Dept. 17418

* Note ORC packs were found in MW3, MW10, & MW11! Per Dawn Kittredge, Ultramar placed them in these wells because they're conducting a field survey on product. Left msg for Jerry Zoe to call.

9/17/96

Ultramar

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

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

August 13, 1996

Ms. Amy Leach
Hazardous Materials Program
Department of Environmental Health
Alameda County Health Care Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

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

Dear Ms. Leach:

Enclosed is a copy of the ***Quarterly Ground Water Monitoring Report and Status of Remediation System, Second Quarter 1996*** 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.

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

Ultramar

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525 W. Third Street
Hanford, CA 93232-0466
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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: August 13, 1996
QUARTER ENDING: June 30, 1996

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. In March 1994, the vapor extraction system began operation.

Obtained the Permit to Operate for the vapor extraction system on June 8, 1994.

In December 1995, installed an air sparging system.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on June 11, 1996.

Continued to operate the remediation system.

RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that measurable free product was not detected in any well. Benzene concentrations remained not detected in wells MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11. The benzene concentration increased in MW-1 from not detected to 48 ppb, in MW-2 from not detected to 1.6 ppb, and in RW-1 from not detected to 38 ppb. The benzene concentration decreased in MW-10 from 1.4 ppb to not detected. MW-3 was not sampled this quarter.

As of June 27, 1996, approximately 1,175,632 gallons of ground water have been removed, treated, and discharged. Reportedly, approximately 100 gallons (640 pounds) of hydrocarbons have been removed the vapor extraction system.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY	ESTIMATED COMPLETION DATE
Continue quarterly ground-water monitoring.	Ongoing
Continue operation of remediation system.	Ongoing

Per field notes an ORC sock had been installed in MW-10 and MW-11 & MW-3

Delta
Environmental
Consultants, Inc.

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

July 18, 1996

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

Subject: *Quarterly Ground Water Monitoring Report and Status of Remediation System, Second Quarter 1996*
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 ground water monitoring and perform remedial actions at the above-referenced site. The monitoring is intended to evaluate the distribution of dissolved 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 activities performed at the site on June 11, 1996, and the remediation system status through June 27, 1996. The site location is shown in Figure 1 and site features are illustrated in Figure 2.

Ground water monitoring included measurement of depth to ground water, subjective analyses of water samples to evaluate the presence or absence of free petroleum product or product sheen in the monitoring wells, and collection of ground water samples for chemical analysis in monitoring wells MW-1 through MW-11 and one ground water recovery well RW-1. Delta was unable to monitor MW-3, due to the well being dry. Methods used to perform these tasks are described in Enclosure A.

Ground Water Table Measurements and Flow Direction

Ground water was present in all of the wells at depths ranging from 12.96 (RW-1) to 16.98 (MW-11) feet below the tops of well casings. Ground water elevations have decreased an average of approximately one foot since the last quarterly monitoring event in March 1996. Cumulative ground water table measurements at the site are compiled in Table 1. Based on the ground water table measurements, the inferred ground water flow is to the southwest with a gradient of less than 0.01 foot. The ground water recovery system was not operating during this monitoring event. A ground water table contour map prepared from the current event data is included as Figure 3.

Ground Water Analytical Results

Ground water samples were collected from all of the monitoring wells (with the exception of MW-3 and RW-1). The ground water samples were submitted to Western Environmental Science and Technology (West laboratory) of Davis, California, for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) using EPA Method 602/5030, and total petroleum hydrocarbons (TPH) as gasoline using EPA Method 8015 Modified. Samples were also analyzed for alkalinity, dissolved iron, nitrate, nitrite, sulfate, and total dissolved solids. Copies of the sampling information data sheets are included in Enclosure B.

Benzene was not detectable at the laboratory detection limit in ground water samples collected from MW-4 through MW-11. Detectable benzene concentrations ranged from 1.6 micrograms per liter (μg/L) in MW-2 to 48 μg/L in MW-1. Using the June 1996 ground water analytical data, a benzene isoconcentration contour map was constructed and is included as Figure 4. Cumulative ground water analytical results for TPH as gasoline and BTEX are summarized in Table 2. A copy of the certified analytical report with chain of custody documentation is provided in Enclosure C.

Status of Remediation System

Delta has performed operation and maintenance of the ground water remediation and soil vapor extraction (SVE) system at the site since April 1993. The ground water remediation system pumps ground water from 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 Sewer District (Permit No. 018). The SVE system removes soil vapors under vacuum from MW-3 and RW-1. The soil vapors are then abated by two vapor phase granular activated carbon columns placed in series. The SVE system is currently in operation. As of June 27, 1996, the data indicated that the SVE system had removed approximately 100 gallons of vapor equivalent gasoline.

An air sparging system was installed by Delta at the site in December 1995. Air is sparged into the ground water through wells AS-1 through AS-3 shown on Figure 2. The purpose of the air sparging system is to increase the ground water's dissolved oxygen content which, in turn, is anticipated to increase the rate of indigenous biodegradation of petroleum hydrocarbons in the ground water. It is further anticipated that air sparging will aid in the volatilization of dissolved petroleum hydrocarbons in the ground water.

The totalizing flow meter for the ground water remediation system was replaced on January 30, 1996. As of June 27, 1996, the ground water remediation system had discharged approximately 1,175,682 gallons of treated ground water to the sewer. Cumulative totals for ground water treated and discharged to the sewer are presented in Table 3.

Ground Water Remediation System Analytical Results

Ground water remediation system samples were collected on March 16, May 7, and June 11, 1996, and submitted to West laboratory to be analyzed for BTEX, MTBE, and TPH as gasoline using the previously mentioned methods. The samples were also analyzed for total suspended solids using EPA Method 160.2 and chemical oxygen demand using EPA Method 410.4. The analytical results for BTEX and TPH as gasoline are summarized in Table 4. Copies of the analytical reports are presented in Enclosure D.

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. Amy Leech
Alameda County Environmental
Health Dept.
470 27th Street, Room 322
Oakland, California 94612

If you have any questions, please contact Owen Kittredge at (916) 638-2085.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

for

Matthew V. Dahl
Project Engineer

Owen M. Kittredge, R.G.
Project Manager
California Registered Geologist No. 5853

REGISTERED GEOLOGIST
OWEN M. KITTREDGE
NO. 5853
STATE OF CALIFORNIA

MVD (LRP001.936)
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
	01/24/94		17.91	25.76	
	04/07/94		16.94	26.73	No free product or sheen
	06/07/94		17.20	26.47	No free product or sheen
	09/28/94		18.73	24.94	No free product or sheen
	12/14/94		17.56	26.11	Product sheen
	03/15/95		14.92	28.75	Product sheen
	06/13/95		15.38	28.29	No free product or sheen
	09/28/95		16.75	26.92	No free product or sheen
	12/28/95		17.28	26.39	No free product or sheen
	03/12/96		14.13	29.54	No free product or sheen
	06/11/96		14.90	28.77	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
	06/07/94		16.46	26.63	No free product or sheen
	09/28/94		18.06	25.03	No free product or sheen
	12/14/94		16.86	26.23	No free product or sheen
	03/15/95		14.08	29.01	No free product or sheen
	06/13/95		14.67	28.42	No free product or sheen
	09/28/95		16.07	27.02	No free product or sheen
	12/28/95		16.46	26.63	No free product or sheen
	03/12/96		13.11	29.98	No free product or sheen
	06/11/96		14.14	28.95	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-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
	06/07/94		13.37	29.73	Product sheen
	09/28/94		18.05	25.05	No free product or sheen
	12/14/94		16.92	26.18	Product sheen
	03/15/95		14.22	28.88	Product sheen
	06/13/95		14.49	28.61	Product sheen
	09/28/95		15.17	27.93	No free product or sheen
	12/28/95		15.45	27.65	No free product or sheen
	03/12/96		11.35	31.75	No free product or sheen
	06/11/96		---	---	Dry
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
	06/07/94		18.08	26.58	No free product or sheen
	09/28/94		19.70	24.96	No free product or sheen
	12/14/94		18.55	26.11	No free product or sheen
	03/15/95		16.14	28.52	No free product or sheen
	06/13/95		16.41	28.25	No free product or sheen
	09/28/95		17.88	26.78	No free product or sheen
	12/28/95		17.81	26.85	No free product or sheen
	03/12/96		14.77	29.89	No free product or sheen
	06/11/96		15.88	28.78	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-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
	01/24/94		17.82	25.97	
	04/07/94		16.91	26.88	No free product or sheen
	06/07/94		17.10	26.69	No free product or sheen
	09/28/94		18.73	25.06	No free product or sheen
	12/14/94		17.53	26.26	No free product or sheen
	03/15/95		14.96	28.83	No free product or sheen
	06/13/95		15.30	28.49	No free product or sheen
	09/28/95		16.74	27.05	No free product or sheen
	12/28/95		15.10	28.69	No free product or sheen
	03/12/96		13.67	30.12	No free product or sheen
	06/11/96		14.88	28.91	No 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
	01/24/94		16.52	25.95	
	04/07/94		15.70	26.77	No free product or sheen
	06/07/94		15.88	26.59	No free product or sheen
	09/28/94		17.51	24.96	No free product or sheen
	12/14/94		16.27	26.20	No free product or sheen
	03/15/95		13.52	28.95	No free product or sheen
	06/13/95		13.96	28.51	No free product or sheen
	09/28/95		15.61	26.86	No free product or sheen
	12/28/95		15.54	26.93	No free product or sheen
	03/12/96		11.88	30.59	No free product or sheen
	06/11/96		13.52	28.95	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-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
	01/24/94		16.07	25.47	
	04/07/94		15.10	26.44	
	06/07/94		15.16	26.38	No free product or sheen
	09/28/94		16.82	24.72	No free product or sheen
	12/14/94		15.75	25.79	No free product or sheen
	03/15/95		14.00	27.54	No free product or sheen
	06/13/95		13.44	28.10	No free product or sheen
	09/28/95		14.84	26.70	No free product or sheen
	12/28/95		14.55	26.99	No free product or sheen
	03/12/96		11.88	29.66	No free product or sheen
	06/11/96		13.52	28.58	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
	01/24/94		17.06	25.20	
	04/07/94		15.95	26.31	No free product or sheen
	06/07/94		15.10	27.16	No free product or sheen
	09/28/94		17.63	24.63	No free product or sheen
	12/14/94		16.66	25.60	No free product or sheen
	03/15/95		14.30	27.96	No free product or sheen
	06/13/95		14.37	27.89	No free product or sheen
	09/28/95		15.62	26.64	No free product or sheen
	12/28/95		15.62	26.64	No free product or sheen
	03/12/96		12.75	29.51	No free product or sheen
	06/11/96		13.94	28.32	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-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
	06/07/94		18.40	26.54	No free product or sheen
	09/28/94		20.01	24.93	No free product or sheen
	12/14/94		18.88	26.06	No free product or sheen
	03/15/95		16.24	28.70	No free product or sheen
	06/13/95		16.75	28.19	No free product or sheen
	09/28/95		18.04	26.90	No free product or sheen
	12/28/95		17.87	27.07	No free product or sheen
	03/12/96		NM[b]	NM	Not measured[c]
	06/11/96		16.26	28.68	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
	06/07/94		16.04	26.30	No free product or sheen
	09/28/94		17.69	24.65	No free product or sheen
	12/14/94		16.65	25.69	No free product or sheen
	03/15/95		14.08	28.26	No free product or sheen
	06/13/95		14.49	27.85	No free product or sheen
	09/28/95		15.81	26.53	No free product or sheen
	12/28/95		15.46	26.88	No free product or sheen
	03/12/96		12.62	29.72	No free product or sheen
	06/11/96		14.40	27.94	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
	01/24/94		19.79	25.21	
	04/07/94		18.78	26.22	No free product or sheen
	06/07/94		18.88	26.12	No free product or sheen
	09/28/94		20.45	24.55	No free product or sheen
	12/14/94		19.45	25.55	No free product or sheen
	03/15/95		17.32	27.68	No free product or sheen
	06/13/95		17.43	27.57	No free product or sheen
	09/28/95		18.67	26.33	No free product or sheen
	12/28/95		18.31	26.69	No free product or sheen
	03/12/96		15.89	29.11	No free product or sheen
	06/11/96		16.98	28.02	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
	06/07/94		16.00	27.17	No free product or sheen
	09/28/94		18.35	24.82	No free product or sheen
	12/14/94		19.50	23.67	No free product or sheen
	03/15/95		17.00	26.17	No free product or sheen
	06/13/95		14.95	28.22	No free product or sheen
	09/28/95		27.63	15.54	No free product or sheen
	12/28/95		14.54	28.63	No free product or sheen
	03/12/96		11.02	32.15	No free product or sheen
	06/11/96		14.52	28.65	No free product or sheen

[a] All top of riser elevations surveyed by Aegis Environmental, and are assumed relative to mean sea level.
[b] Not measured.
[c] Car parked over well.

Note: Aegis Environmental, Inc., collected data prior to 06/23/93.

TABLE 2

GROUND WATER SAMPLE ANALYTICAL RESULTS

Concentrations in micrograms per liter (μg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total 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
	06/07/94	1,800	510	1,100	1,600	26,000
	09/28/94	1,700	210	970	870	18,000
	12/14/94	4,400	2,400	2,300	4,300	31,000
	03/15/95	830	310	840	1,200	17,000
	06/13/95	1,300	99	1,500	1,100	22,000
	09/28/95	580	<25	780	410	8,800
	12/28/95	4.9	<1.3	<1.3	290	4,800
	03/12/96	<0.5	<0.5	<0.5	<0.5	110
	06/11/96	48	0.9	37	26	600
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
	06/07/94	<0.5	<0.5	1.5	<0.5	550
	09/28/94	<0.5	<0.5	<0.5	<0.5	190
	12/14/94	7.2	0.84	<0.5	<0.5	1,400
	03/15/95	39	<0.5	0.53	<0.5	730
	06/13/95	8.3	<0.5	<0.5	<0.5	750[c]
	09/28/95	<0.5	<0.5	<0.5	<0.5	670[c]
	12/28/95	9.5	<5.0	<5.0	5.2	3,100
	03/12/96	<1.3	<1.3	<1.3	<1.3	710
	06/11/96	1.6	<1.3	<1.3	<1.3	1,900[c]

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in micrograms per liter (µg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH[a] as gasoline
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
	06/07/94	6,400	2,300	1,500	3,500	27,000
	09/28/94	7,400	4,300	1,500	4,600	40,000
	12/14/94	17,000	21,000	3,900	22,000	140,000
	03/15/95	4,900	1,900	1,800	7,100	58,000
	06/13/95	7,200	2,900	1,200	4,600	44,000
	09/28/95	5,600	2,100	1,900	6,900	30,000
	12/28/95	32	5.8	18	4,700	16,000
	03/12/96	48	64	5.3	630	2,400
	06/11/96	NS	NS	NS	NS	NS
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
	06/07/94	<0.5	<0.5	<0.5	<0.5	150
	09/28/94	<0.5	<0.5	<0.5	<0.5	75
	12/14/94	<0.5	<0.5	<0.5	<0.5	160
	03/15/95	<0.5	<0.5	<0.5	<0.5	500
	06/13/95	<0.5	<0.5	<0.5	<0.5	210[c]
	09/28/95	<0.5	<0.5	<0.5	<0.5	140[c]
	12/28/95	<0.5	<0.5	<0.5	<0.5	510[c]
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<0.5	<0.5	<0.5	<0.5	50[c]

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in micrograms per liter (μg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total 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
	06/07/94	<0.5	<0.5	<0.5	<0.5	<50
	09/28/94	<0.5	<0.5	<0.5	<0.5	<50
	12/14/94	<0.5	<0.5	<0.5	<0.5	<50
	03/15/95	<0.5	<0.5	<0.5	<0.5	<50
	06/13/95	<0.5	0.52	<0.5	<0.5	<50
	09/28/95	<0.5	<0.5	<0.5	<0.5	<50
	12/28/95	<0.5	<0.5	<0.5	<0.5	120
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<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
	06/07/94	<0.5	<0.5	<0.5	<0.5	180
	09/28/94	<0.5	<0.5	<0.5	<0.5	100
	12/14/94	<0.5	<0.5	<0.5	<0.5	140
	03/15/95	<0.5	<0.5	<0.5	<0.5	110
	06/13/95	<0.5	0.87	<0.5	<0.5	150[c]
	09/28/95	0.78	<0.5	<0.5	<0.5	<50
	12/28/95	<0.5	<0.5	<0.5	6.3	410
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<0.5	<0.5	<0.5	<0.5	<50

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in micrograms per liter (μg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH[a] as gasoline
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
	06/07/94	55	<0.5	14	24	730
	09/28/94	21	<0.5	2.3	3.1	300
	12/14/94	19	<0.5	3.3	32	430
	03/15/95	0.88	<0.5	<0.5	<0.5	70
	06/13/95	7.3	0.79	7.6	8.9	190
	09/28/95	1.5	<0.5	1.2	0.84	60
	12/28/95	<0.5	<0.5	0.91	0.69	60
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<0.5	<0.5	<0.5	<0.5	79
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
	06/07/94	<0.5	<0.5	<0.5	<0.5	<50
	09/28/94	<0.5	<0.5	<0.5	<0.5	<50
	12/14/94	<0.5	<0.5	<0.5	<0.5	<50
	03/15/95	<0.5	<0.5	<0.5	<0.5	<50
	06/13/95	<0.5	<0.5	<0.5	<0.5	<50
	09/28/95	NS	NS	NS	NS	NS
	12/28/95	<0.5	<0.5	<0.5	<0.5	<50
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<0.5	<0.5	<0.5	<0.5	<50

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in micrograms per liter (µg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total 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
	06/07/94	<0.5	<0.5	<0.5	<0.5	<50
	09/28/94	<0.5	<0.5	<0.5	<0.5	<50
	12/14/94	<0.5	<0.5	<0.5	<0.5	<50
	03/15/95	<0.5	<0.5	<0.5	<0.5	<50
	06/13/95	<0.5	<0.5	<0.5	<0.5	<50
	09/28/95	<0.5	<0.5	<0.5	<0.5	<50
	12/28/95	<0.5	<0.5	<0.5	<0.5	<50
	03/12/96	NS	NS	NS	NS	NS
	06/11/96	<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
	06/07/94	5.6	<2.5	150	5.7	6,700
	09/28/94	2.2	2.6	110	44	5,700
	12/14/94	<1.3	<1.3	77	27	3,500
	03/15/95	<5.0	6.7	150	23	7,200
	06/13/95	9.0	48	610	130	8,400
	09/28/95	22	17	360	24	6,300
	12/28/95	4.4	5.6	340	11	5,000
	03/12/96	1.4	5.9	41	73	4,500
	06/11/96	<5.0	25	350	81	7,500

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in micrograms per liter (μg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH[a] as gasoline
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
	06/07/94	<0.5	<0.5	<0.5	0.64	560
	09/28/94	<0.5	<0.5	<0.5	<0.5	600
	12/14/94	<0.5	<0.5	<0.5	<0.5	340
	03/15/95	<0.5	<0.5	<0.5	<0.5	340
	06/13/95	<0.5	<0.5	<0.5	<0.5	210[c]
	09/28/95	4.1	0.50	<0.5	<0.5	93
	12/28/95	<0.5	<0.5	<0.5	<0.5	380[c]
	03/12/96	<0.5	<0.5	<0.5	<0.5	110
	06/11/96	<0.5	<0.5	<0.5	<0.5	400[c]

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES
Concentrations in micrograms per liter (μg/L)

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total 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
	06/07/94	130	51	45	180	1,700
	09/28/94	54	9.2	12	29	350
	12/14/94	6.8	2.1	1.2	3.4	79
	03/15/95	NS	NS	NS	NS	NS
	04/10/95	54	11	11	69	410
	06/13/95	1,600	780	340	1,400	8,200
	09/28/95	<0.5	<0.5	<0.5	<0.5	<50
	12/28/95	<0.5	<0.5	<0.5	<0.5	<50
	03/12/96	<0.5	<0.5	<0.5	<0.5	86
	06/11/96	38	11	4.7	50	230

[a] Total petroleum hydrocarbons.
[b] Not sampled.
[c] Product is not typical 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
01/24/94	399,520
03/31/94	460,075
06/21/94	597,663
09/28/94	662,894
12/14/94	723,160
03/15/95	902,621
06/30/95	929,056
09/26/95	1,018,150
12/06/95	1,053,866
03/19/96	1,076,752[b]
06/27/96	1,175,632[b]

[a] Cumulative volume of water discharged to sanitary sewer at the indicated date.
[b] Flow meter changed out on 01/30/96; volume = reading of new meter + 1,067,852.

TABLE 4

GROUND WATER SYSTEM ANALYTICAL RESULTS

Concentrations in micrograms per liter (μg/L)

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

Sample	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH[a] as gasoline
Influent	12/14/94	<0.5	<0.5	<0.5	<0.5	<50
	03/22/95	<0.5	<0.5	<0.5	<0.5	<50
	04/10/95	3.9	0.57	0.65	5.5	<50
	06/13/95	NS[b]	NS	NS	NS	NS
	08/10/95	<0.5	<0.5	<0.5	<0.5	<50
	09/14/95	<0.5	<0.5	<0.5	<0.5	490[c]
	12/06/95	<0.5	<0.5	<0.5	<0.5	<50
	01/30/96	<0.5	<0.5	<0.5	<0.5	<50
	02/27/96	<0.5	<0.5	<0.5	<0.5	<50
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	04/16/96	<0.5	<0.5	<0.5	<0.5	<50
	05/07/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	2.4	0.57	5.9	2.8	190
Mid Carbon	12/14/94	<0.5	<0.5	<0.5	<0.5	<50
	03/22/95	<0.5	<0.5	<0.5	<0.5	<50
	04/10/95	<0.5	<0.5	<0.5	<0.5	<50
	06/13/95	NS	NS	NS	NS	NS
	08/10/95	<0.5	<0.5	<0.5	<0.5	<50
	09/14/95	<0.5	<0.5	<0.5	<0.5	<50
	12/06/95	<0.5	<0.5	<0.5	<0.5	<50
	01/30/96	<0.5	<0.5	<0.5	<0.5	<50
	02/27/96	<0.5	<0.5	<0.5	<0.5	<50
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	04/16/96	<0.5	<0.5	<0.5	<0.5	<50
	05/07/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<0.5	<0.5	<0.5	<0.5	<50

TABLE 4-Continued

GROUND WATER SYSTEM ANALYTICAL RESULTS
Concentrations in micrograms per liter (μg/L)

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

Sample	Date	Benzene	Toluene	Ethyl-benzene	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
	05/18/94	<0.5	<0.5	<0.5	<0.5	<50
	09/28/94	NS	NS	NS	NS	NS
	12/14/94	<0.5	<0.5	<0.5	<0.5	<50
	03/22/95	<0.5	<0.5	<0.5	<0.5	<50
	04/10/95	<0.5	<0.5	<0.5	<0.5	<50
	06/13/95	NS	NS	NS	NS	NS
	07/28/95	<0.5	<0.5	<0.5	<0.5	<50
	08/10/95	<0.5	<0.5	<0.5	<0.5	<50
	09/14/95	<0.5	<0.5	<0.5	<0.5	<50
	12/06/95	<0.5	<0.5	<0.5	<0.5	<50
	01/30/96	<0.5	<0.5	<0.5	<0.5	<50
	02/27/96	<0.5	<0.5	<0.5	<0.5	<50
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50
	04/16/96	<0.5	<0.5	<0.5	<0.5	<50
	05/07/96	<0.5	<0.5	<0.5	<0.5	<50
	06/11/96	<0.5	<0.5	<0.5	<0.5	<50

[a] Total petroleum hydrocarbons.
[b] Not sampled.
[c] Not typical gasoline.

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

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 LH. 11/2/92
FILE NO. —	PREPARED BY TMG
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

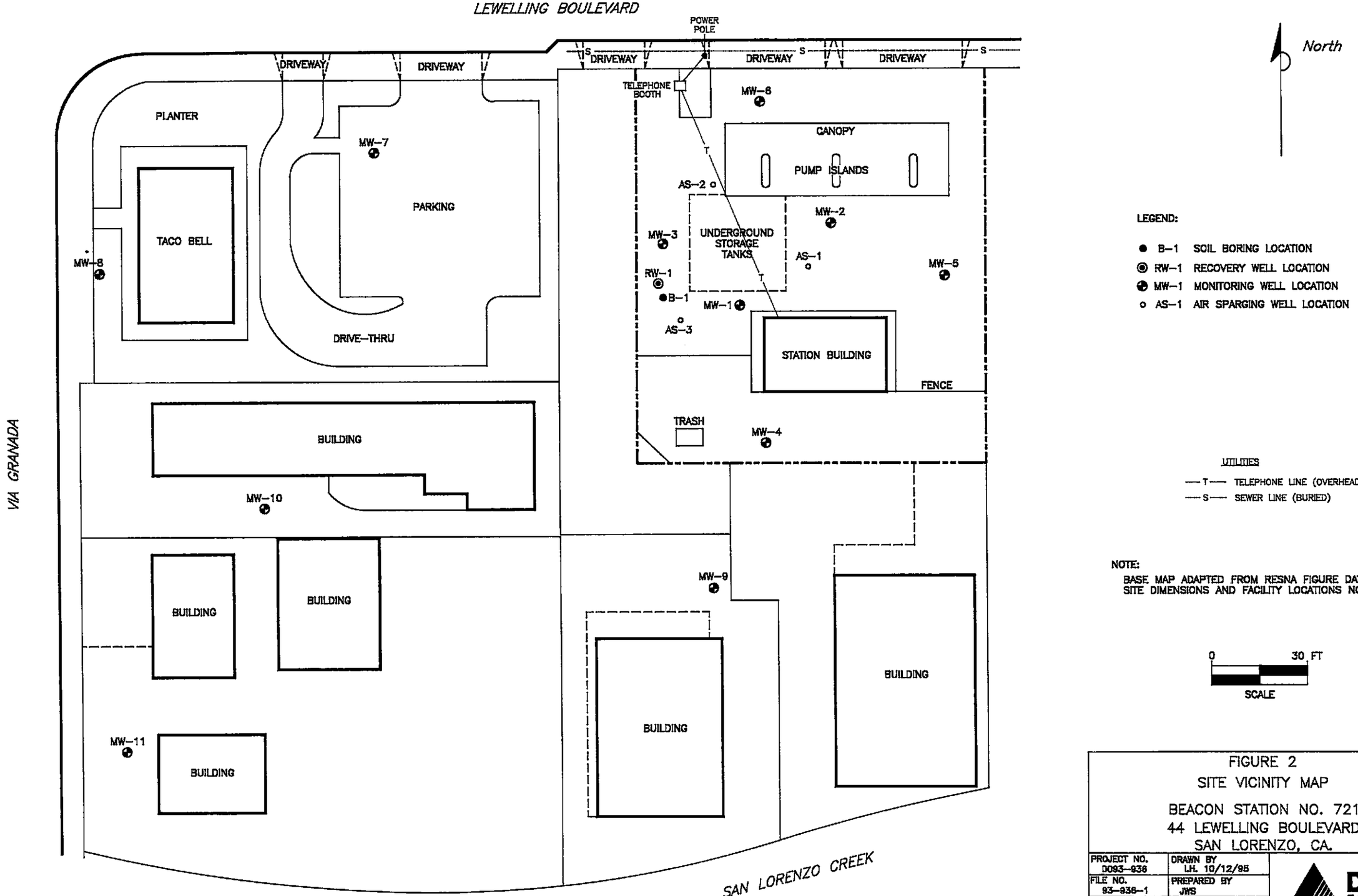
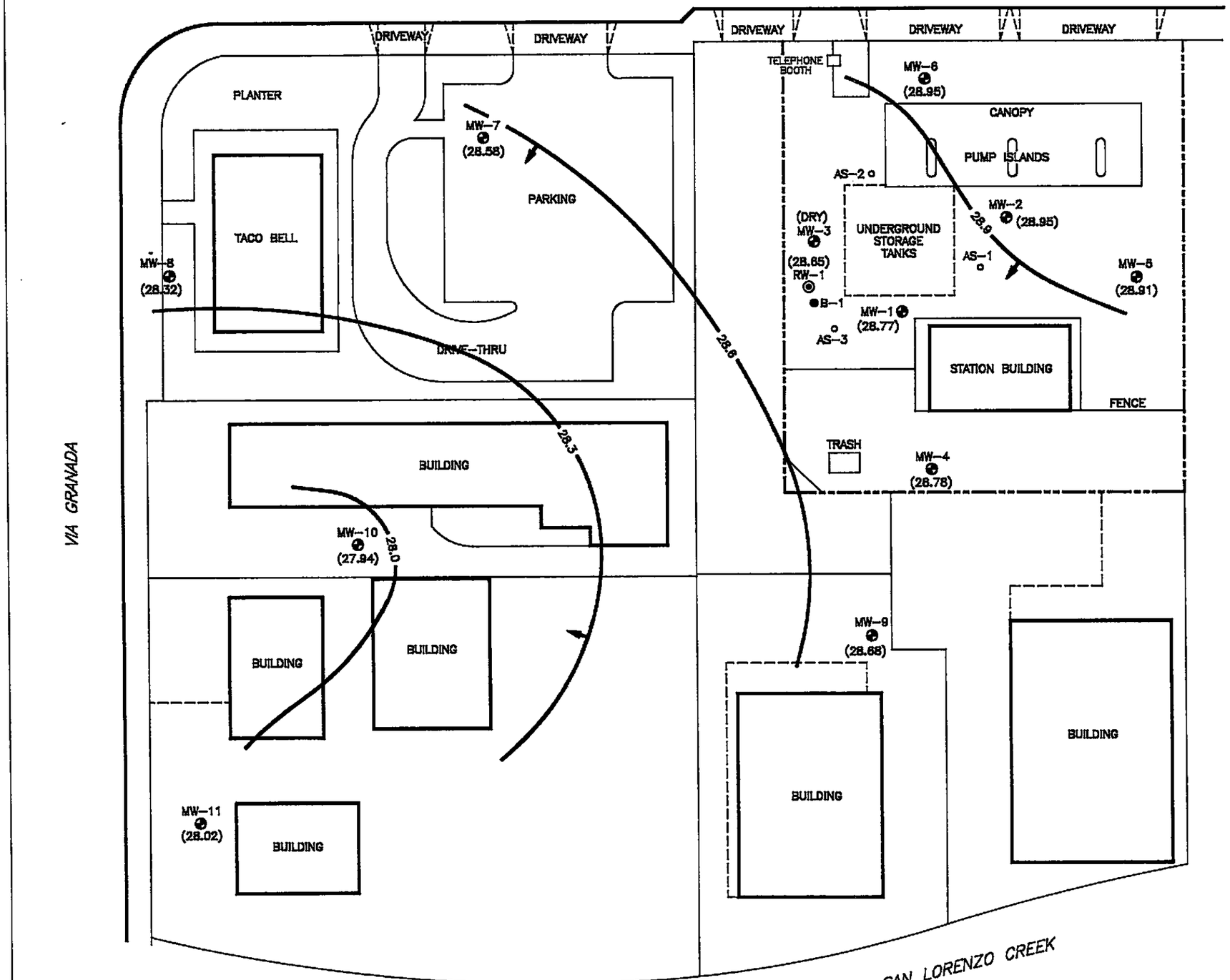


FIGURE 2
SITE VICINITY MAP

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

PROJECT NO. D093-936	DRAWN BY LH. 10/12/95
FILE NO. 93-936-1	PREPARED BY JWS
REVISION NO. 3	REVIEWED BY

Delta Environmental Consultants, Inc.



North

LEGEND:

- ● B-1 SOIL BORING LOCATION
- ◉ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- ○ AS-1 AIR SPARGING WELL LOCATION
- (28.77) GROUND WATER ELEVATION RELATIVE TO MEAN SEA LEVEL (MSL)
- — 28.0 — WATER TABLE CONTOUR RELATIVE TO MSL
- ⬅ 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 – 6/11/96
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. D093-936	DRAWN BY I.H. 7/1/96
FILE NO. 93-936-1	PREPARED BY M.D.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

LEWELLING BOULEVARD

VIA GRANADA

SAN LORENZO CREEK

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

PLANTER

TACO BELL

PARKING

DRIVE-THRU

TELEPHONE BOOTH

CANOPY

PUMP ISLANDS

UNDERGROUND STORAGE TANKS

STATION BUILDING

FENCE

TRASH

BUILDING

BUILDING

BUILDING

BUILDING

BUILDING

BUILDING

MW-1 (48)

MW-2 (1.6)

(NS) MW-3

MW-4 (<0.5)

MW-5 (<0.5)

MW-6 (<0.5)

MW-7 (<0.5)

MW-8 (<0.5)

MW-9 (<0.5)

MW-10 (<5.0)

MW-11 (<0.5)

RW-1 (38)

B-1

AS-1

AS-2

AS-3

5

<0.5

North

LEGEND:

- ● B-1 SOIL BORING LOCATION
- ◉ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- ○ AS-1 AIR SPARGING WELL LOCATION
- (48) BENZENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- — 5 — BENZENE ISOCONCENTRATION IN ug/L
- (NS) NOT SAMPLED

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 MAP
6/11/96
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. D093-936	DRAWN BY I.H. 7/1/96
FILE NO. 93-936-1	PREPARED BY M.D.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

ENCLOSURE A

Field Methods and Procedures

FIELD METHODS AND PROCEDURES

1.0 GROUND WATER AND FREE-FLOATING PRODUCT DEPTH ASSESSMENT

A water/petroleum product interface probe was used to assess free product thickness and ground water depth in each well. If a free floating product layer was not measured 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 dedicated 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 conductivity were recorded during the purging of each well. After 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 document possession of the sample. 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

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-1 Project Name: Beacon 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: 6/11/96 Time: 1205

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 31.20 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 14.90 ft. Date: 6/11/96 Time 1054

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 2 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX, TPHg Sample appearance cloudy

Note any sampling problems none

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X.00 Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1159	79.5	7.23	10.67		0
1200	76.7	7.13	8.70		4
1201	76.1	7.15	9.56		8
					8

Comments: Q= 6-6 gpm

Transportation (thermal preservation) cooler + ice

Form completed by: [signature] Sampled by: [signature]

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-2 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: 6 / 11 / 96 Time: 1150

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 33.30 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 14.14 ft Date: 6 / 11 / 96 Time 1032

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: ____ Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX, TPHg Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X100 Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1143	74.9	7.36	10.69		2
1149	75.2	7.14	10.55		4
1141	74.6	6.99	11.42		7
1154	74.1	6.99	11.65		9
					9

Comments: BD = 4.1 ppm

Transportation (thermal preservation) COOLER & ICE

Form completed by: [illegible] Sampled by: [illegible]

Delta Environmental Consultants, Inc.

SAMPLING INFORMATION SHEET

Sample ID# MW-3 Project Name: BEACON 721 Project No. D093-936

Location (address): 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: ____ / ____ / ____ Time: ____

Wellhead assembly condition: ____ Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 29.30 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) ____ ft Date: ____ / ____ / ____ Time ____

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer ____ Centrifugal pump ____ Other ____

At least ____ well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: ____ Disposable bailer ____ Sampling port

Samples collected 2 VOA's – BTEX, TPHg Sample appearance ____

Note any sampling problems ____

GROUND WATER EVACUATION/STABILIZATION DATA

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

Comments: Dry – ORC installed – Removed for measurement
Bottom 18" of socks were muddy

Transportation (thermal preservation) COOLER & ICE

Form completed by: ____ Sampled by: ____

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-4 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: 6/11/96 Time: 1240

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 24.60 ± below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 15.88 ± Date: 6/11/96 Time 1042

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump X Bailer ____ Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX; TOG Sample appearance clear

Note any sampling problems none

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X100 Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1222	75.2	7.42	8.67		0
1225	73.1	6.88	8.95		2
1228	73.2	6.89	8.98		4
					6

Comments: DO = 0.5

Transportation (thermal preservation) COOLER & ICE

Form completed by: [signature] Sampled by: [signature]

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-5 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO CA

Date Sampled: 6 / 11 / 96 Time: 1135

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 29.20 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 14.88 ft. Date: 6 / 11 / 96 Time 1030

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other: ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new) or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX; TPHg Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X100 Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
11-26		7.61	10.93		0
1127	73.7	7.48	10.56		4
1128	73.2	7.31	10.45		7
					7

Comments: DO = 2.8 ppm

Transportation (thermal preservation) cooler & ice

Form completed by: ____ Sampled by: ____

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-6 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD SAN LORENZO CA

Date Sampled: 10/11/96 Time: 1105

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 28.70 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 13.52 ft. Date: 10/11/96 Time 1028

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other: ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (New or previously used) was used to purge well.

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX; TPHg Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X100 Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1057	81.5	7.49	9.99		2
1057	77.3	7.35	9.39		5
1058	77.1	7.34	9.45		7
					7

Comments: DO = 1.1 ppm

Transportation (thermal preservation) COOLER & ICE

Form completed by: [illegible] Sampled by: [illegible]

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-7 Project Name: BEACON 721 Project No. 2093-936

Location (address) 44 LEWELLING BLVD SAN LORENZO, CA

Date Sampled: 6 / 11 / 96 Time: 0950

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 24.30 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 12.96 ft. Date: 6 / 11 / 96 Time 0938

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling pump

Samples collected 2 VOA's - BTEX, TPHg Sample appearance Cloudy

Note any sampling problems none

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance X1.00 (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
0941	72.8	7.28	10.43		0
0942	71.6	10.94	1066		3
0943	71.1	1090	10.94		5
0943	71.1	10.94	10.93		7
					7

Comments: DO = 1.2 ppm

Transportation (thermal preservation) COOLER & ICE

Form completed by: ____ Sampled by: ____

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-8 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: 10 / 11 / 96 Time: 0930

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 23.20 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 13.91 ft Date: 10 / 11 / 96 Time 0919

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX; TPHg Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X Conductance (mmhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
0924	72.4	7.50	0.35		0
0924	69.3	7.47	0.36		3
0925	69.1	7.42	0.41		
					6

Comments: DO = 8.2 ppm

Transportation (thermal preservation) COOLER & ICE

Form completed by: [signature] Sampled by: [signature]

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-9 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: 6/11/96 Time: 1010

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 23.80 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 16.26 ft. Date: 6/11/96 Time 1000

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____) (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX, TPHg Sample appearance clear

Note any sampling problems Locked

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units X100	Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1004	74.4	7.80	1.81		0
1004	74.9	7.40	7.61		2
1005	73.0	7.41	7.67		5
					5

Comments: DO = 4.2 ppm

Transportation (thermal preservation) COOLER & ICE

Form completed by: [illegible] Sampled by: [illegible]

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-10 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD SAN LORENZO, CA

Date Sampled: 6 / 11 / 96 Time: 0910

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 29.50 ± below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 14.40 ± Date: 6/11/96 Time 0859

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX; TPH$_g$ Sample appearance Clear

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	X 100 Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
0902	69.6	7.39	744		0
0903	68.4	7.24	7.34		5
0903	68.2	7.16	7.12		7
0904	68.0	7.12	7.14		10
					9.5

Comments: DO = 1.3 ppm

ORC Sock Had Been installed - Removed for QA

Transportation (thermal preservation) COOLER & ICE

Form completed by: ____ Sampled by: ____

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# MW-11 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO CA

Date Sampled: 6 / 11 / 96 Time: 0845

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 29.50 ft below top of casing Casing diameter 2 inches

Depth to water (below top of casing) 16.98 ft Date: 6 / 11 / 96 Time 0833

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer X Centrifugal pump ____ Other ____

At least 4 well volumes have been evacuated before sampling.

Tubing (type: ____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer ____ Sampling port

Samples collected 2 VOA's - BTEX ; TPHg - see chain Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (mmhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
0840	66.2	8.05	7.78		6
0890	66.3	7.86	7.13		4
0841	66.4	7.81	7.05		8
					8

Comments: DO = 15 ppm at 1' Below MW water

CRC SOCKS were installed in this well

Transportation (thermal preservation) COOLER & ICE

Form completed by: ____ Sampled by: ____

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# RW-1 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA

Date Sampled: 6 / 11 / 96 Time: 1345

Wellhead assembly condition: X Good ____ Fair ____ Poor (If poor, see comments)

Equipment Replaced: ____ bolts ____ locks ____ locking cap

Well Depth 29.50 ft below top of casing Casing diameter 6 inches

Depth to water (below top of casing) 14.52 ft. Date: 6 / 11 / 96 Time 1056

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ____ Submersible pump ____ Bailer ____ Centrifugal pump ____ Other System

At least ____ well volumes have been evacuated before sampling.

Tubing (type: System Hose). (new or previously used) was used to purge well

Sampling method: ____ Disposable bailer X Sampling port

Samples collected ____ Sample appearance Clear

Note any sampling problems None

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (umhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
					55

Comments: System was up for many

Transportation (thermal preservation) Cooler & ice

Form completed by: [illegible] Sampled by: [illegible]

ENCLOSURE C

Ground Water Sample Laboratory Report

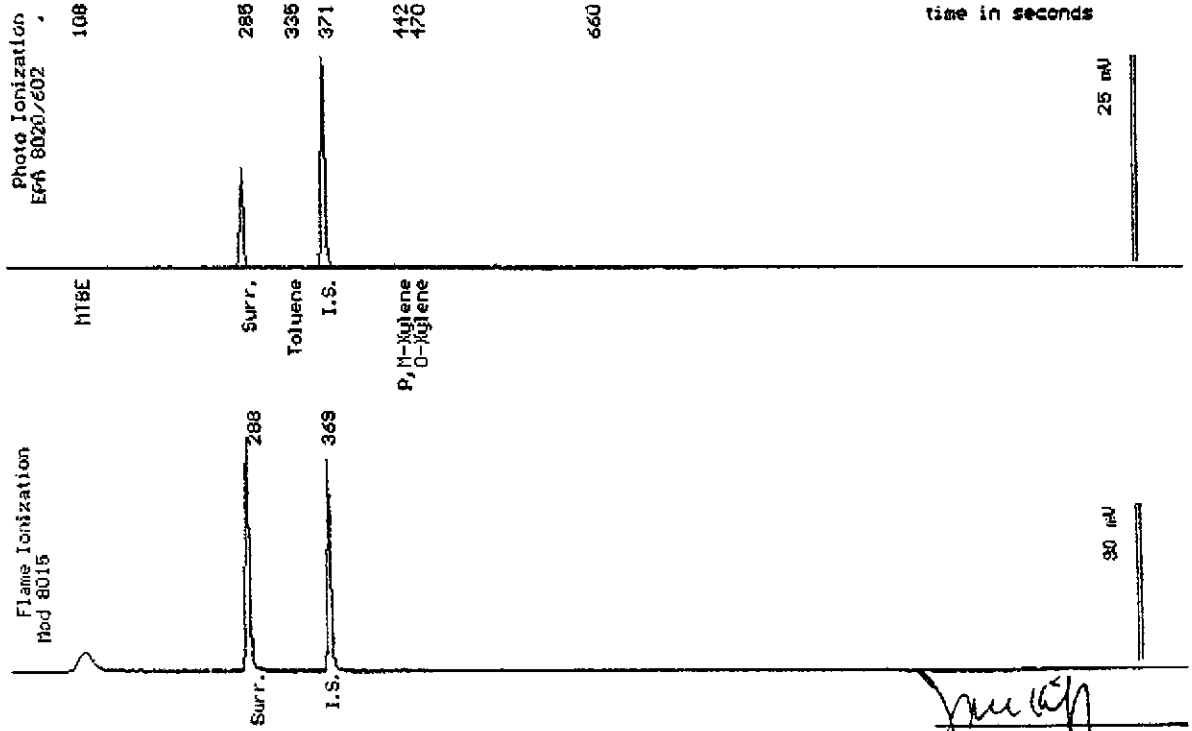
WEST LABORATORY

Sample Log 14881
14881-12

Sample: Effluent

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 6172A
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: 06-19-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14881

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Received : 06/11/96
Matrix : Water

MTBE	(MRL) ug/L	Measured Value ug/L
MW-11	(5.0)	<5.0
MW-10	(25)	<25
MW-8	(5.0)	<5.0
MW-7	(5.0)	16
MW-9	(5.0)	<5.0
MW-6	(5.0)	<5.0
MW-5	(5.0)	<5.0
MW-2	(13)	5100
MW-1	(5.0)	75
MW-4	(5.0)	<5.0
RW-1	(5.0)	68
Effluent	(5.0)	<5.0
Mid Carbon	(5.0)	<5.0
Influent	(5.0)	610

Approved By:

Joel Kiff
Senior Chemist

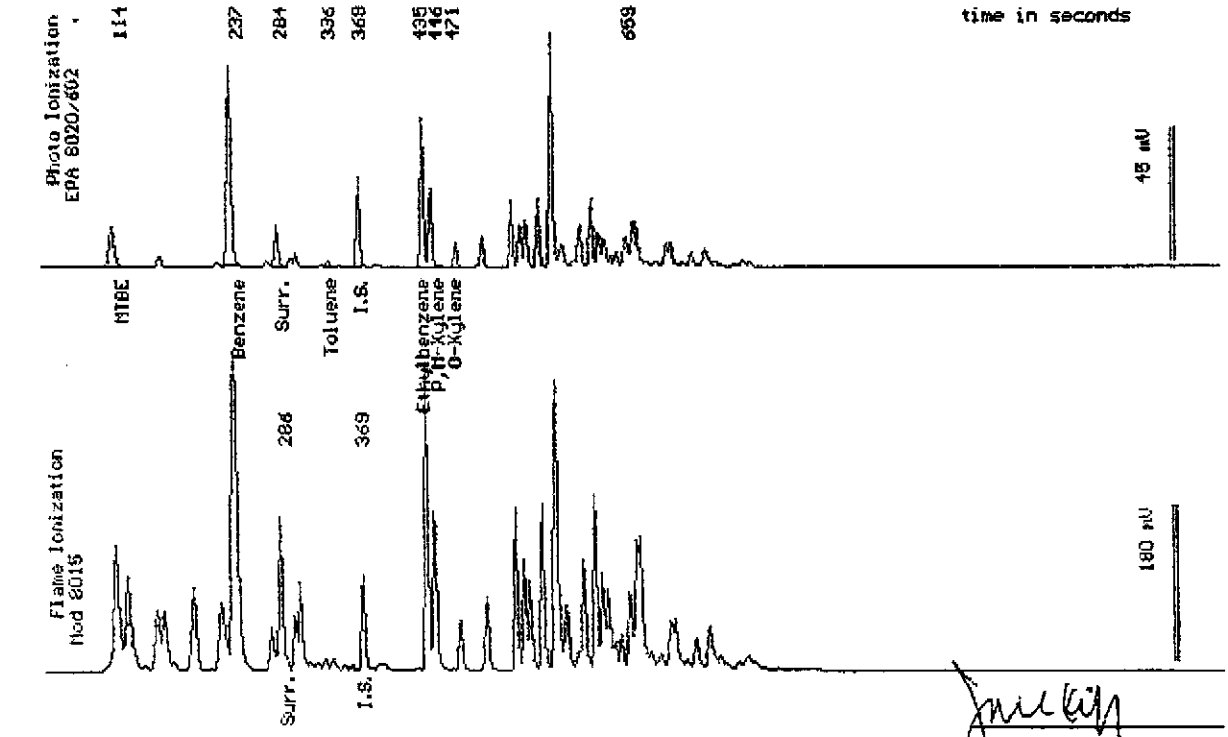
WEST LABORATORY

Sample Log 14881
14881-09

Sample: **MW-1**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 6172A
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L	
Benzene	(.50)	48	
Toluene	(.50)	.90	
Ethylbenzene	(.50)	37	
Total Xylenes	(.50)	26	
TPH as Gasoline	(50)	600	
Surrogate Recovery		93	%



Date Analyzed: 06-19-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

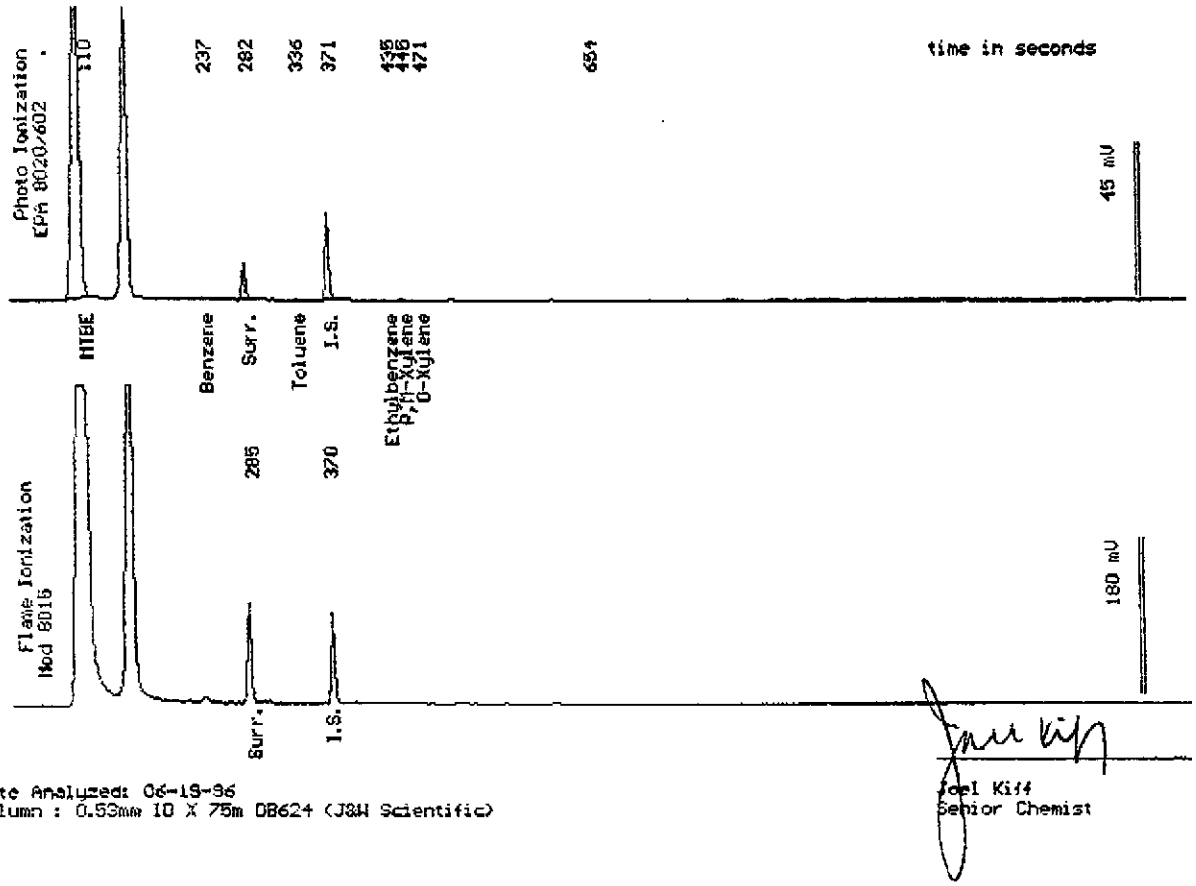
Sample Log 14881
14881-08

Sample: **MW-2**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:3 QC Batch : 6172B
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(1.3)	1.6
Toluene	(1.3)	<1.3
Ethylbenzene	(1.3)	<1.3
Total Xylenes	(1.3)	<1.3
TPH as Gasoline	(130)	1900 *
Surrogate Recovery		88 %

* Product is not typical gasoline.



Date Analyzed: 06-19-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

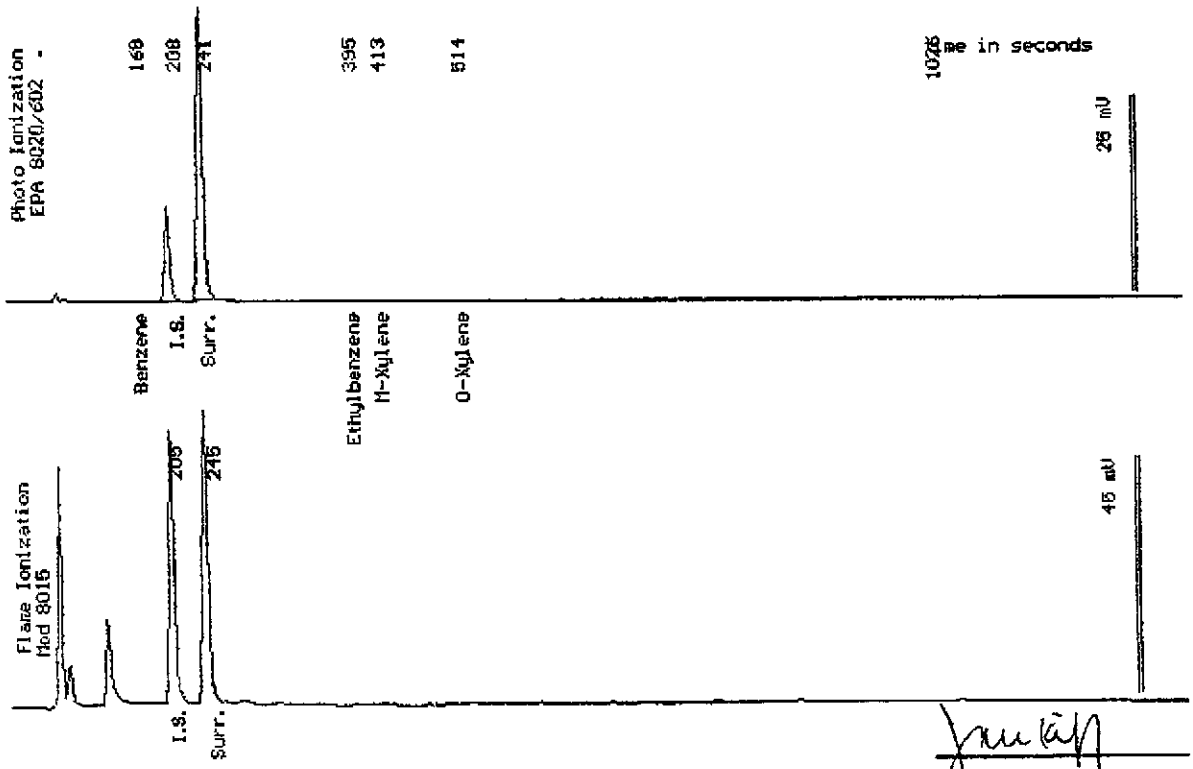
Sample Log 14881
14881-10

Sample: **MW-4**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 4148E
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		104 %

* Product is not typical gasoline.



Date Analyzed: 06-19-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

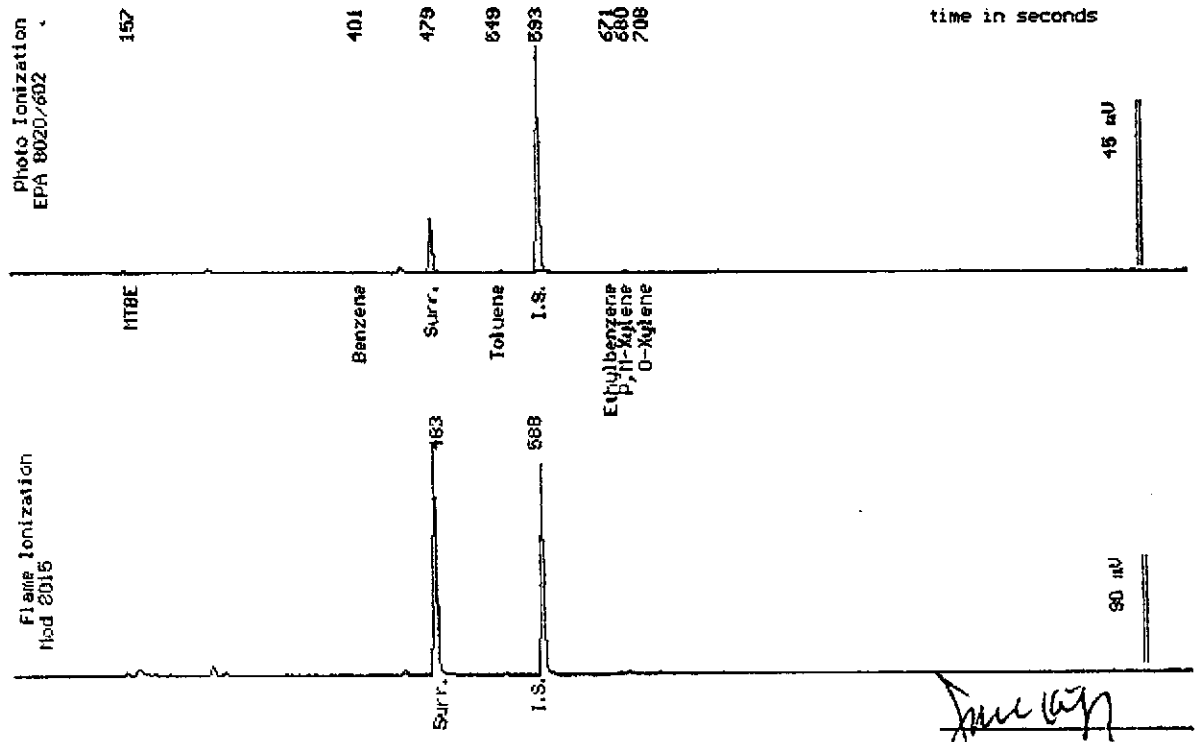
WEST LABORATORY

Sample Log 14881
14881-07

Sample: **MW-5**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 2145A
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		95 %



Date Analyzed: 06-19-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

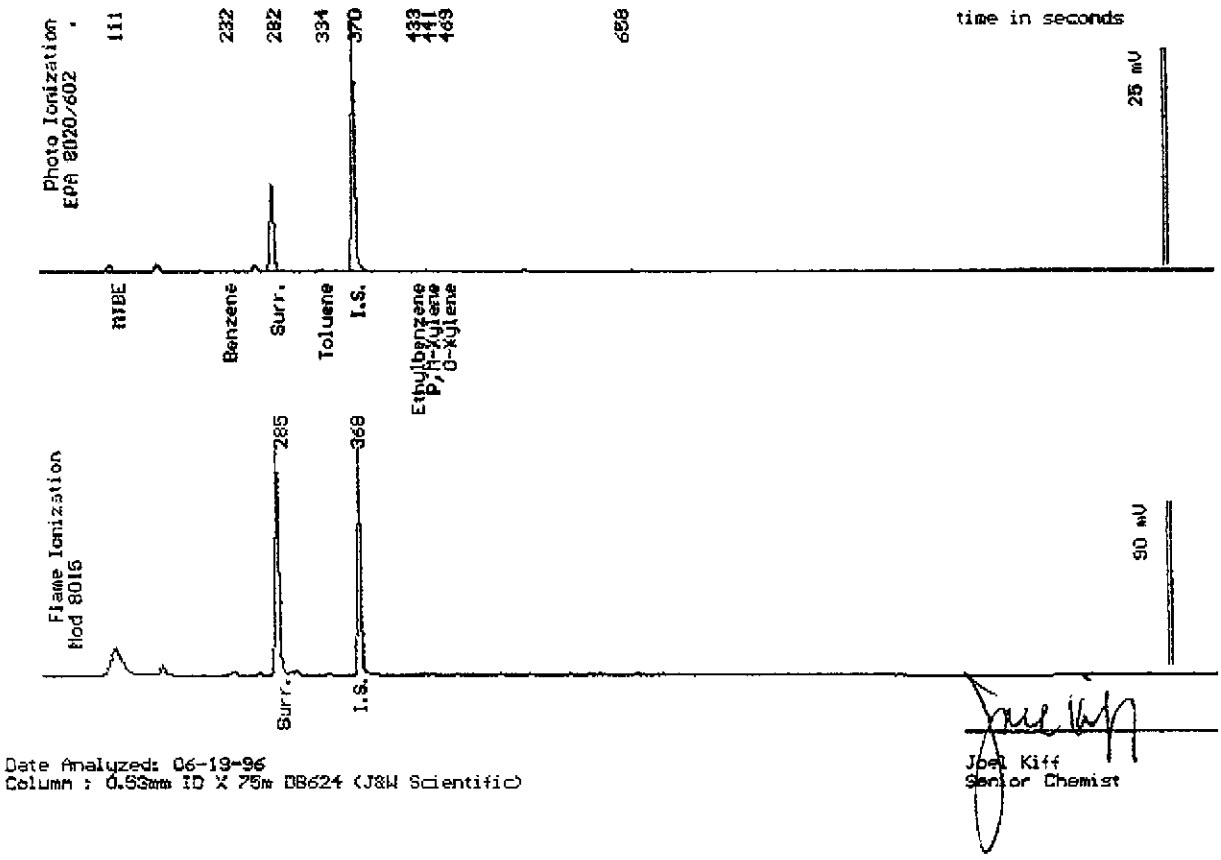
WEST LABORATORY

Sample Log 14881
14881-06

Sample: **MW-6**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 6172A
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		88 %



Date Analyzed: 06-19-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

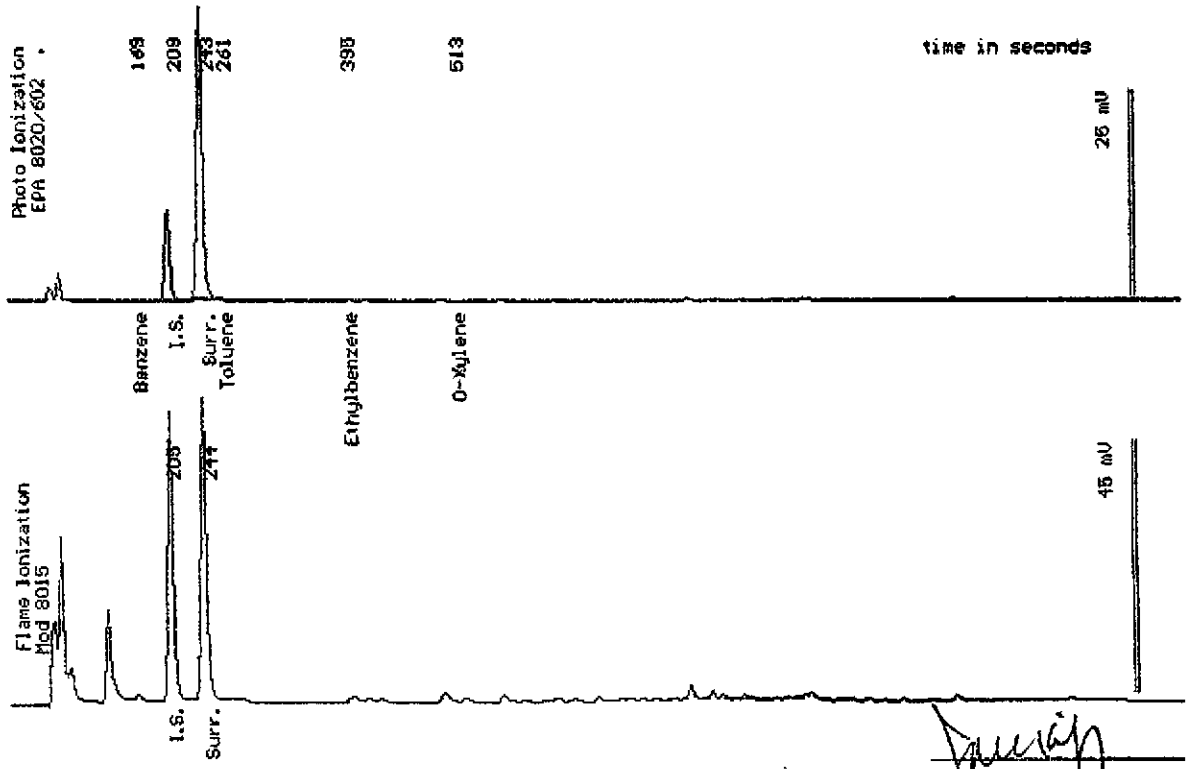
WEST LABORATORY

Sample Log 14881
14881-04

Sample: **MW-7**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 4148E
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)	79
Surrogate Recovery		102 %



Date Analyzed: 06-19-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

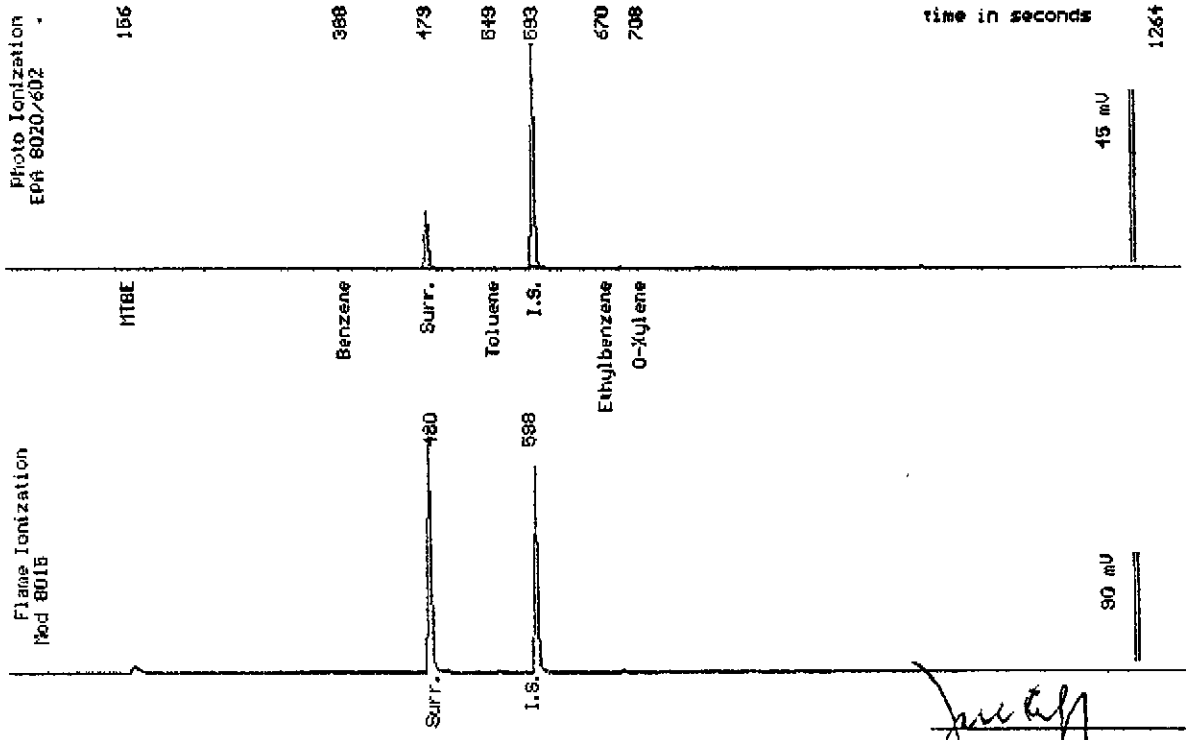
Sample Log 14881

14881-03

Sample: **MW-8**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 2145A
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: 06-19-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

WEST LABORATORY

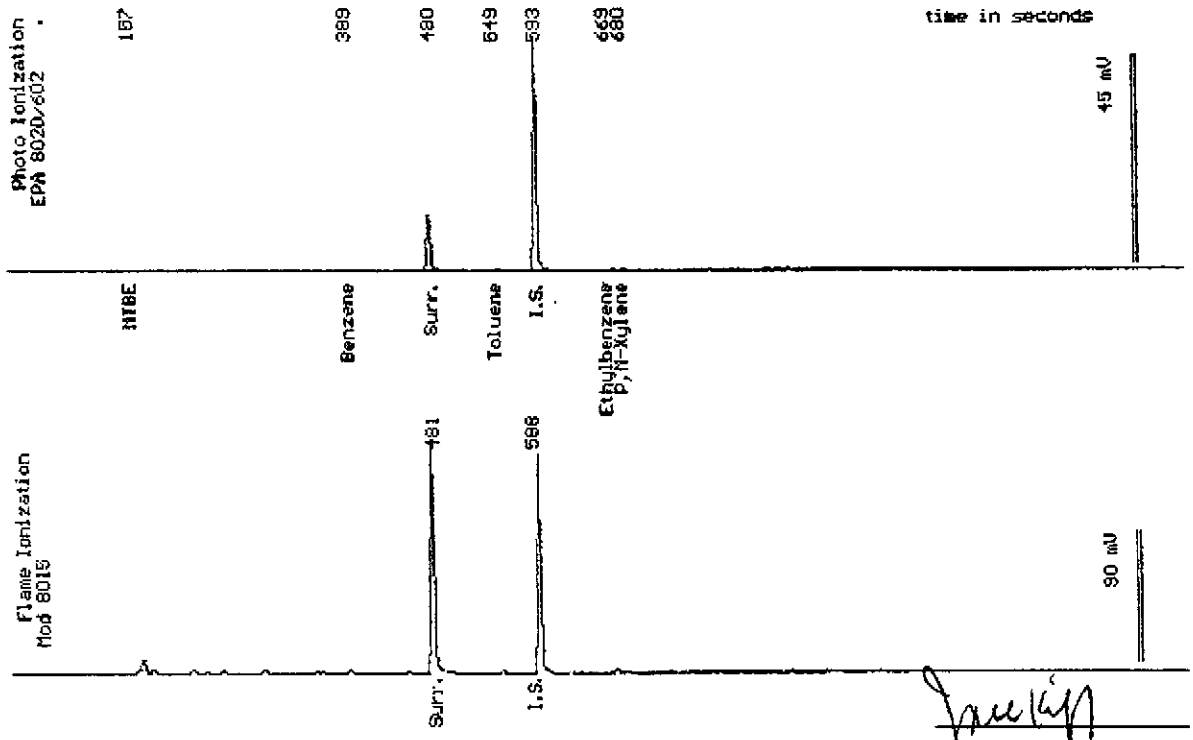
Sample Log 14881

14881-05

Sample: **MW-9**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 2145A
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: 06-19-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

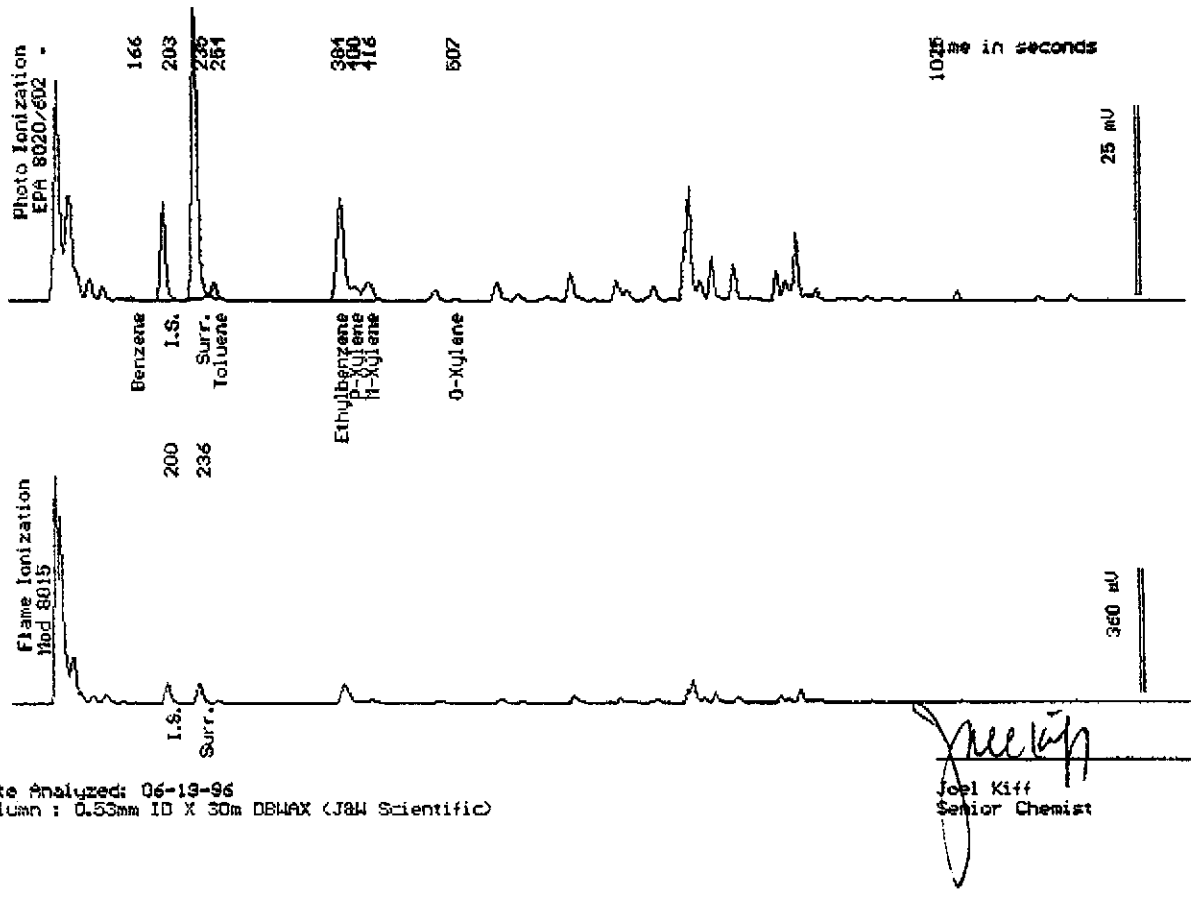
WEST LABORATORY

Sample Log 14881
14881-02

Sample: **MW-10**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:10 QC Batch : 4148E
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	<5.0
Toluene	(5.0)	25
Ethylbenzene	(5.0)	350
Total Xylenes	(5.0)	81
TPH as Gasoline	(500)	7500
Surrogate Recovery		99 %



Date Analyzed: 06-19-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

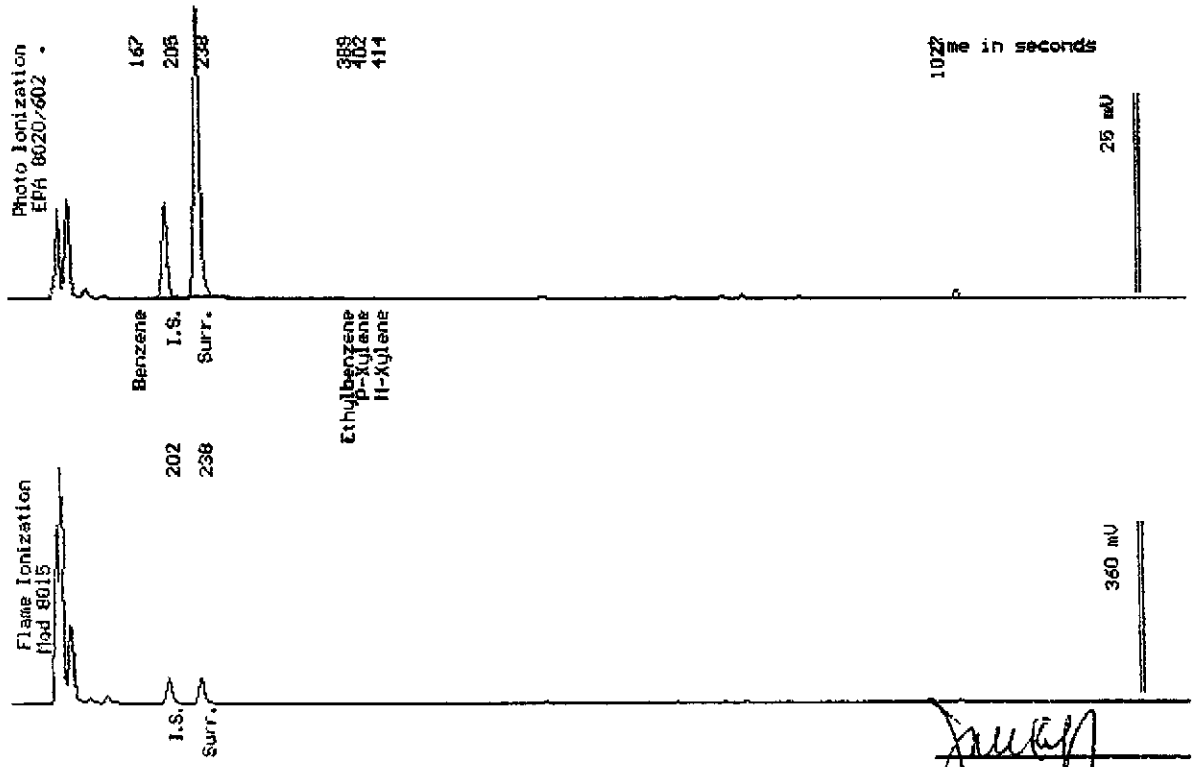
Sample Log 14881
14881-01

Sample: **MW-11**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 4148E
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)	400 *
Surrogate Recovery		101 %

* Product is not typical gasoline.



Date Analyzed: 06-19-96
Column : 0.53mm ID X 30m DB-WAX (J&W Scientific)

Joel Kiff
Senior Chemist

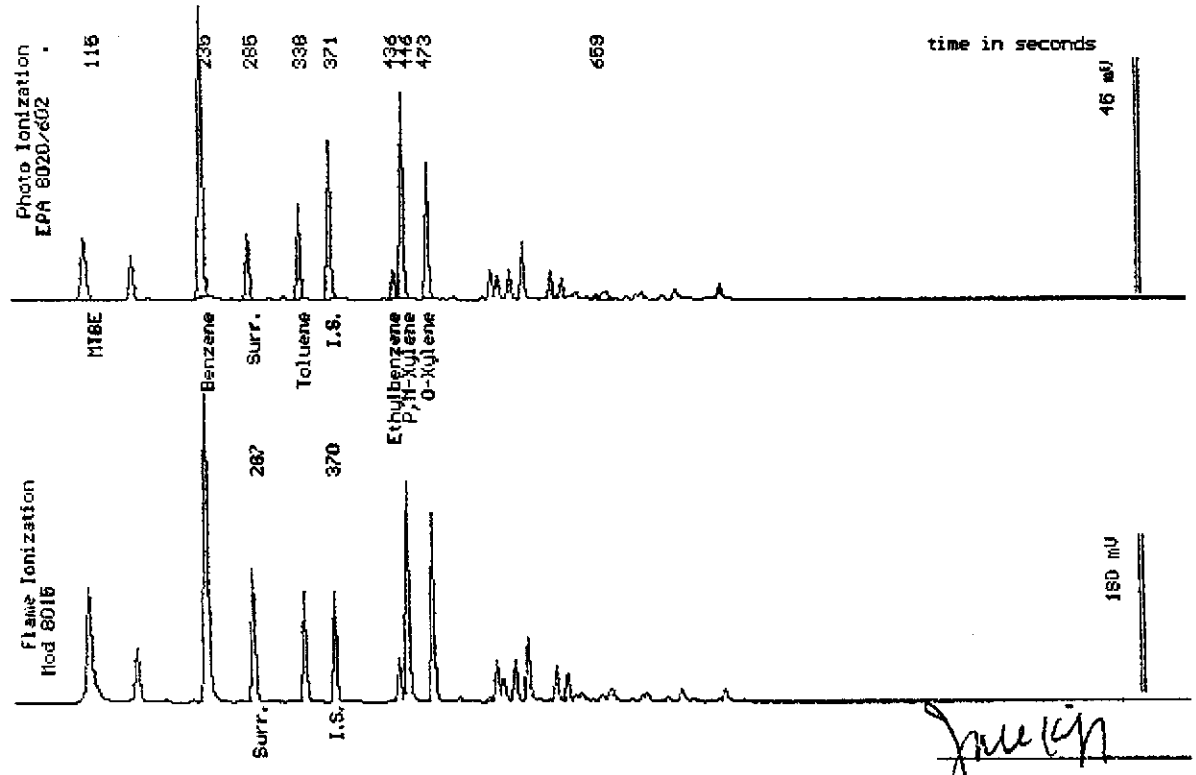
WEST LABORATORY

Sample Log 14881
14881-11

Sample: RW-1

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 6172A
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	38
Toluene	(.50)	11
Ethylbenzene	(.50)	4.7
Total Xylenes	(.50)	50
TPH as Gasoline	(50)	230
Surrogate Recovery		93 %



Date Analyzed: 06-19-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

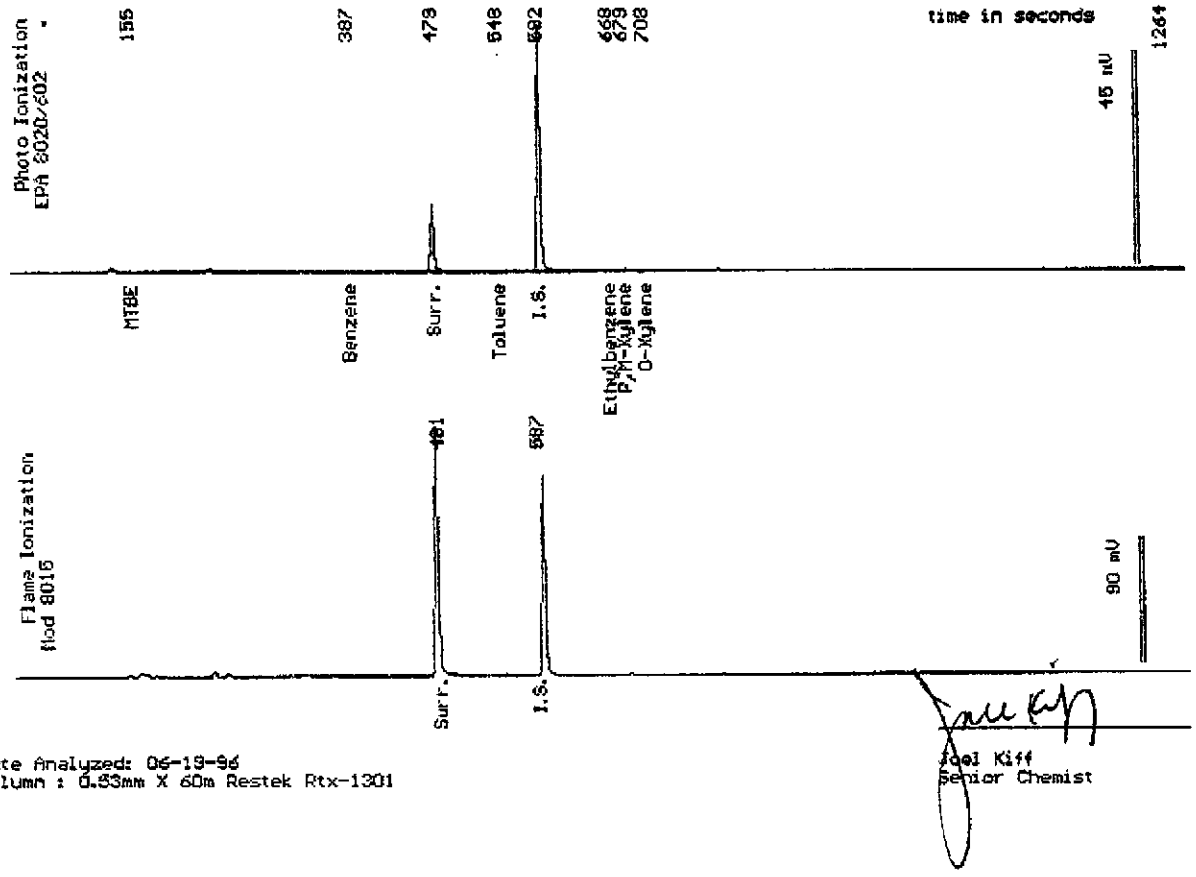
Sample Log 14881

14881-13

Sample: Mid Carbon

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 2145B
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		98 %



Date Analyzed: 06-19-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

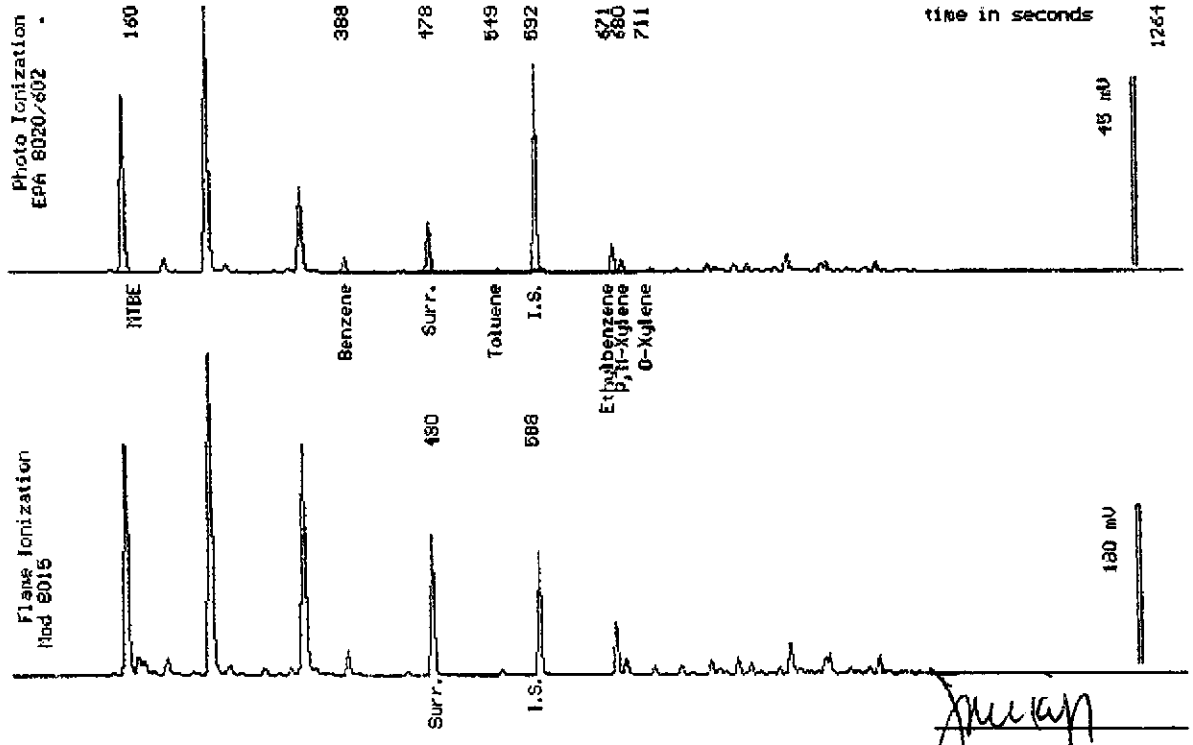
WEST LABORATORY

Sample Log 14881
14881-14

Sample: **Influent**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 06/11/96
Dilution : 1:1 QC Batch : 2145B
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	2.4
Toluene	(.50)	.57
Ethylbenzene	(.50)	5.9
Total Xylenes	(.50)	2.8
TPH as Gasoline	(50)	190
Surrogate Recovery		96 %



Date Analyzed: 06-19-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14881
July 10, 1996

Project Name : Beacon 721
Project Number : DO93-936

Date Received : 06/11/96

Sample : MW-11 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	370	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/06/96		EPA 353.3	0.52	3.2	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	10	19	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	420	mg/L

Sample : MW-10 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	400	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/06/96		EPA 353.3	0.050	<0.050	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	10	<10	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	410	mg/L

Sample : MW-8 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	190	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/06/96		EPA 353.3	0.52	3.1	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	10	33	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	280	mg/L

MRL = Method Reporting Limit

Approved By : Joel L. Kiff

WEST LABORATORY

Sample Log 14881
July 10, 1996

Project Name : Beacon 721
Project Number : DO93-936

Date Received : 06/11/96

Sample : MW-7 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	590	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/06/96		EPA 353.3	2.1	11	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	0.10	mg/L
Sulfate		07/09/96		EPA 375.4	10	28	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	740	mg/L

Sample : MW-9 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	310	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/06/96		EPA 353.3	4.2	16	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	20	65	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	520	mg/L

Sample : MW-6 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	440	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/06/96		EPA 353.3	1.6	5.7	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	0.057	mg/L
Sulfate		07/09/96		EPA 375.4	10	34	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	570	mg/L

MRL = Method Reporting Limit

Approved By : Joel L. Kiff

WEST LABORATORY

Sample Log 14881
July 10, 1996

Project Name : Beacon 721
Project Number : DO93-936

Date Received : 06/11/96

Sample : MW-5 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	360	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/07/96		EPA 353.3	4.2	21	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	20	40	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	580	mg/L

Sample : MW-2 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	580	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/07/96		EPA 353.3	0.050	0.59	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	20	56	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	680	mg/L

Sample : MW-1 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	400	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/07/96		EPA 353.3	0.050	0.32	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	40	87	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	560	mg/L

MRL = Method Reporting Limit

Approved By : Joel L. Kiff

WEST LABORATORY

Sample Log 14881
July 10, 1996

Project Name : Beacon 721
Project Number : DO93-936

Date Received : 06/11/96

Sample : MW-4 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	290	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/07/96		EPA 353.3	4.2	20	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	0.071	mg/L
Sulfate		07/09/96		EPA 375.4	40	49	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	550	mg/L

Sample : RW-1 **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Alkalinity		06/26/96		EPA 310.1	10	420	mg CaCO3/L
Dissolved Iron	06/18/96	07/02/96	EPA 3020	EPA 6010	0.10	<0.10	mg/L
Nitrate		07/07/96		EPA 353.3	0.52	2.5	mg/L
Nitrite		06/12/96		EPA 353.3	0.050	<0.050	mg/L
Sulfate		07/09/96		EPA 375.4	20	31	mg/L
Total Dissolved Solids		06/16/96		EPA 160.1	15	520	mg/L

Sample : Effluent **Matrix : Water** **Sampled : 06/11/96**

Parameter	Date Prep.	Date Analyzed	Prep. Method	Analysis Method	MRL	Result	Units
Total Suspended Solids		06/14/96		EPA 160.2	3.0	<3.0	mg/L

MRL = Method Reporting Limit

Approved By : Joel L. Kiff

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

W.E.S.T. Labs
1046 Olive Dr #3
Davis, CA 95616
Attn: Joel Kiff

Date Printed 6/18/96 | Page 1

Batch Number	Receipt Date	Client	Client P.O.	Send Via
96-0612-006	06/12/96 09:15	WESTLAB	14881	Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Batch 96-0612-006 consisted of 1 Sample and 1 Test							
Sample 1 Effluent Beacon 735 Santa Cruz							
Project #D094-956							
Sample Type: Water Sampled by: N/A			Sampled: 6/11/96 13:00				
Chemical Oxygen Demand	SM5220D		6/13/96	3.6	mg/l	1	

PQL - Practical Quantitation Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 6/18/96

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. 721	Sampler (Print Name) Jay Stoops	Date 6-11-96
Project No. D093-936	Sampler (Signature) [signature]	Form No. 1 of 2
Project Location San Lorenzo	Affiliation Delta	WEST LAB - Davis Standard TAT

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	Nitrates-Nitrites	Alk TDS Sulfate	Dissolve Fe			No. of Containers	REMARKS
mw-11	6-11-96	0845		X	X		X	X	X			5	
mw-10	↓	0910		↓	↓		↓	↓	↓				
mw-8	↓	0930		↓	↓		↓	↓	↓				
mw-4	↓	0950		↓	↓		↓	↓	↓				
mw-9	↓	1010		↓	↓		↓	↓	↓				RECEIVED
mw-6	↓	1105		↓	↓		↓	↓	↓				DATE 06/11/96 TIME 1745 TEMP 0°
mw-5	↓	1135		↓	↓		↓	↓	↓				INITIAL [initials]
mw-2	↓	1150		↓	↓		↓	↓	↓				WEST LAB

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
[signature] / Delta	6-11-96	17:05	Troy D. [signature] / WEST	6-11-96	17:05
Troy D. [signature] / WEST	6-11-96	1745			
			[signature]	06/11/96	1745

Report To: Owen Kittredge - Delta

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 0003 1/90

Ultramar Inc.

CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
7-21	Jay Stoops / Mindy Morgan	6-11-96	2 of 2

Project No.	Sampler (Signature)
D093-936	

Project Location	Affiliation
San Lorenzo	Delta

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	TSS	COD	Nitrate Nitrite	Oil TDS Sulfate	Dissolved Fe	No. of Containers	REMARKS
MW-1	6-11-96	1205		X	X				X	X	X	5	
MW-4		1240		X	X				X	X	X	5	
RW-1		1345		X	X				X	X	X	5	
Effluent		1300		X	X		X	X				4	
Mid Carbon		1310 1305		X	X							2	
Influent		1310 1305		X	X							2	

WEST LAB
Davis.
Standard TAT

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Jay Stoops / Delta	6-11-96	1705	Troy A. Lyon / WEST	6-11-96	1705
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Troy A. Lyon / WEST	6-11-96	1745			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			John Mart	6/11/96	1745

Report To: Owen Kittredge - Delta

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

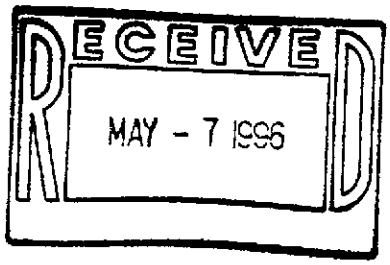
32-8003 1/92

ENCLOSURE D

Remediation System Analytical Results

WEST LABORATORY

Sample Log 14509
April 30, 1996



Owen Kittredge
Delta Environmental Consultants
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Subject : 3 water & 2 air samples
Project Name : Beacon 721
Project Number : DO93-936

Location : San Lorenzo

Dear Mr. Kittredge,

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

WEST Laboratory is certified by the State of California (# 1346). If you have any questions regarding procedures or results, please call me at 916-753-9500.

Sincerely,

Joel L. Kiff

WEST LABORATORY

Sample Log 14509

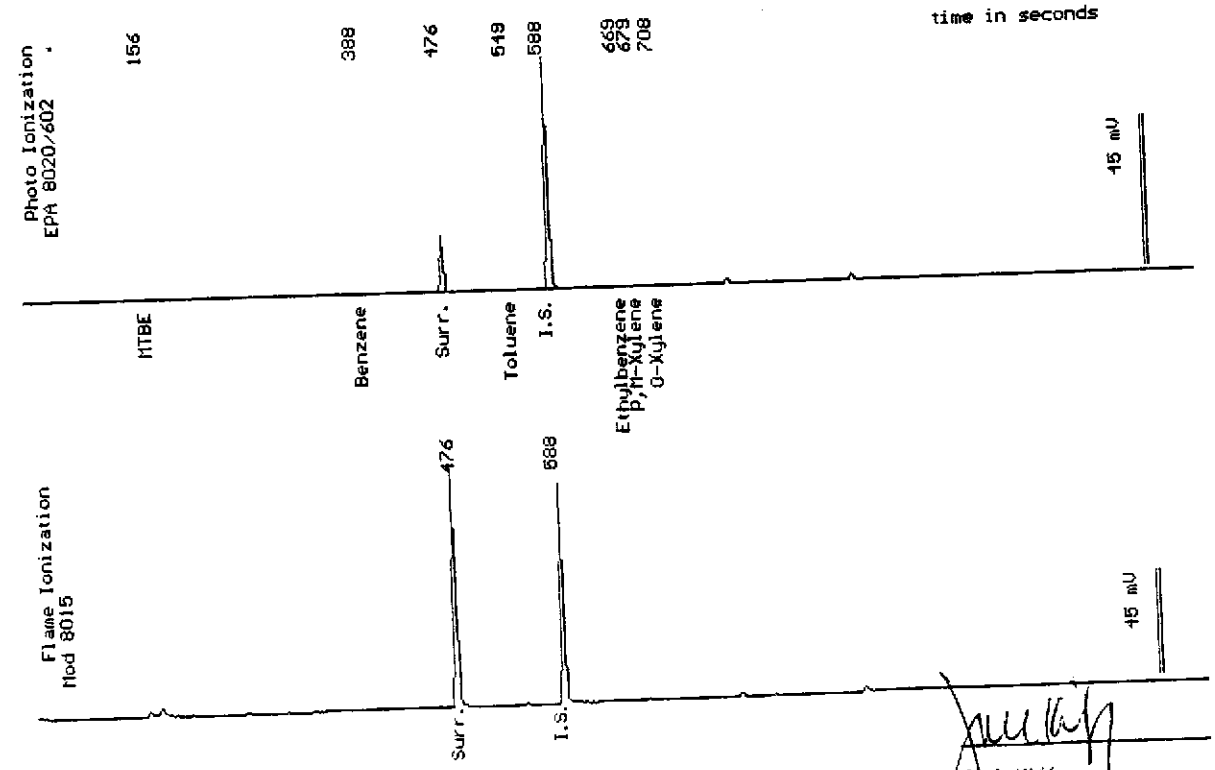
14509-01

Sample: influent

From : Beacon 721 (Proj. # DO93-936)
Sampled : 04/16/96
Dilution : 1:1
Matrix : Water

QC Batch : 2142S

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)	
Surrogate Recovery		100 %



Date Analyzed: 04-29-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14509

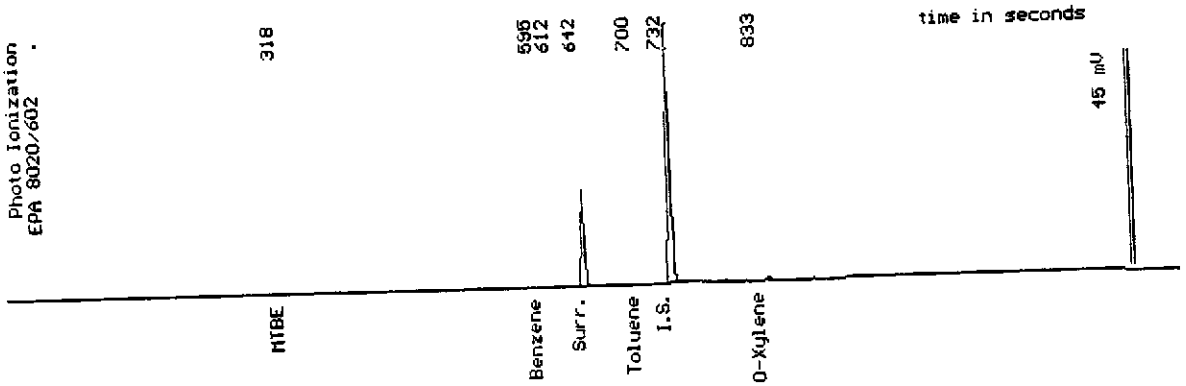
14509-02

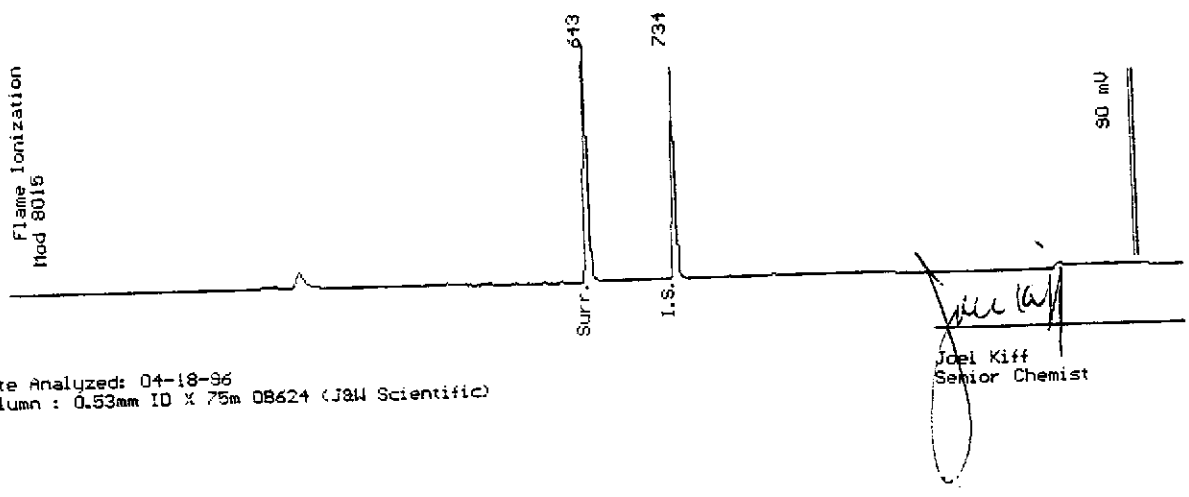
Sample: **MID**

From : Beacon 721 (Proj. # DO93-936)
Sampled : 04/16/96
Dilution : 1:1
Matrix : Water

QC Batch : 6170cc

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		102 %





Date Analyzed: 04-18-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14509

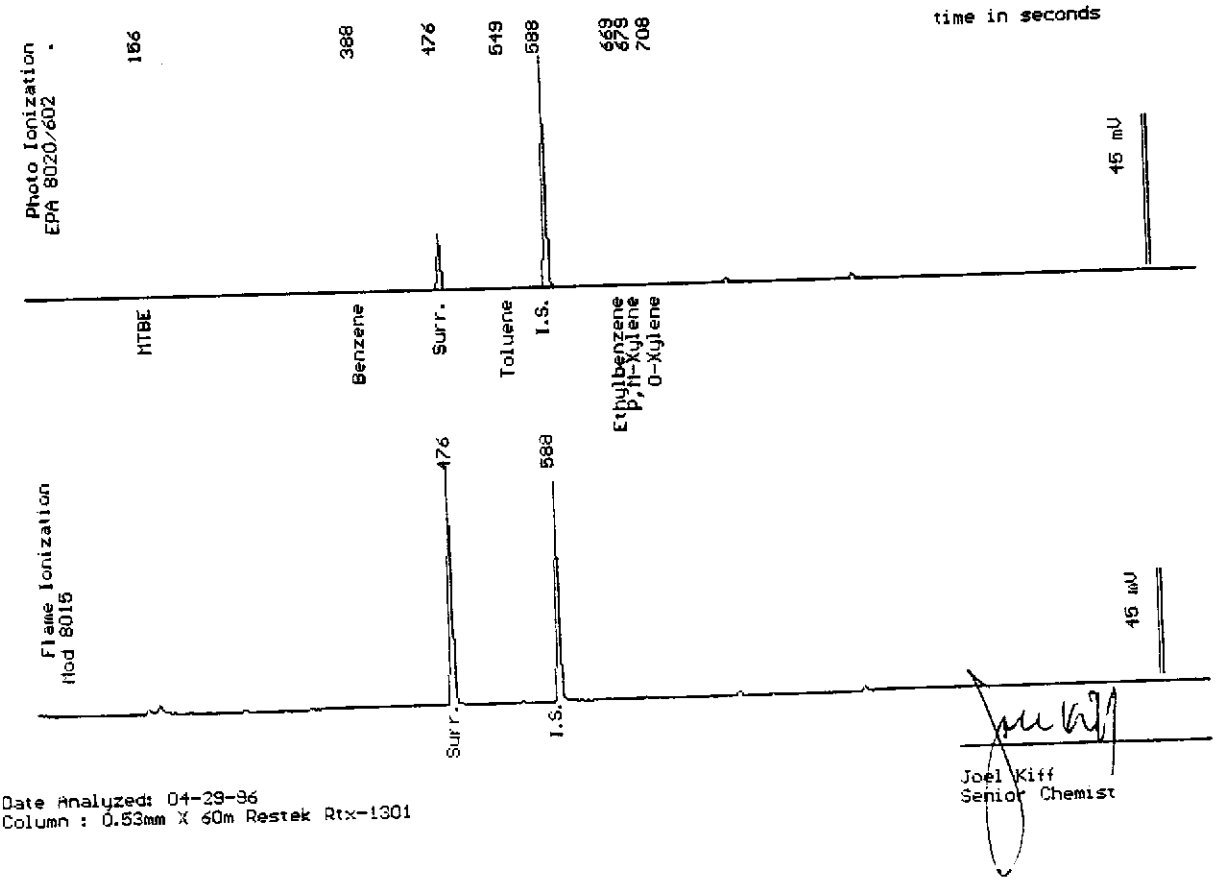
14509-03

Sample: effluent

From : Beacon 721 (Proj. # DO93-936)
Sampled : 04/16/96
Dilution : 1:1
Matrix : Water

QC Batch : 2142S

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: 04-29-96
Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14509

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : Beacon 721 (Proj. # DO93-936)
Sampled : 04/16/96
Received : 04/17/96
Matrix : Water

MTBE	(MRL) ug/L	Measured Value ug/L
influent	(5.0)	<5.0
MID	(5.0)	<5.0
effluent	(5.0)	<5.0

Approved By:

Joel Kiff
Senior Chemist

WEST LABORATORY

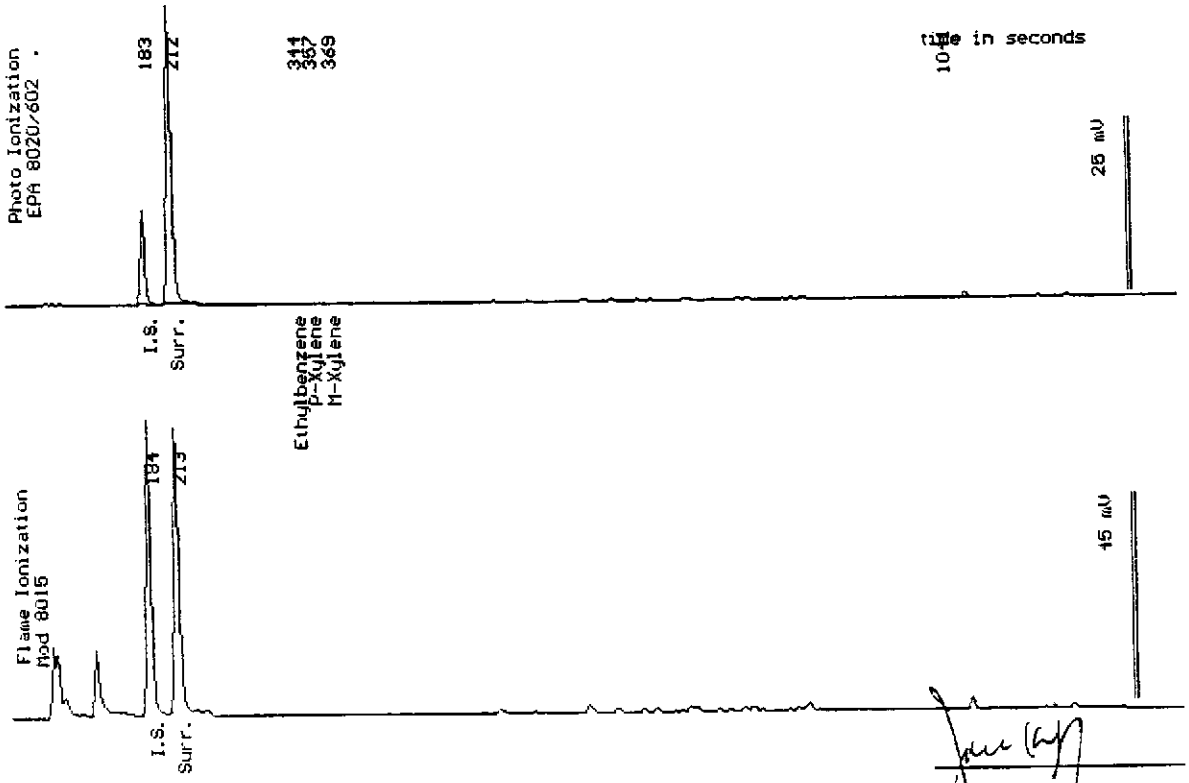
Sample Log 14509

14509-04

Sample: influent air

From : Beacon 721 (Proj. # DO93-936)
Sampled : 04/16/96
Dilution : 1:1 QC Batch : 4146B
Matrix : Air

Parameter	(MRL) Molar ppm	Measured Value Molar ppm
Benzene	(.050)	<.050
Toluene	(.050)	<.050
Ethylbenzene	(.050)	<.050
Total Xylenes	(.050)	<.050
TPH as Gasoline	(5.0)	<5.0
Surrogate Recovery		113 %



Date Analyzed: 04-17-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

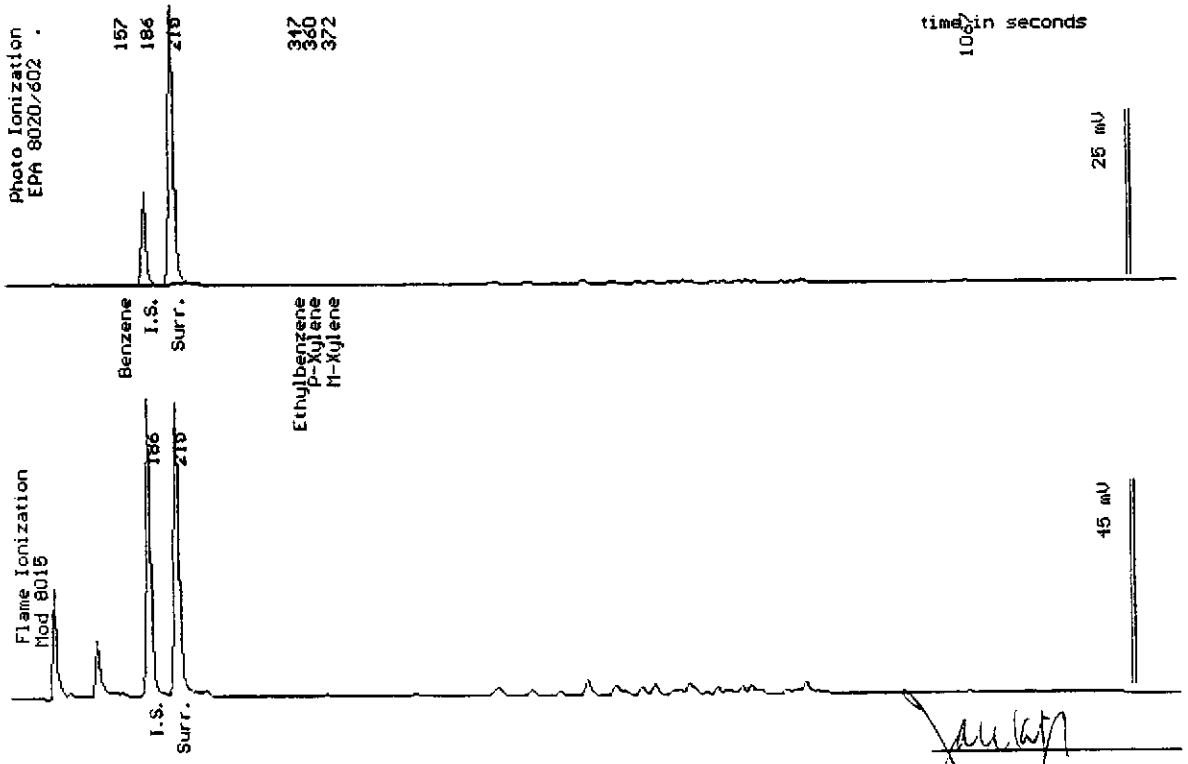
Sample Log 14509

14509-05

Sample: effluent air

From : Beacon 721 (Proj. # DO93-936)
Sampled : 04/16/96
Dilution : 1:1 QC Batch : 4146B
Matrix : Air

Parameter	(MRL) Molar ppm	Measured Value Molar ppm
Benzene	(.050)	<.050
Toluene	(.050)	<.050
Ethylbenzene	(.050)	<.050
Total Xylenes	(.050)	<.050
TPH as Gasoline	(5.0)	<5.0
Surrogate Recovery		113 %



Date Analyzed: 04-17-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

April 22, 1996
Sample Log 14509

From : Beacon 721 (Project # D093-936)
Date Sampled : 04/16/96
Matrix : Water
Duplicate Sample : 14505-02

Date Received : 04/17/96
Units : mg/L

Total Suspended Solids EPA Method 160.2

West ID	Sample ID	Result	MRL	Blank	% RPD	Date Analyzed
14509-03	**effluent**	<3.0	3.0	<3.0	2	04/19/96

MRL = Method Reporting Limit
RPD = Relative Percent Difference between a sample and its duplicate.

The RPD Limits are ± 20 %.

Michelle L. Anderson
Inorganics Supervisor

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

W.E.S.T. Labs
1046 Olive Dr #3
Davis, CA 95616
Attn: Joel Kiff

Date Printed: 4/30/96

Batch Number	Receipt Date	Client	Client P.O.	Send Via
96-0419-020	04/18/96 16:34	WESTLAB	14509	Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Batch 96-0419-020 consisted of 1 Sample and 1 Test							
Sample 1 14509-03 Effluent Beacon 721 D093-936							
Sample Type: Water Sampled by: N/A			Sampled: 4/16/96				
Chemical Oxygen Demand	SM5220D		4/30/96	ND	mg/l	1	

PQL - Practical Quantitation Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Date Printed: 4/30/96

Ultramar Inc.

CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
721	Martin W. Morgan	4/16/96	1 of 1

Project No.: D093-936

Sampler (Signature): [signature]

Project Location: San Lorenzo, CA

Affiliation: Delta Env. Cons.

WEST Labs 916 753 9500

Standard Turn

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	COD	TSS				No. of Containers	REMARKS
influent	4/16/96	1059		X	X							2	
MID	4/16/96	1057		X	X							2	
effluent	4/16/96	1055		X	X		X	X				4	
influent air	4/16/96	1050		X	X							1	
effluent air	4/16/96	1048		X	X							1	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
[signature] / Delta	4/17/96	840	Kim Seitz / Delta	4/17/96	840
Kim Seitz	4/17/96	0845	Sid Paden	4/17/96	0845
Sid Paden	4/17/96	0917	[signature]	4/17/96	0917

Report To: Owen Kittredge

916 638 2085 fax 8385

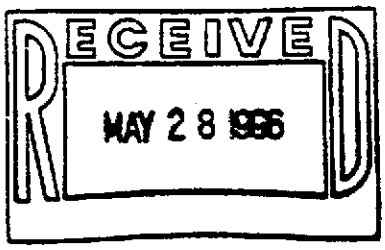
Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Terry Fox

32-8003 1/90

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

WEST LABORATORY

Sample Log 14617
May 21, 1996



Owen Kittredge
Delta Environmental Consultants
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Subject : 3 water & 2 air samples
Project Name : Beacon 721
Project Number : DO93-936

Location : San Lorenzo

Dear Mr. Kittredge,

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

WEST Laboratory is certified by the State of California (# 1346). If you have any questions regarding procedures or results, please call me at 916-753-9500.

Sincerely,

Joel L. Kiff

WEST LABORATORY

May 15, 1996
Sample Log 14617

From : Beacon 721 (Project # D093-936)
Date Sampled : 05/07/96
Matrix : Water
Duplicate Sample : 14637-01

Date Received : 05/07/96
Units : mg/L

Total Suspended Solids EPA Method 160.2

West ID	Sample ID	Result	MRL	Blank	% RPD	Date Analyzed
14617-02	**effluent**	<3.0	3.0	<3.0	0	05/10/96

MRL = Method Reporting Limit
RPD = Relative Percent Difference between a sample and its duplicate.

The RPD Limits are ± 20 %.

Michelle L. Anderson
Inorganics Supervisor

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

W.E.S.T. Labs
1046 Olive Dr #3
Davis, CA 95616
Attn: Joel Kiff

Date Printed: 5/21/96
Page: 1

Batch Number	Receipt Date	Client	Client P.O.	Send Via
96-0508-019	05/08/96 09:30	WESTLAB	14617	Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Batch 96-0508-019 consisted of 1 Sample and 1 Test							
Sample 1 14617-02 Effluent - Beacon 721 D093-936							
Sample Type: Water Sampled by: N/A			Sampled: 5/07/96				
Chemical Oxygen Demand	SM5220D		5/16/96	ND	mg/l	1	

PQL - Practical Quantitation Limit ND - None Detected
* . Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Date Printed: 5/21/96

WEST LABORATORY

Sample Log 14617

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : Beacon 721 (Proj. # DO93-936)
Sampled : 05/07/96
Received : 05/07/96
Matrix : Water

MTBE	(MRL) ug/L	Measured Value ug/L
influent	(5.0)	7.9
effluent	(5.0)	<5.0
MID	(5.0)	<5.0

Approved By:

Joel Kiff
Senior Chemist

WEST LABORATORY

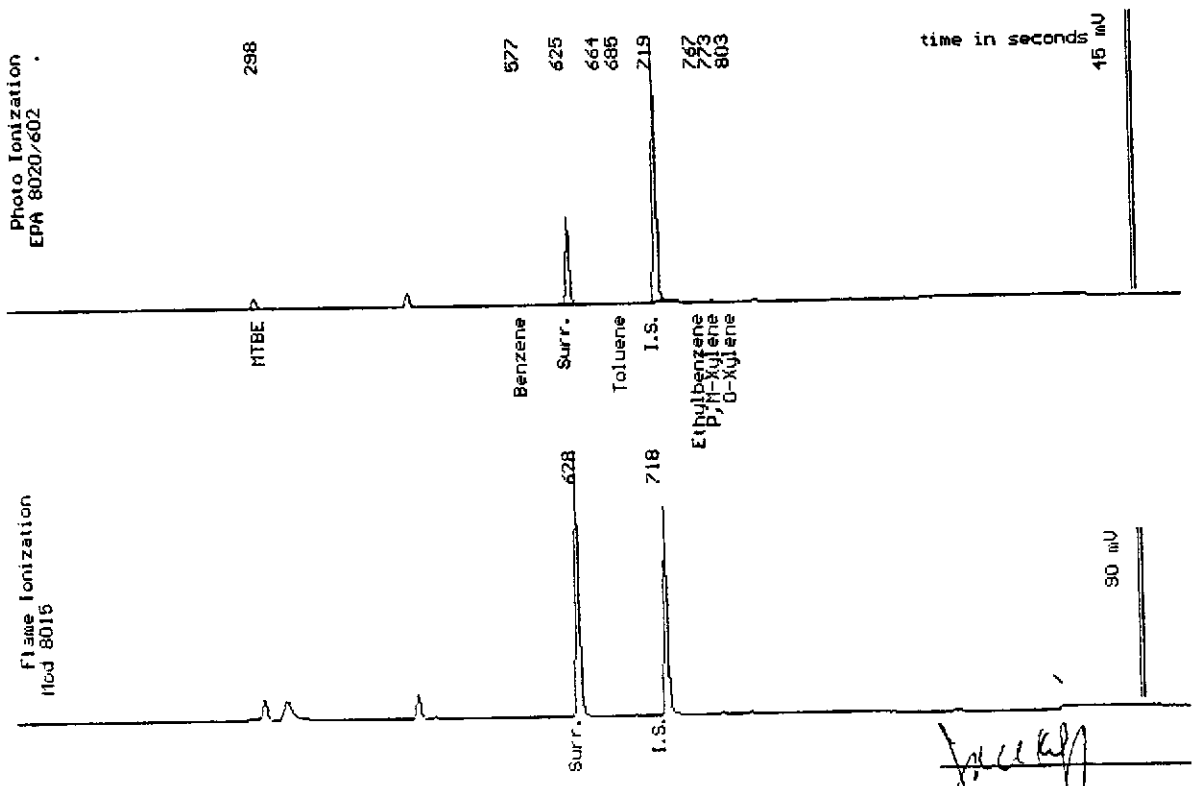
Sample Log 14617

14617-01

Sample: influent

From : Beacon 721 (Proj. # DO93-936)
Sampled : 05/07/96
Dilution : 1:1 QC Batch : 6170S
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		108 %



Date Analyzed: 05-14-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

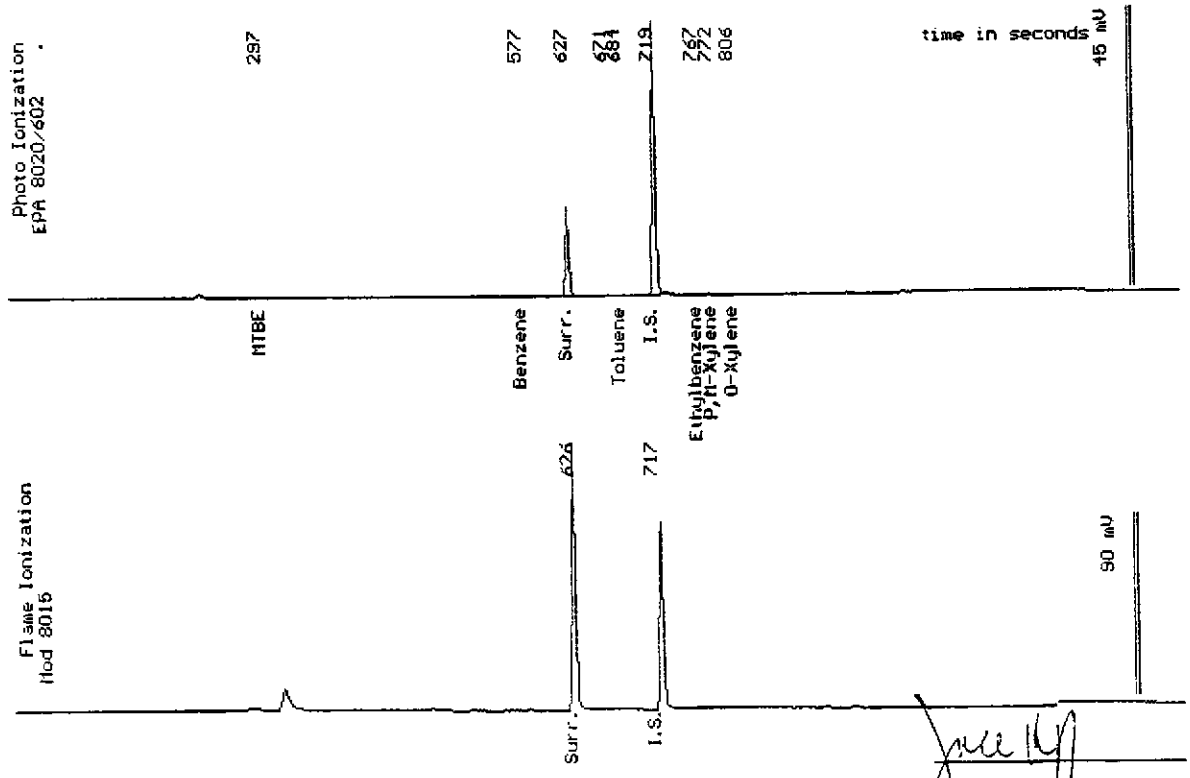
Sample Log 14617

14617-02

Sample: effluent

From : Beacon 721 (Proj. # DO93-936)
Sampled : 05/07/96
Dilution : 1:1 QC Batch : 6170S
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		102 %



Date Analyzed: 05-14-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14617

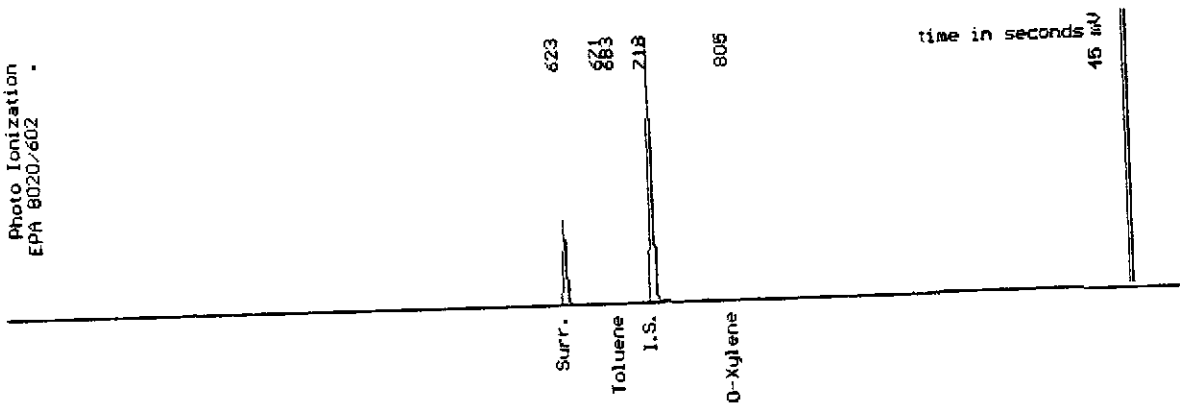
14617-03

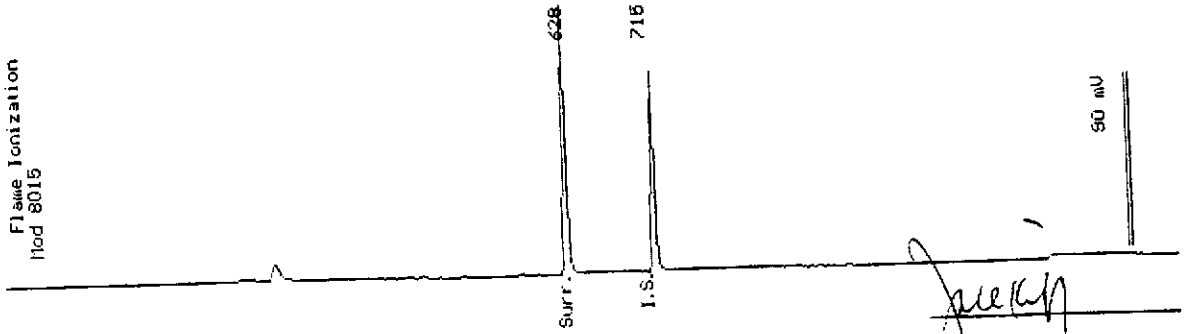
Sample: MID

From : Beacon 721 (Proj. # DO93-936)
Sampled : 05/07/96
Dilution : 1:1
Matrix : Water

QC Batch : 6170S

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)	
Surrogate Recovery		102 %





Date Analyzed: 05-14-96
Column : 0.53mm ID X 75m DB624 (J&W Scientific)

Joel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14617

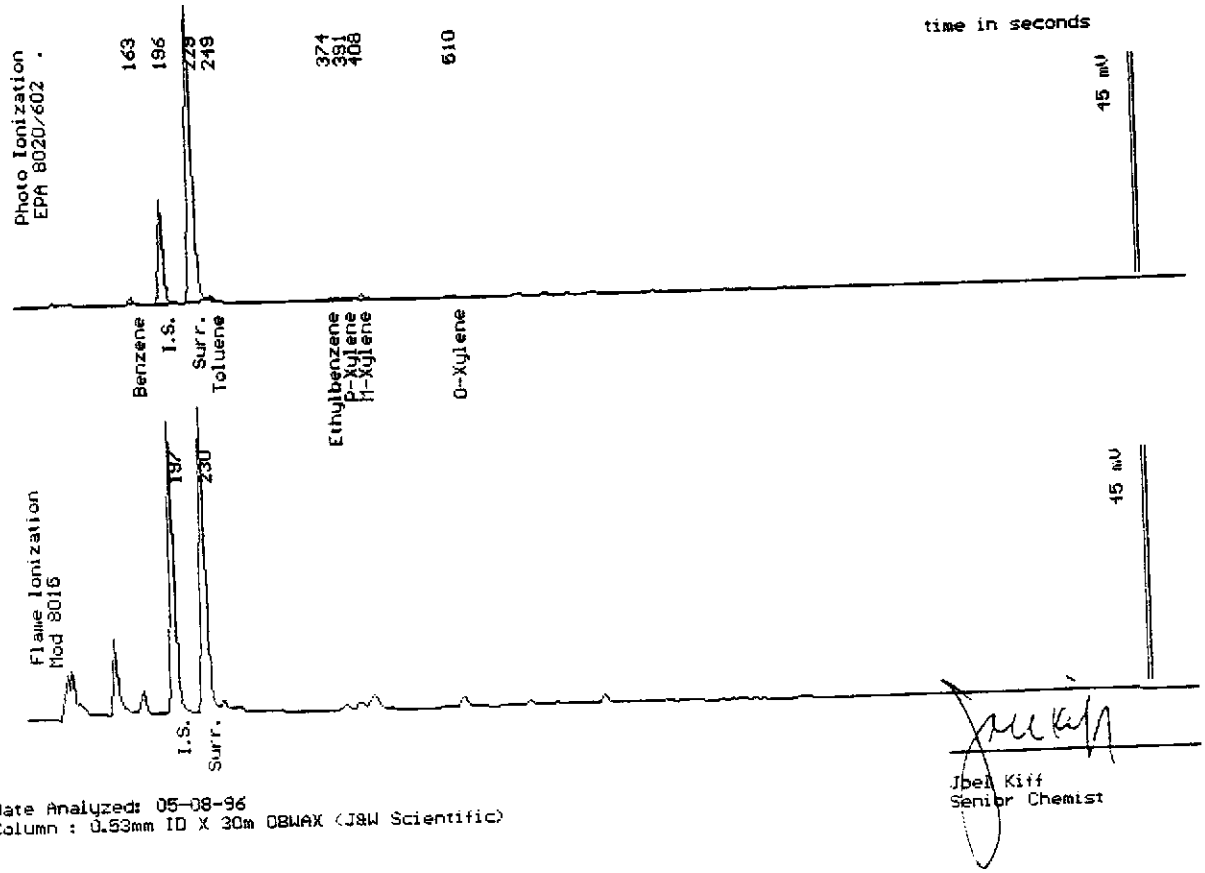
14617-04

Sample: influent Air

From : Beacon 721 (Proj. # DO93-936)
Sampled : 05/07/96
Dilution : 1:1
Matrix : Air

QC Batch : 4146N

Parameter	(MRL) Molar ppm	Measured Value Molar ppm
Benzene	(.050)	<.050
Toluene	(.050)	<.050
Ethylbenzene	(.050)	<.050
Total Xylenes	(.050)	.12
TPH as Gasoline	(5.0)	<5.0
Surrogate Recovery		98 %



Date Analyzed: 05-08-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Jbel Kiff
Senior Chemist

WEST LABORATORY

Sample Log 14617

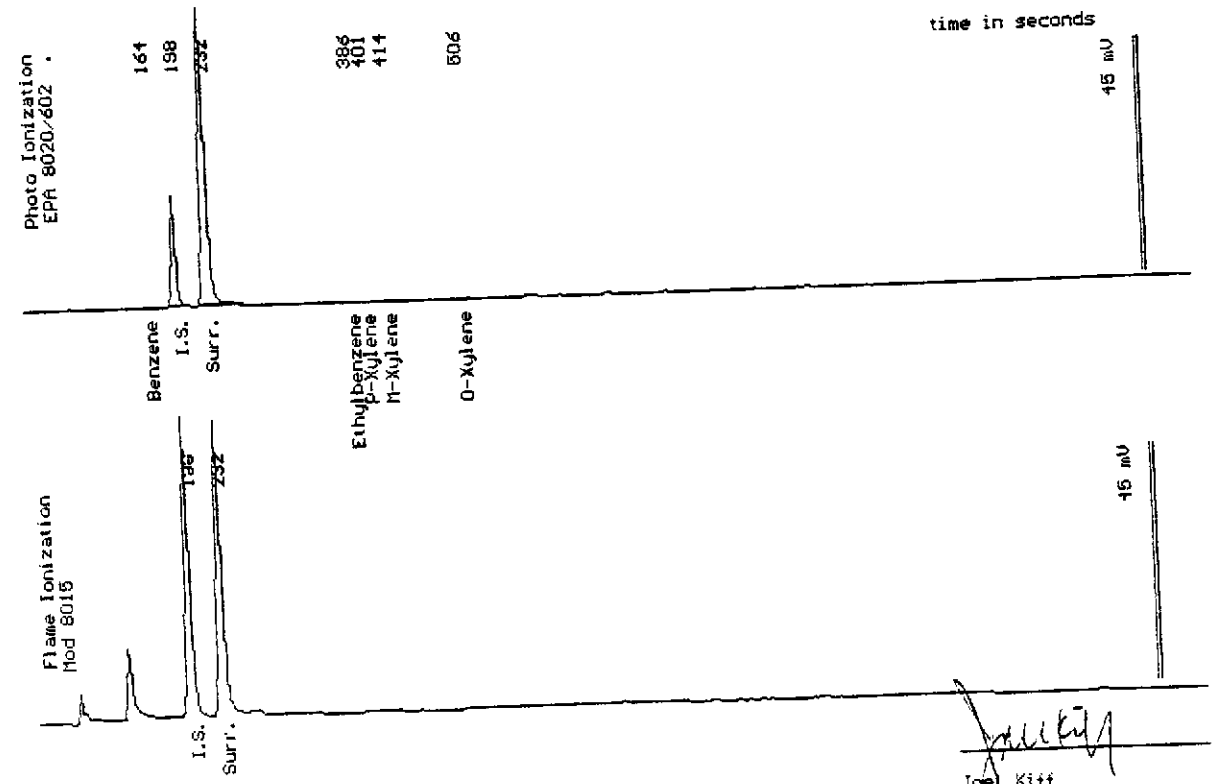
14617-05

Sample: effluent Air

From : Beacon 721 (Proj. # DO93-936)
Sampled : 05/07/96
Dilution : 1:1
Matrix : Air

QC Batch : 4146N

Parameter	(MRL) Molar ppm	Measured Value Molar ppm
Benzene	(.050)	<.050
Toluene	(.050)	<.050
Ethylbenzene	(.050)	<.050
Total Xylenes	(.050)	<.050
TPH as Gasoline	(5.0)	<5.0
Surrogate Recovery		100 %



Date Analyzed: 05-08-96
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

W.E.S.T. Labs
1046 Olive Dr #3
Davis, CA 95616
Attn: Joel Kiff

Date Printed 5/21/96

Batch Number	Receipt Date	Client	Client P.O.	Send Via
96-0508-019	05/08/96 09:30	WESTLAB	14617	Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Batch 96-0508-019 consisted of 1 Sample and 1 Test							
Sample 1 14617-02 Effluent - Beacon 721 D093-936							
Sample Type: Water Sampled by: N/A			Sampled: 5/07/96				
Chemical Oxygen Demand	SM5220D		5/16/96	ND	mg/l	1	

PQL - Practical Quantitation Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Date Printed: 5/21/96

Ultramar Inc.

CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
721	Martin W. Morgan	5/7/96	1 of 1
Project No.	**Sampler (Signature)**		
D093-936			
Project Location	**Affiliation**		
San Lorenzo, CA	Delta Env.		

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	TSS	COD	No. of Containers	REMARKS
Influent	5/7/96	0829	14617-01	X	X				2	WEST Labs 916 753 9500
Effluent	5/7/96	0825	02	X	X		X	X	4	Standard Turn
MID	5/7/96	0827	03	X	X				2	
Influent Air	5/7/96	0957	04	X	X				1	
Effluent Air	5/7/96	0955	05	X	X				1	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Martin W. Morgan / Delta	5/7/96	1320			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation) John Matty	Date	Time
				05/10/96	1300

Report To: Owen Kittredge

916 638 2085 fax 8385

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

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

32-6003 1/90