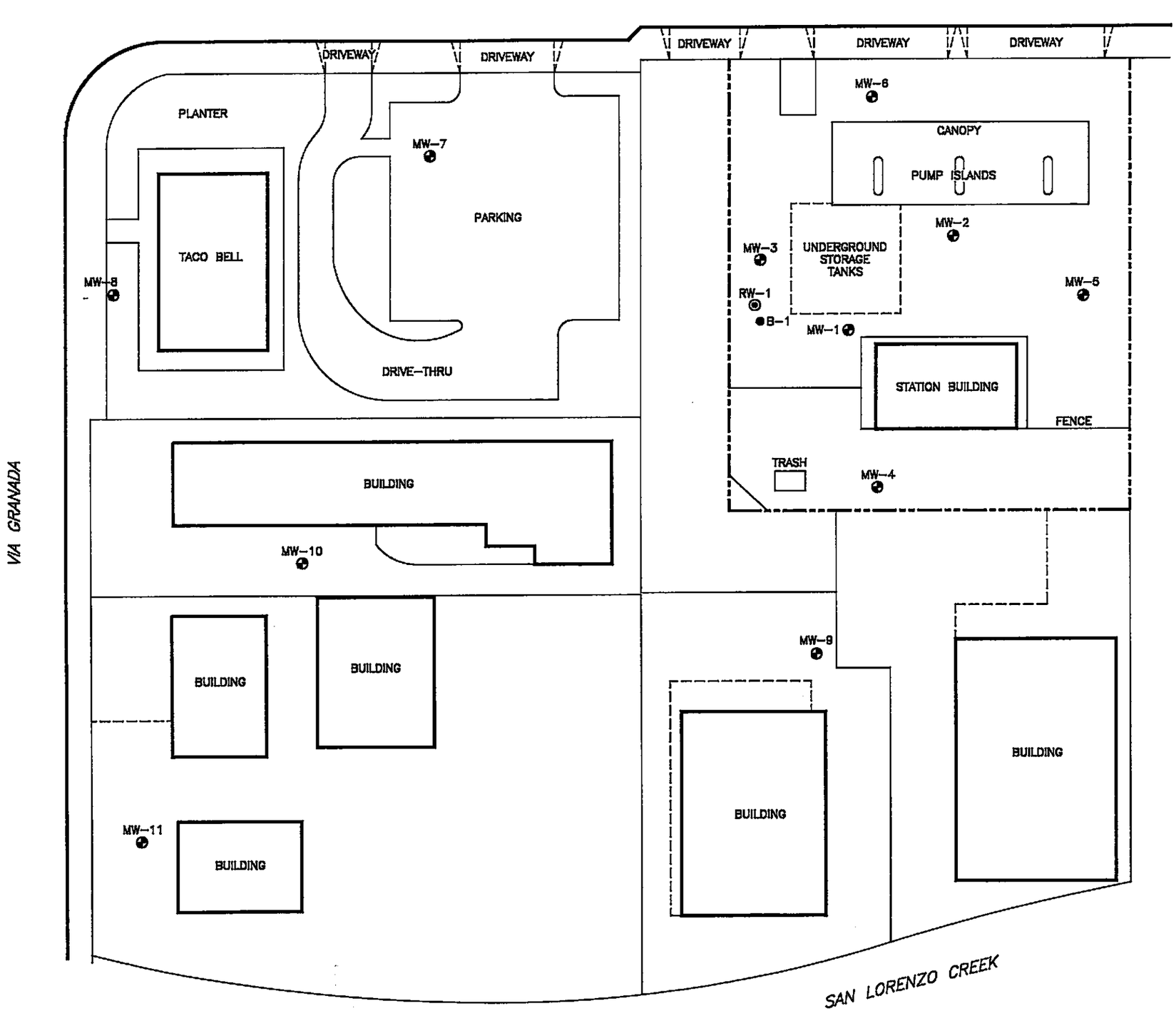
CALIF
QUADRANGLE LOCATION

SCALE 1 : 24,000

FIGURE 1
SITE LOCATION MAP
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. 40-93-936	DRAWN BY I.H. 11/2/92
FILE NO. —	PREPARED BY TMG
REVISION NO. 1	REVIEWED BY 11/19/92

Delta Environmental Consultants, Inc.



North

LEGEND:

- ● B–1 SOIL BORING LOCATION
- ◉ RW–1 RECOVERY WELL LOCATION
- ⊕ MW–1 MONITORING WELL LOCATION

NOTE:
BASE MAP ADAPTED FROM RESNA FIGURE DATED 1/9/92
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED

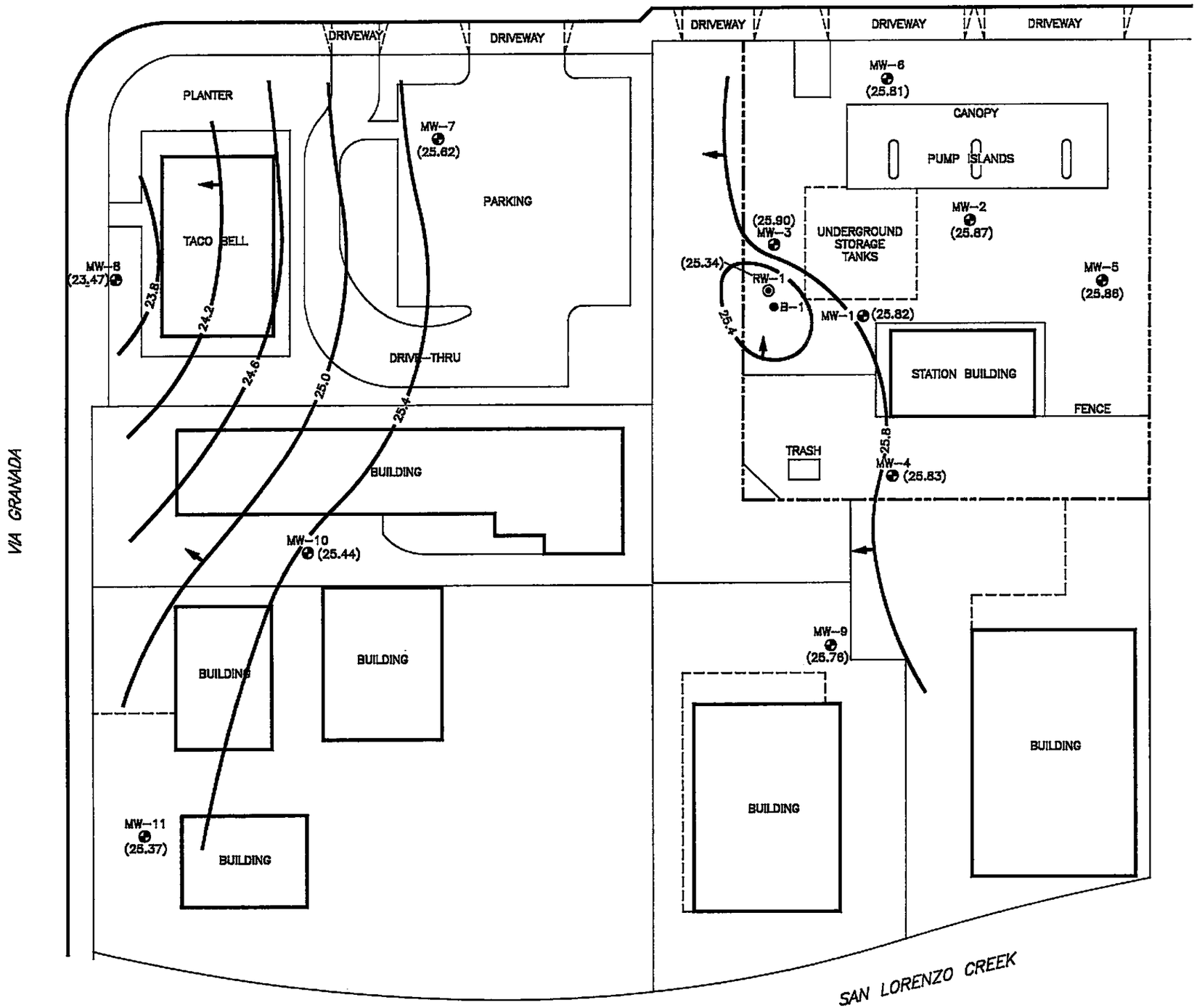
0 30 FT
SCALE

FIGURE 2
SITE VICINITY MAP

BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. 40–93–936	DRAWN BY LH. 8/11/93
FILE NO. 93–936–1	PREPARED BY JRB
REVISION NO. 1	REVIEWED BY JRB 8/11/93

Delta Environmental Consultants, Inc.



North

LEGEND:

- ● B-1 SOIL BORING LOCATION
- ◉ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- (25.82) GROUND WATER ELEVATION RELATIVE TO AN ASSUMED BENCH MARK
- —25.0— WATER TABLE CONTOUR RELATIVE TO AN ASSUMED BENCH MARK
- ← GROUND WATER FLOW DIRECTION

NOTE:
BASE MAP ADAPTED FROM RESNA FIGURE DATED 1/9/92
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED

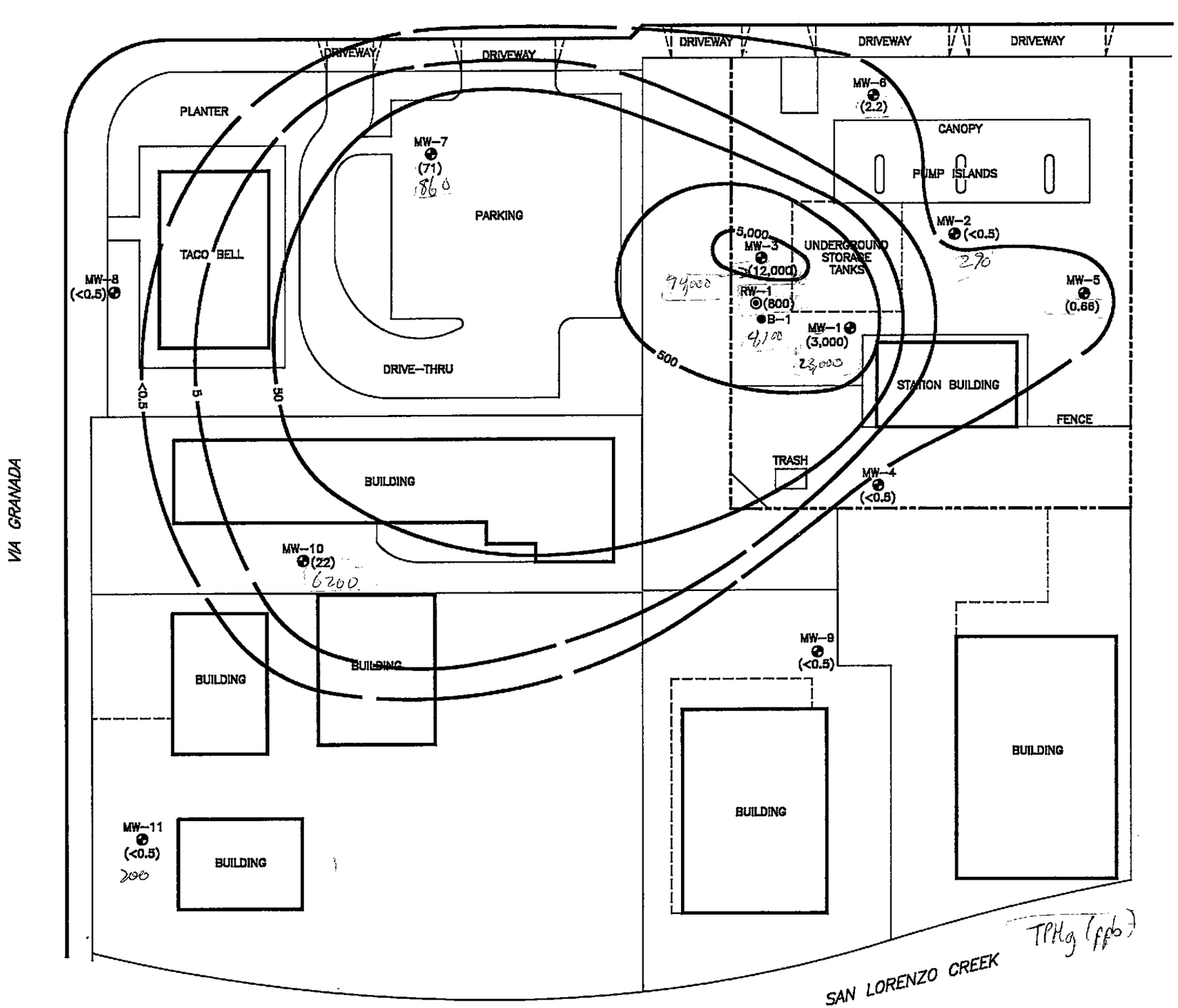
0 30 FT
SCALE

FIGURE 3
WATER TABLE CONTOUR MAP – 9/22/93

BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. 40-93-936	DRAWN BY LH. 11/1/93
FILE NO. 93-936-1	PREPARED BY CKA
REVISION NO. 1	REVIEWED BY CKA 11/9/93

Delta Environmental Consultants, Inc.



North

LEGEND:

- ● B-1 SOIL BORING LOCATION
- ◉ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- (3,000) BENZENE CONCENTRATION IN PARTS PER BILLION
- —50— BENZENE ISOCONCENTRATION CONTOUR IN PARTS PER BILLION

NOTE:
BASE MAP ADAPTED FROM RESNA FIGURE DATED 1/9/92
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED

0 30 FT
SCALE

FIGURE 4
BENZENE ISOCONCENTRATION CONTOUR MAP
9/22/93
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. 40-93-936	DRAWN BY LH. 11/9/93
FILE NO. 93-936-1	PREPARED BY CKA
REVISION NO. 2	REVIEWED BY 11/9/93

Delta Environmental Consultants, Inc.

1.0 GROUND WATER AND FREE-FLOATING PRODUCT DEPTH DETERMINATION

A water/petroleum product interface probe was used to determine free product thickness and ground water depth in each well. If a free floating product layer was not detected by the interface probe, the tip of the probe was subjectively analyzed for product sheen or detectable odor. All measurements and physical observations were then recorded on separate data sheets in the field.

2.0 SUBJECTIVE ANALYSIS OF GROUND WATER

Prior to the purging of ground water monitoring wells, a water sample was collected from the monitoring well for subjective analysis. The sample was retrieved by gently lowering a clean disposable bailer 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 product levels, appearance of a petroleum product sheen, and any detectable petroleum product odor.

3.0 MONITORING WELL DEVELOPMENT, PURGING, AND SAMPLING

Monitoring wells were purged and sampled using new disposable bailers. Ground water removed from the wells was stored in 55-gallon barrels at the site. The barrels were labeled with corresponding monitoring well numbers and date of purging. After pH, temperature, and purging, ground water levels were allowed to stabilize. 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.

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 76°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-1 Project: BEACON 721
Location: 44 DWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-1 Date Sampled: 9/22/93 Time: 17:05
Describe Sampling Point: SEE SITE MAP

Well Depth: 31.20 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 17.85 ft. Date: 9/22/93 Time: 16:50
Discharge rate _____ gpm x 0.00____ = _____ cfs.
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Tap ____ Submersible pump X Bailer ____ Other ____
Pump Intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER) (New or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-1
Sample appearance: SILTY
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
16:57	6.98	1.48	73.5			
16:58	6.98	1.36	73.4			
16:59	6.96	1.35	73.0			
					7	

Bailing start time: 16:55 Wt. 17.85
Bailing stop time: 16:59 Wt. 18.59

Comments: _____

Transportation (thermal preservation): COOLER W/ ICE

Form completed by: J Perry Sampled by: JP

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 82°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-2 Project: BEACON 721
Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-2 Date Sampled: 9 / 22 / 93 Time: 14:30
Description Sampling Point: SEE SITE MAP

Well Depth: 33.30 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 17.22 ft. Date: 9 / 22 / 93 Time: 14:11
Discharge rate _____ gpm x 0.00[illegible] = _____ cfm
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Teo ____ Submersible pump X Bailer ____ Other ____
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER) (new) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-2
Sample appearance: CLEAR
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
14:23	6.96	1.22	73.8			
14:24	7.00	1.17	74.0			
14:25	7.00	1.11	74.3			
					8	

Bailing start time: 14:20 WL: 17.22
Bailing stop time: 14:26 WL: 17.65

Comments: _____

Transportation (thermal preservation): COOLER & ICE

Form completed by: J Kerry Sampled by: JK

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 76°F
Wind Speed: 0-10 MPH

GENERAL CONDITIONS

Sample ID: MW-3 Project: BEACON #21
Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-3 Date Sampled: 9/22/93 Time: 17:45
Describe Sampling Point: SEE SITE MAP

Well Depth: 29.30 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 17.20 ft. Date: 9/22/93 Time: 10:01
Discharge rate: _____ gpm x 0.0[illegible] = _____ cfs.
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ___ Bag ___ Submersible pump X Bailer ___ Other ___
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER) (new) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-3
Sample appearance: SILTY
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
17:29	6.96	1.63	74.5			
17:30	6.93	1.63	74.1			
17:31	6.90	1.63	74.1			
					6	

Bailing start time: 17:25 Wt. 17.20
Bailing stop time: 17:32 Wt. 17.51

Comments: _____

Transportation (thermal preservation): COOLER W/ ICE

Form completed by: J Perry Sampled by: JP

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 82°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-4 Project: BEACON #21
Location: 44 LEWELLING BLVD. SAN LORENZO CA WO #: 40-93-936
Sampling Point: MW-4 Date Sampled: 9/22/93 Time: 13:30
Describe Sampling Point: SEE SITE MAP

Well Depth: 24.60 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 18.83 ft. Date: 9/22/93 Time: 13:32
Discharge rate _____ gpm x 0.00____ = _____ cfs
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Bailer ____ Submersible pump X Bailer ____ Other ____
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER) (new) or previously used was used to collect all samples X Yes ___ No
and all field measurements (X Yes ___ No). Tubing was used only for MW-4
Sample appearance: CLEAR
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
13:43	7.35	1.45	70.8			
13:44	7.10	1.45	69.0			
13:45	7.06	1.45	68.9			
					3	

Bailing start time: 13:40 WL: 18.83
Bailing stop time: 13:46 WL: 18.83

Comments: _____

Transportation (thermal preservation): COOLER & ICE

Form completed by: _____ Sampled by: _____

SAMPLING INFORMATION SHEET

Weather Conditions

Cloud Cover: CLOUDY Temperature: 60°F

Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-5 Project: BEACON 721

Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936

Sampling Point: MW-5 Date Sampled: 9 / 22 / 93 Time: 11:40

Describe Sampling Point: SEE SITE MAP

Well Depth: 29.20 ft. below MP Casing diameter: 2 inches

Depth to water (below MP): 17.93 ft. Date: 9 / 22 / 93 Time: 09:53

Discharge rate _____ gpm x 0.00xxx = _____ cfs.

At least 3 Well volumes have been evacuated before sampling.

Sampling Method: ____ Tap ____ Submersible pump · X Bailer ____ Other ____

Pump intake or bailer set at _____ ft. below MP

Tubing (type) DISPOSABLE BAILER (new) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-5

Sample appearance: SILTY

Note any sampling problems: NONE

Note any cleaning performed in the field: SLOPE INDICATOR

Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (micromhos/cm) x1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
11:30	7.59	.99	69.6			
11:33	7.45	.99	70.6			
11:35	7.43	.99	70.9			
					6	

Bailing start time: 11:25 WL: 17.93

Bailing stop time: 11:35 WL: 18.44

Comments: _____

Preservation (thermal preservation): COOLER & ICE

Form completed by: Jerry Samples by: JP

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLOUDY Temperature: 60°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-6 Project: BEACON #21
Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-6 Date Sampled: 9/22/93 Time: 11:10
Describe Sampling Point: SEE SITE MAP

Well Depth: 28.70 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 16.66 ft. Date: 9/22/93 Time: 09:35
Discharge rate: _____ gpm x 0.00____ = _____ cfs.
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ___ Tap ___ Submersible pump X Bailer ___ Other ___
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER ; (New) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-6
Sample appearance: SILTY
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
10:07	7.12	1.10	69.8			
UNABLE TO COMPLETE READINGS - PUMPED WELL DRY THREE						
					6	

Bailing start time: 09:40 WL: 16.66
Bailing stop time: _____ WL: _____
Comments: PUMPED DRY @ 3.5 GAL. RECHARGED FOR 20 MIN. & PUMPED DRY. PUMPED A TOTAL OF 4.5 GAL.

Transportation (thermal preservation): COOLER & ICE

Form completed by: J. Perry Sampled by: JP

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 80°F
Wind Speed: 0-10 MPH

GENERAL CONDITIONS

Sample ID: MW-7 Project: BEACON 721
Location: 44 LEWELLING BLVD. SAN LORENZO CA W.O.: 40-93-936
Sampling Point: MW-7 Date Sampled: 9 / 22 / 93 Time: 15:50
Describe Sampling Point: SEE SITE MAP

Well Depth: 24.30 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 15.92 ft. Date: 9 / 22 / 93 Time: 15:35
Discharge rate: _____ gpm x 0.00____ = _____ cfs
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Bag ____ Submersible pump X Bailer ____ Other ____
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER); (new) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-7
Sample appearance: CLEAR
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
15:45	7.22	1.16	74.0			
15:46	7.20	1.16	74.2			
15.47	7.20	1.16	74.3			
					5	

Bailing start time: 15:40 WL: 15.92
Bailing stop time: 15:48 WL: 16.49

Comments: _____

Transportation (thermal preservation): COOLER & ICE

Form completed by: _____ Sampled by: _____

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 75°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-8 Project: BEACON 721
Location: 44 DWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-8 Date Sampled: 9/22/93 Time: 12:15
Describe Sampling Point: SEE SITE MAP

Well Depth: 23.20 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 18.79 ft. Date: 9/22/93 Time: 12:02
Discharge rate _____ gpm x 0.XXXX = _____ cu.
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Teo ____ Submersible pump X Bailer ____ Other ____
Pump Intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER); (new or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-8
Sample appearance: CLOUDY
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
12:08	7.60	.74	70.4			
12:10	7.50	.74	71.4			
12:11	7.49	.74	71.6			
					4/3	

Ending purge time: 12:06 WL: 18.79
Ending sample time: 12:12 WL: 18.83

Comments: _____

Transportation (thermal preservation): COOLER & ICE

Form completed by: _____ Sampled by: _____

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 80°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-9 Project: BEACON 721
Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-9 Date Sampled: 9/22/93 Time: 13:15
Describe Sampling Point: SEE SITE MAP

Well Depth: 23.80 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 19.18 ft. Date: 9/22/93 Time: 12:55
Discharge rate: _____ gpm x 0.00[illegible] = _____ cfm
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Teflon ____ Submersible pump X Bailer ____ Other ____
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER); (new) or previously used) was used to collect all samples X Yes ___ No
and all field measurements (X Yes ___ No. Tubing was used only for MW-9
Sample appearance: CLOUDY
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature - Corrected Conductance (umhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
13:03	7.20	1.46	75.8			
13:04	7.05	1.48	77.2			
13:05	6.97	1.59	77.4			
					3	

Bailing start time: 12:57 WL: 19.18
Bailing stop time: 13:07 WL: 19.46

Comments: INSTALLED A NEW WELL PLUG & LOCK

Transportation (thermal preservation): COOLER & ICE

Form completed by: Jim Perry Submitted by: JP

SAMPLING INFORMATION SHEET

Weather Conditions

Cloud Cover: CLEAR Temperature: 78°F

Wind Speed: 0-10 MPH

GENERAL CONDITIONS

Sample ID: MW-10 Project: BEACON #21

Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936

Sampling Point: MW-10 Date Sampled: 9 / 22 / 93 Time: 16:25

Describe Sampling Point: SEE SITE MAP

Well Depth: 29.50 ft. below MP Casing diameter: 2 inches

Depth to water (below MP): 16.90 ft. Date: 9 / 22 / 93 Time: 16:10

Discharge rate: _____ gpm x 0.00____ = _____ cfs.

At least 3 Well volumes have been evacuated before sampling.

Sampling Method: ____ Bailer ____ Submersible pump X Bailer ____ Other ____

Pump intake or bailer set at _____ ft. below MP

Tubing (type: DISPOSABLE BAILER); (new) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for MW-10

Sample appearance: CLEAR

Note any sampling problems: NONE

Note any cleaning performed in the field: SLOPE INDICATOR

Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (µmhos/cm) X1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
16:17	7.36	0.90	70.8			
16:18	7.28	0.90	71.5			
16:19	7.27	0.90	71.6			
					7	

Bailing start time: 16:15 Wt. 16.90

Bailing stop time: 16:20 Wt. 17.20

Comments: _____

Transportation (Thermal preservation): COOLER & ICE

Forms completed by: _____ Sampled by: _____

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 80°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: MW-11 Project: BEACON #21
Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-11 Date Sampled: 9/22/93 Time: 15:05
Describe Sampling Point: SEE SITE MAP

Well Depth: 29.50 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 18.63 ft. Date: 9/22/93 Time: 14:51
Discharge rate: _____ gpm x 0.00____ = _____ cfs.
At least 3 Well volumes have been evacuated before sampling.
Sampling Method: ____ Bailer ____ Submersible pump X Bailer ____ Other ____
Pump intake or bailer set at _____ ft. below MP
Tubing (type: DISPOSABLE BAILER); (new) or previously used well was used to collect all samples X Yes ___ No
and all field measurements (X Yes ___ No). Tubing was used only for MW-11
Sample appearance: CLOUDY
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (micromhos/cm) 1000	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Pumping Zone Well (gallons)	(ppm)
14:57	7.32	.90	71.2			
14:58	7.28	.88	72.5			
14:59	7.32	.90	72.9			
					5	

Bailing start time: 14:55 WL: 19.63
Bailing stop time: 15:03 WL: 19.68
Comments: INSTALLED A NEW WELL CAP

Preservation (Chemical preservation): COOLER W/ ICE

Form completed by: J Perry Sampled by: JP

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: CLEAR Temperature: 78°F
Wind Speed: 0-5 MPH

GENERAL CONDITIONS

Sample ID: RW-1 Project: BEACON 721
Location: 44 LEWELLING BLVD SAN LORENZO, CA W.O.: 40-93-436
Sampling Point: RW-1 Date Sampled: 9 / 22 / 93 Time: 18:15
Describe Sampling Point: SEE SITE MAP

Well Depth: 29.50 ft. below MP Casing diameter: 6 Inches
Depth to water (below MP): 17.83 ft. Date: / / Time:
Discharge rate: _____ gpm x 0.00[illegible] = _____ cfs.
At least 3 + NA GP Well volumes have been evacuated before sampling.
Sampling Method: ___ Tap ___ Submersible pump X Bailer ___ Other
Pump Intake or bailer set at: _____ ft. below MP
Tubing (type: DISPOSABLE BAILER (new) or previously used) was used to collect all samples X Yes ___ No and all field measurements (X Yes ___ No). Tubing was used only for
Sample appearance: CLEAR
Note any sampling problems: NONE
Note any cleaning performed in the field: SLOPE INDICATOR
Samples collected: 2 VOAS - TESTED FOR BTEX / TPHg

EVACUATION/STABILIZATION TEST DATA

Time	pH Units	Temperature Corrected Conductance (umhos/cm)	Temperature (°F)	Water Level (Nearest 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
Start						

Bailing start time: _____ Wt. _____
Bailing stop time: _____ Wt. _____

Comments: DREW SAMPLE FROM INFLUENT PORT AT THE TREATMENT SYSTEM. UNABLE TO OBTAIN STABILIZATION TEST DATA

Transportation (thermal preservation): COOLER & ICE

Form completed by: [signature] Samples by: [signature]

ENCLOSURE C

Ground Water Sample Laboratory Reports

October 5, 1993
Sample Log 7517

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

Subject: Analytical Results for 12 Water Samples
Identified as: Project # 40-93-936 (Beacon 721)
Received: 09/24/93

Dear Mr. Galati:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on October 5, 1993 and describes procedures used to analyze the samples.

Sample(s) were received in 40-milliliter glass vials sealed with TFE lined septae and plastic screw-caps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Sample(s) were analyzed using the following method(s):

"BTEX" (EPA Method 602/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

Please refer to the following table(s) for summarized analytical results and contact us at 916-757-4650 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

Stewart Podolsky
Senior Chemist

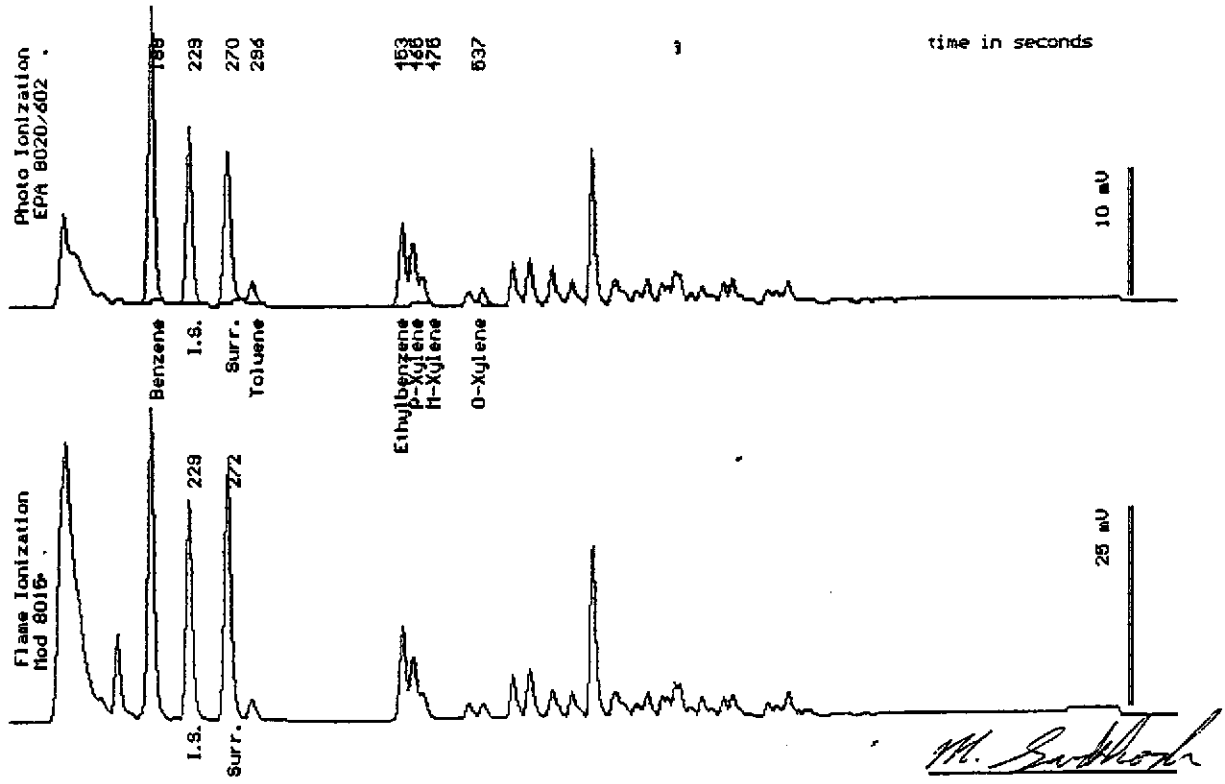
Sample Log 7517

7517-1

Sample: **MW-1**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:100 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(50)	3000
Toluene	(50)	290
Ethylbenzene	(50)	1100
Total Xylenes	(50)	1200
TPH as Gasoline	(5000)	23000
Surrogate Recovery		107 %



Date Analyzed: 09-30-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

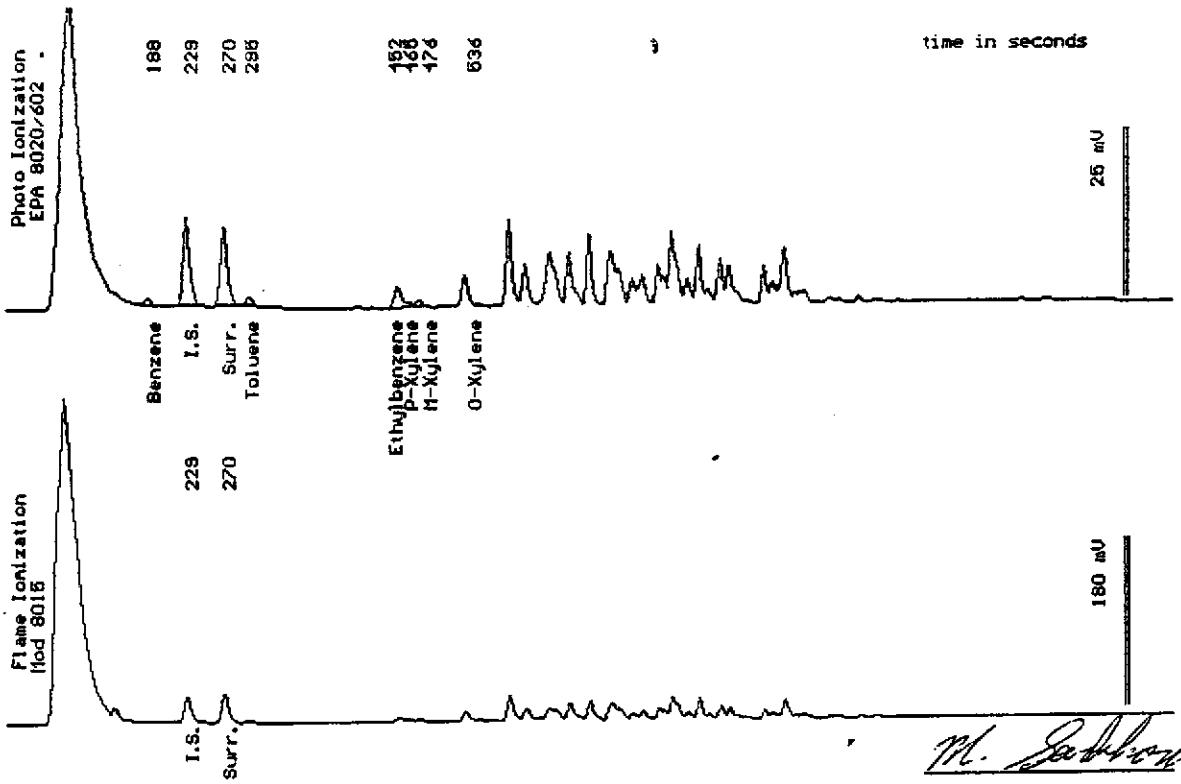
Sample Log 7517

7517-2

Sample: **MW-2**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	.59
Ethylbenzene	(.50)	1.2
Total Xylenes	(.50)	.59
TPH as Gasoline	(50)	290
Surrogate Recovery		98 %



Date Analyzed: 09-30-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

M. Sarkhosh

Mitra Sarkhosh
Senior Chemist

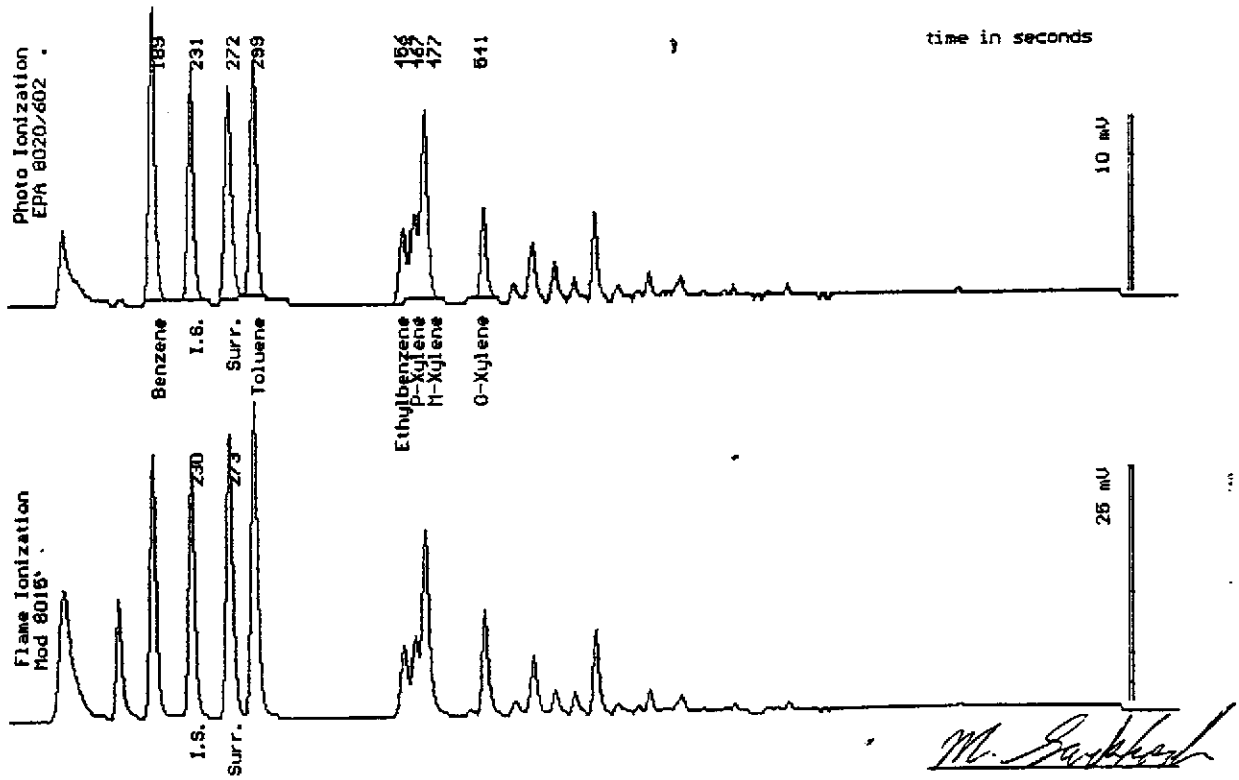
Sample Log 7517

7517-3

Sample: **MW-3**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:500 QC Batch : 4039C
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(250)	12000
Toluene	(250)	14000
Ethylbenzene	(250)	3900
Total Xylenes	(250)	18000
TPH as Gasoline	(25000)	94000
Surrogate Recovery		113 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

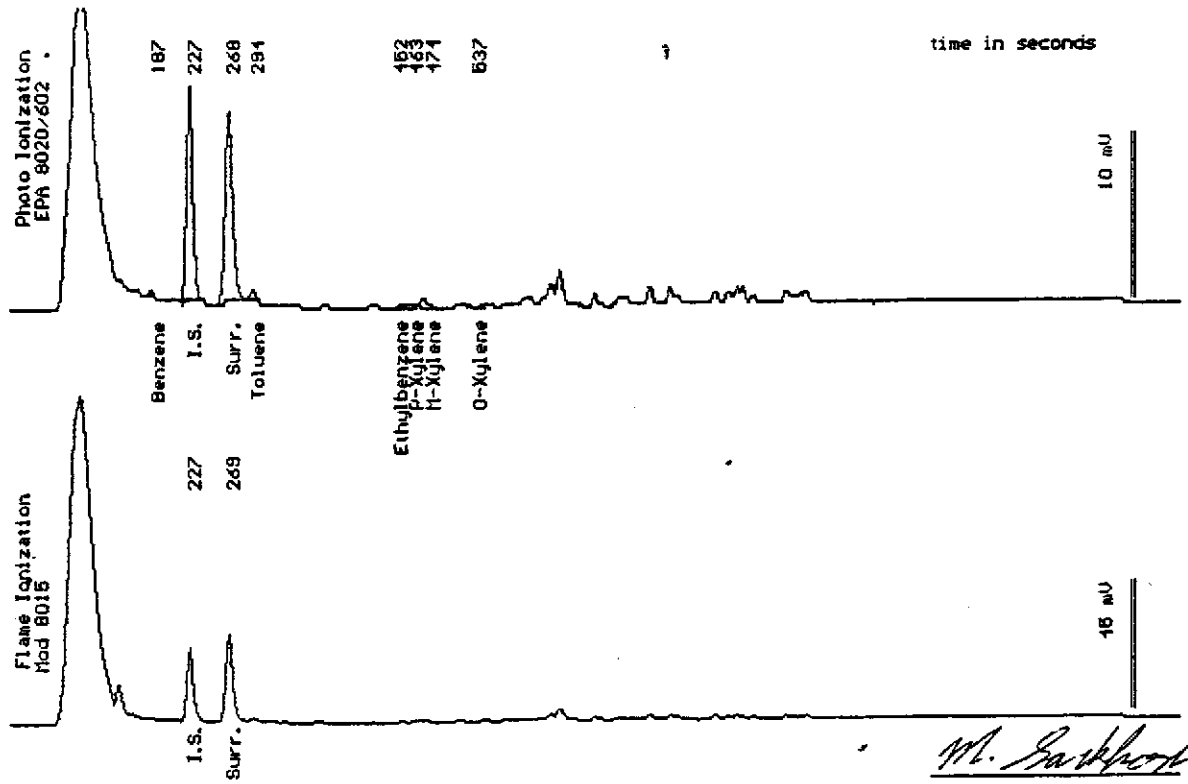
Sample Log 7517

7517-4

Sample: **MW-4**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	110
Surrogate Recovery		104 %



Date Analyzed: 09-30-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

M. Sarkhosh

Mitra Sarkhosh
Senior Chemist

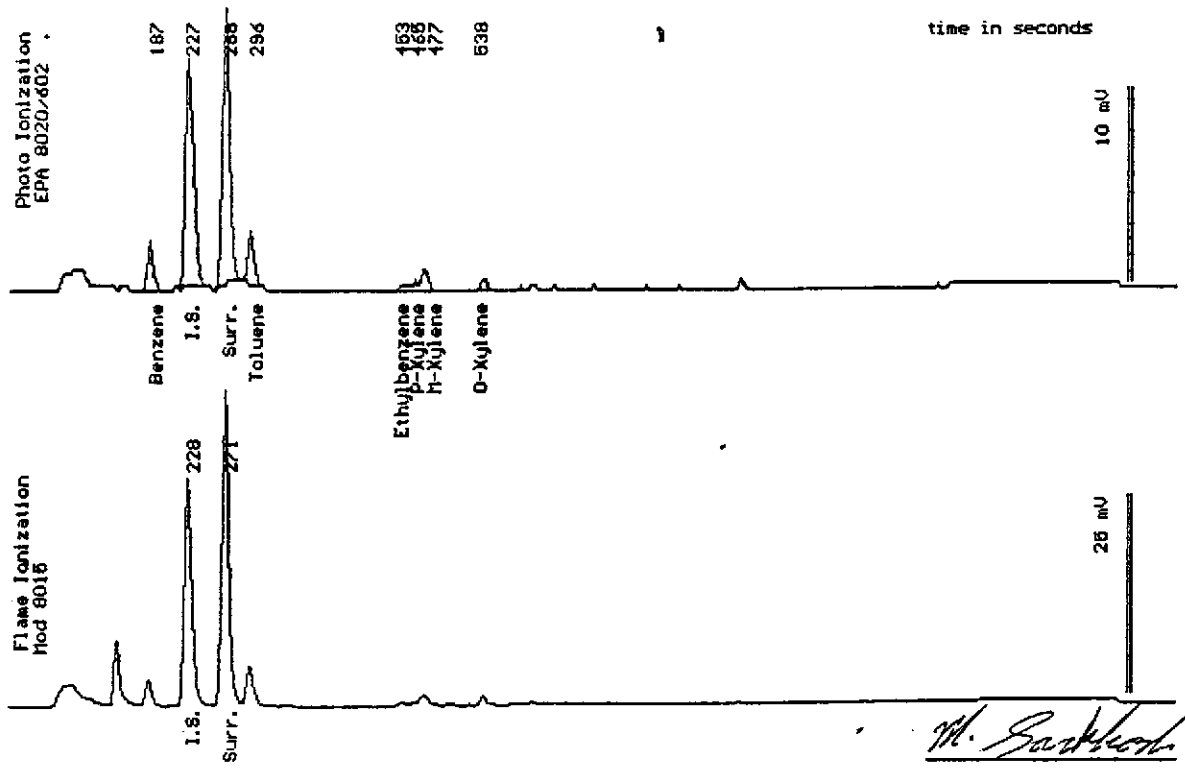
Sample Log 7517

7517-5

Sample: **MW-5**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	.66
Toluene	(.50)	1.1
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	.60
TPH as Gasoline	(50)	<50
Surrogate Recovery		103 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

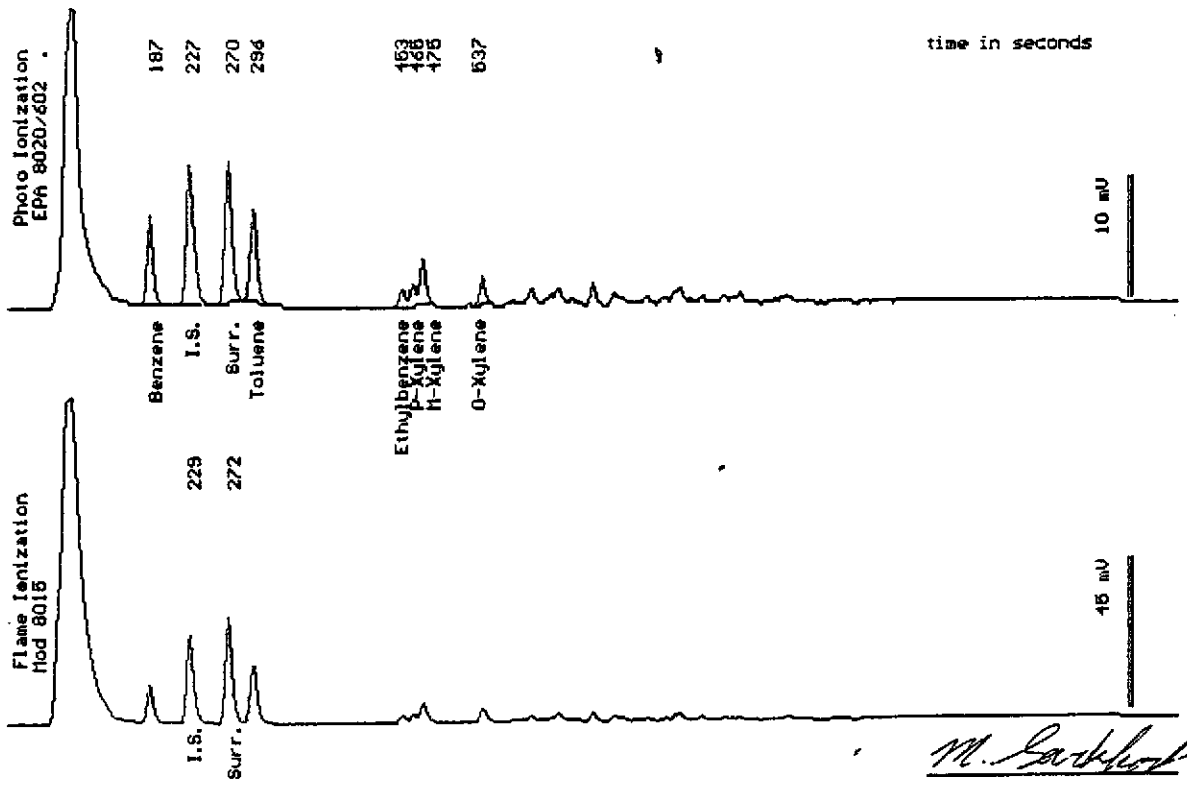
Sample Log 7517

7517-6

Sample: **MW-6**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	2.2
Toluene	(.50)	3.8
Ethylbenzene	(.50)	.53
Total Xylenes	(.50)	2.7
TPH as Gasoline	(50)	81
Surrogate Recovery		103 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

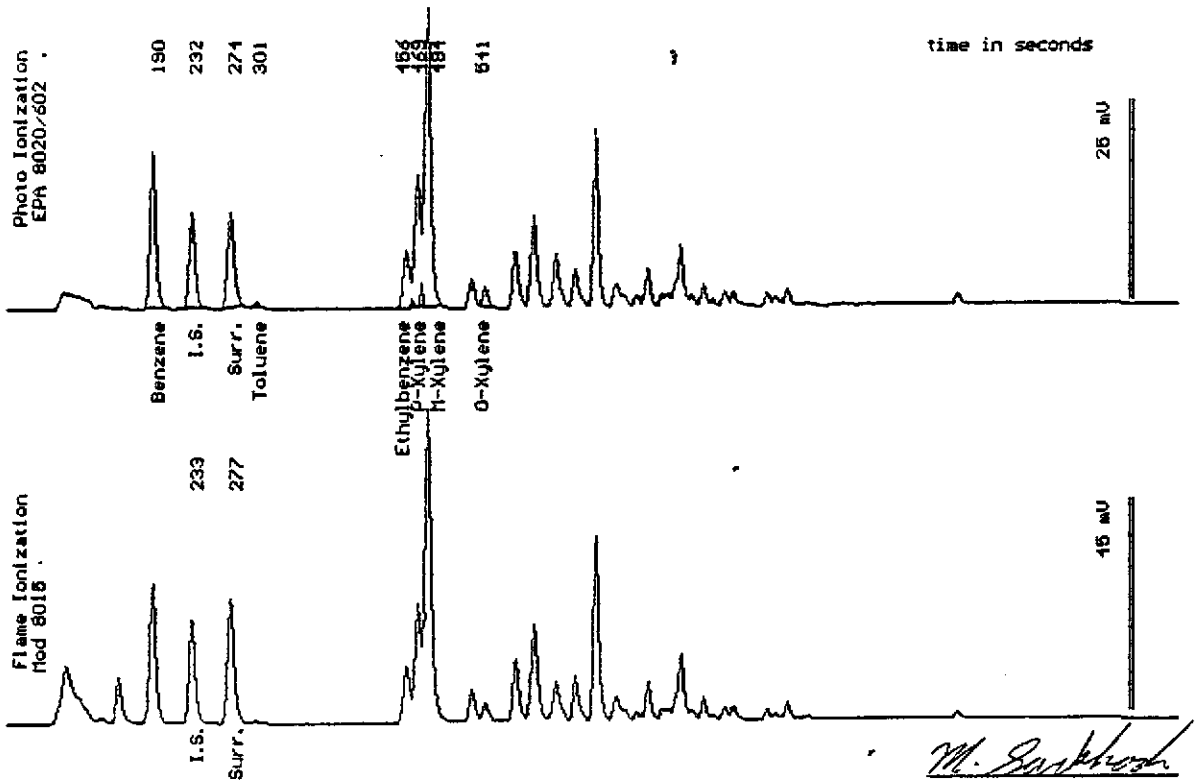
Sample Log 7517

7517-7

Sample: **MW-7**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:3 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(1.3)	71
Toluene	(1.3)	2.2
Ethylbenzene	(1.3)	33
Total Xylenes	(1.3)	210
TPH as Gasoline	(130)	860
Surrogate Recovery		117 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

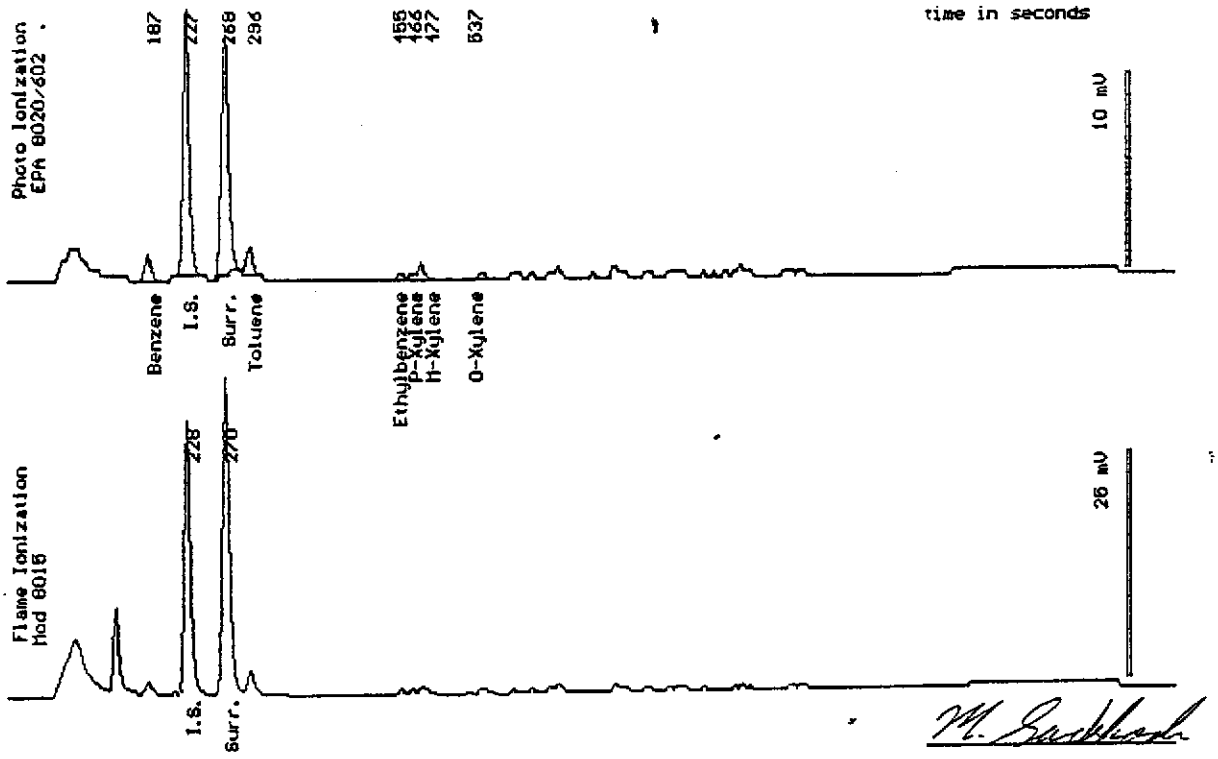
Sample Log 7517

7517-8

Sample: **MW-8**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	.67
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		110 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

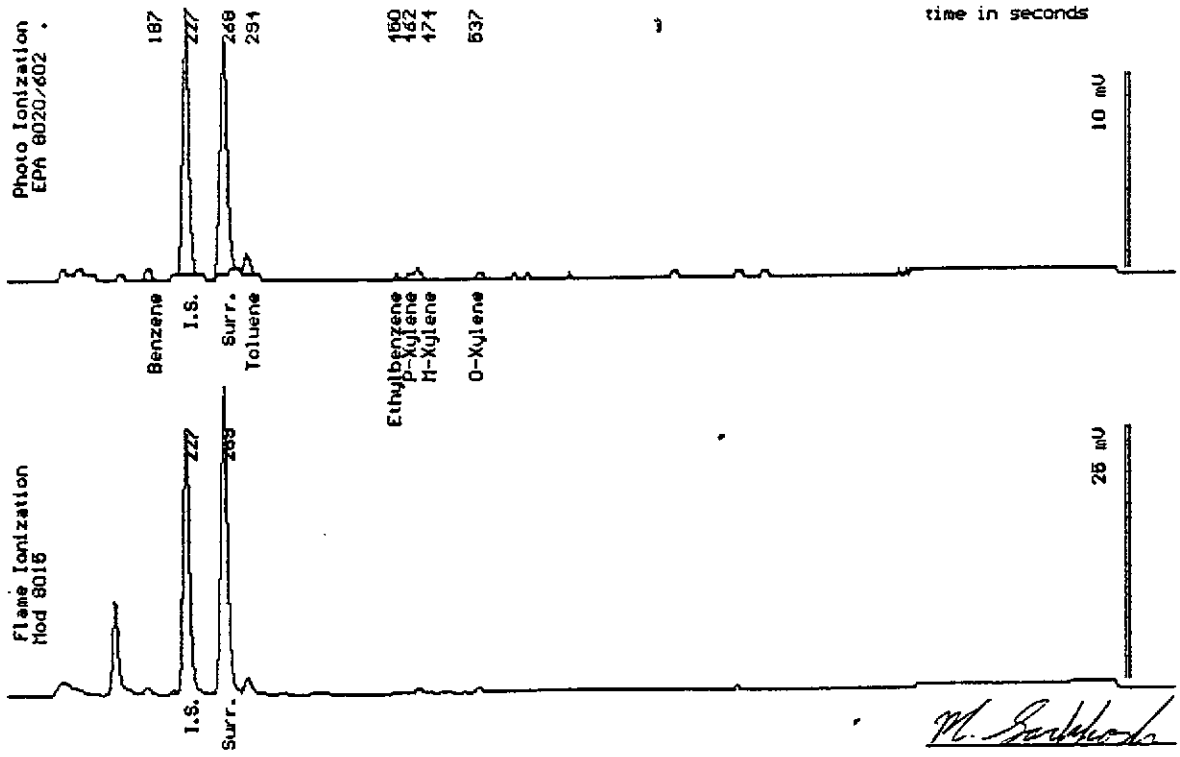
Sample Log 7517

7517-9

Sample: **MW-9**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		109 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

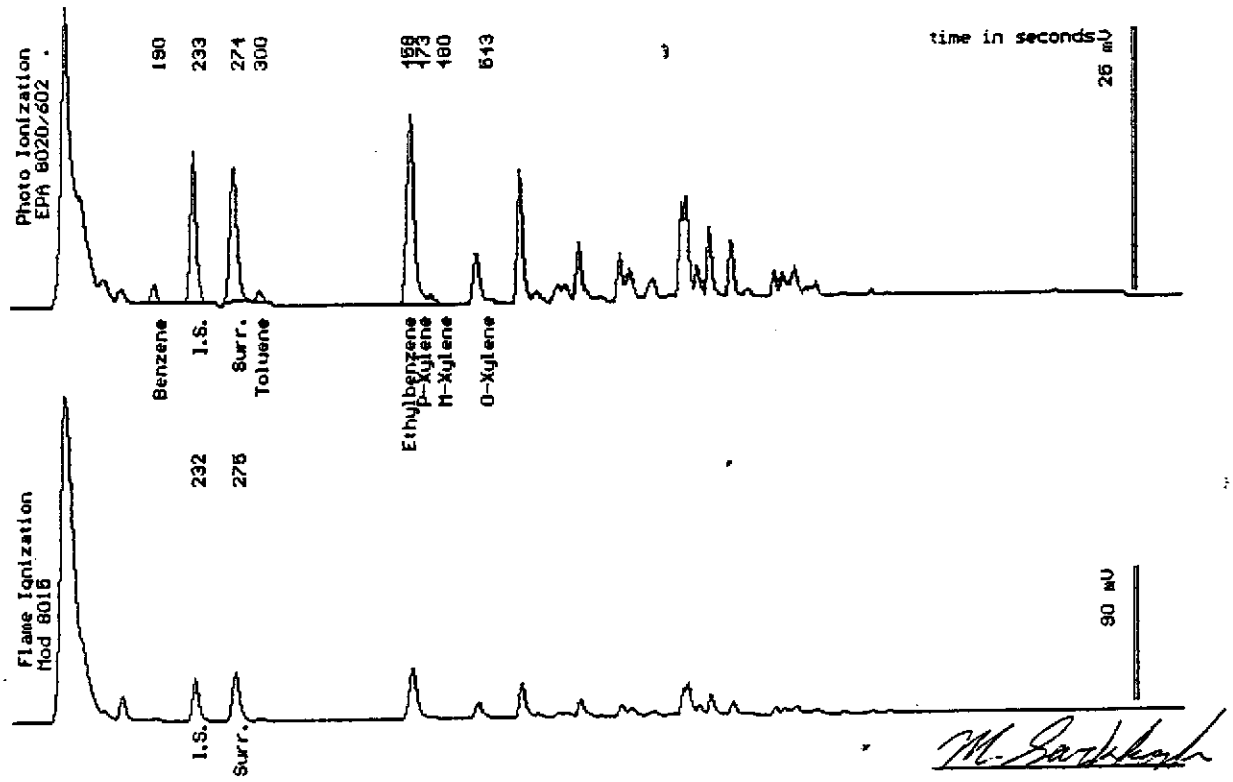
Sample Log 7517

7517-10

Sample: **MW-10**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:10 QC Batch : 4039C
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	22
Toluene	(5.0)	17
Ethylbenzene	(5.0)	350
Total Xylenes	(5.0)	16
TPH as Gasoline	(500)	6200
Surrogate Recovery		110 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

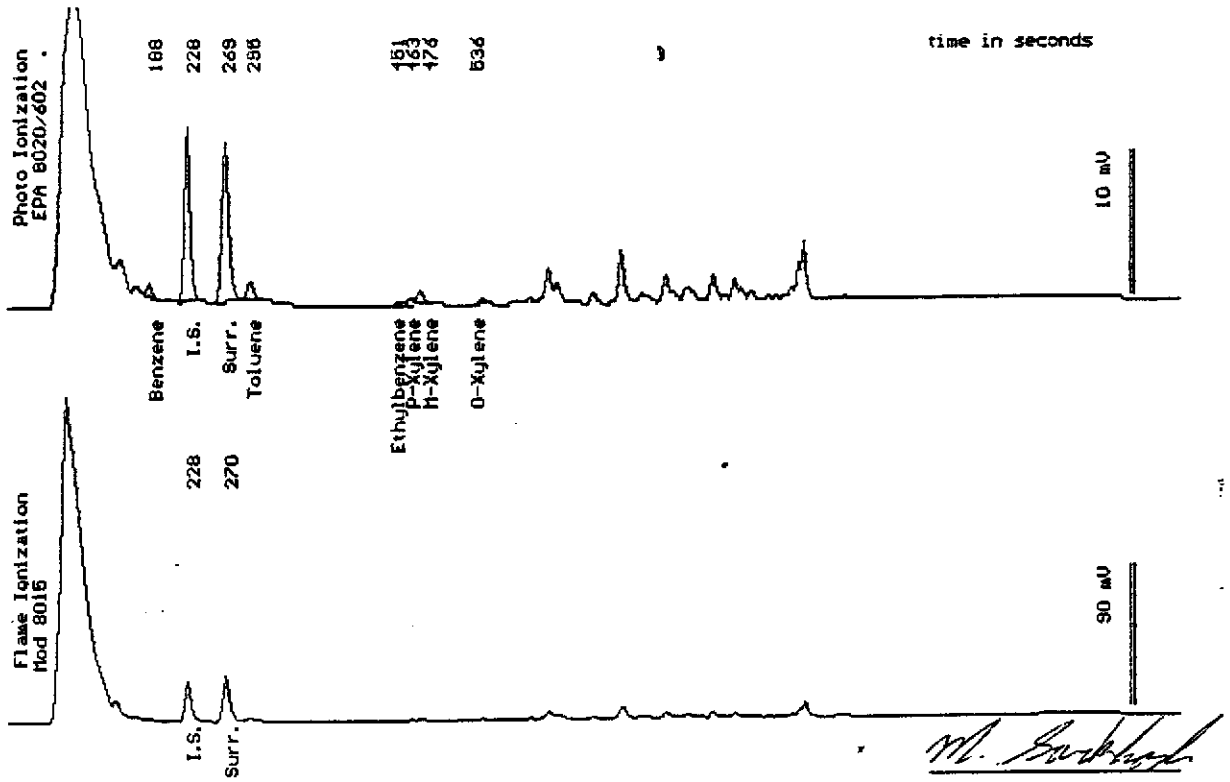
Sample Log 7517

7517-11

Sample: **MW-11**

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:1 QC Batch : 4039b
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	.65
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	.71
TPH as Gasoline	(50)	200
Surrogate Recovery		110 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

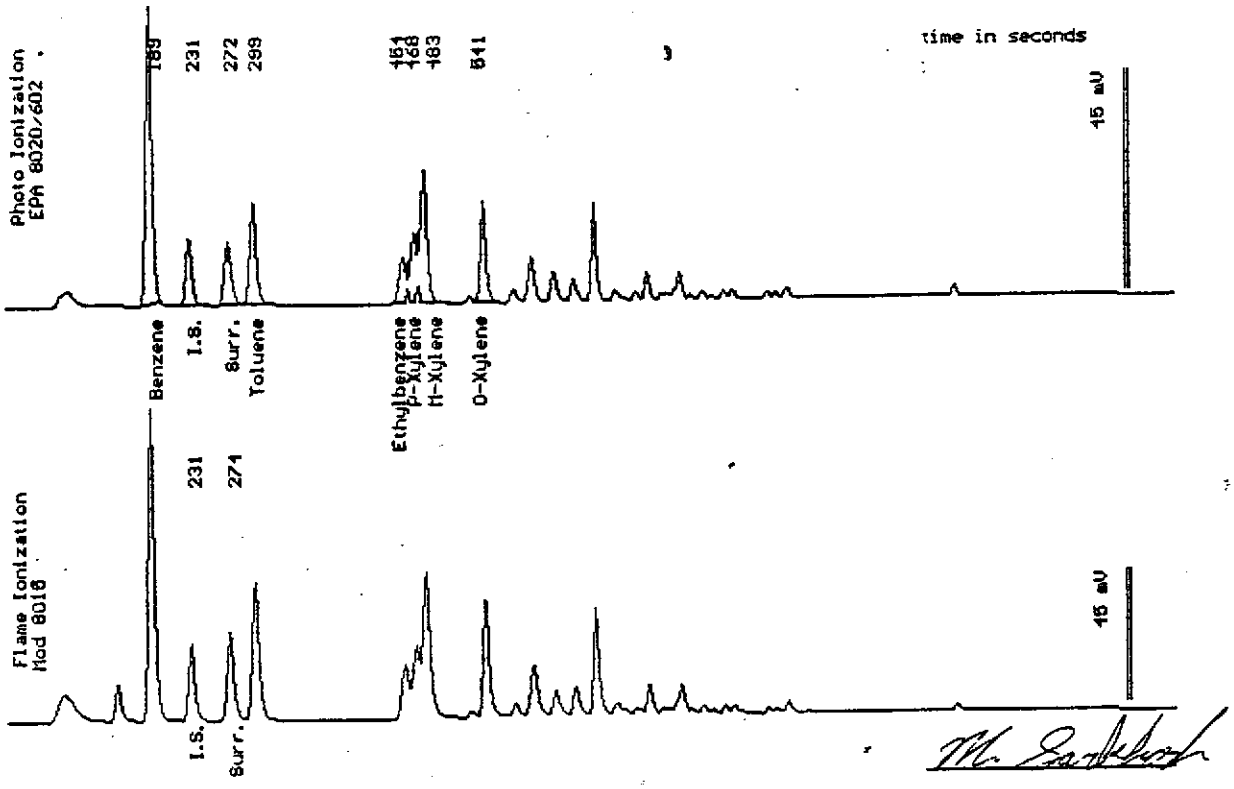
Sample Log 7517

7517-12

Sample: RW-1

From : Project # 40-93-936 (Beacon 721)
Sampled : 09/22/93
Dilution : 1:10 QC Batch : 4039C
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	800
Toluene	(5.0)	400
Ethylbenzene	(5.0)	170
Total Xylenes	(5.0)	910
TPH as Gasoline	(500)	4100
Surrogate Recovery		110 %



Date Analyzed: 10-01-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
721	JIM PERRY	9-22-93	1 of 2
Project No.	**Sampler (Signature)**		
40-93-936	Jim Perry		
Project Location	**Affiliation**		
414 LEWELLING BLVD. SAN LORENZO, CA	DELTA ENVIRONMENTAL		

WEST LAB - DAVIS

NORMAL TAT

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	No. of Containers	REMARKS
MW-1	9-22-93	17:05		X	X		2	
MW-2		14:30		X	X		2	
MW-3		17:45		X	X		2	
MW-4		13:50		X	X		2	
MW-5		11:40		X	X		2	
MW-6		11:10		X	X		2	
MW-7		15:35		X	X		2	
MW-8	9-22-93	12:02		X	X		2	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Jim Perry / DELTA	9-23-93	17:25	T. Alvarez / Delta	9/23/93	1725
T. Alvarez / Delta	9/23/93	3:29	Tony D. Lupro (WEST)	9/23/93	15:29
Tony D. Lupro (WEST)	9/24/93	17:00		9/24/93	1700

Report To: TODD GALATI / DELTA
(916) 638-2085
FAX (916) 638-8385

Bill To: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: T. Fox

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

32-8003 1/90

Ultramar Inc.

CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
721	Jim Perry	9-23-93	2 of 2
Project No.	**Sampler (Signature)**		
40-93-936	Jim Perry		
Project Location	**Affiliation**		
44 LEWELLING BLVD. SAN LORENZO, CA	DELTA ENVIRONMENTAL		

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	No. of Containers	REMARKS
MW-9	9-22-93	13:15		X	X		2	
MW-10	"	16:25		X	X		2	
MW-11	"	15:05		X	X		2	
RW-1	9-22-93	18:00		X	X		2	

ANALYSES

WEST LAB - DAVIS

NORMAL TAT

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
J. Perry / DELTA	9/23/93	17:25	T. Fox / Delta	9/23/93	725
T. Fox / Delta	9/24/93	3:29	Troy L. Fuqua (WEST)	9/24/93	15:32
Troy L. Fuqua	9/24/93	17:00	[illegible] West	9/24/93	1700

Report To: TODD GALATI / DELTA
(916) 638-2085

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: T. FOX

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

32-8003 1/90

ENCLOSURE D

Ground Water Treatment System Analytical Report

October 8, 1993
Sample Log 7578

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

Subject: Analytical Results for 3 Water Samples
Identified as: Project # 40-93-936 (Beacon 721)
Received: 10/01/93

Dear Mr. Galati:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on October 8, 1993 and describes procedures used to analyze the samples.

Sample(s) were received in 40-milliliter glass vials sealed with TFE lined septae and plastic screw-caps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Sample(s) were analyzed using the following method(s):

"BTEX" (EPA Method 602/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

Please refer to the following table(s) for summarized analytical results and contact us at 916-757-4650 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

Stewart Podolsky
Senior Chemist

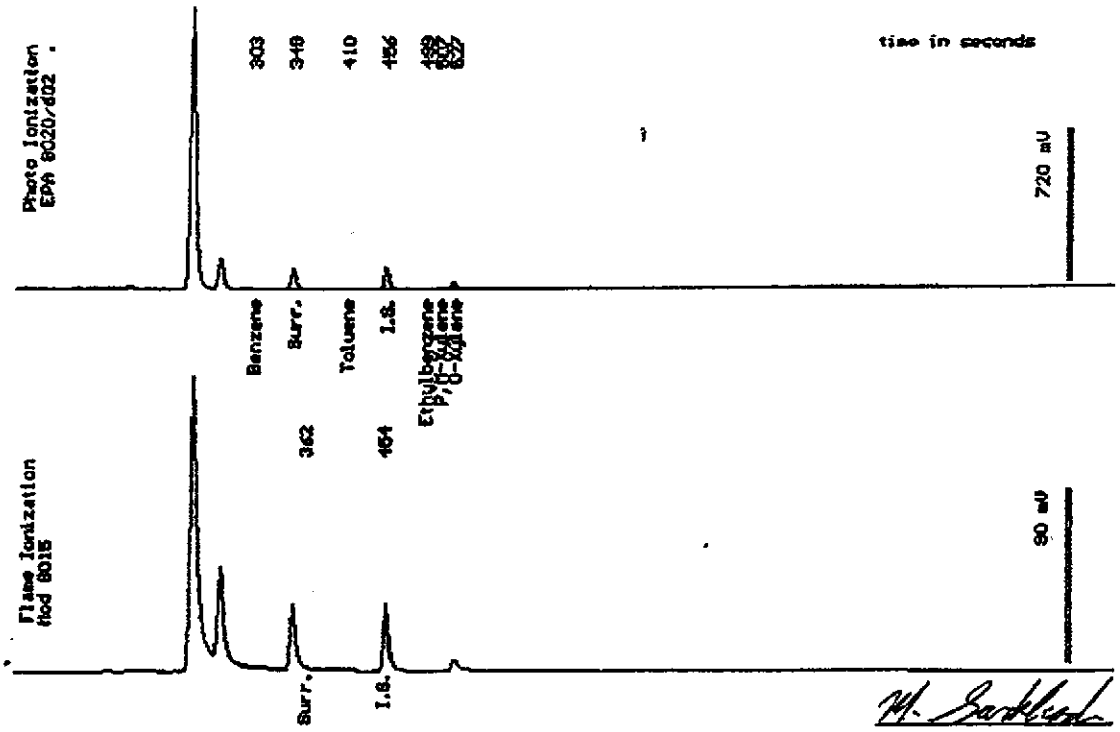
Western Environmental Science & Technology • 45133 County Road 32B • Davis, CA 95616 • 916 753-9500 • FAX: 916 757-4652

Sample Log 7578
7578-1

Sample: Effluent

From : Project # 40-93-936 (Beacon 721)
Sampled : 10/01/93
Dilution : 1:1 QC Batch : 6058a
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	68
Surrogate Recovery		94 %



Date Analyzed 10-07-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Nitra Sarkhosh
Senior Chemist

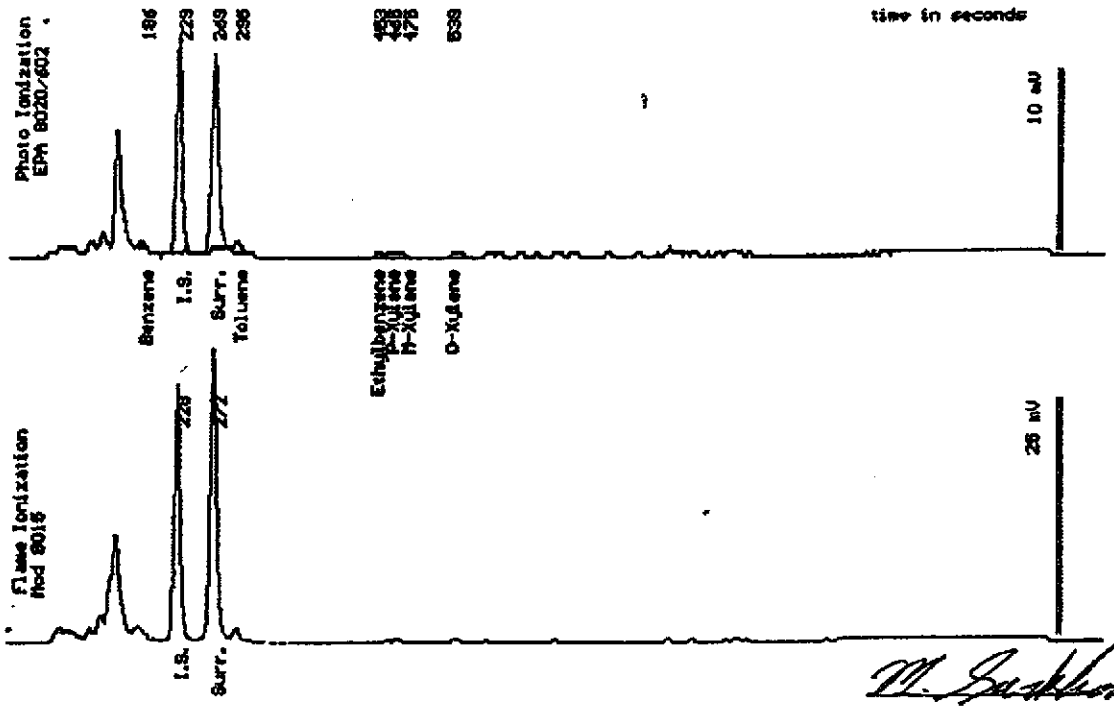
Sample Log 7578

7578-2

Sample: ASE

From : Project # 40-93-936 (Beacon 721)
Sampled : 10/01/93
Dilution : 1:1 QC Batch : 4040e
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		92 %



Date Analyzed: 10-07-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

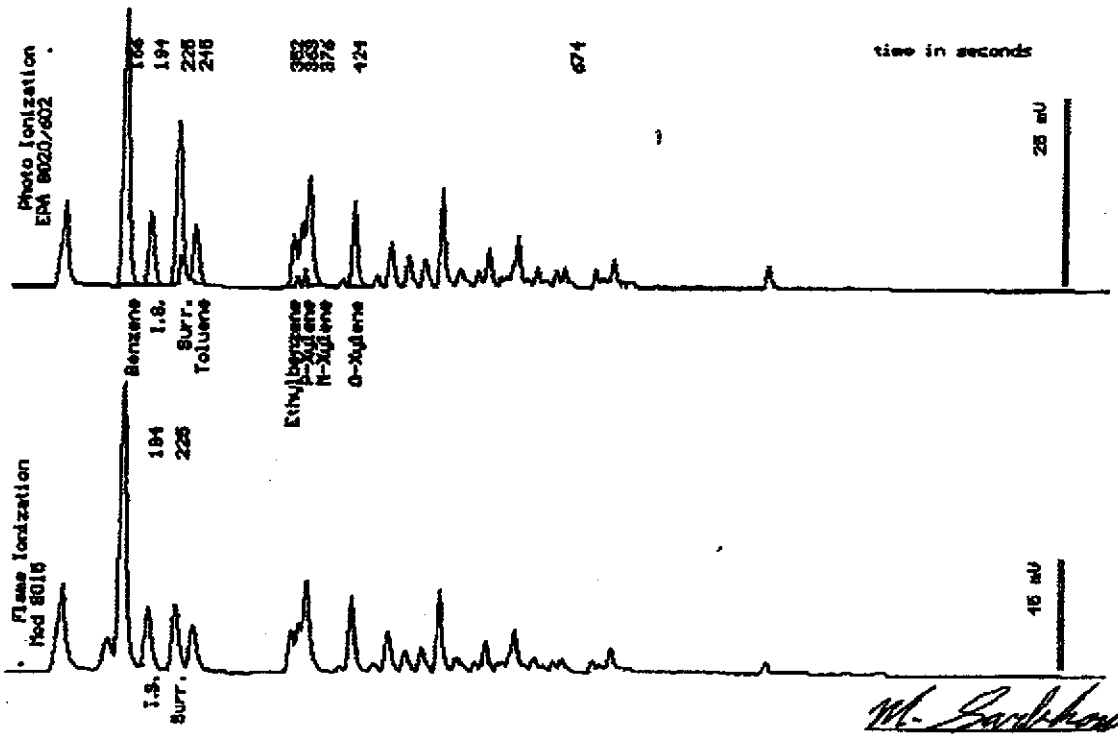
Nitra Sarkhosh
Senior Chemist

Sample Log 7578
7578-3

Sample: Influent

From : Project # 40-93-936 (Beacon 721)
Sampled : 10/01/93
Dilution : 1:1 QC Batch : 2024a
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	73
Toluene	(.50)	17
Ethylbenzene	(.50)	13
Total Xylenes	(.50)	61
TPH as Gasoline	(50)	430
Surrogate Recovery		97 %



Date Analyzed: 10-07-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist