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

July 8, 1994

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 first quarter 1994 and the remediation system status through March 1994 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.

Due to initiating the vapor extraction system, temporary mounding developed around RW-1 and MW-3. The consultant informs me that this has been rectified and a cone of depression has again been established around the recovery well.

Please call if you have any questions regarding this project.

Sincerely,

ULTRAMAR INC.

Terrence A. Fox

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: July 8, 1994
QUARTER ENDING: March 31, 1994

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.

In April 1993, the ground-water extraction system began operation.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on April 7, 1994. Continued to operate the ground-water extraction system. Completed installation of 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-5, MW-8, MW-9, and MW-11. The benzene concentration decreased in MW-3 from 14,000 ppb to 6,500 ppb, and in MW-7 from 61 ppb to 53 ppb. The benzene concentration increased in MW-1 from 2,400 ppb to 4,200 ppb and in MW-6 from not detected to 0.71 ppb. MW-10, which was not sampled last quarter, contain a benzene concentration of 6.4 ppb.

As of March 31, 1994, approximately 1,353,840 gallons of ground water have been removed, treated, and discharged.

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.	April 7, 1994

Delta
Environmental
Consultants, Inc.

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

June 28, 1994

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

Subject: *Quarterly Ground Water Monitoring Report, First Quarter 1994, and Status of Remediation System through March 1994*
Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California
Delta Project No. D093-936

Dear Mr. Fox:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Ultramar Inc. to conduct quarterly monitoring at the above-referenced site. The monitoring is intended to evaluate the presence 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 April 7, 1994, and the remediation system status through March 1994. The site location is shown in Figure 1, and site features are illustrated in Figure 2.

Quarterly ground water monitoring conducted on April 7, 1994, included measurement of depth to water in six on-site monitoring wells (MW-1 through MW-6), five off-site monitoring wells (MW-7 through 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 April 7, 1994. Depth to ground water ranged from 14.48 (MW-3) to 18.78 (MW-11) feet below the top of well casings. The water table elevation measurements indicate ground water mounding around MW-3 and RW-1. Ground water mounding is caused by initiation of the soil vapor extraction system. Ground water table measurements recorded at the site on April 7, 1994, are compiled in Table 1, along with measurements recorded since February 1992. A water table contour map prepared from the April 1994 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 April 7, 1994, separate phase petroleum product or product sheen was not observed in any of the wells associated with 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 April 7, 1994. 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. Benzene was not detected in monitoring wells MW-2, MW-4, MW-5, MW-8, MW-9, and MW-11. Detectable benzene concentrations ranged from 0.71 parts per billion (ppb) (MW-6) to 6,500 ppb (MW-3). A comparison of the analytical results for the samples collected in January 1994 and April 1994 indicate that the benzene concentrations decreased in MW-3 (14,000 to 6,500 ppb), and MW-7 (61 to 53 ppb), and increased in MW-1 (2,400 to 4,200 ppb), MW-6 (<0.5 to 0.71 ppb), and RW-1 (33 to 110 ppb). Results of the chemical analyses for the April 7, 1994, 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 has performed operation and maintenance of the ground water remediation system at the site since 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, while the air stripper tower packing was replaced. The ground water treatment system was restarted on September 22, 1993. The volume of ground water treated by the remediation system through March 31, 1994, is 1,353,840 gallons as shown in Table 3.

The soil vapor extraction system was started in March 1994 and is operational. Bay Area Air Quality Management District source testing will be conducted in early April 1994.

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 April 7, 1994, 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 C.

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.

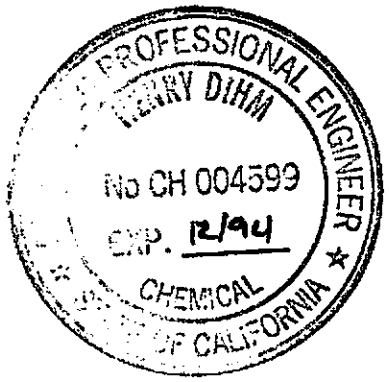
Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Paul V. Zianno
Project Hydrogeologist

Todd M. Galati
Project Manager

Henry A. Dihm, P.E.
California Registered Engineer No. CH 4599



PVZ (LRP373.TA)
Enclosures

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

TABLE 1

GROUND WATER ELEVATIONS

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

Monitoring Well	Date	Top of Riser Elevation (ft)*	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
	01/24/94		17.91	25.76	
	04/07/94		16.94	26.73	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
	01/24/94		17.20	25.89	
	04/07/94		16.26	26.83	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
	01/24/94		17.35	25.75	
	04/07/94		14.48	28.62	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
	01/24/94		18.86	25.80	
	04/07/94		17.90	26.76	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)*	Depth to Water (ft)	Ground Water Elevation (ft)	Physical Observation of 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
	01/24/94		19.17	25.77	
	04/07/94		18.23	26.71	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
	01/24/94		NM	NM	
	04/07/94		15.97	26.37	No 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
	01/24/94		19.79	25.21	
	04/07/94		18.78	26.22	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
	01/24/94		24.00	19.17	
	04/07/94		16.05	27.12	No free product or sheen

* All top of riser elevations surveyed by Aegis Environmental.
NM = Not Measured.
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	TPH[a] as gasoline
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
	01/24/94	2,400	280	1,100	1,700	18,000
	04/07/94	4,200	820	1,600	2,100	20,000
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
	01/24/94	<0.5	<0.5	0.68	<0.5	330
	04/07/94	<0.5	<0.5	<0.5	4.4	490
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
	01/24/94	14,000	17,000	4,200	14,000	110,000
	04/07/94	6,500	1,800	1,700	4,100	28,000
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
	01/24/94	<0.5	<0.5	<0.5	<0.5	260
	04/07/94	<0.5	<0.5	<0.5	<0.5	430

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	TPH[a] as gasoline
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
	01/24/94	<0.5	<0.5	<0.5	<0.5	<50
	04/07/94	<0.5	<0.5	<0.5	<0.5	<50
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
	01/24/94	<0.5	<0.5	<0.5	<0.5	98
	04/07/94	0.71	<0.5	<0.5	<0.5	150
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
	01/24/94	61	<1.3	10	160	900
	04/07/94	53	<0.5	7.1	49	630
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
	01/24/94	<0.5	<0.5	<0.5	<0.5	290
	04/07/94	<0.5	<0.5	<0.5	<0.5	<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	TPH[a] as gasoline
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
	01/24/94	<0.5	<0.5	<0.5	<0.5	<50
	04/07/94	<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	24	540	45	8,100
	09/22/93	22	17	350	16	6,200
	01/24/94	NS[b]	NS	NS	NS	NS
	04/07/94	6.4	2.9	150	4.7	4,000
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
	09/22/93	<0.5	0.65	<0.5	0.71	200
	01/24/94	<0.5	<0.5	<0.5	<0.5	450
	04/07/94	<0.5	<0.5	<0.5	<0.5	500

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	TPH[a] as gasoline
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
	01/24/94	33	6.0	6.9	23	190
	04/07/94	110	57	32	260	1,500

[a] Total petroleum hydrocarbons.
[b] Not Sampled.
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
01/24/94	1,242,108
03/31/94	1,353,840

[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
	01/24/94	<0.5	<0.5	<0.5	<0.5	<50
	04/07/94	<0.5	<0.5	<0.5	<0.5	<50

[a] Total petroleum hydrocarbons.

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

North

CALIF

QUADRANGLE LOCATION

0 2000 FT

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 L.H. 11/2/92
FILE NO. —	PREPARED BY TMG
REVISION NO. 1	REVIEWED BY [illegible] 11/17/92

Delta Environmental Consultants, Inc.

LEWELLING BOULEVARD

VIA GRANADA

SAN LORENZO CREEK

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

PLANTER

TACO BELL

DRIVE-THRU

PARKING

BUILDING

BUILDING

BUILDING

BUILDING

BUILDING

BUILDING

CANOPY

PUMP ISLANDS

UNDERGROUND STORAGE TANKS

STATION BUILDING

FENCE

TRASH

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

RW-1

B-1

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 I.H. 8/11/93
FILE NO. 93-936-1	PREPARED BY JRB
REVISION NO. 1	REVIEWED BY 8/11/93

Delta Environmental Consultants, Inc.

LEWELLING BOULEVARD

VIA GRANADA

DRIVEWAY
DRIVEWAY
DRIVEWAY
DRIVEWAY
DRIVEWAY

PLANTER
TACO BELL
MW-8 (26.31)
MW-7 (26.44)
PARKING
DRIVE-THRU
BUILDING
MW-10 (26.37)
BUILDING
BUILDING
MW-11 (26.22)
BUILDING
MW-6 (26.77)
CANOPY
PUMP ISLANDS
MW-2 (26.83)
(28.62) MW-3
UNDERGROUND STORAGE TANKS
RW-1
(27.12) B
MW-1 (26.73)
MW-5 (26.88)
STATION BUILDING
FENCE
TRASH
MW-4 (26.76)
MW-9 (26.71)
BUILDING
BUILDING

28.8
28.6
28.4
28.0
27.8
27.4
27.2
27.0

SAN LORENZO CREEK

North

LEGEND:

- ● B-1 SOIL BORING LOCATION
- ◉ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- (26.73) GROUND WATER ELEVATION RELATIVE TO AN ASSUMED BENCH MARK
- —27.0— 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 – 4/7/94
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. D093-938	DRAWN BY L.H. 6/8/94
FILE NO. 93-938-1	PREPARED BY PVZ
REVISION NO. 2	REVIEWED BY 9/9/94

Delta Environmental Consultants, Inc.

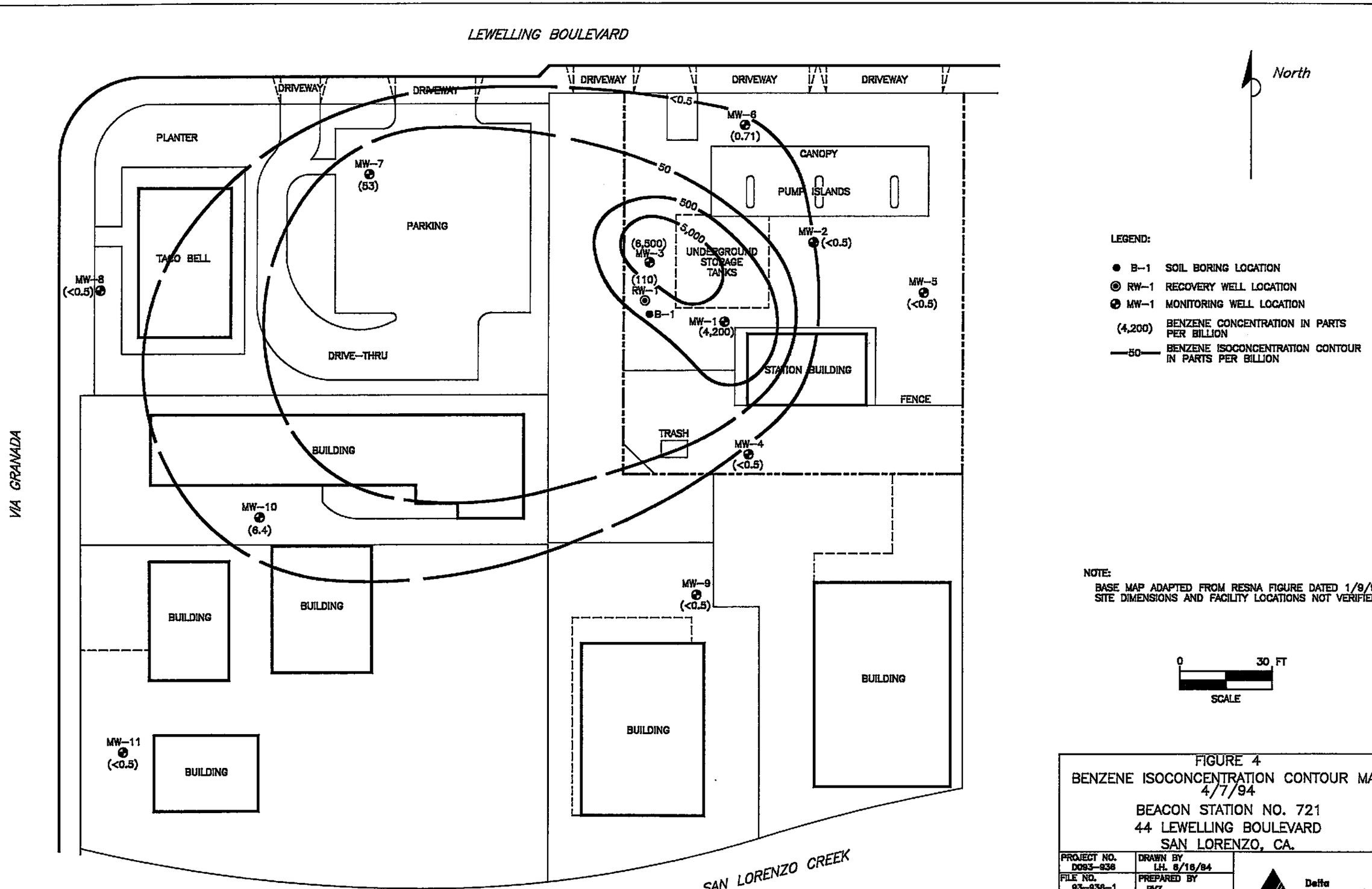


FIGURE 4
BENZENE ISOCONCENTRATION CONTOUR MAP
4/7/94
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. D093-938	DRAWN BY LH. 6/16/94
FILE NO. 93-938-1	PREPARED BY PVZ
REVISION NO. 3	REVIEWED BY RZ 6/17/94

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 PURGING AND SAMPLING

Monitoring wells were purged using a centrifugal pump with new disposable tubing. Monitoring wells were sampled using new disposable bailers. Ground water removed from the wells was stored in 55-gallon barrels at the site. The purge water was treated by the remediation system. 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.

ENCLOSURE B

Field Sampling Data Sheets

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Ground Water Level Data

PROJECT: BEACON 721 DELTA PROJECT NO.: 40-93-936

DATE: 4-7-94 RECORDED BY: MWM / SWG MEASURING DEVICE: Slope

Well No.	Time	Reference Elevation	Depth to G.W.	Elevation	Free Product Thickness	Physical Observations/Comments
MW-1	11:04	43.67	16.74			31.20 TOTAL DEPTH
MW-2	11:05	43.09	16.26			33.30
MW-3	11:03	43.10	14.48		Under Vacuum	29.30
MW-4	10:38	44.66	17.70'			24.60
MW-5	11:01	43.79	16.91			29.20
MW-6	11:00	42.47	15.70			28.70
MW-7	10:58	41.54	15.10			24.30
MW-8	10:50	42.26	15.95			23.20
MW-9	10:48	44.94	18.23			23.80
MW-10	10:56	42.34	15.97			29.50
MW-11	10:52	45.00	18.78			29.50 TOTAL DEPTH
RW-1	10:41	43.17	16.05'			Under Vacuum

* Measured from top of riser unless otherwise noted.

1012/3-89

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly — Temperature: 60's

Wind Speed: 0-2

GENERAL CONDITIONS

Sample ID: MW-1 — Project: BEACON 721

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

Sampling Point: MW-1 — Date Sampled: 4/7/94 — Time: 1409

Describe Sampling Point: SEE SITE MAP

Well Depth: 31.20 ft. below MP — Casing diameter: 2 inches

Depth to water (below MP): 16.94 ft. — Date: 4/7/94 — Time: 11:04

Discharge rate: _____ gpm x 0.00[illegible] = _____ cfs.

At least 4 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: Slightly Cloudy - Grayish Coloring

Note any sampling problems:

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)
Static	7.08	2010	72			
	6.77	2040	71			
	6.68	1970	71			
					9.5gal	

Bailing start time: 1402 — WL: 16.94

Bailing stop time: 14:07 — WL: 18.48

Comments: Used Centrifugal pump w/ designated tubing to purge well and a new disposable bailer to sample well. ; Sheen on purge water

Transportation (thermal preservation): COOLER & ICE

Forms completed by: MWM / JWB — Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly — Temperature: 60's

Wind Speed: 0-2

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: 4/7/94 — Time: 1233

Describe Sampling Point: SEE SITE MAP

Well Depth: 33.30 ft. below MP — Casing diameter: 2 inches

Depth to water (below MP): 16.26 ft. — Date: 4/7/94 — Time: 11:05

Discharge rate: _____ gpm x 0.00___ = _____ cfm

At least 4 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-2

Sample appearance: clear

Note any sampling problems:

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)
	7.12	1448	69			
	6.88	1402	69			
	6.82	1418	69			
					11.25gal	

Pumping start time: 1229 — WL: 16.91

Pumping stop time: 1232 — WL: 17.01

Comments: Used Centrifugal pump w/ designated tubing to purge Well and a new disposable bailer to Sample Well

Temperature (thermal preservation): COOLER & ICE

Form completed by: MWM / JWB — Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly — Temperature: 60's

Wind Speed: 0-2

GENERAL CONDITIONS

Sample ID: MW-3 — Project: BEACON 721

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

Sampling Point: MW-3 — Date Sampled: 4 / 7 / 94 — Time: 1354

Describe Sampling Point: SEE SITE MAP

Well Depth: 29.30 ft. below MP — Casing diameter: 2 inches

Depth to water (below MP): 14.48 ft. — Date: 4 / 7 / 94 — Time: 11:03

Discharge rate _____ gpm x 0.00__ = _____ cfm

At least 4 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-3

Sample appearance: Slightly Cloudy

Note any sampling problems:

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)
	7.00	1428	70			
	6.85	1445	69			
	6.73	1491	69			
					9.75 gal	

Bailing start time: 13:49 — WL: 14.48

Bailing stop time: 13:52 — WL: 18.70

Comments: Used Centrifugal pump w/ designated tubing to purge well and a new ; well under VACUUM ; Sheen on purge water.

Transportation (thermal preservation): COOLER & ICE

Forms completed by: JWB, MWM — Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Partly Cloudy Temperature: 60's

Wind Speed: 0-2

GENERAL CONDITIONS

Sample ID: MW-4 Project: BEACON 721

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

Sampling Point: MW-4 Date Sampled: 4/7/94 Time: 1342

Describe Sampling Point: SEE SITE MAP

Well Depth: 24.60 ft. below MP Casing diameter: 2 inches

Depth to water (below MP): 17.90 ft. Date: 4/7/94 Time: 10:38

Discharge rate _____ gpm x 0.0___ = _____ cfs.

At least 4 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-4

Sample appearance: Clear

Note any sampling problems: _____

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)
	7.60	1165	71			
	7.38	1208	70			
	7.25	1142	70			
					4.5 gal	

Bailing start time: 13:38 WL: 17.90

Bailing stop time: 13:40 WL: 18.85

Comments: Used Centrifugal pump w/ designated tubing to purge Well and a new disposable bailer to Sample Well.

Transportation (Thermal preservation): COOLER W/ ICE

Forms completed by: MWM / JWB Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly Temperature: 60's

Wind Speed: 0-2 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: 4 / 7 / 94 Time: 12:46

Describe Sampling Point: SEE SITE MAP

Well Depth: 29.2 ft. below MP Casing diameter: 2 inches

Depth to water (below MP): 16.91 ft. Date: 4/7/94 Time: 11:01

Discharge rate: _____ gpm x 0.002___ = _____ cfs.

At least 4 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: cloudy

Note any sampling problems:

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)
	7.39	884	71			
	7.34	855	70			
	7.29	805	70			
					8.0	

Bailing start time: 12:42 WL: 16.91

Bailing stop time: 12:44 WL: 17.53

Comments: Used Centrifugal pump w/ designated tubing to purge well and a new disposable bailer to sample well

Transportation (thermal preservation): COOLER & ICE

Form completed by: MWM / DWB Sampled by: DWB

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: Partly Temperature: 60's

Wind Speed: 0-2 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: 4/7/94 Time: 12:23
Description Sampling Point: SEE SITE MAP

Well Depth: 28.70 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 15.70 ft. Date: 4/7/94 Time: 11:00
Discharge rate: _____ gpm x 0.00[illegible] = _____ cfs.
At least 4 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-6
Sample appearance: Slightly Cloudy
Note any sampling problems: _____
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)
	7.96	972	69			
	7.76	901	69			
	7.62	920	69			
					8.5gl	

Bailing start time: 1219 WL: 15.70
Bailing stop time: 1222 WL: 17.25

Comments: centrifugal pump and dedicated tubing used to purge well; new disposable bailer used to sample

Transportation (Thermal preservation): COOLER & ICE

Form completed by: JWB, MWM Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly — Temperature: 60's

Wind Speed: 0-2 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: 4/7/94 — Time: 12:03

Describe Sampling Point: SEE SITE MAP

Well Depth: 24.30 ft. below MP — Casing diameter: 2 inches

Depth to water (below MP): 15.10 ft. — Date: 4/7/94 — Time: 10:58

Discharge rate _____ gpm x 0.00___ = _____ cfs.

At least 4 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-7

Sample appearance: Clear

Note any sampling problems: _____

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)	Temperature (°F)	Water Level (Measured 0.01 ft.)	Cumulative Volume of Water Removed from Well (gallons)	Pumping Rate (gpm)
	7.40	1002	68			
	7.04	1125	69			
	6.84	1143	69			
	6.75	1158	69		6 gal	

Ending water time: 11:59 — WL: 15.10

Ending water time: 12:01 — WL: 19.68

Comments: Used centrifugal pump w/ designated tubing to purge well and (1) disposable bailer to sample well.

Transportation (thermal preservation): COOLER & ICE

Form completed by: JWB, MWM — Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly — Temperature: 100's

Wind Speed: 0-2

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: 4/7/94 — Time: 11:52

Describe Sampling Point: SEE SITE MAP

Well Depth: 23.20 ft. below MP — Casing diameter: 2 inches

Depth to water (below MP): 15.95 ft. — Date: 4/7/94 — Time: 10:50

Discharge rate _____ gpm x 0.002228 = _____ cfs.

At least 4 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-8

Sample appearance: clear

Note any sampling problems: _____

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)
	7.61	549	67			
	7.59	474	67			
	7.57	451	66			
					5 gal	

Bailing start time: 11:48 — WL: 15.95

Bailing stop time: 11:50 — WL: 19.38

Comments: Used centrifugal pump w/ designated tubing to Purge well and (1) disposable bailer to Sample Well.

Transportation (Thermal preservation): COOLER & ICE

Form completed by: MWH / JWB — Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions: Cloud Cover: Partly — Temperature: 60's

Wind Speed: 0-2

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: 4/7/94 — Time: 12:13

Description Sampling Point: SEE SITE MAP

Well Depth: 23.80 ft. below MP — Casing diameter: 2 inches

Depth to water (below MP): 18.23 ft. — Date: 4/7/94 — Time: 10:48

Discharge rate: _____ gpm x 0.00[illegible] = _____ cfs.

At least 4 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-9

Sample appearance: _____

Note any sampling problems: _____

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)
	7.82	1391	68			
	7.56	1439	68			
	7.37	1419	68			
					4 gal	

Bailing start time: 12:09 — WL: 18.23

Bailing stop time: 12:12 — WL: 19.92

Comments: Used centrifugal pump w/ designated tubing to purge well and (1) disposable bailer to purge well.

Preservation (Chemical preservation): COOLER W/ ICE

Forms completed by: JWB, MVM — Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: Partly Temperature: 60's

Wind Speed: 0-2

GENERAL CONDITIONS

Sample ID: MW-10 Project: BEACON 721
Location: 44 LEWELLING BLVD. SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: MW-10 Date Sampled: 4/7/94 Time: 11:40
Describe Sampling Point: SEE SITE MAP

Well Depth: 29.50 ft. below MP Casing diameter: 2 inches
Depth to water (below MP): 15.97 ft. Date: 4/7/94 Time: 10:56
Discharge rate: _____ gpm x 0.00[illegible] = _____ cfm
At least: 4 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-10
Sample appearance: clear
Note any sampling problems:
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)
	7.23	807	67			
	7.13	815	67			
	7.10	825	67			
					9 gal	

Ending purge time: 11:37 WL: 15.97
Ending sample time: 11:39 WL: 17.90

Comments: Used Peristaltic pump to purge well w/ designated tubing and (1) disposable bailer to sample

Transportation (Chemical preservation): COOLER & ICE

Form completed by: MMM / JWB Sampled by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: Partly — Temperature: 60's

Wind Speed: 0-2

GENERAL CONDITIONS

Sample ID: MW-11 — Project: BEACON 721
Location: 44 LEWELLING BLVD. SAN LORENZO, CA — W.O.: 40-93-936
Sampling Point: MW-11 — Date Sampled: 4/7/94 — Time: 11:29
Description Sampling Point: SEE SITE MAP

Well Depth: 29.50 ft. below MP — Casing diameter: 2 inches
Depth to water (below MP): 18.78 ft. — Date: 4/7/94 — Time: 10:52
Discharge rate _____ gpm x 0.00___ = _____ cfm.
At least 4 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-11
Sample appearance: clear
Note any sampling problems: _____
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)
	6.31	706	70			
	6.40	700	68			
	6.55	697	68			
					7gal	

Bailing start time: 11:23 — wl. 18.78
Bailing stop time: 11:27 — wl. 18.94

Comments: Used centrifugal to purge well and disposable bailer to sample well

Temperature (Thermal preservation): COOLER & ICE

Form completed by: MWM / JWB — Samples by: JWB

SAMPLING INFORMATION SHEET

Weather Conditions
Cloud Cover: Partly Temperature: 60's

Wind Speed: 0-2

GENERAL CONDITIONS

Sample ID: RW-1 Project: BEACON 721
Location: 44 ROWELLING BLVD SAN LORENZO, CA W.O.: 40-93-936
Sampling Point: RW-1 Date Sampled: 4 / 7 / 94 Time: 1325
Describe Sampling Point: SEE SITE MAP

Well Depth: 29.50 ft. below MP Casing diameter: 6 inches
Depth to water (below MP): 16.05 ft. Date: 4 / 7 / 94 Time: 10:41
Discharge rate _____ gpm x 0.002[illegible] = _____ cfs.
At least 4 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: Slightly Cloudy
Note any sampling problems _____
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)

Bailing start time: _____ WL _____
Bailing stop time: _____ WL _____

Comments: totalizer: 427093 on arrival
totalizer: 427244 on Sampling

Transportation (thermal preservation): COOLER/ICE

Form completed by: MWM / JNB Sampled by: JNB

ENCLOSURE C

Ground Water Sample Laboratory Reports

April 15, 1994
Sample Log 9086

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

Subject: Analytical Results for 15 Water Samples
Identified as: Project # 40-93-936 (Beacon 721)
Received: 04/08/94

Dear Mr. Galati:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on April 15, 1994 and describes procedures used to analyze the samples.

The sample(s) were received in:

40-ml glass vials sealed with TFE-lined septae
1-L polyethylene bottles with polyethylene caps
1-L glass bottles sealed with TFE-lined caps

Each sample was transported and received under documented chain of custody, assigned a consecutive log number and stored at 4 degrees Celsius until analysis commenced.

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 916-753-9500 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

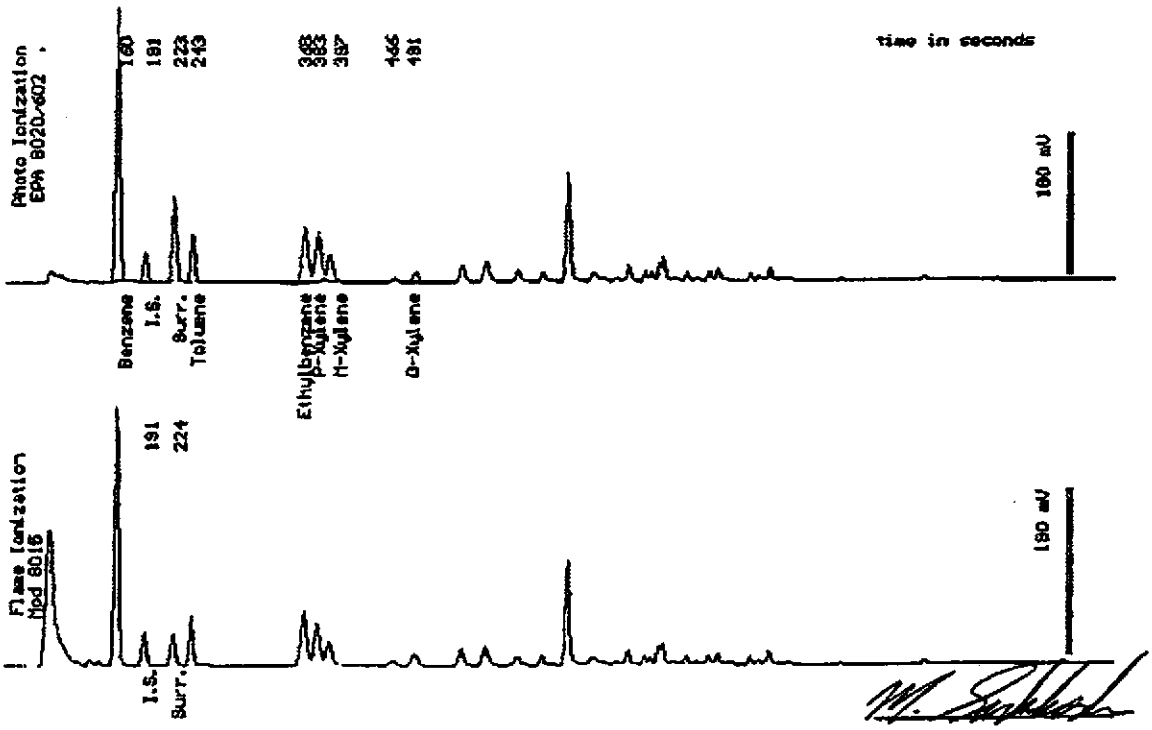
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-11

Sample: MW-1

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:25 QC Batch : 4078B
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(13)	4200
Toluene	(13)	820
Ethylbenzene	(13)	1600
Total Xylenes	(13)	2100
TPH as Gasoline	(1300)	20000
Surrogate Recovery		98 %



Date Analyzed: 04-11-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

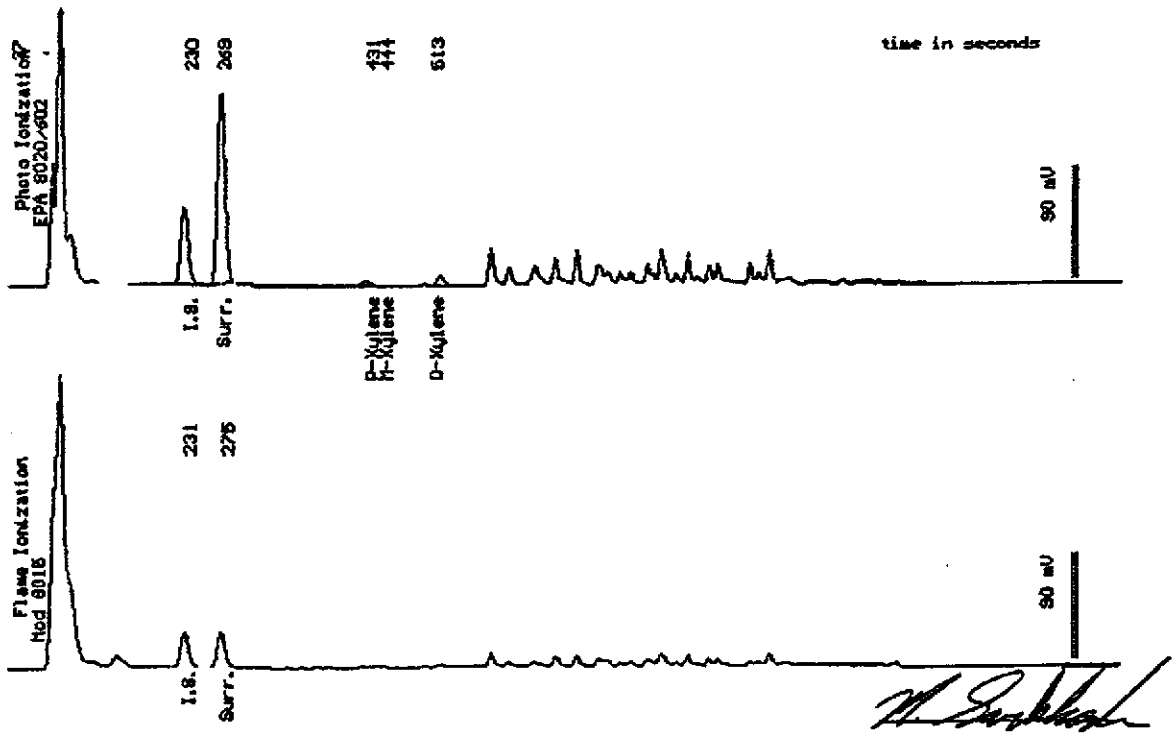
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-c

Sample: MW-2

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	4.4
TPH as Gasoline	(50)	490
Surrogate Recovery		94 %



Date Analyzed 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarthosh
Senior Chemist

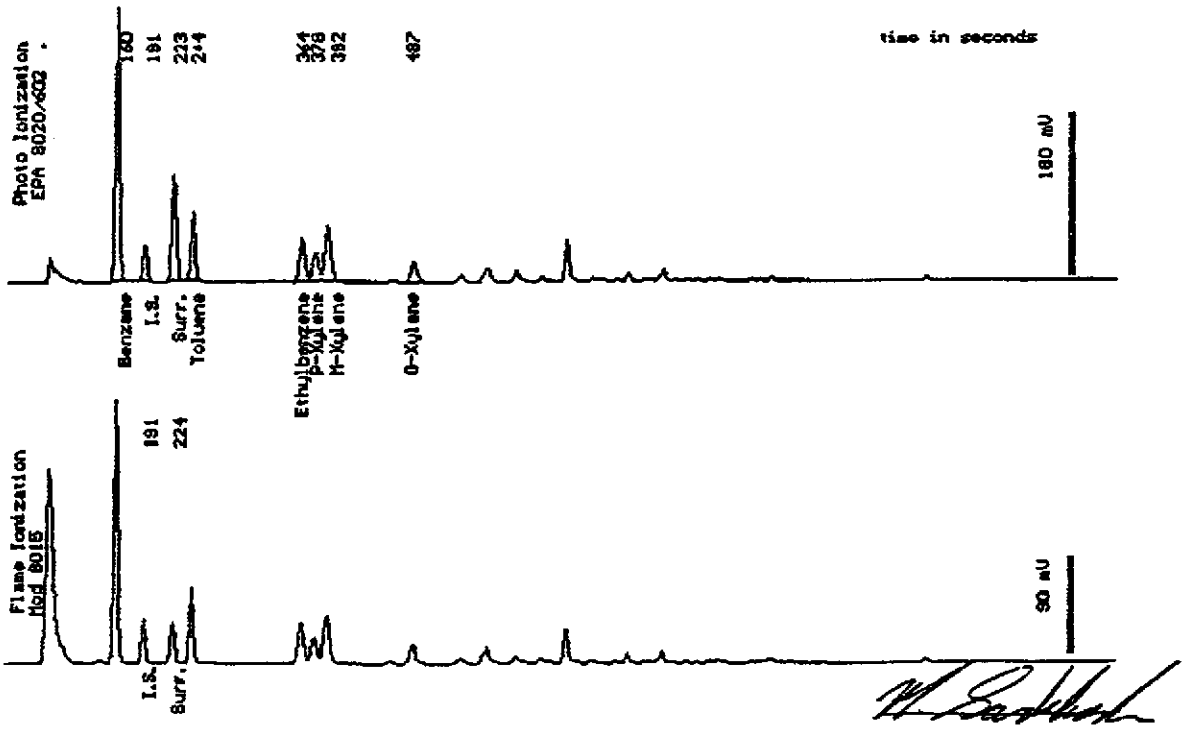
Sample Log 9086

9086-10

Sample: MW-3

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:50 QC Batch : 4078B
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	6500
Toluene	(25)	1800
Ethylbenzene	(25)	1700
Total Xylenes	(25)	4100
TPH as Gasoline	(2500)	28000
Surrogate Recovery		99 %



Date Analyzed 04-11-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

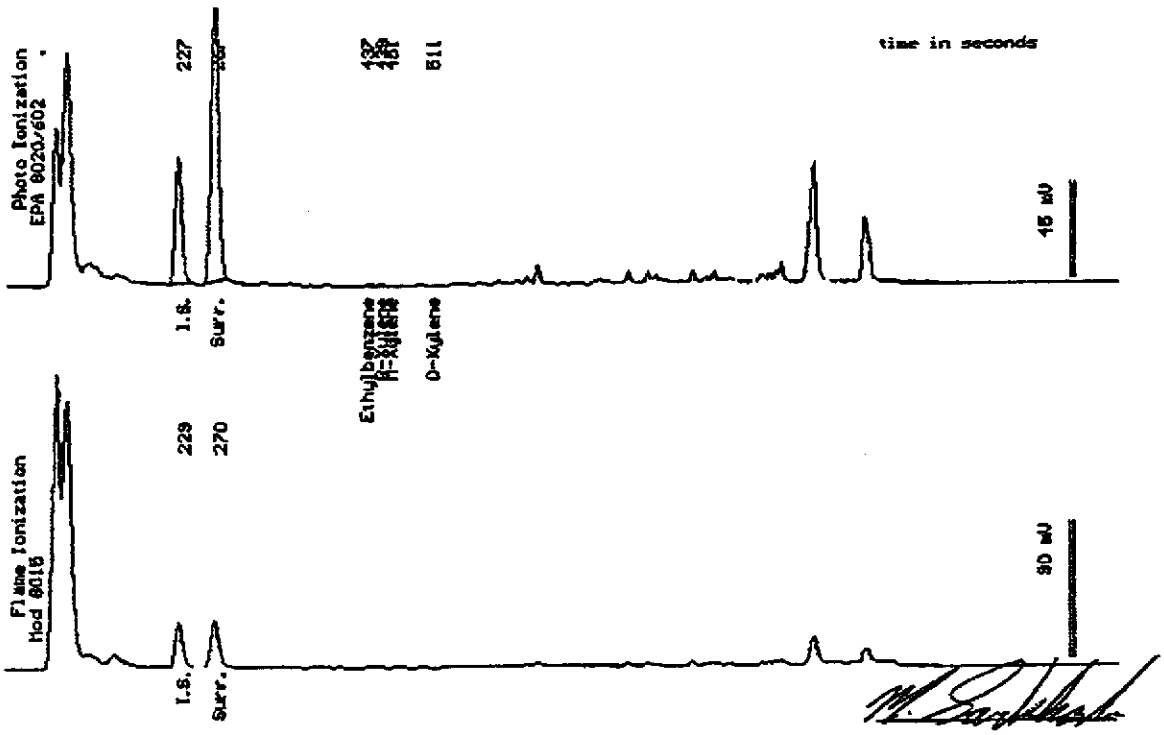
Mitra Garthosh
Senior Chemist

Sample Log 9086
9086-9

Sample: MW-4

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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)	430
Surrogate Recovery		99 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

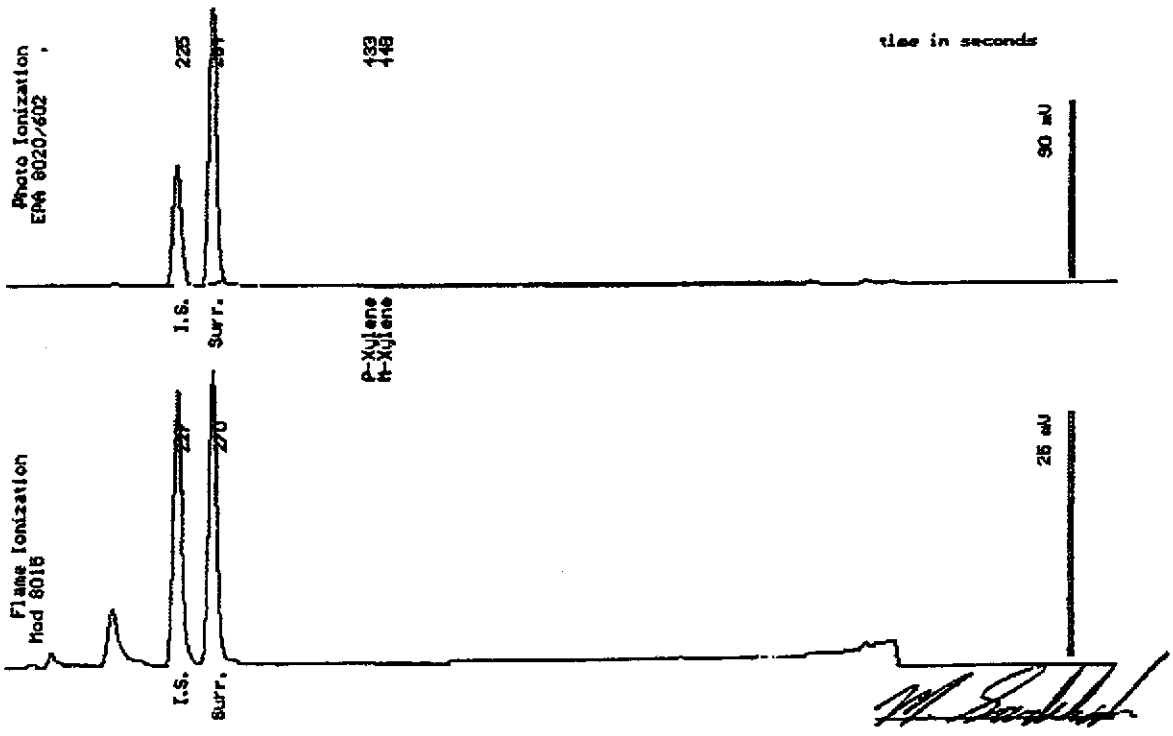
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-7

Sample: MW-5

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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		89 %



Date Analyzed 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

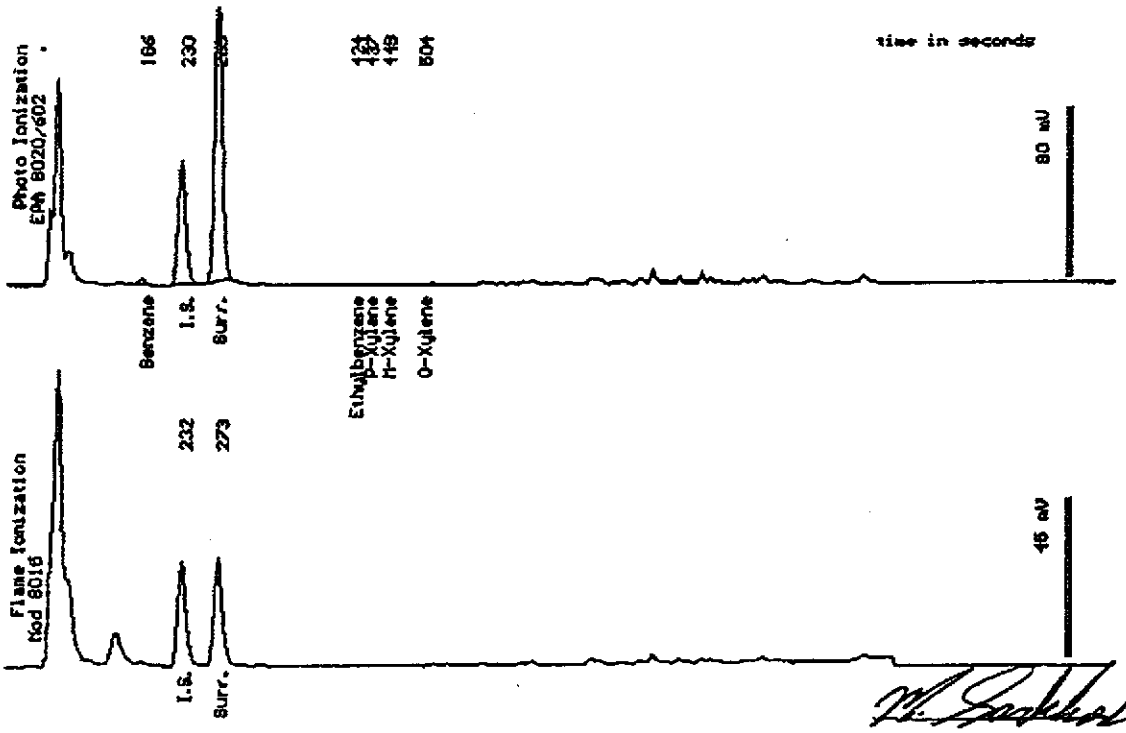
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-6

Sample: MW-6

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	.71
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	150
Surrogate Recovery		93 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m OBWAX (J&W Scientific)

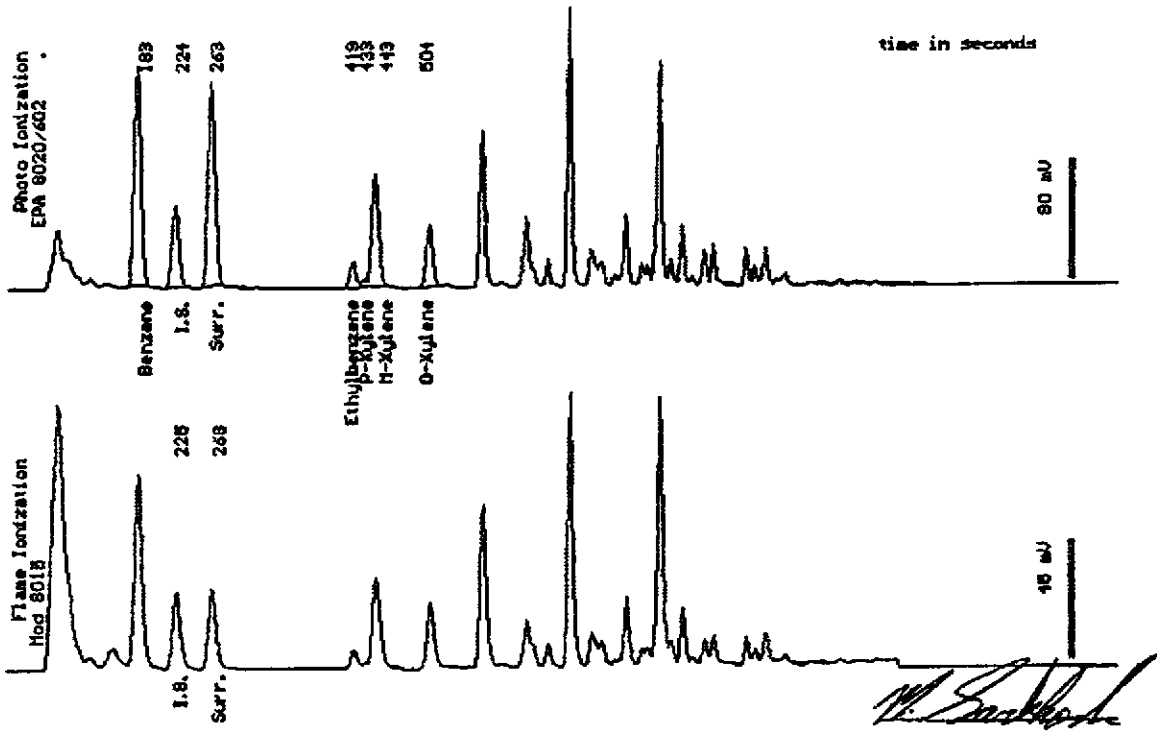
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-4

Sample: MW-7

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	53
Toluene	(.50)	<.50
Ethylbenzene	(.50)	7.1
Total Xylenes	(.50)	49
TPH as Gasoline	(50)	630
Surrogate Recovery		101 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

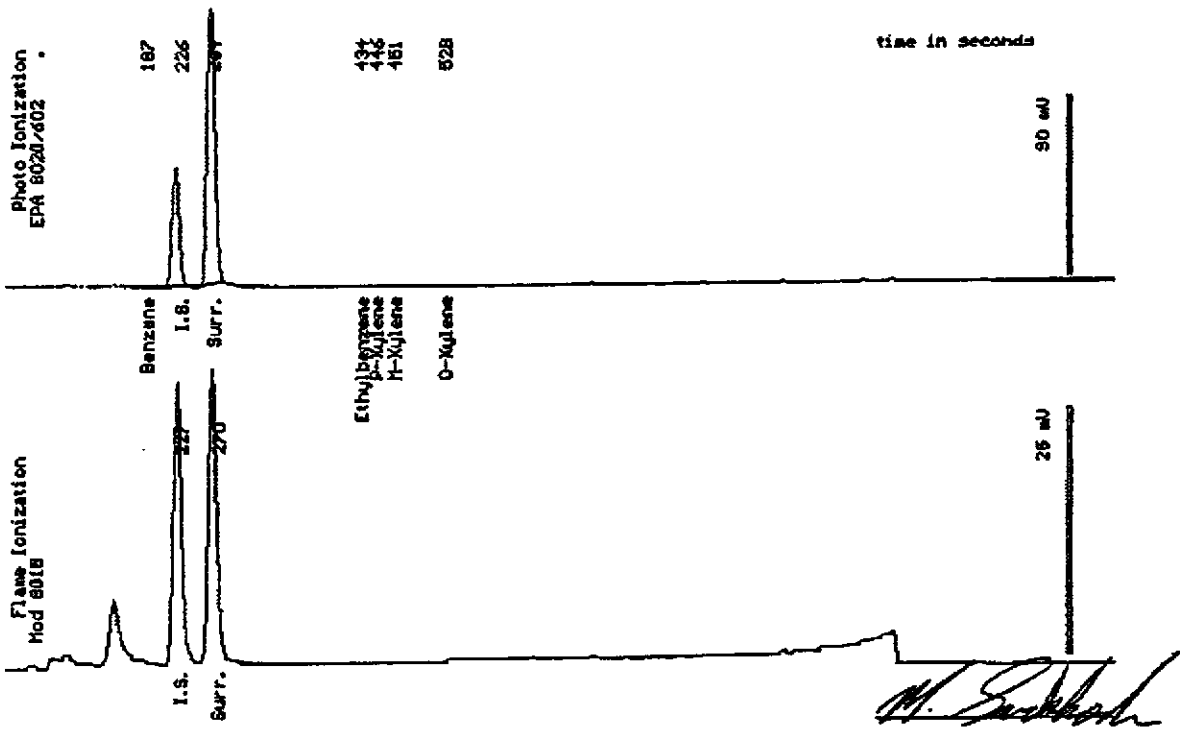
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-3

Sample: MW-8

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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		100 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

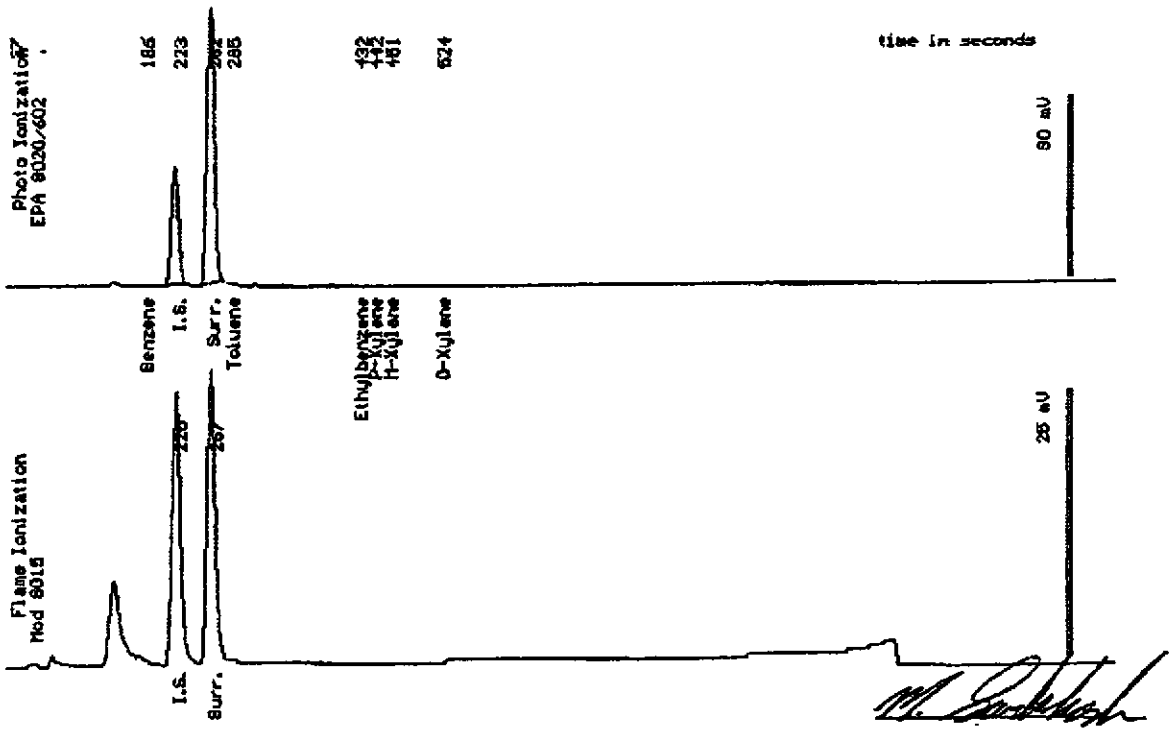
Sample Log 9086

9086-15

Sample: **MW-9**

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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		99 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

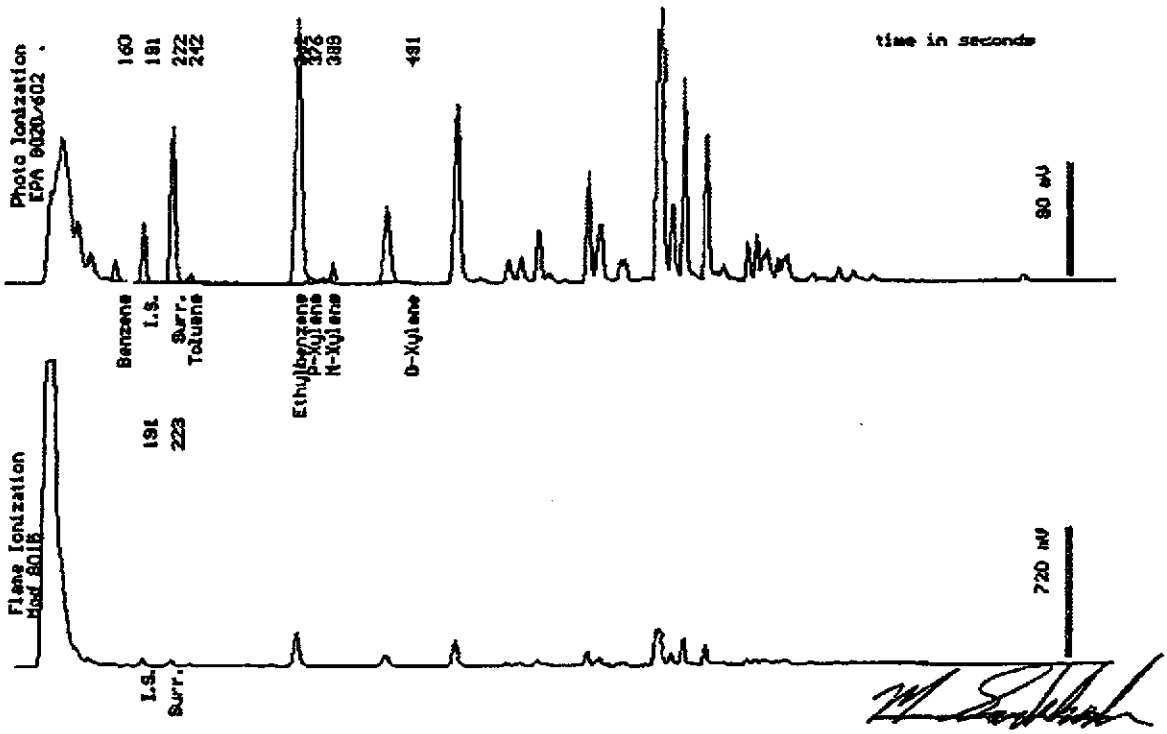
Sample Log 9086

9086-2

Sample: MW-10

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 4077F
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	6.4
Toluene	(.50)	2.9
Ethylbenzene	(.50)	150
Total Xylenes	(.50)	4.7
TPH as Gasoline	(50)	4000
Surrogate Recovery		97 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

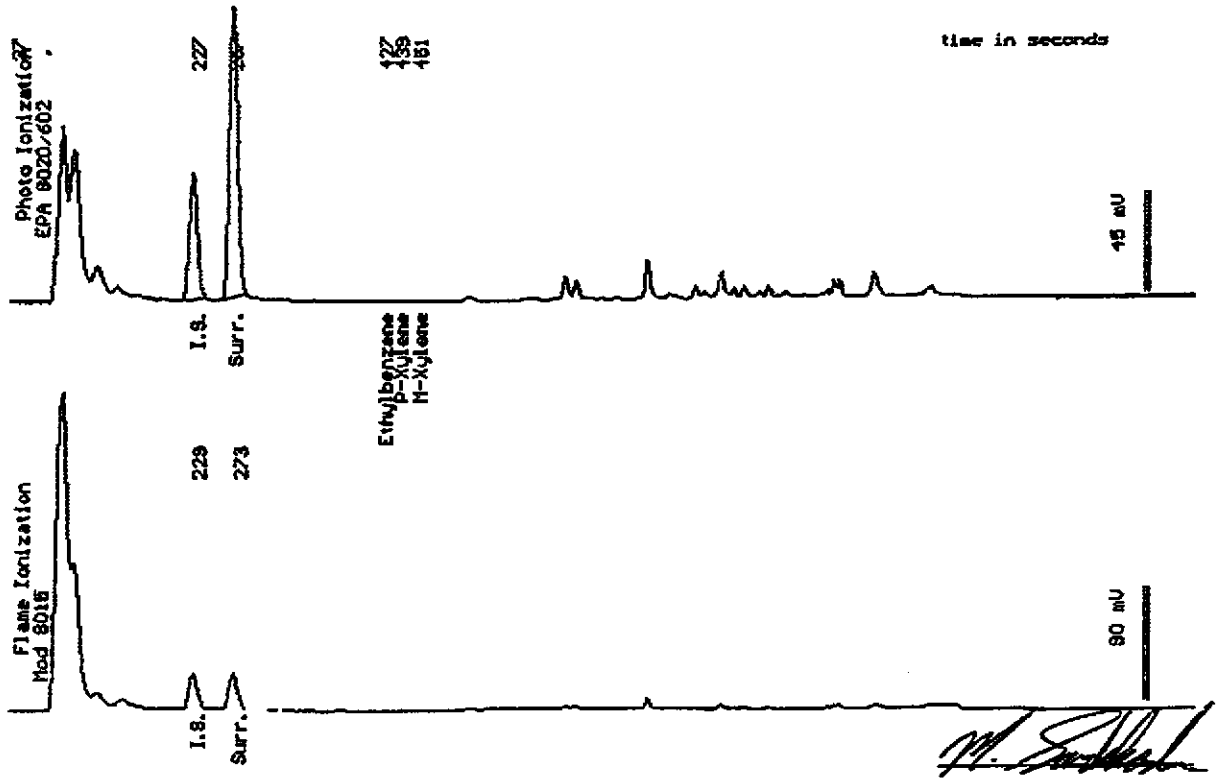
Sample Log 9086

9086-1

Sample: **MW-11**

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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)	500
Surrogate Recovery		100 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

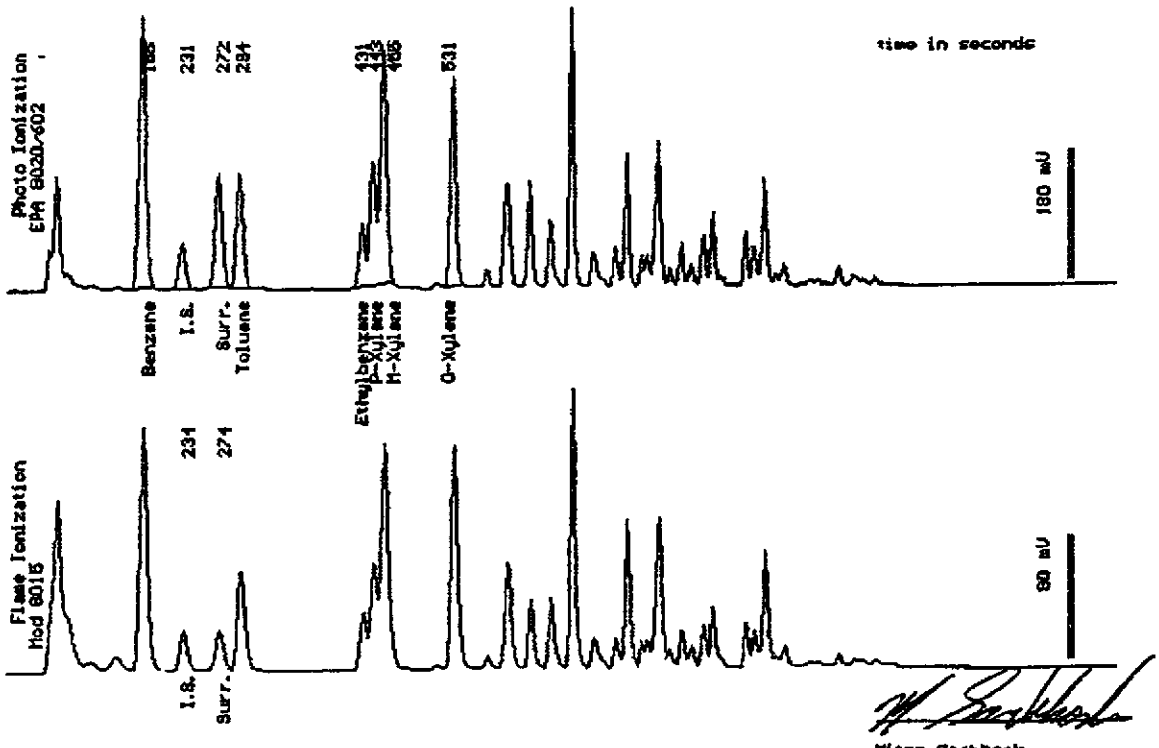
Sample Log 9086

9086-6

Sample: RW-1

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	110
Toluene	(.50)	57
Ethylbenzene	(.50)	32
Total Xylenes	(.50)	260
TPH as Gasoline	(50)	1500
Surrogate Recovery		102 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

ENCLOSURE D

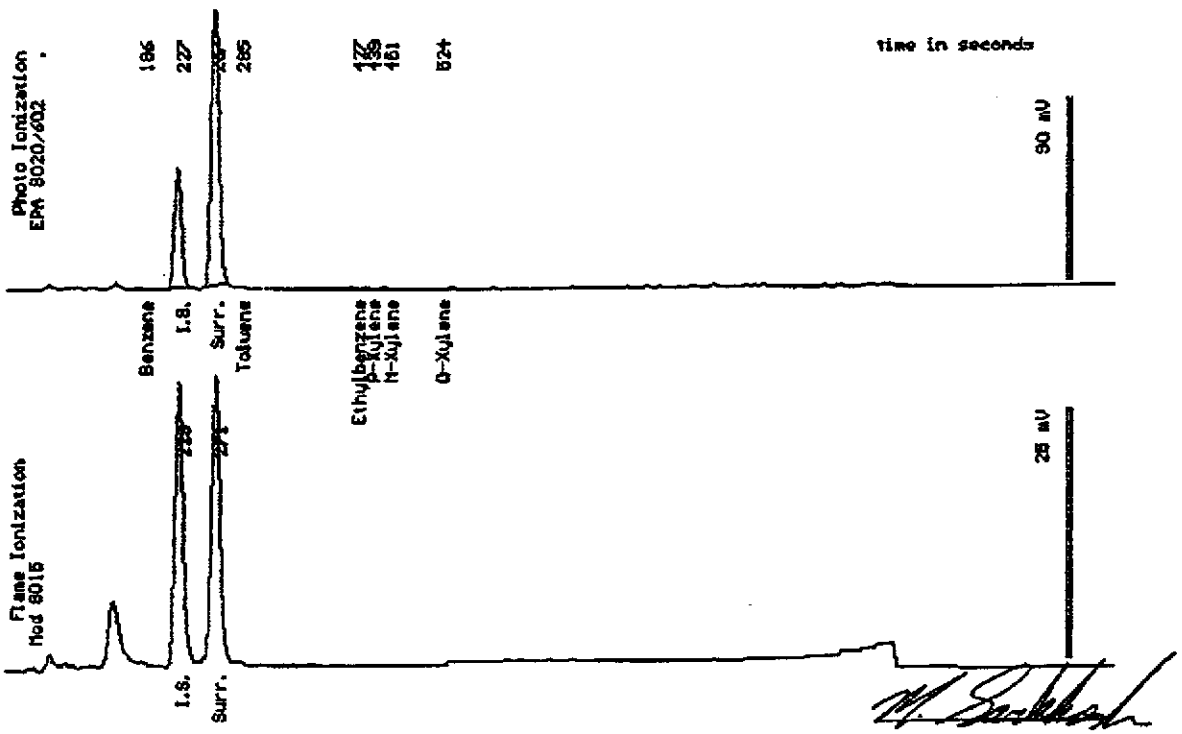
Copies of Remediation System Analytical Reports

Sample Log 9086
9086-13

Sample: GAC influent

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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		99 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

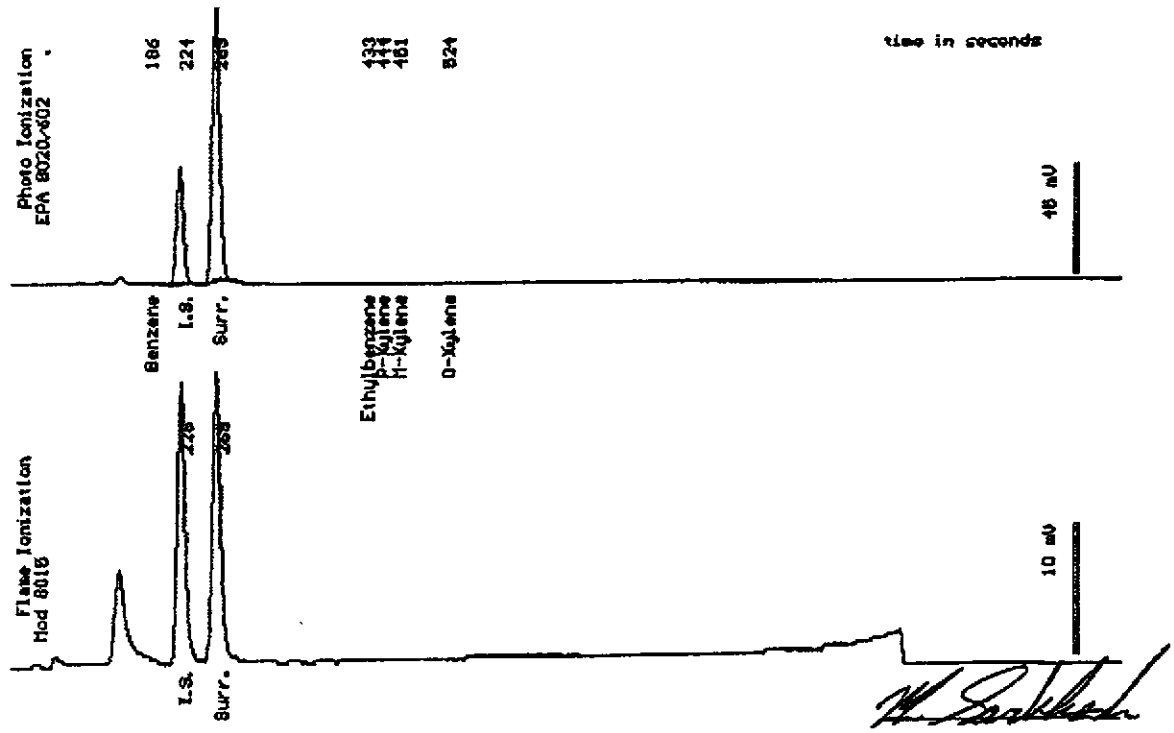
Mitra Sarkhush
Senior Chemist

Sample Log 9086
9086-14

Sample: GAC middle

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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		99 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

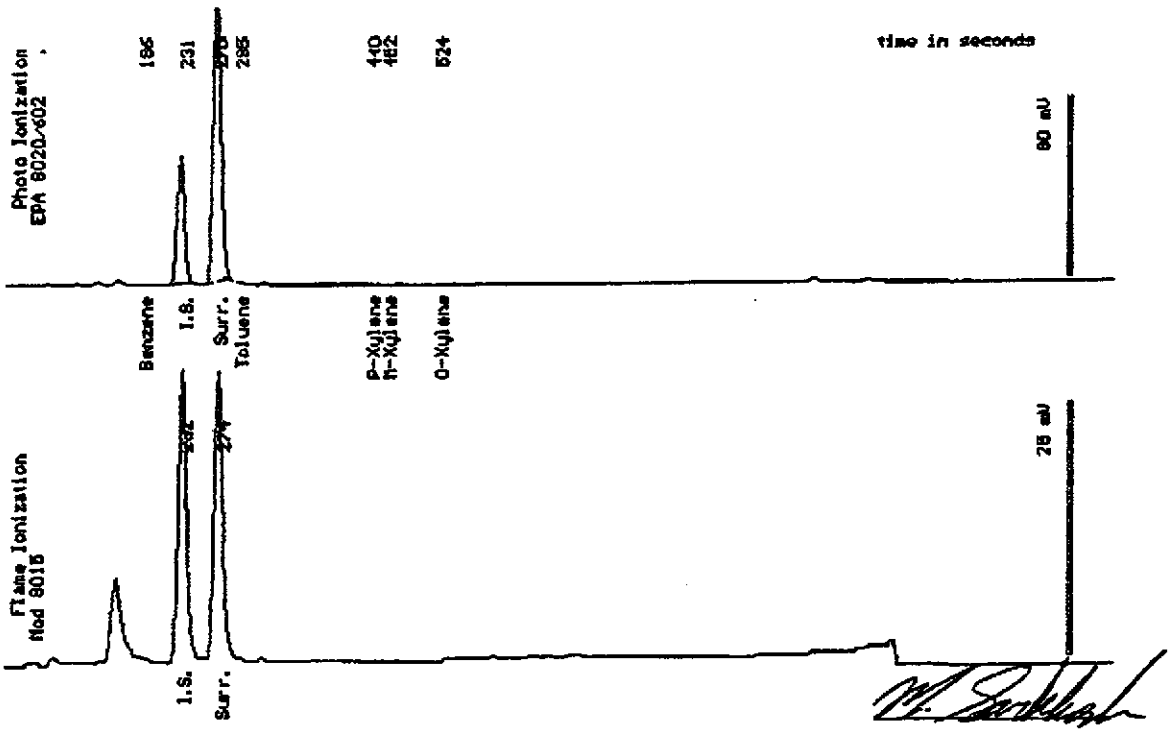
Mitra Sarkhosh
Senior Chemist

Sample Log 9086
9086-12

Sample: GAC effluent

From : Project # 40-93-936 (Beacon 721)
Sampled : 04/07/94
Dilution : 1:1 QC Batch : 2067E
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		101 %



Date Analyzed: 04-09-94
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

#4086

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)			ANALYSES							Date	Form No.
721	Jon W Blank										4-7-94	2 of 2
Project No.	Sampler (Signature)										WEST LAB - DAVIS CA.	
40-93-936												
Project Location	Affiliation										STANDARD TAT	
SAN LORENZO	DELTA ENVIRONMENTAL											
Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	TOTAL SUSPENDED SOLIDS	CHROMIUM & ARSENIC	No. of Containers		REMARKS	
MW-4	4-7-94	13:42		X	X				2			
MW-3		13:54		X	X				2			
MW-1		14:09		X	X				2			
N GAC effluent		13:20		X	X		X	X	4			
GAC influent		14:21		X	X				2			
GAC middle		14:22		X	X				2			
MW-9		12:13										

pic date 4/8/94

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Jon W Blank / Delta	4/8/94	09:40	D. Hinton / Delta	4/8/94	9:40
D. Hinton / Delta	4/8/94	10:59	[signature]	4/8/94	1059
[signature]	4/8/94	1335	[signature] WEST	4/8/94	1335

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

32-9003 1/92