

# Ultramar

Ultramar, Inc.  
P.O. Box 486  
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

*Oct 2/17/96*  
*Note: MTB results included*

June 12, 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

ENVIRONMENTAL  
PROTECTION  
96 JUN 14 PM 3:29

**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, First Quarter 1996 and Status of Remediation System from December 29, 1995 through March 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*  
Terrence A. Fox  
Senior Project Manager  
Marketing Environmental Department

Enclosures

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



A Member of the Ultramar Group of Companies

**BEACON**  
#1 Quality and Service

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## ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

**DATE REPORT SUBMITTED:** June 10, 1996  
**QUARTER ENDING:** March 31, 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.



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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 March 12, 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-11 and RW-1. MW-9, which was not detected for benzene last quarter, was not sampled this quarter. The benzene concentration decreased in MW-1 from 4.9 ppb to not detected, in MW-2 from 9.5 ppb to not detected, and in MW-10 from 4.4 ppb to 1.4 ppb. The benzene concentration increased in MW-3 from 32 ppb to 48 ppb. *good!*

As of March 19, 1996, approximately 1,076,752 gallons of ground water have been removed, treated, and discharged. Reportedly, approximately 98 gallons (627 pounds) of hydrocarbons have been removed the vapor extraction system.

**PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:**

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



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

ENVIRONMENTAL  
PROTECTION  
96 JUN 14 PM 3:29

June 6, 1996

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

Subject: *Quarterly Ground Water Monitoring Report, First Quarter 1996,  
and Status of Remediation System from December 29, 1995 through March 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 March 12, 1996, and the remediation system status from December 29, 1995 through March 19, 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-8, MW-10, MW-11, and one ground water recovery well RW-1. MW-9 was not accessible due to a car parked over it. 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 monitoring wells and RW-1 at depths ranging from 11.02 (RW-1) to 15.89 (MW-11) feet below the tops of well casings. Ground water elevations have increased an average of approximately 3 feet since the last quarterly monitoring event in December 1995. Cumulative ground water table measurements at the site are compiled in Table 1. Based on the ground water table measurements, ground water was mounded around RW-1, probably due to soil vapor extraction and air sparging systems operating during ground water measurements. 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-9) 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. Copies of the sampling information data sheets are included in Enclosure B.

Benzene concentrations were reported below laboratory detection limits in ground water samples collected from MW-1, MW-2, MW-4 through MW-8, and MW-11, and RW-1. Detectable benzene concentrations ranged from 1.4 micrograms per liter ( $\mu\text{g/L}$ ) in MW-10 to 48  $\mu\text{g/L}$  in MW-3. Using the March 1996 ground water analytical data, a benzene isoconcentration contour map was constructed and is included as Figure 4. Cumulative ground water analytical results 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 March 19, 1996, the data indicated that the soil vapor extraction system had removed approximately 98 gallons of vapor equivalent gasoline.

An air sparging system was installed by Delta at the site in December 1995. Air is sparged into air sparging 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 March 19, 1996, the ground water remediation system had discharged approximately 1,076,752 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 January 30, February 27, and March 12, 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.

Mr. Terrence A. Fox  
Ultramar Inc.  
June 6, 1996  
Page 3

**Remarks\Signatures**

The interpretations contained in this report represent our professional opinions, and are based in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

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

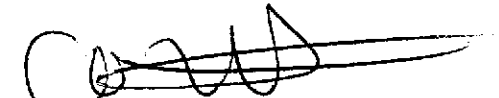
If you have any questions, please call Owen Kittredge at (916) 638-2085.

Sincerely,

**DELTA ENVIRONMENTAL CONSULTANTS, INC.**



Steven W. Meeks  
Project Engineer



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

JWS (LRP199.CAC)  
Enclosures



TABLE 1

## GROUND WATER ELEVATIONS

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

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)<sup>a</sup></u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Physical Observation of Free Product or Sheen</u>
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		
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		

TABLE 1-Continued

GROUND WATER ELEVATIONS

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

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)<sup>a</sup></u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Physical Observation of Free Product or Sheen</u>
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		
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		



TABLE 1-Continued

## GROUND WATER ELEVATIONS

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

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)<sup>a</sup></u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Physical Observation of Free Product or Sheen</u>
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		
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		

TABLE 1-Continued

GROUND WATER ELEVATIONS

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

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)<sup>a</sup></u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Physical Observation of Free Product or Sheen</u>
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		
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		

TABLE 1-Continued

## GROUND WATER ELEVATIONS

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

<u>Monitoring Well</u>	<u>Date</u>	<u>Top of Riser Elevation (ft)<sup>a</sup></u>	<u>Depth to Water (ft)</u>	<u>Ground Water Elevation (ft)</u>	<u>Physical Observation of Free Product or Sheen</u>	
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 <sup>b</sup>	NM	Not measured <sup>c</sup>		
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		

TABLE 1-Continued

## GROUND WATER ELEVATIONS

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

Monitoring Well	Date	Top of Riser Elevation (ft) <sup>a</sup>	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		
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		

<sup>a</sup> All top of riser elevations surveyed by Aegis Environmental, and are assumed relative to mean sea level.

<sup>b</sup> Not measured.

<sup>c</sup> 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 ( $\mu\text{g/L}$ )

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH <sup>a</sup> 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
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 <sup>c</sup>
	09/28/95	<0.5	<0.5	<0.5	<0.5	670 <sup>c</sup>
	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

TABLE 2-Continued

## ANALYTICAL RESULTS OF GROUND WATER SAMPLES

Concentrations in micrograms per liter ( $\mu\text{g/L}$ )

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH <sup>a</sup> 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
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 <sup>c</sup>
	09/28/95	<0.5	<0.5	<0.5	<0.5	140 <sup>c</sup>
	12/28/95	<0.5	<0.5	<0.5	<0.5	510 <sup>c</sup>
	03/12/96	<0.5	<0.5	<0.5	<0.5	<50

TABLE 2-Continued

## ANALYTICAL RESULTS OF GROUND WATER SAMPLES

Concentrations in micrograms per liter ( $\mu\text{g/L}$ )

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH <sup>a</sup> 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	
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 <sup>c</sup>
	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	

TABLE 2-Continued

## ANALYTICAL RESULTS OF GROUND WATER SAMPLES

Concentrations in micrograms per liter ( $\mu\text{g/L}$ )

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH <sup>a</sup> 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
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



TABLE 2-Continued

## ANALYTICAL RESULTS OF GROUND WATER SAMPLES

Concentrations in micrograms per liter ( $\mu\text{g/L}$ )

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH <sup>a</sup> 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
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 <sup>b</sup>	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	

TABLE 2-Continued

ANALYTICAL RESULTS OF GROUND WATER SAMPLES

Concentrations in micrograms per liter ( $\mu\text{g/L}$ )

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

Monitoring Well	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH <sup>a</sup> 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 <sup>c</sup>
	09/28/95	4.1	0.50	<0.5	<0.5	93
	12/28/95	<0.5	<0.5	<0.5	<0.5	380 <sup>c</sup>
	03/12/96	<0.5	<0.5	<0.5	<0.5	110
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	

<sup>a</sup> Total petroleum hydrocarbons.

<sup>b</sup> Not sampled.

<sup>c</sup> 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

<u>Date</u>	<u>Volume<sup>a</sup></u> <u>(gallons)</u>
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 <sup>b</sup>

<sup>a</sup> Cumulative volume of water discharged to sanitary sewer at the indicated date.

<sup>b</sup> 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 ( $\mu\text{g/L}$ )

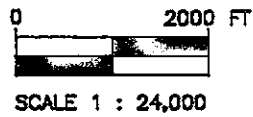
Beacon Station No. 721  
44 Lewelling Boulevard  
San Lorenzo, California

<u>Sample</u>	<u>Date</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Total Xylenes</u>	<u>TPH<sup>a</sup> as gasoline</u>
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 <sup>b</sup>	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 <sup>c</sup>
	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
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
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	

<sup>a</sup> Total petroleum hydrocarbons.<sup>b</sup> Not sampled.<sup>c</sup> Not typical gasoline.




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



R.2 W.

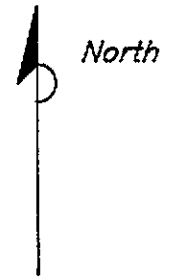
**FIGURE 1**  
**SITE LOCATION MAP**  
 BEACON STATION NO. 721  
 44 LEWELLING BOULEVARD  
 SAN LORENZO, CA.

PROJECT NO. 40-93-936	DRAWN BY LH. 11/2/82
FILE NO.	PREPARED BY TMG
REVISION NO. 1	REVIEWED BY [Signature]

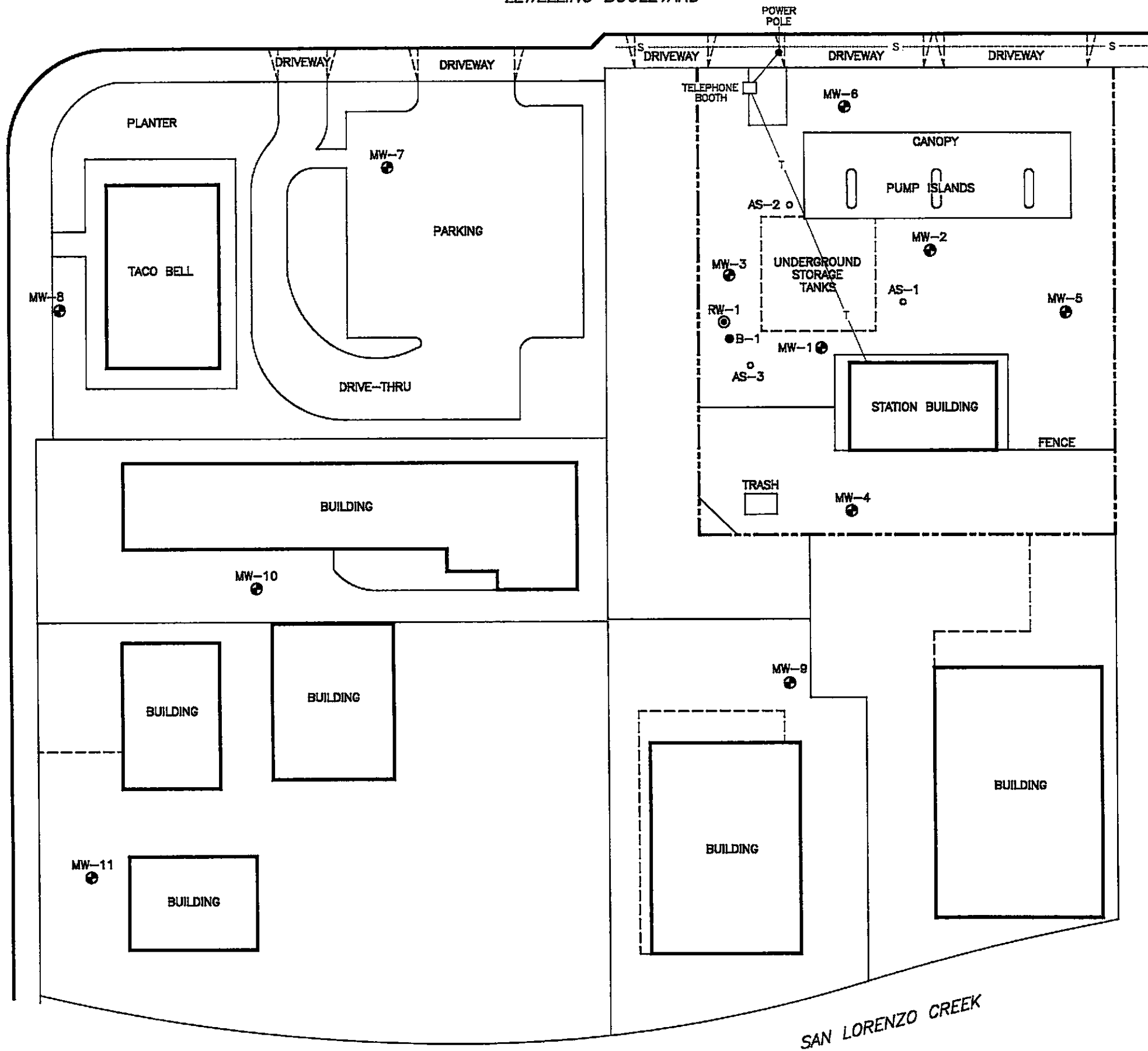


**Delta**  
 Environmental  
 Consultants, Inc.

LEWELLING BOULEVARD



VIA GRANADA



LEGEND:

- B-1 SOIL BORING LOCATION
- ⊙ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- AS-1 AIR SPARGING WELL LOCATION

UTILITIES

- T — TELEPHONE LINE (OVERHEAD)
- S — SEWER LINE (BURIED)

NOTE:

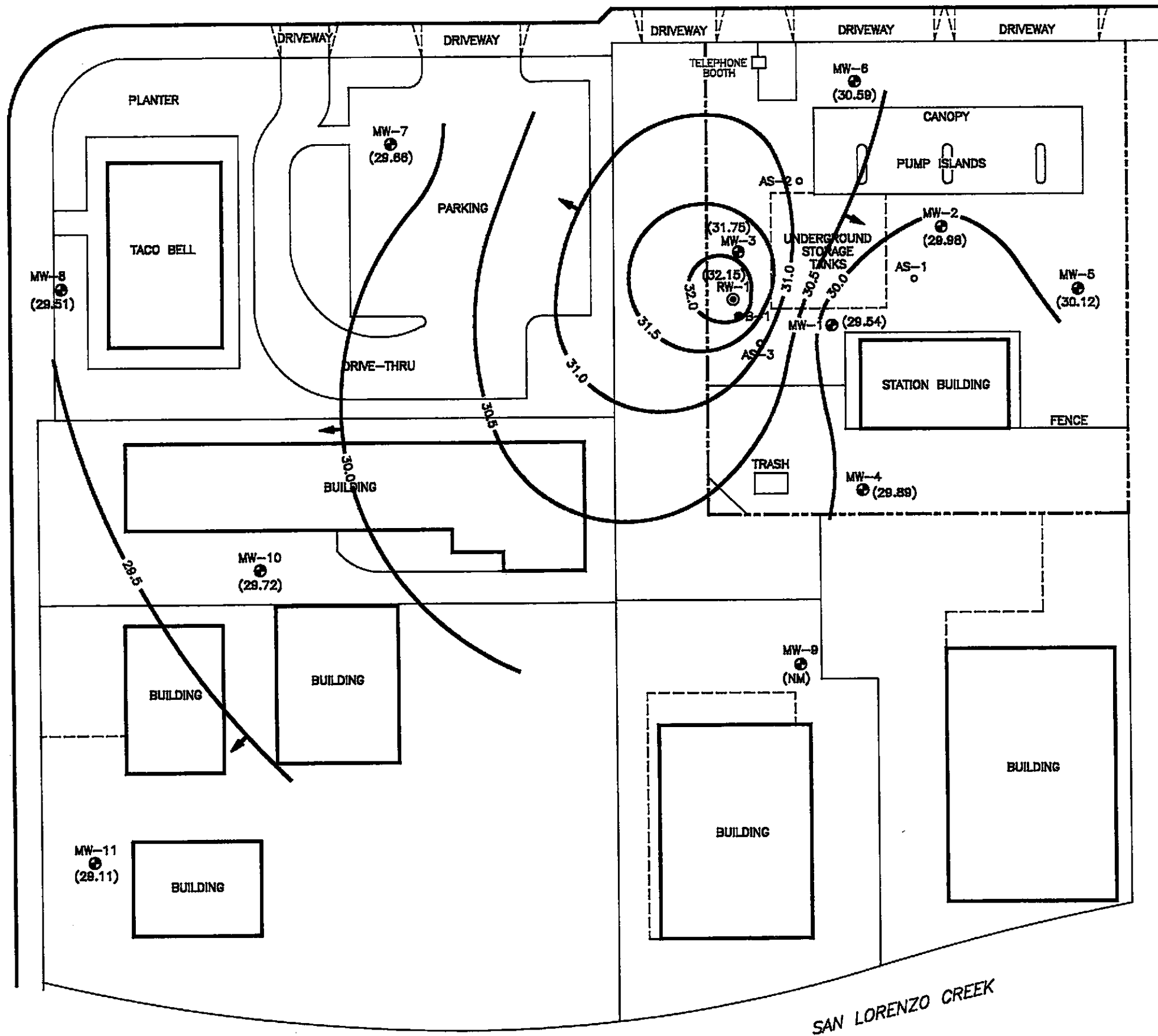
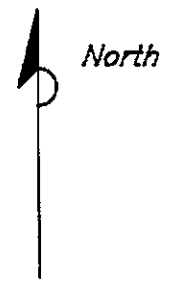
BASE MAP ADAPTED FROM RESNA FIGURE DATED 1/9/92  
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED



<b>FIGURE 2</b> <b>SITE VICINITY MAP</b> BEACON STATION NO. 721 44 LEWELLING BOULEVARD SAN LORENZO, CA.	
PROJECT NO. D093-936	DRAWN BY L.H. 10/12/95
FILE NO. 93-936-1	PREPARED BY JWS
REVISION NO. 3	REVIEWED BY <i>[Signature]</i>



LEWELLING BOULEVARD

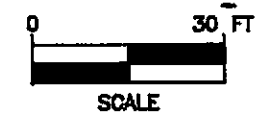


LEGEND:

- B-1 SOIL BORING LOCATION
- ⊙ RW-1 RECOVERY WELL LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION
- AS-1 AIR SPARGING WELL LOCATION
- (29.54) GROUND WATER ELEVATION ASSUMED RELATIVE TO MEAN SEA LEVEL
- 31.0 — WATER TABLE CONTOUR ASSUMED RELATIVE TO MEAN SEA LEVEL
- ← GROUND WATER FLOW DIRECTION
- (NM) NOT MEASURED

NOTE:

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



**FIGURE 3**  
**WATER TABLE CONTOUR MAP - 3/12/96**  
**BEACON STATION NO. 721**  
**44 LEWELLING BOULEVARD**  
**SAN LORENZO, CA.**

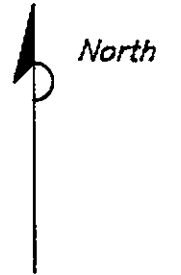
PROJECT NO. D083-836	DRAWN BY L.H. 4/28/96
FILE NO. 83-836-1	PREPARED BY SWM
REVISION NO. 1	REVIEWED BY

**Delta**  
 Environmental  
 Consultants, Inc.

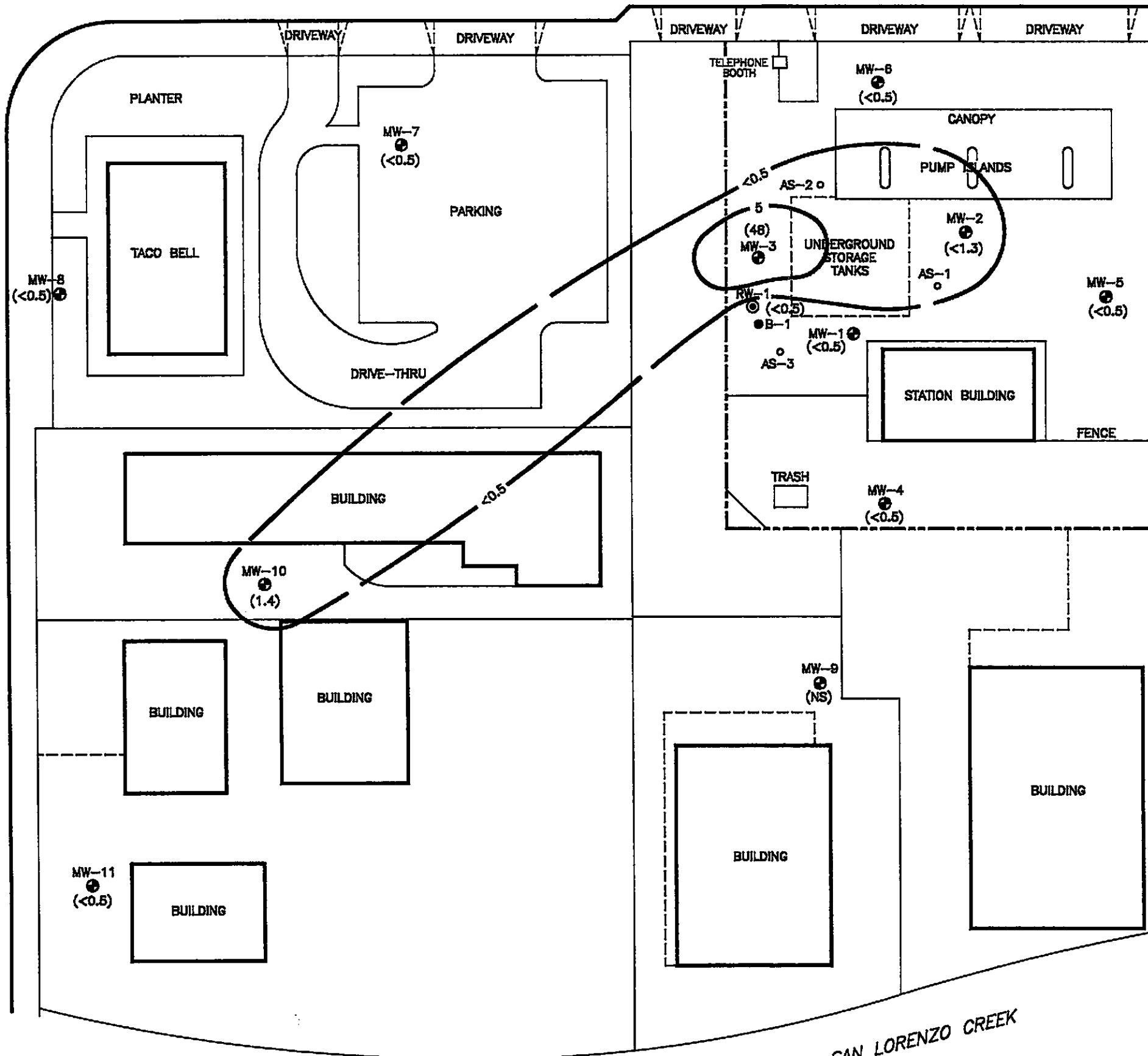
VIA GRANADA

SAN LORENZO CREEK

LEWELLING BOULEVARD



VIA GRANADA



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

*SVE from MW-3 + RW-1*

NOTE:  
BASE MAP ADAPTED FROM RESNA FIGURE DATED 1/8/92  
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED



FIGURE 4  
BENZENE ISOCONCENTRATION MAP  
3/12/96  
BEACON STATION NO. 721  
44 LEWELLING BOULEVARD  
SAN LORENZO, CA.

PROJECT NO. D083-836	DRAWN BY L.H. 4/25/96
FILE NO. 93-936-1	PREPARED BY SWM
REVISION NO. 1	REVIEWED BY <i>[Signature]</i>



SAN LORENZO CREEK



**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.

SAMPLING INFORMATION SHEET



**Delta**  
Environmental  
Consultants, Inc.

Sample ID# MW-1 Project Name: Beacon 721 Project No. DO93-936

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

Date Sampled: 3/12/96 Time: 1100

Wellhead assembly condition:  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) 14.13 ft Date: 3/12/96 Time 1000

Well Casing Volume Multiplier: 0.16 for 2", 0.45 for 4", 1.47 for 6"

Purging method:  Submersible pump  Bailor  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 VDA'S - BTEX; TOHg 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)
1101	68.1	7.12	7.81		0
1103	68.8	7.17	8.67		6
1104	68.8	7.15	8.62		11
					11

Comments: \_\_\_\_\_

Transportation (thermal preservation) COOLER + ICE

Form completed by: My Sampled by: My

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: 3/12/96 Time: 1100

Wellhead assembly condition:  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) 13.11 ft Date: 3/12/96 Time 1010

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

Purging method:  Submersible pump  Bailor  Conventional 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, TPH<sub>2</sub> Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (µmhos/cm) <sup>X100</sup>	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1050	66.1	7.13	7.81		0
1052	68.2	7.15	7.98		6
1057	68.3	7.15	8.00		13
					13

Comments: \_\_\_\_\_

Preservation (thermal preservation) COOLER & ICE

Form completed by: M Sampled by: U





SAMPLING INFORMATION SHEET



**Deita**  
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: 3/12/96 Time: 1045

Wellhead assembly condition:  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) 13.67 ft Date: 3/12/96 Time 1004

Well Casing Volume Multiplier: 0.16 for 2", 0.53 for 4", 1.47 for 6"

Purging method:  Submersible pump  Bailor  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, TPHs Sample appearance Cloudy

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)
1039	67.5	7.39	9.09		0
1039	66.8	7.33	8.29		5
1042	66.9	7.35	8.32		10
					10

Comments: \_\_\_\_\_

Transportation (thermal preservation) cooler & ice

Form completed by: [Signature] Sampled by: [Signature]





SAMPLING INFORMATION SHEET



Sample ID# MIN-7 Project Name: BEACON 721 Project No. D093-936

Location (address) 44 LEWELLING BLVD SAN LORENZO, CA

Date Sampled: 3/12/96 Time: 0955

Wellhead assembly condition:  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) 11.88 ft Date: 3/12/196 Time 0944

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

Purging method:  Submersible pump  Bailer  Cartridge 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, TPHs Sample appearance Cloudy

Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	FE Units	X100 Conductance (micro/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
0947	66.9	6.90	9.30		0
0948	66.9	6.68	12.61		4
0948	69.9	6.69	12.13		8
					8

Comments: \_\_\_\_\_

Temperature (thermal preservation) COOLER & ICE

Form completed by: CH Sampled by: [Signature]

SAMPLING INFORMATION SHEET



Sample ID# MW-8 Project Name: BEACON 721 Project No. DD93-936  
 Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA  
 Date Sampled: 3/12/96 Time: 0940  
 Wellhead assembly condition:  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) 12.75 ft Date: 3/12/96 Time 0927  
 Well Casing Volume Multiplier: 0.16 for 2", 0.63 for 4", 1.47 for 6"  
 Purging method:  Submersible pump  Bailor  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, TPH 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)
0930	65.4	7.28	3.87		0
0931	66.3	7.29	4.07		4
0931	66.5	7.33	4.01		7
					7

Comments: \_\_\_\_\_

Transportation (thermal preservation) COOLER & ICE  
 Form completed by: [Signature] Sampled by: [Signature]





SAMPLING INFORMATION SHEET



Sample ID# MW-11 Project Name: BEACON 721 Project No. D093-936  
 Location (address) 44 LEWELLING BLVD. SAN LORENZO, CA  
 Date Sampled: 3/12/96 Time: 0900  
 Wellhead assembly condition:  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) 15.89 ft Date: 3/12/96 Time 0847  
 Well Casing Volume Multiplier: 0.16 for 2", 0.63 for 4", 1.47 for 6"  
 Purging method:  Submersible pump  Bailor  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, TPH<sub>4</sub> Sample appearance Cloudy  
 Note any sampling problems NONE

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (µmhos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
0855	65.6	7.58	8.29		0
0856	66.8	7.53	7.73		4
0857	67.2	7.52	7.93		6
0858	67.2	7.53	7.91		9
					9

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Transportation (thermal preservation) COOLER w ICE  
 Form completed by: M Sampled by: M

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: 3/12/96 Time: 1740

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

Equipment Replaced:  bolts  locks  locking cap

Well Depth 29.50 ft below top of casing Casing diameter: \_\_\_\_\_ inches

Depth to water (below top of casing) 11.02 ft Date: 3/17/96 Time 1008

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

Purging method:  Submersible pump  Bailor  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 TPHA, BTEX Sample appearance Cloudy

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)

Comments: Sampled at well, NO Hydrocs Heavy Rain

Transportation (thermal preservation) COOLER + ICE

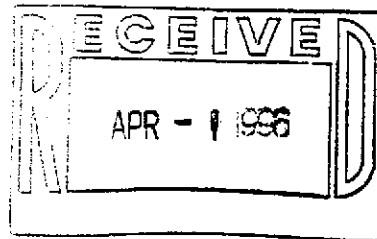
Form completed by: [Signature] Sampled by: [Signature]

**ENCLOSURE C**

Ground Water Sample Laboratory Report

March 26, 1996  
Sample Log 14225

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



Subject: Analytical Results for 11 Water Samples  
Identified as: Beacon 721 (Proj. # D093-936)  
Received: 03/13/96

Dear Mr. Galati:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on March 26, 1996 and describes procedures used to analyze the samples.

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

- "BTEX" (EPA Method 602/5030)
- "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:

A handwritten signature in cursive script that reads "Stewart Podolsky".

Stewart Podolsky  
Senior Chemist



Sample: MW-1

From : Beacon 721 (Proj. # D093-936)

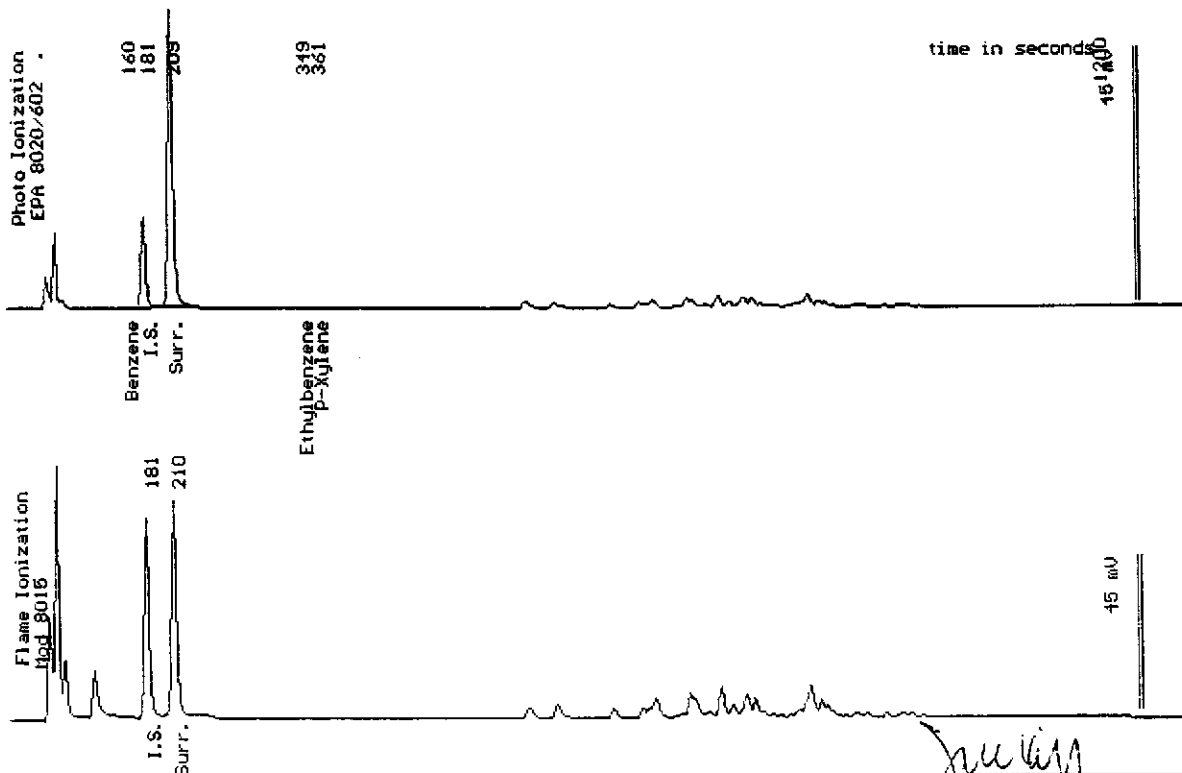
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144T

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	110
Surrogate Recovery		111 %



Date Analyzed: 03-25-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff  
Senior Chemist

Sample: MW-2

From : Beacon 721 (Proj. # D093-936)

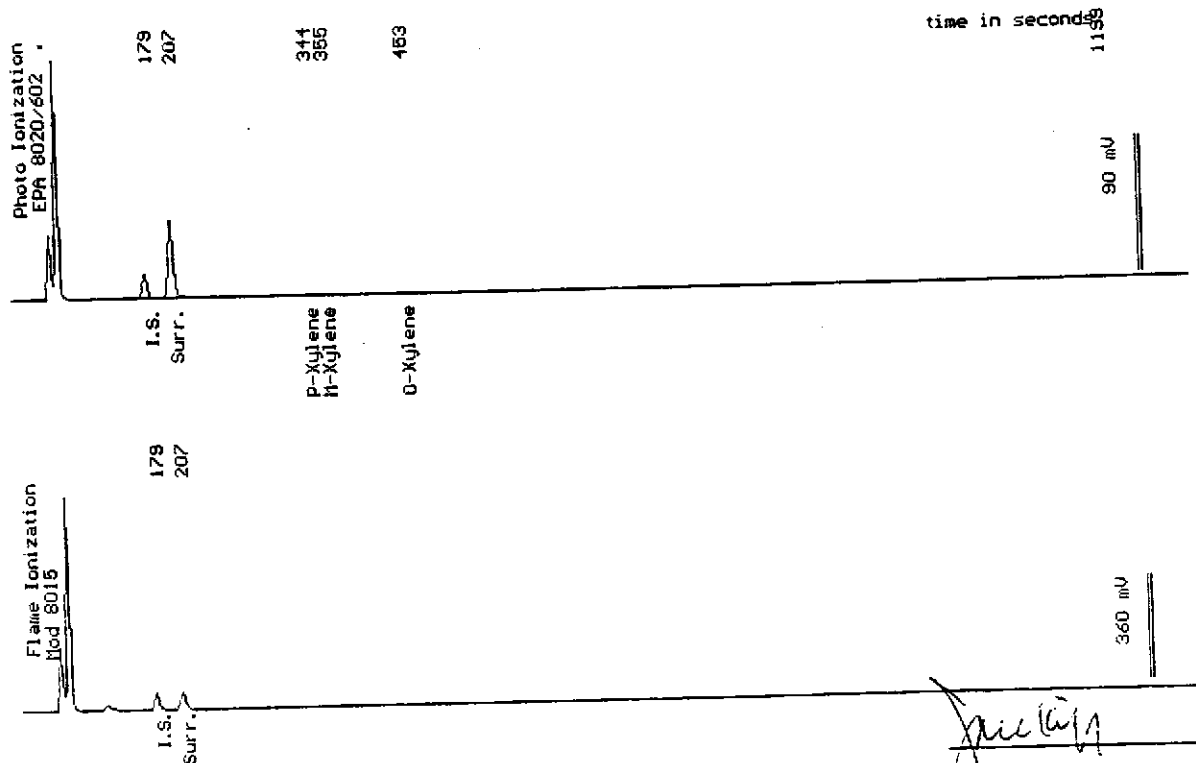
Sampled : 03/12/96

Dilution : 1:3

Matrix : Water

QC Batch : 4144R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(1.3)	<1.3
Toluene	(1.3)	<1.3
Ethylbenzene	(1.3)	<1.3
Total Xylenes	(1.3)	<1.3
TPH as Gasoline	(130)	710
Surrogate Recovery		108 %



Date Analyzed: 03-22-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

Sample: MW-3

From : Beacon 721 (Proj. # D093-936)

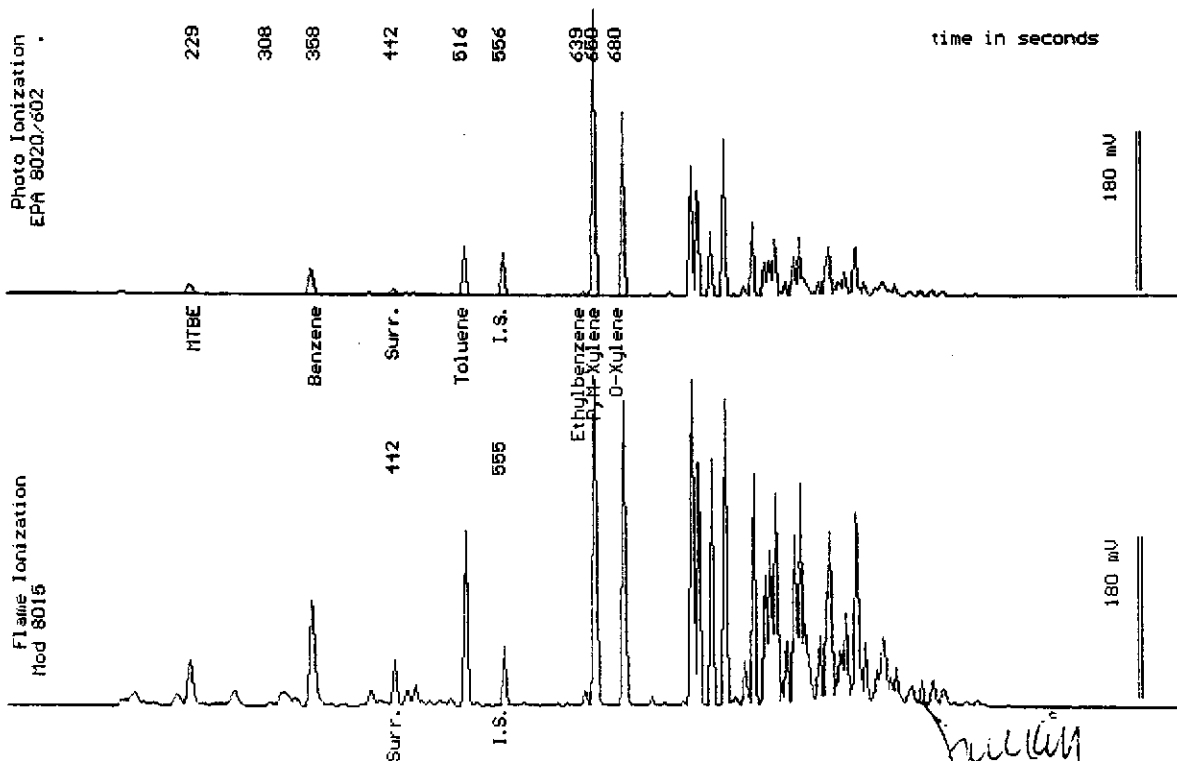
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 2140K

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	48
Toluene	(.50)	64
Ethylbenzene	(.50)	5.3
Total Xylenes	(.50)	630
TPH as Gasoline	(50)	2400
Surrogate Recovery		64 %



Date Analyzed: 03-22-96  
 Column : 0.53mm X 60m Restek Rtx-1301

Joel Kiff  
 Senior Chemist

Sample: MW-4

From : Beacon 721 (Proj. # D093-936)

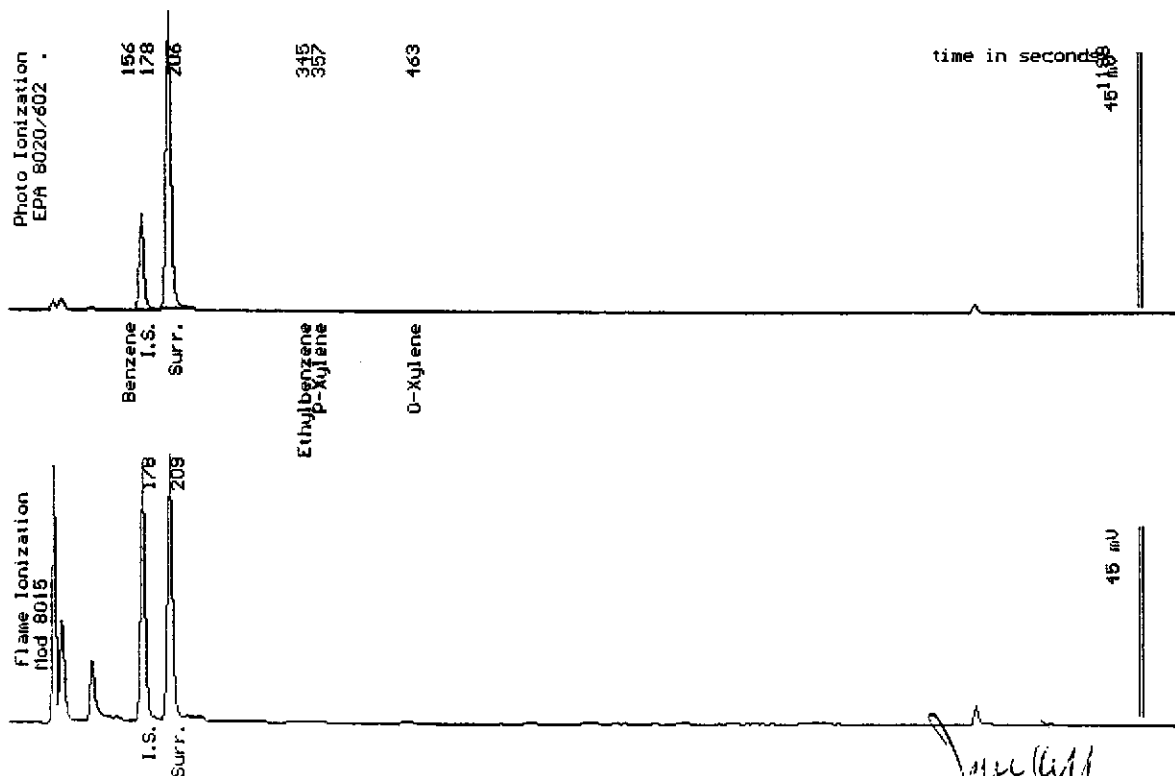
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144R

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		111 %



Date Analyzed: 03-22-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

Sample: MW-5

From : Beacon 721 (Proj. # D093-936)

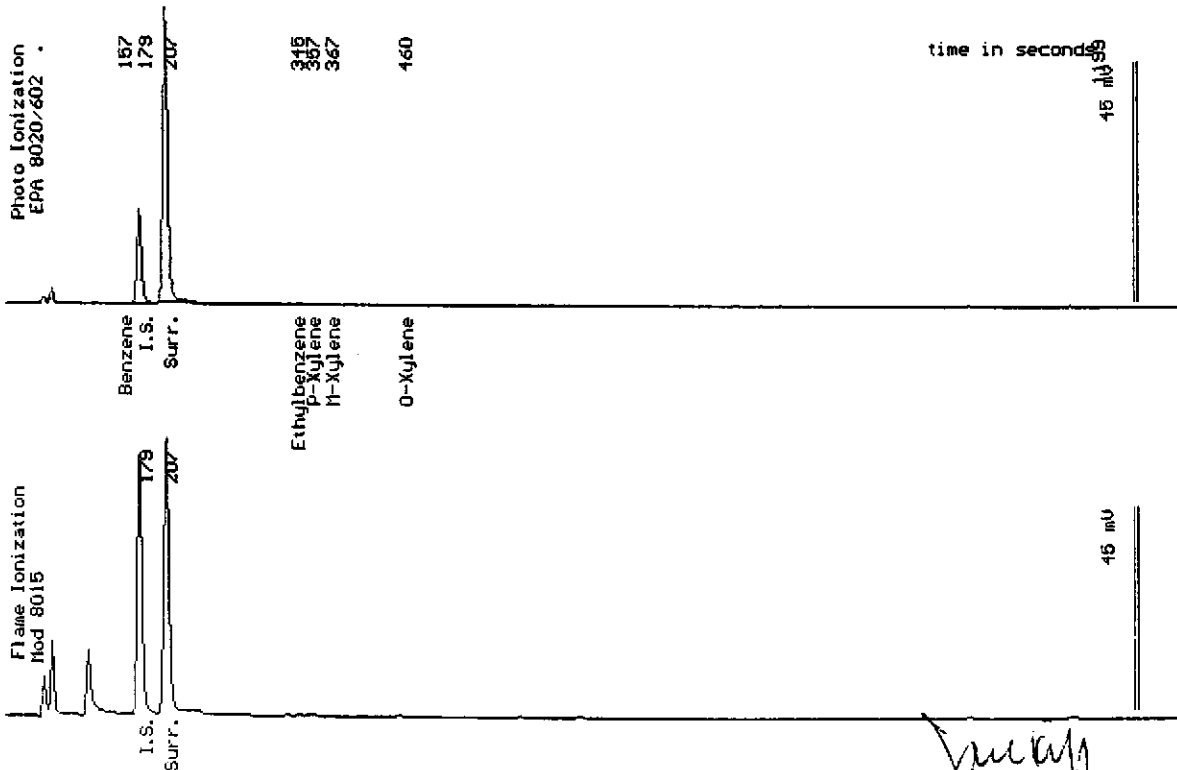
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144p

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		105 %



Date Analyzed: 03-21-96  
 Column : 0.53mm ID X 30m DBMEX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

Sample: MW-6

From : Beacon 721 (Proj. # D093-936)

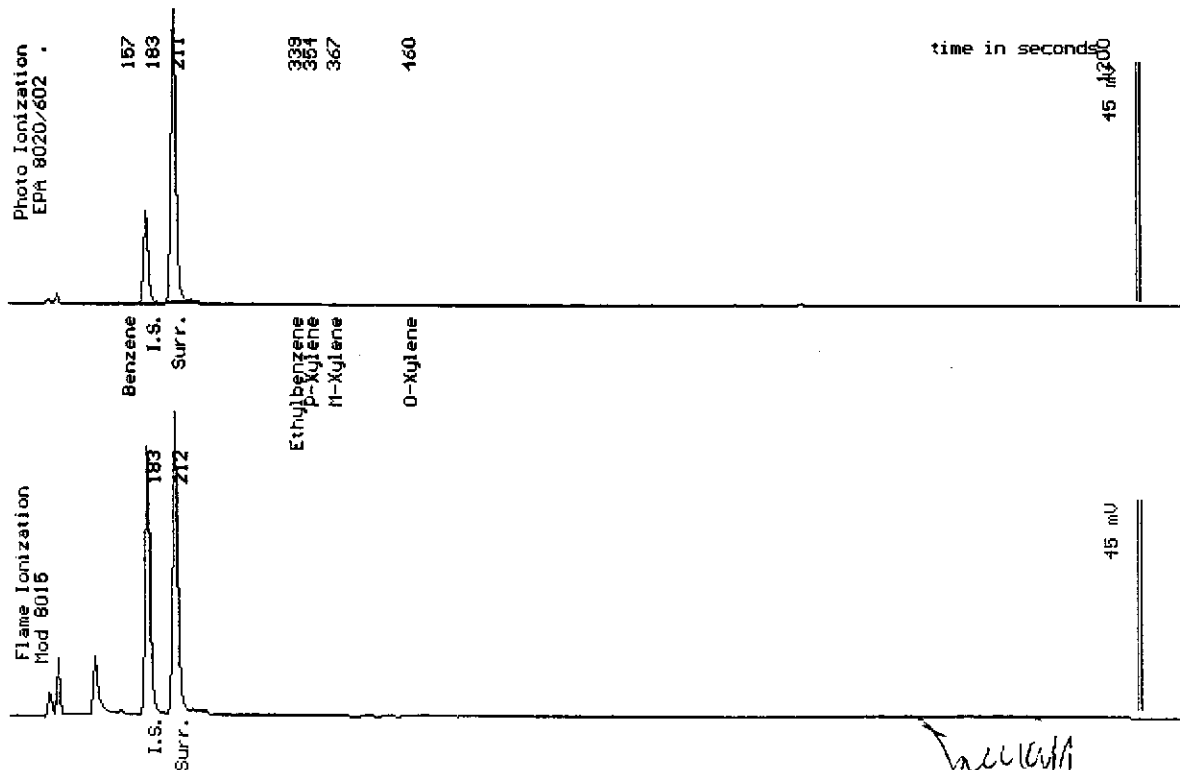
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144p

Matrix : Water

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



Date Analyzed: 03-21-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
Joel Kiff  
Senior Chemist



Sample: MW-8

From : Beacon 721 (Proj. # DO93-936)

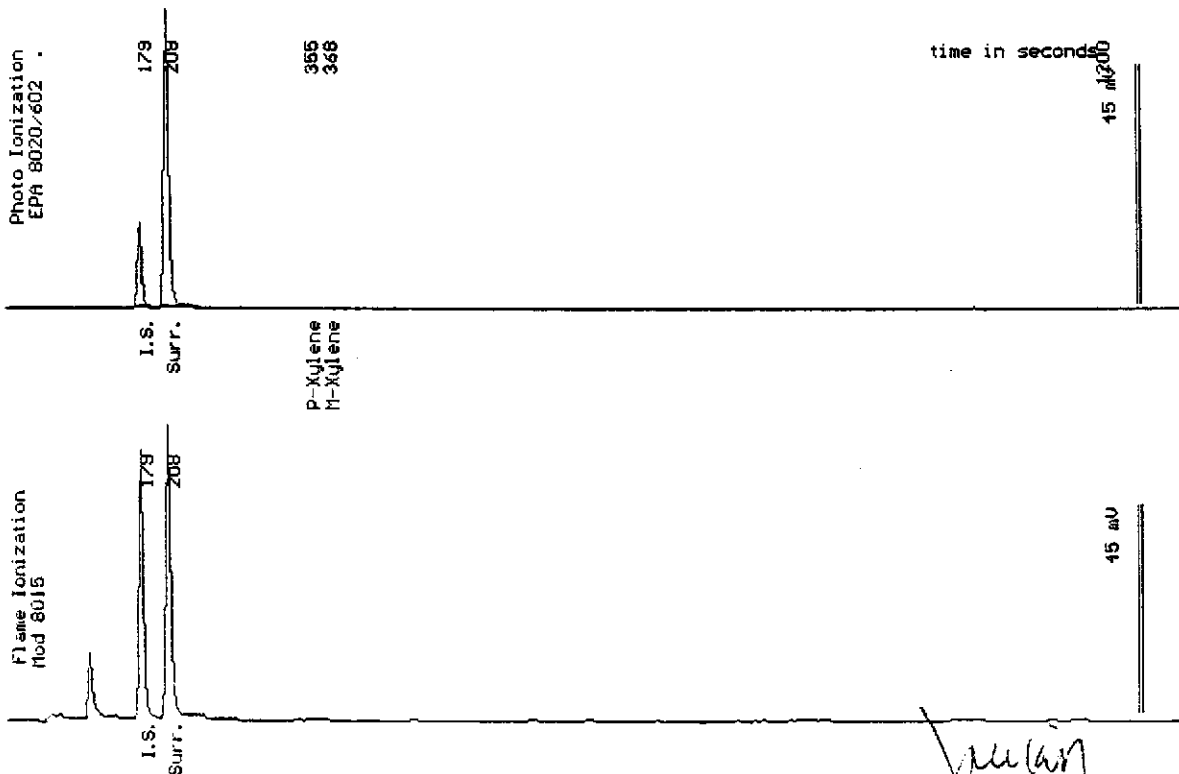
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144p

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		116 %



Date Analyzed: 03-21-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
Joel Kiff  
Senior Chemist



Sample: MW-10

From : Beacon 721 (Proj. # D093-936)

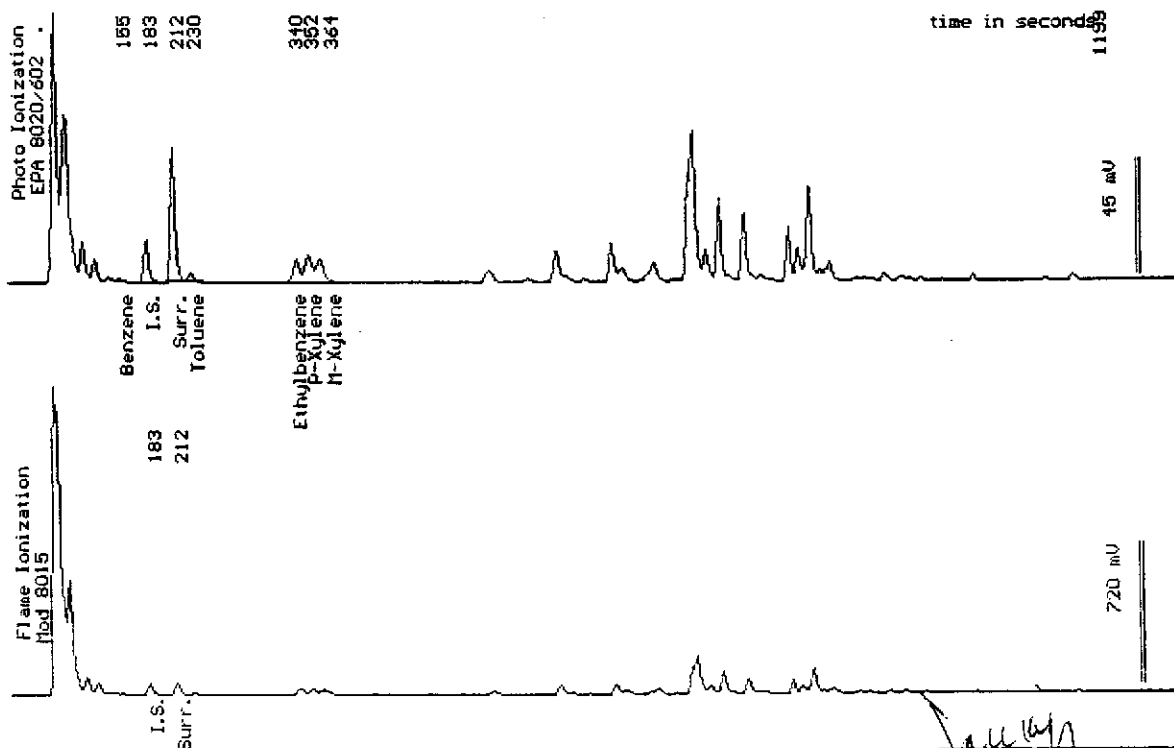
Sampled : 03/12/96

Dilution : 1:3

QC Batch : 4144S

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(1.3)	1.4
Toluene	(1.3)	5.9
Ethylbenzene	(1.3)	41
Total Xylenes	(1.3)	73
TPH as Gasoline	(130)	4500
Surrogate Recovery		96 %



Date Analyzed: 03-22-96  
 Column : 0.83mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff  
 Senior Chemist

Sample Log 14225

14225-01

Sample: MW-11

From : Beacon 721 (Proj. # DO93-936)

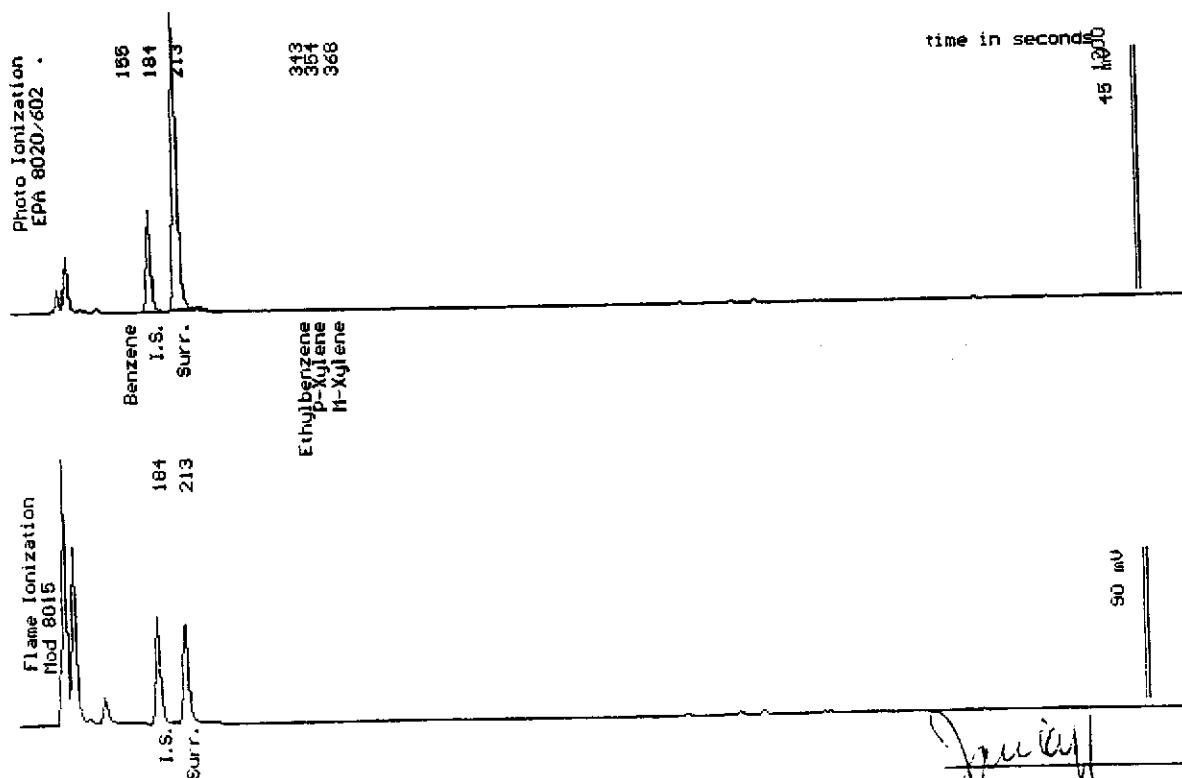
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144p

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	110
Surrogate Recovery		107 %



Date Analyzed: 03-21-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

## MTBE (Methyl-t-butyl ether) Results

From : Beacon 721 (Proj. # D093-936)


Sampled : 03/12/96

Received : 03/13/96

Matrix : Water

MTBE	(MRL) ug/L	Measured Value ug/L
MW-11	(5.0)	<5.0
MW-10	(13)	120 ✓
MW-8	(5.0)	<5.0
MW-7	(5.0)	11
MW-6	(5.0)	7.1
MW-5	(5.0)	9.2
MW-2	(50)	3200
MW-1	(5.0)	44
MW-3	(5.0)	97
MW-4	(5.0)	<5.0
RW-1	(5.0)	110

Approved By:

  
\_\_\_\_\_  
Joel Kiff  
Senior Chemist

Sample: RW-1

From : Beacon 721 (Proj. # D093-936)

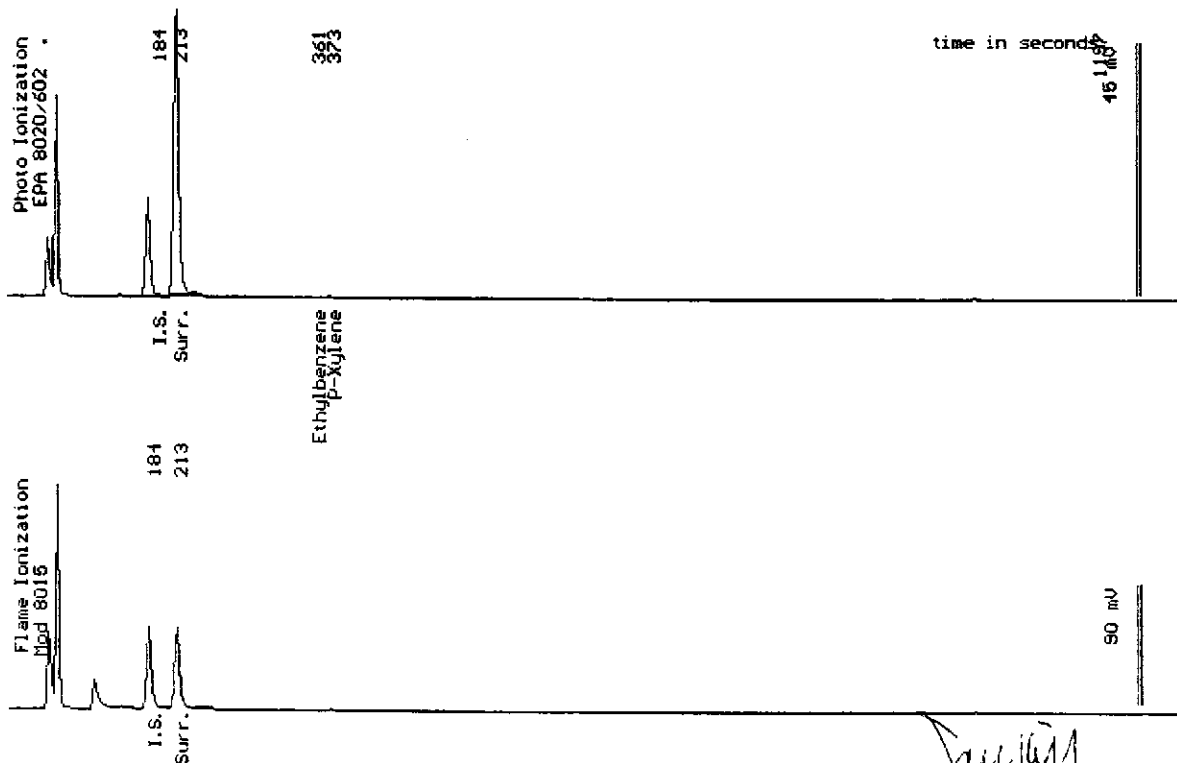
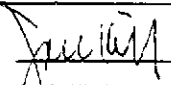
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144p

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)	86
Surrogate Recovery		111 %

Date Analyzed: 03-21-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)  
Joel Kiff  
Senior Chemist



**Ultramar Inc.**  
**CHAIN OF CUSTODY REPORT**

**BEACON**

Beacon Station No. <b>721</b>		Sampler (Print Name) <b>Jay Stoops</b>			ANALYSES				Date <b>3-12-96</b>	Form No. <b>1 of 2</b>																								
Project No. <b>D093-936</b>		Sampler (Signature) <i>Jay Stoops</i>			<table border="1"> <tr><td>BTEX</td><td>TPH (gasoline)</td><td>TPH (diesel)</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>				BTEX	TPH (gasoline)	TPH (diesel)																						West LAB-Davis Standard TAT	
BTEX	TPH (gasoline)	TPH (diesel)																																
Project Location <b>San Lorenzo</b>		Affiliation <b>Delta</b>							No. of Containers <b>2</b>																									
Sample No./Identification	Date	Time	Lab No.					REMARKS																										
<b>MW-11</b>	<b>3-12-96</b>	<b>0900</b>	<b>14225-01</b>																															
<b>MW-10</b>	↓	<b>0920</b>	<b>02</b>																															
<b>MW-8</b>		<b>0940</b>	<b>03</b>																															
<b>MW-7</b>		<b>0955</b>	<b>04</b>																															
<b>MW-4</b>		<b>1030</b>	<b>05</b>					APPROVED 1445 0 JM																										
<b>MW-5</b>		<b>1045</b>	<b>06</b>																															
<b>MW-2</b>		<b>1100</b>	<b>07</b>																															
<b>MW-1</b>		<b>1110</b>	<b>08</b>																															
Relinquished by: (Signature/Affiliation) <i>Jay Stoops / Delta</i>		Date <b>3/13</b>	Time <b>0800</b>	Received by: (Signature/Affiliation) <i>S. Samad / Delta</i>				Date <b>3/13</b>	Time <b>0800</b>																									
Relinquished by: (Signature/Affiliation) <i>S. Samad / Delta</i>		Date <b>3/13</b>	Time <b>3:05</b>	Received by: (Signature/Affiliation) <i>[Signature]</i>				Date <b>3/13/96</b>	Time <b>1445</b>																									
Relinquished by: (Signature/Affiliation) <i>[Signature]</i>		Date <b>3/13/96</b>	Time <b>1445</b>	Received by: (Signature/Affiliation) <i>John Marty</i>				Date <b>03/13/96</b>	Time <b>1445</b>																									
Report To: <b>10110 Galati - Delta</b>				Bill to: <b>ULTRAMAR INC.</b> 525 West Third Street Hanford, CA 93230 Attention: <b>T. Fox</b>																														

WHITE: Return to Client with Report

YELLOW: Laboratory Copy

PINK: Originator Copy



**Ultramar Inc.**  
**CHAIN OF CUSTODY REPORT**

**BEACON**

Beacon Station No. <b>721</b>	Sampler (Print Name) <b>Tay Stoops</b>			ANALYSES				Date <b>3-12-96</b>	Form No. <b>2 of 2</b>
Project No. <b>D093-936</b>	Sampler (Signature) <i>[Signature]</i>			BTEX	TPH (gasoline)	TPH (diesel)	No. of Containers	West LAB - Davis	
Project Location <b>San Lorenzo</b>	Affiliation <b>Delta</b>							Standard TAT	
Sample No./Identification	Date	Time	Lab No.					REMARKS	
<b>MW-3</b>	<b>3-12-96</b>	<b>1205</b>	<b>14225-09</b>	<b>X</b>	<b>X</b>		<b>2</b>		
<b>MW-4</b>	<b>↓</b>	<b>1225</b>	<b>10</b>	<b>X</b>	<b>X</b>		<b>2</b>		
<b>RW-1</b>	<b>↓</b>	<b>1240</b>	<b>11</b>	<b>X</b>	<b>X</b>		<b>2</b>		
								RECEIVED	
								DATE <b>3/13/96</b> TIME <b>1445</b>	
								TEMP <b>0°</b>	
								INITIAL <b>sm</b>	
								WEST LAB	
Relinquished by: (Signature/Affiliation) <i>[Signature]</i> Delta		Date <b>3/12</b>	Time <b>8:00</b>	Received by: (Signature/Affiliation) <i>[Signature]</i> Delta		Date <b>3/13</b>	Time <b>8:00</b>		
Relinquished by: (Signature/Affiliation) <i>[Signature]</i> S. Semas		Date <b>3/13</b>	Time <b>2:05</b>	Received by: (Signature/Affiliation) <i>[Signature]</i>		Date <b>3/13/96</b>	Time <b>2:08</b>		
Relinquished by: (Signature/Affiliation) <i>[Signature]</i>		Date <b>3/13/96</b>	Time <b>1445</b>	Received by: (Signature/Affiliation) <i>[Signature]</i> John Marty		Date <b>03/13/96</b>	Time <b>1445</b>		
Report To: <b>Todd Galati - Delta</b>				Bill to: <b>ULTRAMAR INC.</b> 525 West Third Street Hanford, CA 93230 Attention: <b>T. Fox</b>					

WHITE: Return to Client with Report

YELLOW: Laboratory Copy

PINK: Originator Copy

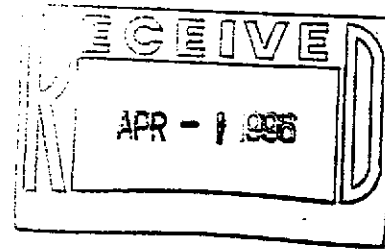
**ENCLOSURE D**

**Remediation System Analytical Results**

# WEST LABORATORY

March 26, 1996  
Sample Log 14210

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



Subject: Analytical Results for 3 Water Samples  
Identified as: Beacon 721 (Proj. # D093-936)  
Received: 03/12/96

Dear Mr. Kittredge:

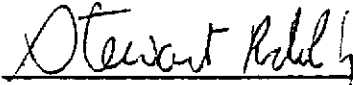
Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on March 21, 1996 and describes procedures used to analyze the samples.

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

- "BTEX" (EPA Method 602/5030)
- "TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)
- "Total Suspended Solids" (EPA 160.2)

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:

  
\_\_\_\_\_  
Stewart Podolsky  
Senior Chemist



March 25, 1996  
Sample Log 14210

From : Beacon 721 (Project # D093-936)  
Date Sampled : 03/12/96  
Matrix : Water  
Duplicate Sample : 14288-01

Date Received : 03/12/96  
Units : mg/L


### Total Suspended Solids EPA Method 160.2

West ID	Sample ID	Result	MRL	Blank	% RPD	Date Analyzed
14210-01	effluent	<3.0	3.0	<3.0	8	03/22/96

MRL = Method Reporting Limit

RPD = Relative Percent Difference between a sample and its duplicate.

The RPD Limits are  $\pm 20\%$ .

  
Michelle L. Anderson  
Inorganics Supervisor

## MTBE (Methyl-t-butyl ether) Results

From : Beacon 721 (Proj. # D093-936)

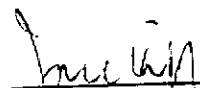
Sampled : 03/12/96

Received : 03/12/96

Matrix : Water

MTBE	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
effluent	(5.0)	<5.0
MID	(5.0)	<5.0
influent	(5.0)	5.3

Approved By:



Joel Kiff  
Senior Chemist

Sample Log 14210

14210-01

Sample: effluent

From : Beacon 721 (Proj. # DO93-936)

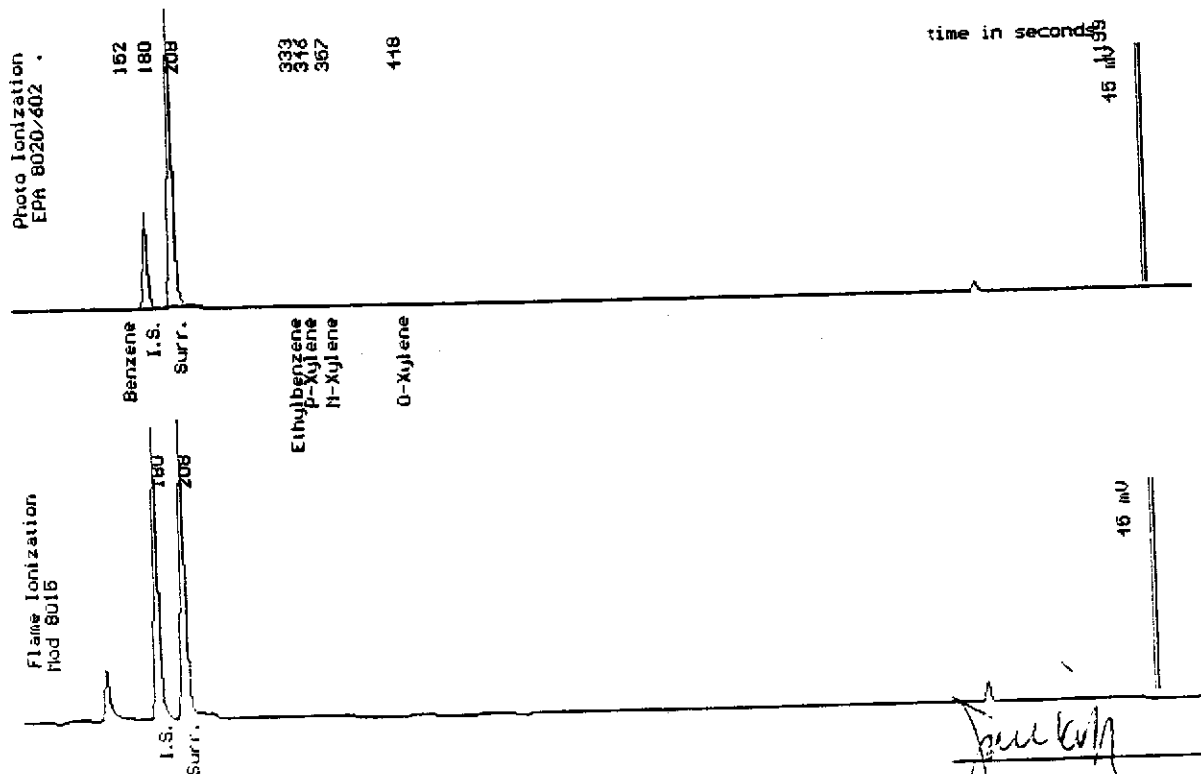
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144M

Matrix : Water

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



Date Analyzed: 03-20-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
Joel Kiff  
Senior Chemist

Sample: MID

From : Beacon 721 (Proj. # D093-936)

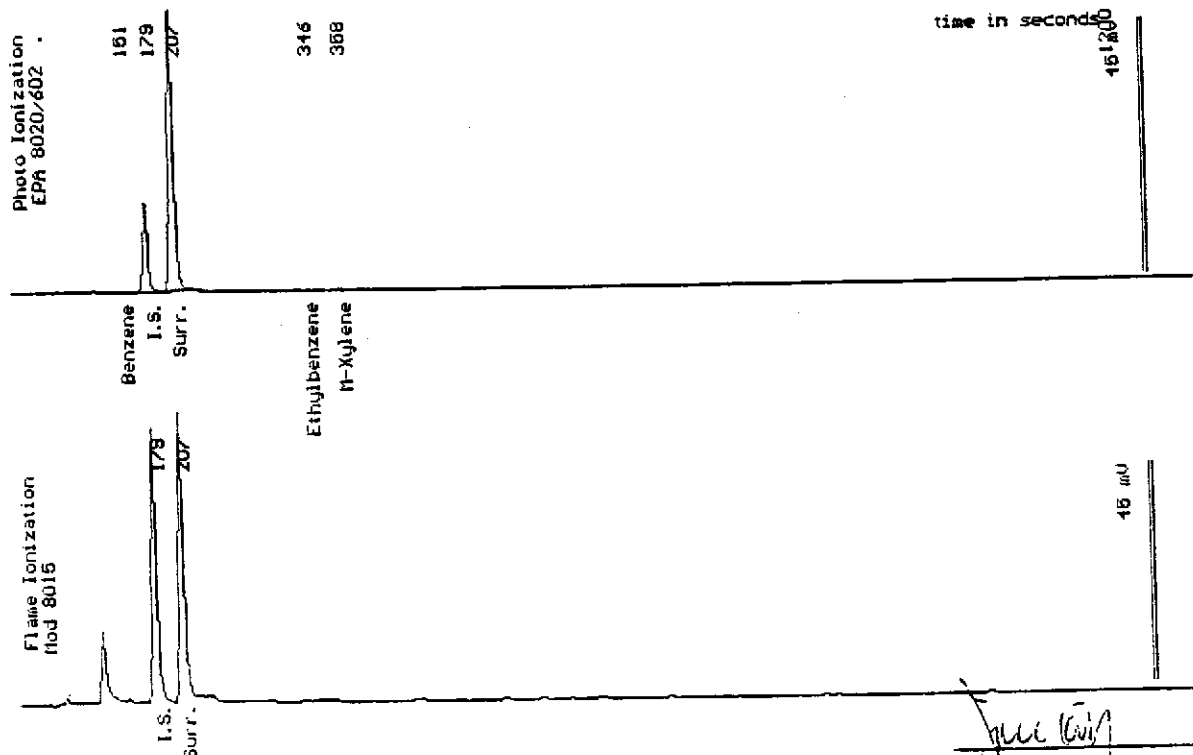
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144n

Matrix : Water

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



Date Analyzed: 03-21-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff  
 Senior Chemist

Sample Log 14210

14210-03

Sample: influent

From : Beacon 721 (Proj. # D093-936)

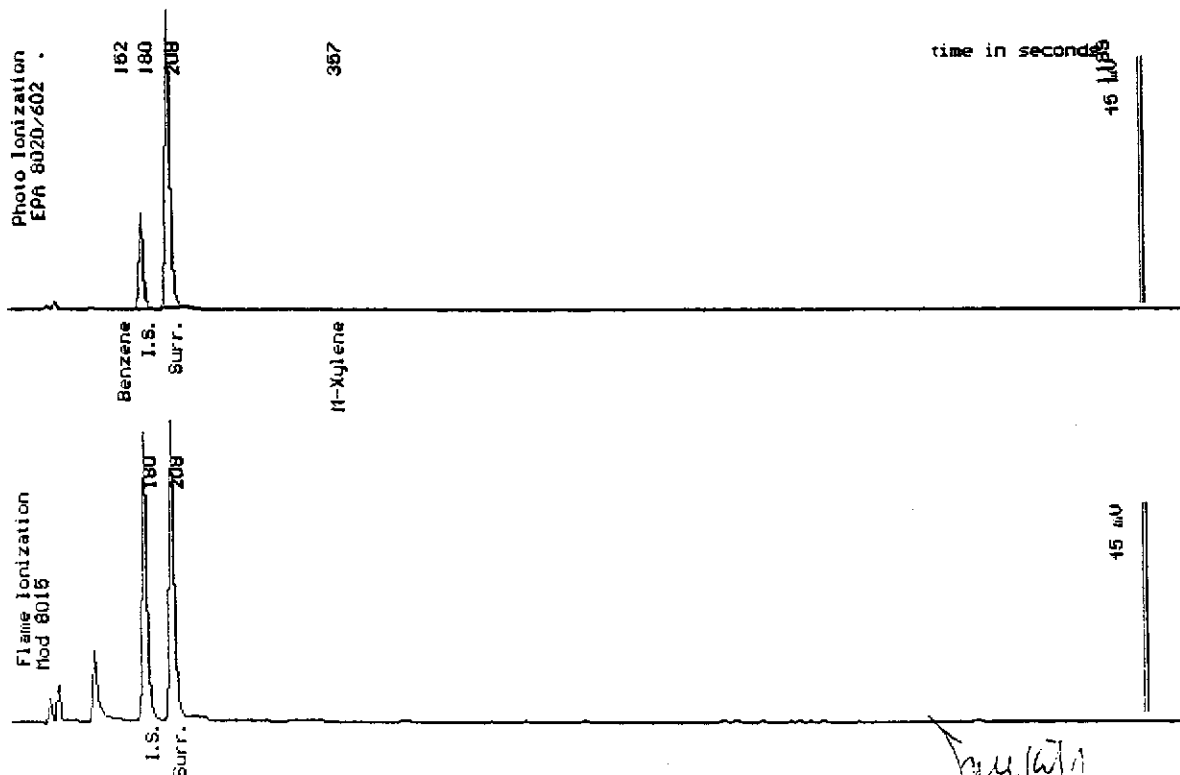
Sampled : 03/12/96

Dilution : 1:1

QC Batch : 4144n

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		111 %



Date Analyzed: 03-21-96  
 Column : 0.53mm ID X 30m DBWAX (JAW Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist



ANALYTICAL LABORATORY

1910 S STREET SACRAMENTO, CALIFORNIA 95814 • 916-447-2946 • FAX 916-447-8321

March 25, 1996

Western Environmental Science  
& Technology  
1046 Olive Drive, Suite 3  
Davis, CA 95616

P.O. #: 14210  
Project #: D093-936  
Project Name: Beacon 721

Anlab I.D. AF04763  
SAMPLE DESCRIPTION: EFFLUENT 14210-01  
Sample collection date: 03/12/96  
Lab submittal date: 03/12/96  
Turn-Around-Time: TYPE 10

Client Code: 315  
Matrix: W  
Time:  
Time: 13:00  
Sample Disposal: LAB

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
COD by EPA 410.4	mg/l	ND	3.0

ND = Not Detected

Date Analyzed: 03/14/96

Report Approved By: Patty Burkhead  
ELAP ID #: 1468

:jbc



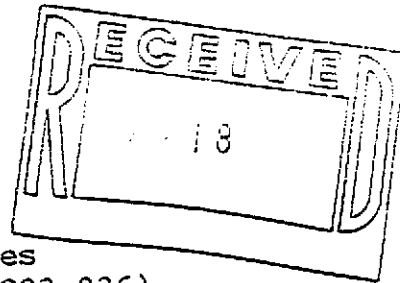




# WEST LABORATORY

March 5, 1996  
Sample Log 14089

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



Subject: Analytical Results for 3 Water Samples  
Identified as: Beacon 721 (Proj. # D093-936)  
Received: 02/27/96

Dear Mr. Kittredge:

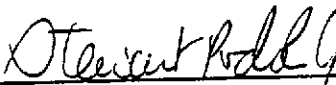
Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on March 5, 1996 and describes procedures used to analyze the samples.

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

- "BTEX" (EPA Method 602/5030)
- "TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)
- "Total Suspended Solids" (EPA 160.2)

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:

  
\_\_\_\_\_  
Stewart Podolsky  
Senior Chemist

March 1, 1996  
Sample Log 14089

From : Beacon 721 (Project # D093-936)  
Date Sampled : 02/27/96  
Matrix : Water  
Duplicate Sample : 14093-01

Date Received : 02/27/96  
Units : mg/L


### Total Suspended Solids EPA Method 160.2

West ID	Sample ID	Result	MRL	Blank	% RPD	Date Analyzed
14089-01	effluent	<3.0	3.0	<3.0	1	03/01/96

MRL = Method Reporting Limit

RPD = Relative Percent Difference between a sample and its duplicate.

The RPD Limits are  $\pm 20\%$ .

  
Michelle L. Anderson  
Inorganics Supervisor

Sample: effluent

From : Beacon 721 (Proj. # D093-936)

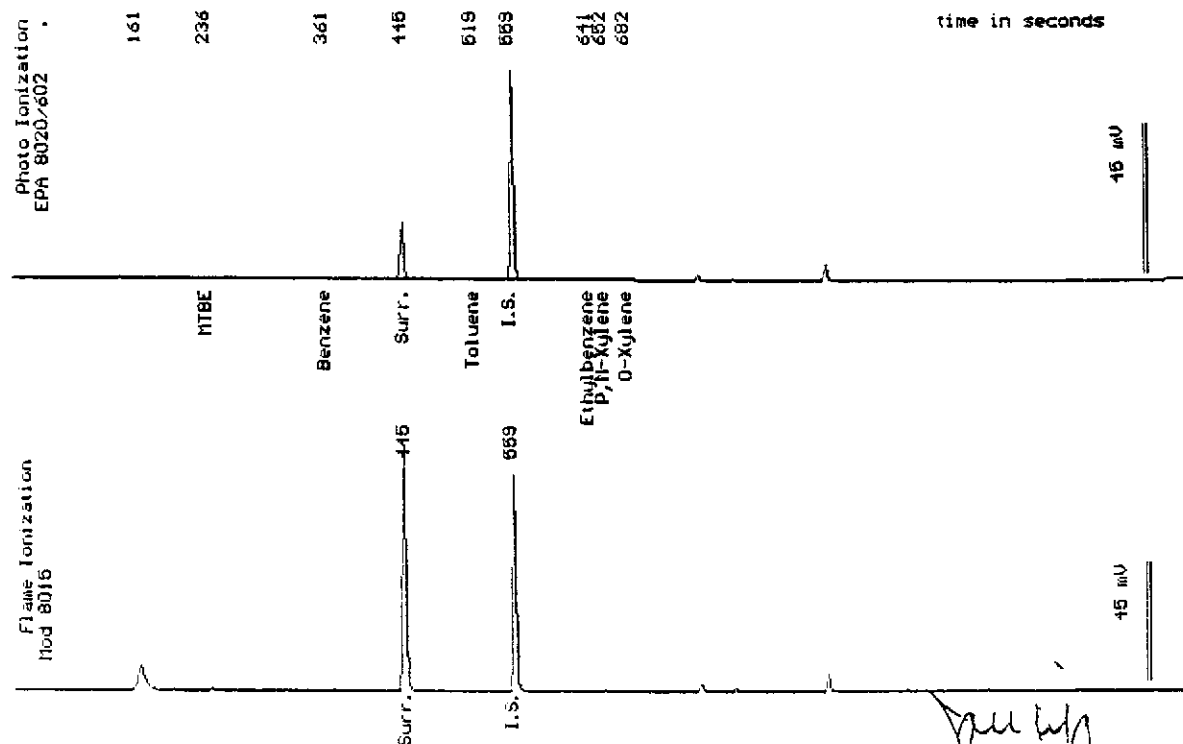
Sampled : 02/27/96

Dilution : 1:1

QC Batch : 2139f

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: 02-29-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

Sample: MID

From : Beacon 721 (Proj. # D093-936)

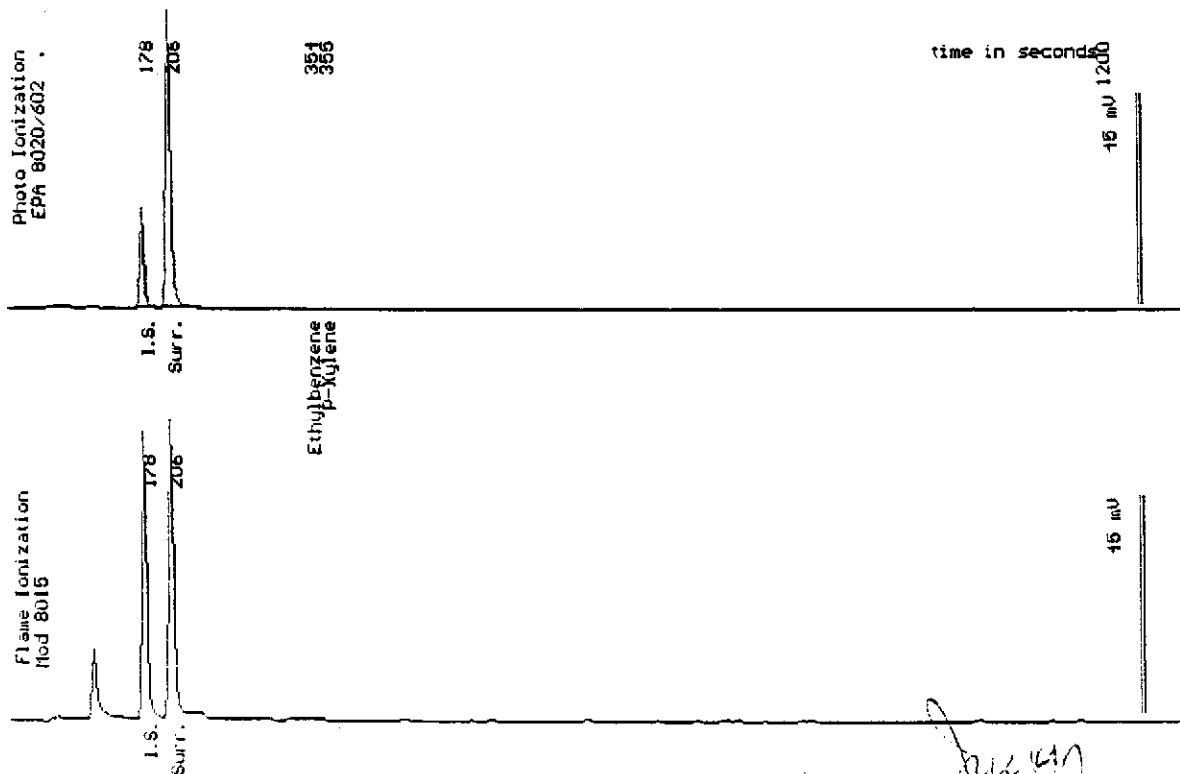
Sampled : 02/27/96

Dilution : 1:1

QC Batch : 4143s

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		114 %



Date Analyzed: 03-02-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff  
Senior Chemist

Sample Log 14089

14089-03

Sample: influent

From : Beacon 721 (Proj. # D093-936)

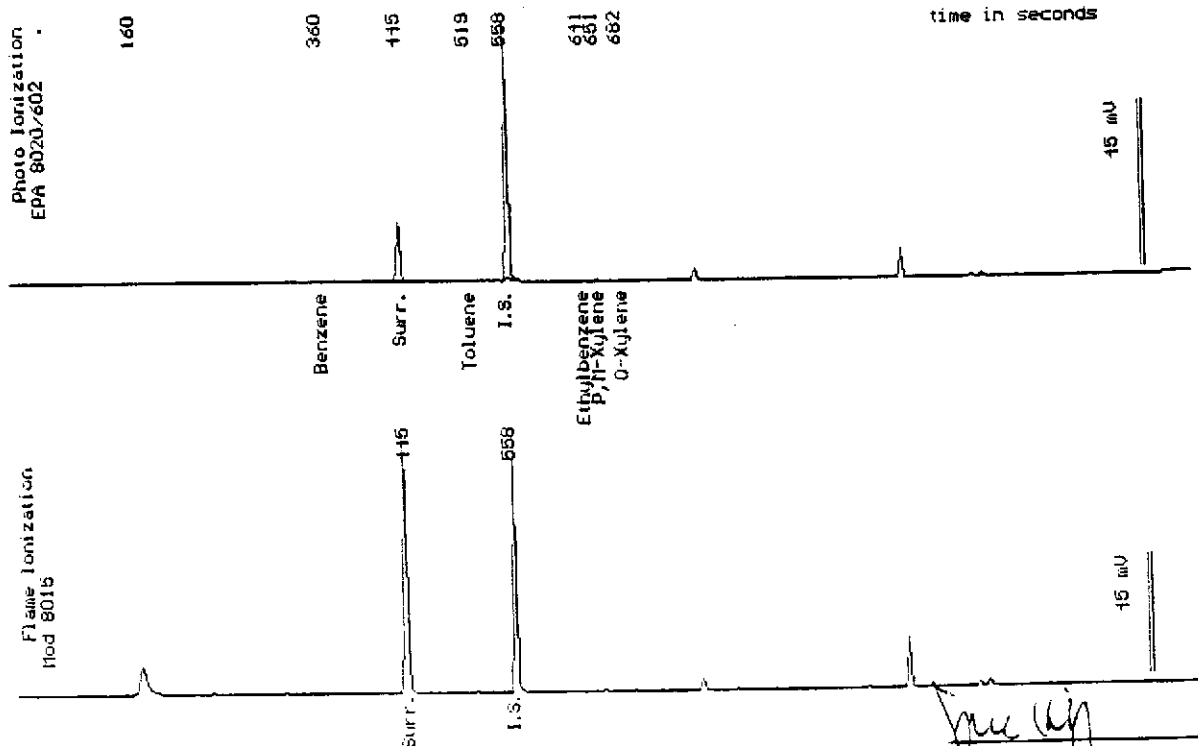
Sampled : 02/27/96

Dilution : 1:1

QC Batch : 2139f

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		102 %



Date Analyzed: 02-29-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist



ANALYTICAL LABORATORY

1910 S STREET SACRAMENTO, CALIFORNIA 95814 • 916-447-2946 • FAX 916-447-8321

February 29, 1996

Western Environmental Science  
& Technology  
1046 Olive Drive, Suite 3  
Davis, CA 95616

P.O.#: 14089  
PROJECT #: D093-936  
PROJECT NAME: BEACON 721

Anlab I.D. AF03454  
SAMPLE DESCRIPTION: 14089-01 EFFLUENT  
Sample collection date: 02/27/96  
Lab submittal date: 02/27/96  
Turn-Around-Time: REG

Client Code: 315  
Matrix: W  
Time:  
Time: 15:15  
Sample Disposal: LAB

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
COD by EPA 410.4	mg/l	ND	3.0

ND = Not Detected

Date Analyzed: 02/28/96

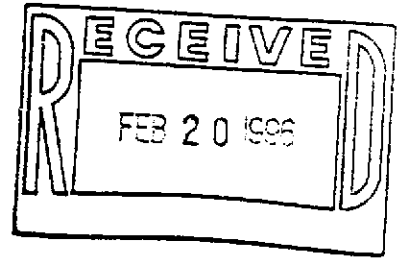
Report Approved By:  
ELAP ID #: 1468

:dv









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

Subject : 2 air and 6 water samples  
Project Name : Beacon 721  
Project Number : DO93-936

Dear Mr. Munsch,

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

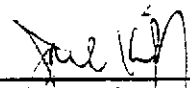
February 5, 1996  
Sample Log 13892

## MTBE (Methyl-t-butyl ether) Results

From : Beacon 721 (Proj. # D093-936)  
Sampled : 01/30/96  
Received : 01/30/96  
Matrix : Water

MTBE	(MRL) ug/L	Measured Value ug/L
MW-1	(13)	63
MW-3	(50)	430
MW-6	(5.0)	46
INFLUENT	(5.0)	<5.0
MID	(5.0)	<5.0
EFFLUENT	(5.0)	<5.0

Approved By:

  
\_\_\_\_\_  
Joel Kiff  
Senior Chemist

Sample: MW-1

From : Beacon 721 (Proj. # DO93-936)

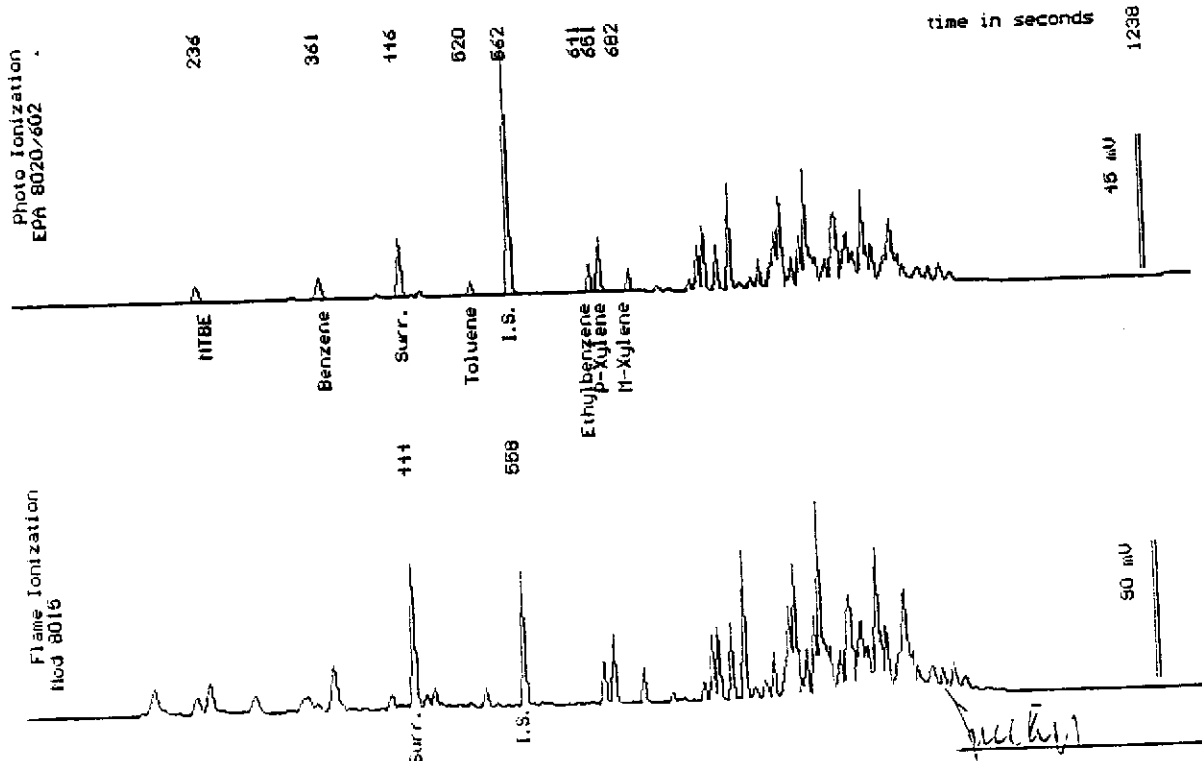
Sampled : 01/30/96

Dilution : 1:3

Matrix : Water

QC Batch : 2137Y

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(1.3)	17
Toluene	(1.3)	7.1
Ethylbenzene	(1.3)	20
Total Xylenes	(1.3)	45
TPH as Gasoline	(130)	1500
Surrogate Recovery		101 %



Date Analyzed: 01-31-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

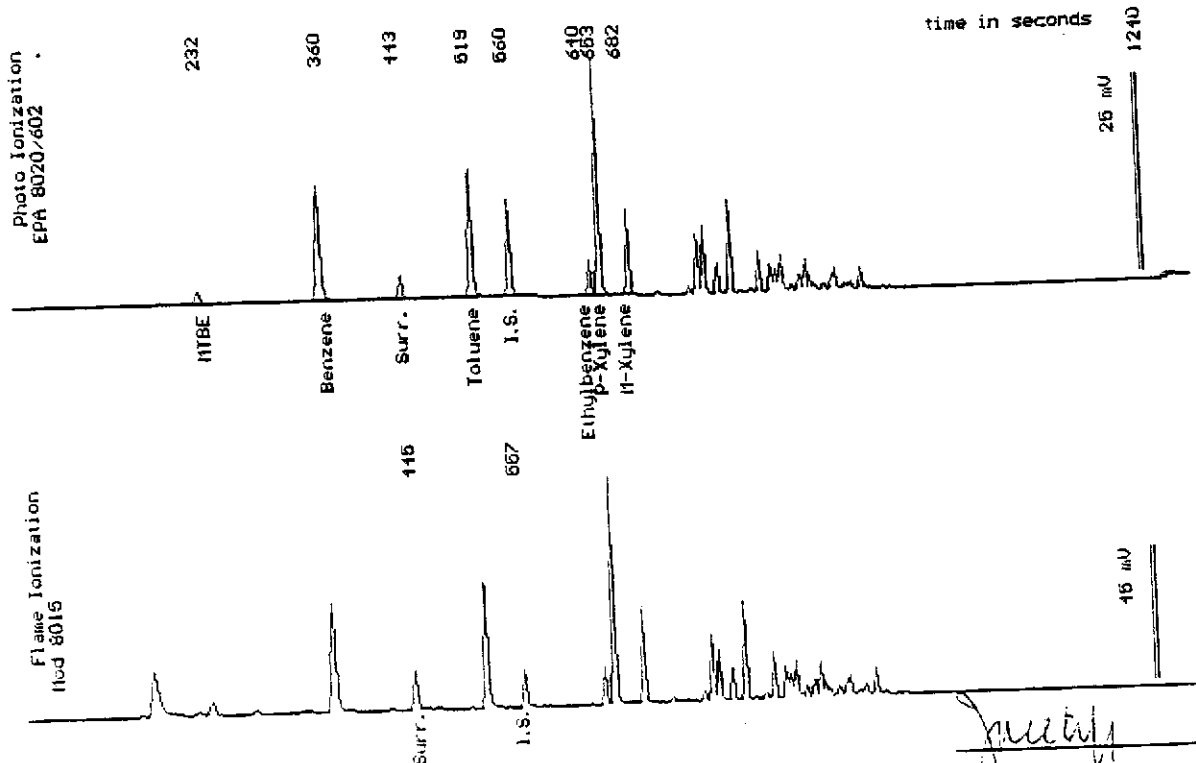
Joel Kiff  
 Senior Chemist

Sample: MW-3

From : Beacon 721 (Proj. # D093-936)  
 Sampled : 01/30/96  
 Dilution : 1:10  
 Matrix : Water

QC Batch : 2137Y

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	850
Toluene	(5.0)	800
Ethylbenzene	(5.0)	190
Total Xylenes	(5.0)	1700
TPH as Gasoline	(500)	8700
Surrogate Recovery		100 %



Date Analyzed: 01-31-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joell Kiff*  
 Joell Kiff  
 Senior Chemist

Sample: MW-6

From : Beacon 721 (Proj. # D093-936)

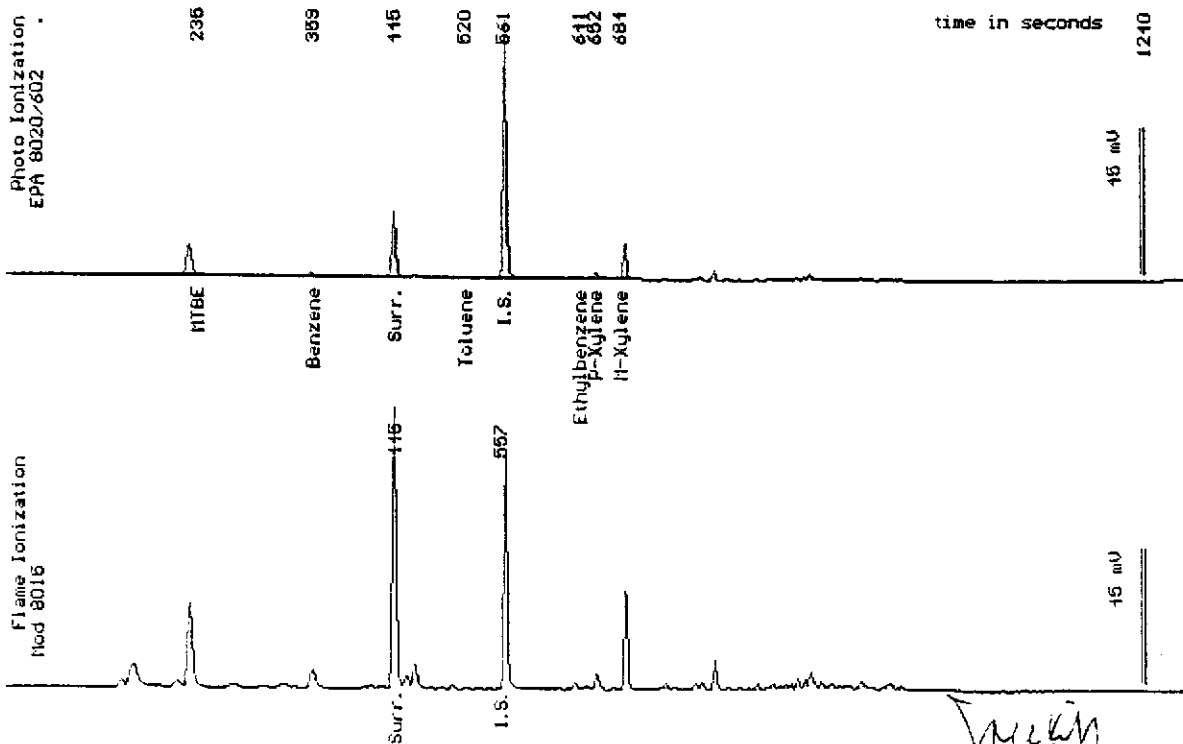
Sampled : 01/30/96

Dilution : 1:1

QC Batch : 2137Y

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	1.0
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	11
TPH as Gasoline	(50)	81
Surrogate Recovery		100 %



Date Analyzed: 01-31-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

Sample: INFLUENT AIR

From : Beacon 721 (Proj. # D093-936)

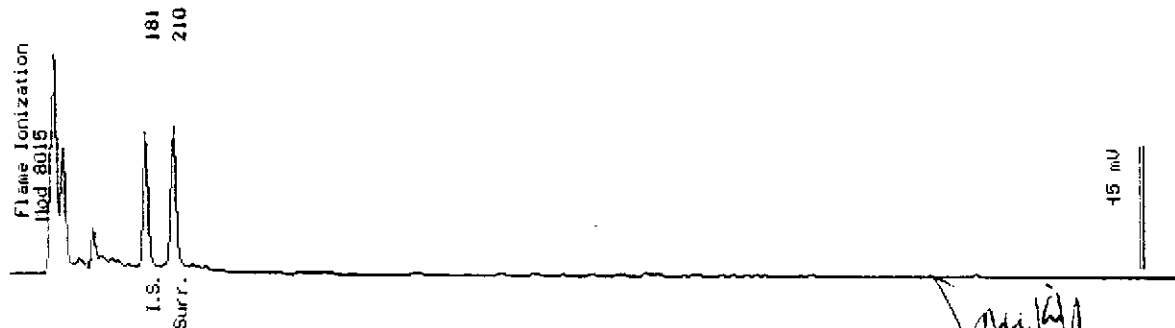
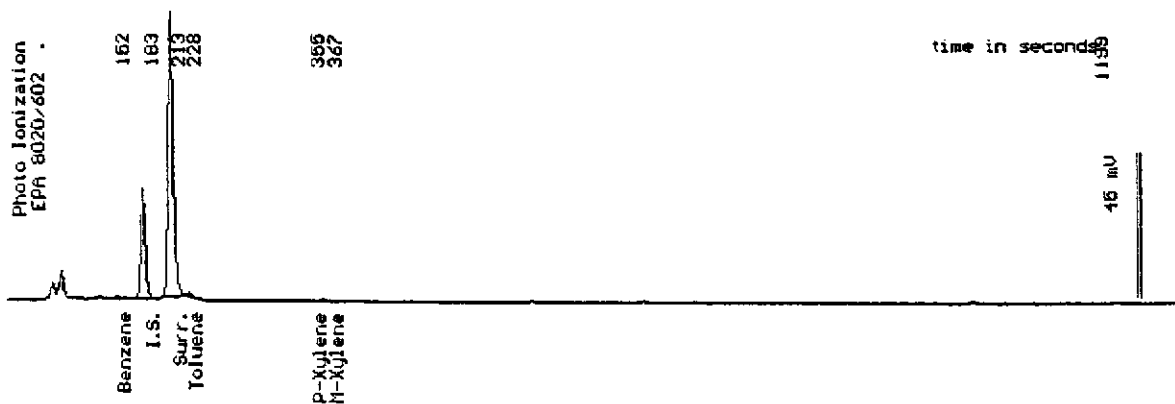
Sampled : 01/30/96

Dilution : 1:1

QC Batch : 4142J

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)	6.0
Surrogate Recovery		98 %



Date Analyzed: 01-30-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joe Kiff*  
Joe Kiff  
Senior Chemist

Sample: EFFLUENT AIR

From : Beacon 721 (Proj. # D093-936)

Sampled : 01/30/96

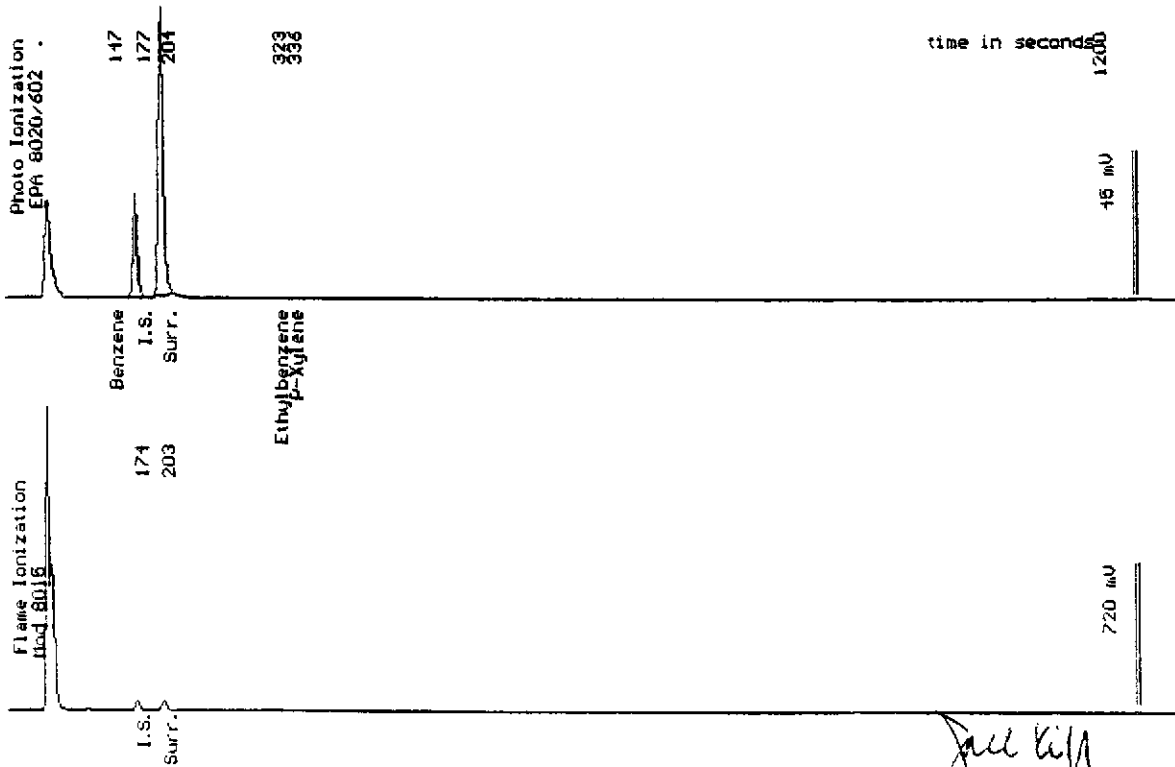
Dilution : 1:1

QC Batch : 4142JJ

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)	36 *
Surrogate Recovery		106 %

\* Product is not typical gasoline.



Date Analyzed: 01-30-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
 Joel Kiff  
 Senior Chemist

Sample: INFLUENT

From : Beacon 721 (Proj. # D093-936)

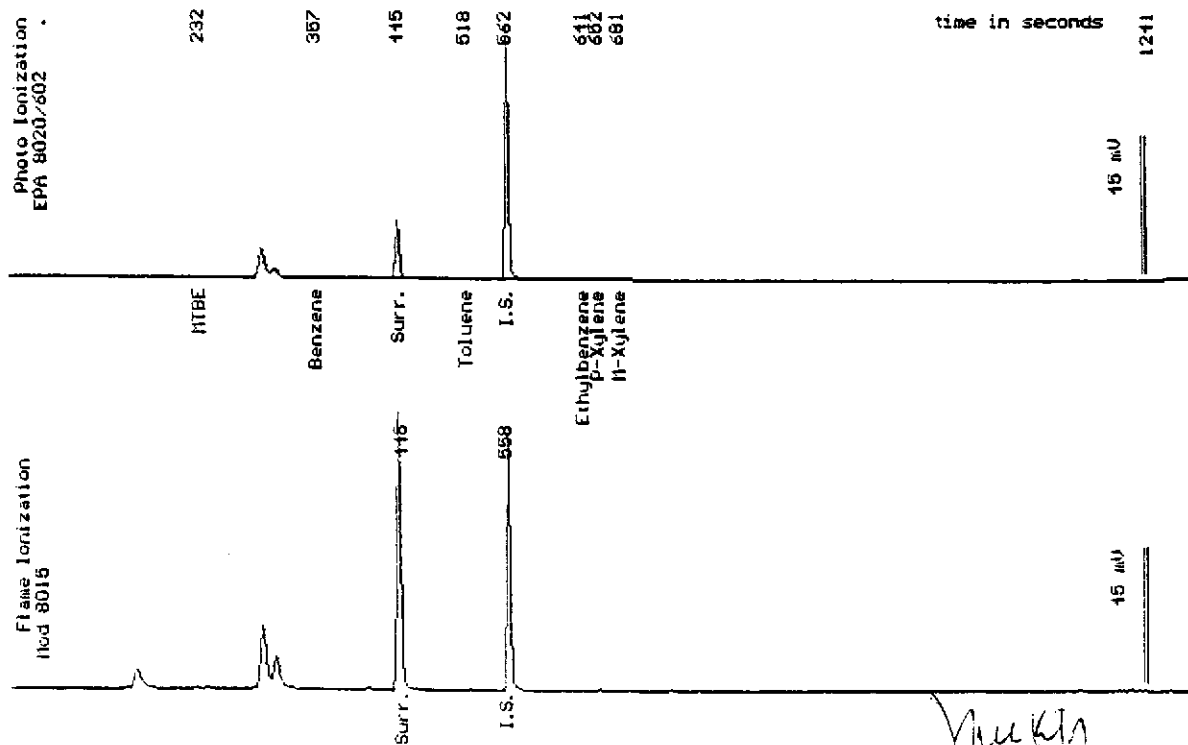
Sampled : 01/30/96

Dilution : 1:1

QC Batch : 2137Y

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: 01-31-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kitt*  
 Joel Kitt  
 Senior Chemist



Sample: MID

From : Beacon 721 (Proj. # D093-936)

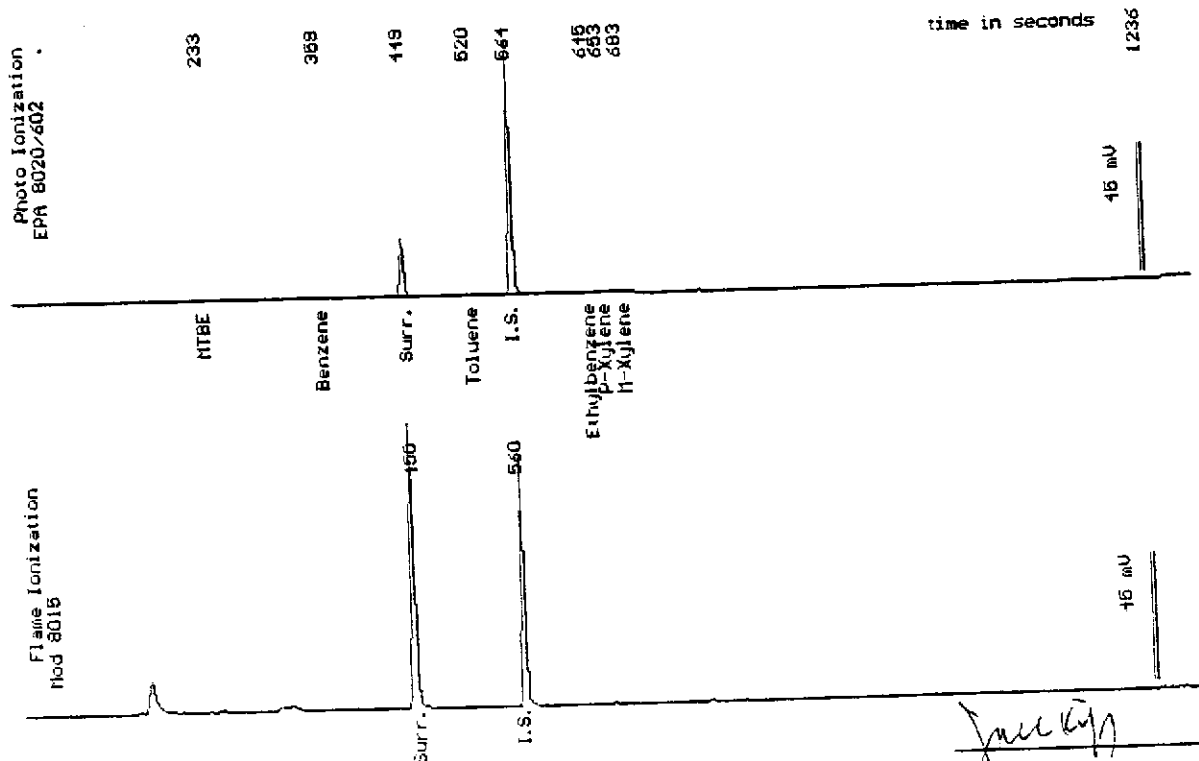
Sampled : 01/30/96

QC Batch : 2137Y

Dilution : 1:1

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		99 %



Date Analyzed: 01-31-96  
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Joel Kiff*  
Joel Kiff  
Senior Chemist

# WEST LABORATORY

Sample Log 13892

13892-08

Sample: EFFLUENT

From : Beacon 721 (Proj. # D093-936)

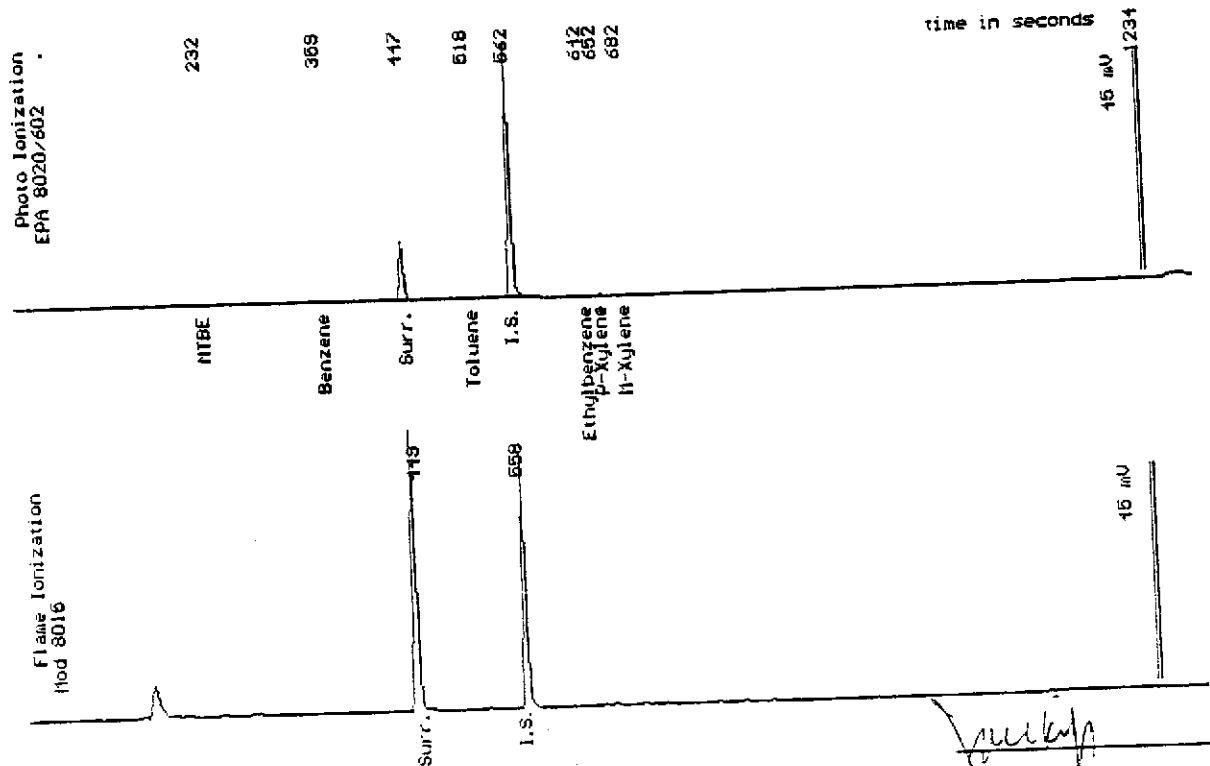
Sampled : 01/30/96

Dilution : 1:1

Matrix : Water

QC Batch : 2137Y

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		101 %



Date Analyzed: 01-31-96  
 Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

*Jdel Kliff*  
 Jdel Kliff  
 Senior Chemist

February 5, 1996  
Sample Log 13892

From : Beacon 721 (Project # D093-936)  
Date Sampled : 01/30/96  
Matrix : Water  
Duplicate Sample : 13906-01

Date Received : 01/30/96  
Units : mg/L

### Total Suspended Solids EPA Method 160.2

West ID	Sample ID	Result	MRL	Blank	% RPD	Date Analyzed
13892-08	effluent	<3.0	3.0	<3.0	4	02/02/96

MRL = Method Reporting Limit

RPD = Relative Percent Difference between a sample and its duplicate.

The RPD Limits are  $\pm 20\%$ .



Michelle L. Anderson  
Inorganics Supervisor



ANALYTICAL LABORATORY

1910 S STREET SACRAMENTO, CALIFORNIA 95814 • 916-447-2946 • FAX 916-447-8321

February 9, 1996

Western Environmental Science  
& Technology  
1046 Olive Drive, Suite 3  
Davis, CA 95616

P.O. #: 13892

Project #: D093-936

Project Name: Beacon-721

Anlab I.D. AF01846  
SAMPLE DESCRIPTION: EFFLUENT  
Sample collection date: 01/30/96  
Lab submittal date: 01/30/96  
Turn-Around-Time: TYPE 10

Client Code: 315  
Matrix: W  
Time: 10:18  
Time: 15:14  
Sample Disposal: LAB

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
COD by EPA 410.4	mg/l	3.7	3.0

Date Analyzed: 02/01/96

Report Approved By:  
ELAP ID #: 1468

*Patty Buckell*

:vas





**Ultramar Inc.**  
**CHAIN OF CUSTODY REPORT**

**BEACON**

Beacon Station No. <b>721</b>		Sampler (Print Name) <b>Martin W. Morgan</b>			<b>ANALYSES</b>				Date <b>1/30/96</b>	Form No. 1 of 1																																																												
Project No. <b>D093-936</b>		Sampler (Signature) 							<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">No. of Containers</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (gasoline)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (diesel)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TSS</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">COD</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>				No. of Containers										BTEX										TPH (gasoline)										TPH (diesel)										TSS										COD							
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Project Location <b>San Lorenzo, CA</b>		Affiliation <b>Delta Env.</b>							<b>Standard Turn</b>																																																													
Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	TSS	COD	No. of Containers	REMARKS																																																												
MW-1	1/30/96	0855	13892-01	X	X				3																																																													
MW-3		0917	02	X	X				3																																																													
MW-6		0940	03	X	X				3																																																													
Influent Air		1002	04	X	X				1																																																													
Effluent Air		1000	05	X	X				1																																																													
Influent		1014	06	X	X				2																																																													
MID		1016	07	X	X				2																																																													
Effluent	↓	1018	08	X	X	X	X		4																																																													
Relinquished by: (Signature/Affiliation) / Delta		Date 1/30/96	Time 1355	Received by: (Signature/Affiliation) 				Date 1/30/96	Time 1355																																																													
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Relinquished by: (Signature/Affiliation)		Date	Time	Received by: (Signature/Affiliation)				Date	Time																																																													
Report To: <b>Richard Munsch</b>				Bill to: <b>ULTRAMAR INC.</b> 525 West Third Street Hanford, CA 93230 Attention: <b>Terry Fox</b>																																																																		
<b>916 638 2085 fax 8585</b>																																																																						

WHITE: Return to Client with Report

YELLOW: Laboratory Copy

PINK: Originator Copy