ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

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July 14, 1993

Mr. Kenneth R. Earnest
Ultramar Inc.
525 West Third Street
Hanford, California 93232

19021.01

Subject: Additional Soil and Ground Water Investigation
Former Beacon Station No. 574
22315 Redwood Road, Castro Valley, California

Dear Mr. Earnest:

Acton • Mickelson • van Dam, Inc. (AMV), has been authorized to continue an investigation of soil and ground water conditions at former Beacon Station No. 574 located at 22315 Redwood Road, Castro Valley, Alameda County, California (Figure 1). This letter summarizes the results of soil boring, ground water monitoring, well installation, and soil and ground water sampling performed at the site on May 13 and 18, 1993.

Scope of Work

The work included advancing five 8-inch-diameter soil borings to a depth of approximately 30 feet below grade and completing each of these borings as a 2-inch-diameter monitoring well (MW-4, MW-5, MW-6, MW-7, and MW-8). Monitoring well locations are illustrated on Figure 2. Methods used to drill and sample the soil borings are described in Enclosure A. Soil boring logs containing detailed descriptions of soil characteristics are included in Enclosure B.

Selected soil samples were submitted for laboratory analysis of benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPHg). Analytical procedures conformed to U.S. Environmental Protection Agency (EPA) and California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA) approved methods.

Ground water monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-8 were constructed of 2-inch-diameter, Schedule 40 PVC casing. Monitoring well construction details are contained in Enclosure C. The monitoring wells were developed, purged, and sampled in accordance with methods outlined in Enclosure A. A ground water sample from each well (MW-4, MW-5, MW-6, MW-7, and MW-8) was submitted for laboratory analysis of BTEX and TPHg by Cal-EPA and EPA-approved methods.

Soil Borings

Soil samples collected from the borings consisted of silty clay, clayey silt, silty sand, sand, clayey sand, gravelly sand, and sandy silt. For example, the lithology of soil samples collected from the soil boring for monitoring well MW-6 is described in detail by depth as follows: from below the asphalt road base to 8.5 feet below grade, the soil encountered consisted of a silty clay; from 8.5 feet to 14 feet below grade, a silty sand was encountered; under the silty sand, a silty clay was present to 19.5 feet; below this level, a sandy silt was present to 27 feet; from 27 to 30 feet, the total depth of the boring, a gravelly silt was encountered. The vertical sequence of strata encountered in each boring indicates that the soil strata beneath the site are somewhat laterally continuous. Contacts between the soil types varied from gradational to sharp. Soil boring logs containing detailed descriptions of soil conditions for each boring are included in Enclosure B.

Soil Sample Analytical Results

A portion of each soil sample collected from the soil borings was sealed in a plastic bag and allowed to reach ambient air temperature. The headspace of the bag was then screened in the field with a photoionization detector (PID). The highest PID reading for each sample was recorded on the right-hand side of the boring logs (Enclosure B).

Soil samples were selected for chemical analysis on the basis of PID screening results and the location of the soil samples in relation to the most likely source of petroleum constituents. Eighteen soil samples were submitted for analysis of concentrations of BTEX and TPHg. Analytical results of soil samples submitted by AMV are summarized in Table 1. Copies of certified analytical reports for each soil sample submitted to the laboratory during this phase of work are contained in Enclosure D.

Ground Water Level Measurements

Depth to ground water was measured in each existing monitoring well (MW-1 through MW-8) on May 18, 1993 (Table 2). Ground water was present at depths ranging from 15.72 to 22.66 feet below the top of the well casings. Water level measurements indicate an inferred direction of ground water flow toward the southwest as illustrated on Figure 3. On May 18, 1993, the ground water gradient was approximately 0.01 foot per foot.

Ground Water Analytical Results

On May 18, 1993, ground water samples were collected from monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-8. Samples were collected as described in Enclosure A. Each ground water sample was analyzed for BTEX and TPHg by EPA and Cal-EPA approved methods.

Analytical results of ground water samples collected on May 18, 1993, are summarized in Table 3. Previous ground water sample analytical results are included in Table 3 for comparison. Copies of certified analytical reports are contained in Enclosure E.

The most recent ground water quality data available for each existing ground water monitoring well were compiled to infer the distribution of dissolved benzene in ground water beneath the site (Figure 4). Data from monitoring wells MW-1, MW-2, and MW-3 are from May 7, 1993; data from monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-8 were collected on May 18, 1993. Each well at the site will be sampled on the same day during the next quarterly sampling event to verify the inferred distribution of dissolved benzene in ground water.

Summary of Analytical Results

None of the soil samples submitted for analysis from borings for monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-8 contained measurable amounts of petroleum hydrocarbon constituents.

The ground water samples collected from monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-8 did not contain detectable concentrations of benzene. The ground water sample collected from monitoring well MW-6 contained a measurable amount of petroleum hydrocarbon constituents (170 micrograms per liter of TPHg).

It is recommended that a copy of this report be forwarded to the following agencies:

Mr. Scott Seery
Environmental Health Department
County of Alameda
80 Swan Way, Room 200
Oakland, California 94621

Mr. Rich Hiett
California Regional Water Quality Control Board,
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

If you have any questions regarding this project, please contact either of the undersigned immediately.

Sincerely,

ACTON • MICKELSON • van DAM, INC.

Hal E. Hansen

Hal E. Hansen
Hydrogeologist

Dale A. van Dam

Dale A. van Dam, R.G.
California Registered Geologist #4632

HEH:DAvD:mjd
Enclosures

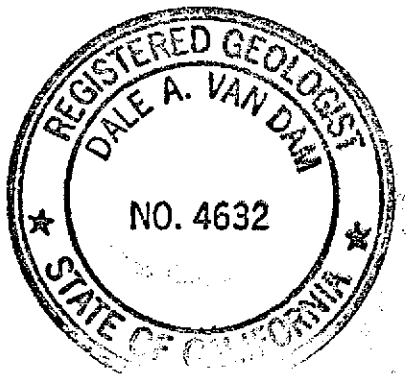


TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
(concentrations in milligrams per kilogram)

Location	Date Sampled	Depth (feet)	Benzene	Toluene	Ethylbenzene	Xylenes	TPHg[a]	TPH[d]
MW-1	3-26-91	15	0.16	0.10	0.010	0.050	<1.0	<10
	3-26-91	20	13	110	33	300	3,200	<10
MW-2	3-26-91	10	0.013	0.26	0.11	0.68	8.1	<10
	3-26-91	15	19	120	42	240	3,200	<10
	3-26-91	20	0.39	0.22	0.11	0.41	5.6	<10
MW-3	3-26-91	15	<0.005	<0.005	<0.005	<0.005	<1.0	<10
	3-26-91	20	<0.005	0.18	0.44	5.9	230	<10
MW-4	5-14-93	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	15	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	20	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
MW-5	5-14-93	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	10	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	15	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	20	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
MW-6	5-14-93	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.60	-
	5-14-93	10	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	15	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	20	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
MW-7	5-14-93	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	10	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	15	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	20	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
MW-8	5-14-93	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	10	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	15	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-
	5-14-93	20	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	-

[a]TPHg = total petroleum hydrocarbons as gasoline.
[b]TPHd = total petroleum hydrocarbons as diesel.

TABLE 2

WATER LEVEL DATA
(measurements in feet)

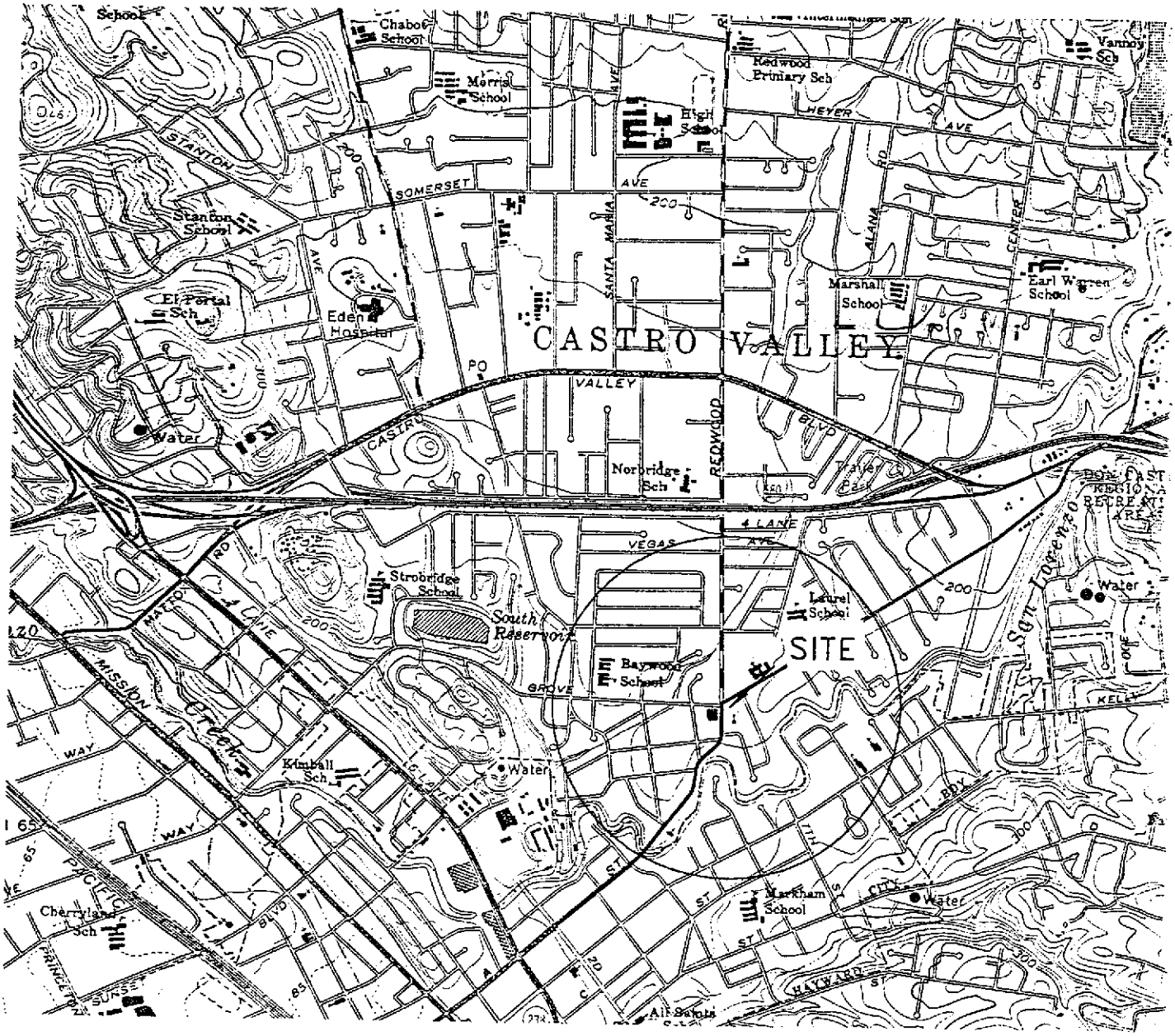
Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Ground Water	Ground Water Elevation
MW-1	04-01-91	156.55	22.37	134.18
	03-27-92		22.43	134.12
	06-04-92		23.40	133.15
	09-23-92		24.07	132.48
	11-12-92		24.16	132.39
	02-02-93		21.87	134.68
	05-18-93		22.66	133.89
MW-2	04-01-91	155.17	20.82	134.25
	03-27-92		20.82	134.35
	06-04-92		21.81	133.36
	09-23-92		22.45	132.72
	11-12-92		22.60	132.57
	02-02-93		20.28	134.89
	05-18-93		21.06	134.11
MW-3	04-01-91	157.13	21.55	135.58
	03-27-92		21.46	135.67
	06-04-92		22.34	134.79
	09-23-92		22.84	134.29
	11-12-92		23.03	134.09
	02-02-93		21.03	136.10
	05-18-93		21.73	135.40
MW-4	05-18-93	151.96	17.55	134.41
MW-5	05-18-93	148.68	15.72	132.96
MW-6	05-18-93	153.96	20.80	133.16
MW-7	05-18-93	156.09	22.64	133.45
MW-8	05-18-93	158.04	21.55	136.49

TABLE 3

GROUND WATER ANALYTICAL RESULTS
(concentrations in parts per billion)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics			
		Gasoline	Diesel	Motor Oil	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1	04-01-91	4,100	<100	-	140	570	76	460
	03-27-92	5,600	<50	<50	760	900	230	1,100
	06-04-92	2,600	<800	-	270	57	230	440
	09-23-92	3,400	-	-	480	430	110	550
	11-12-92	2,700	-	-	5.8	<5.0	140	340
	02-02-93	8,500	-	-	760	770	250	1,200
	05-07-93	7,700	-	-	970	630	280	1,500
MW-2	04-01-91	10,000	<100	-	650	640	150	960
	03-27-92	18,000	<50	<50	2,400	2,300	870	3,300
	06-04-92	14,000	<5,000	-	1,900	1,700	580	2,300
	09-23-92	22,000	-	-	2,100	1,500	760	2,900
	11-12-92	29,000	-	-	2,400	860	540	3,500
	02-02-93	24,000	-	-	2,700	1,900	590	2,600
	05-07-93	19,000	-	-	1,800	1,300	460	2,600
MW-3	04-01-91	3,100	<100	-	41	91	37	420
	03-27-92	160	<50	<50	9.2	4.8	10	23
	06-04-92	120	<50	-	7.5	2.7	0.5	15
	09-23-92	220	-	-	8.3	4.3	6.2	19
	11-12-92	230	-	-	12	5.5	7.7	19
	02-02-93	86	-	-	2.4	0.71	2.7	6.2
	05-07-93	140	-	-	2.6	1.2	3.9	8.4
MW-4	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50
MW-5	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50
MW-6	05-18-93	170	-	-	<0.50	<0.50	<0.50	<0.50
MW-7	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50
MW-8	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50

Note: Dash (-) indicates that the sample was not analyzed for this constituent.



General Notes

BASE MAP FROM U.S.G.S
HAYWARD, CALIFORNIA
7.5 MINUTE TOPOGRAPHIC

N

0 2000

Scale
1" = 2000'

FIGURE 1

SITE LOCATION MAP
FORMER BEACON STATION NO 574
22315 REDWOOD ROAD
CASTRO VALLEY, CA

Project No.	Drawn by:
19021.01	SAL
File No.	Prepared by:
UL21SLM	HEH
Revision No.	Reviewed by:

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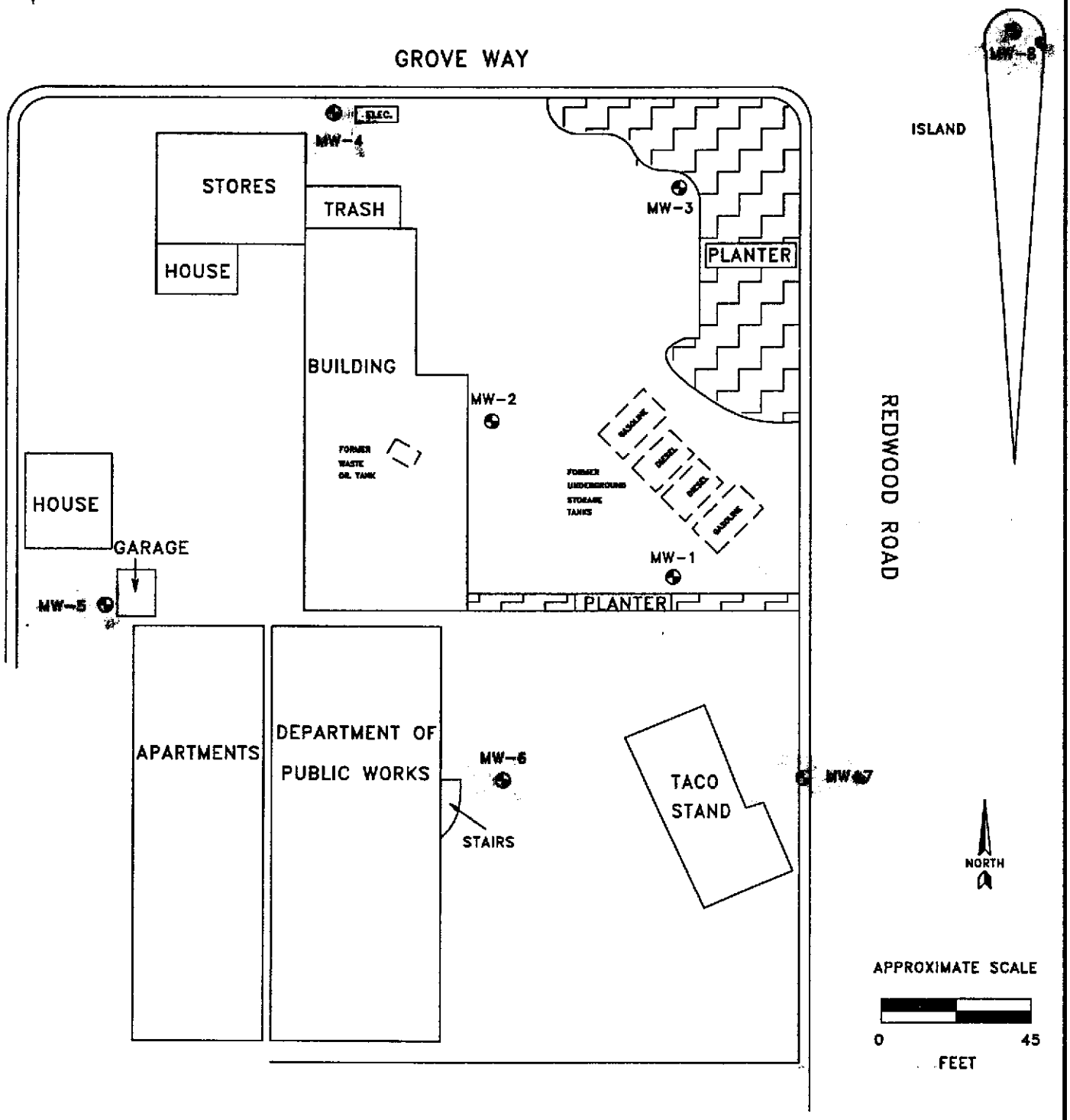

LEGEND

MW-6 — GROUND WATER MONITORING WELL AND NUMBER

GASOLINE — FORMER UNDERGROUND STORAGE TANK LOCATION

FIGURE 2
SITE MAP
FORMER BEACON STATION
22315 REDWOOD ROAD
CASTRO VALLEY, CA

Project No. 19021.01	Drawn SAL
File No. UL021SM	Prepared HEH
Revision	Reviewed

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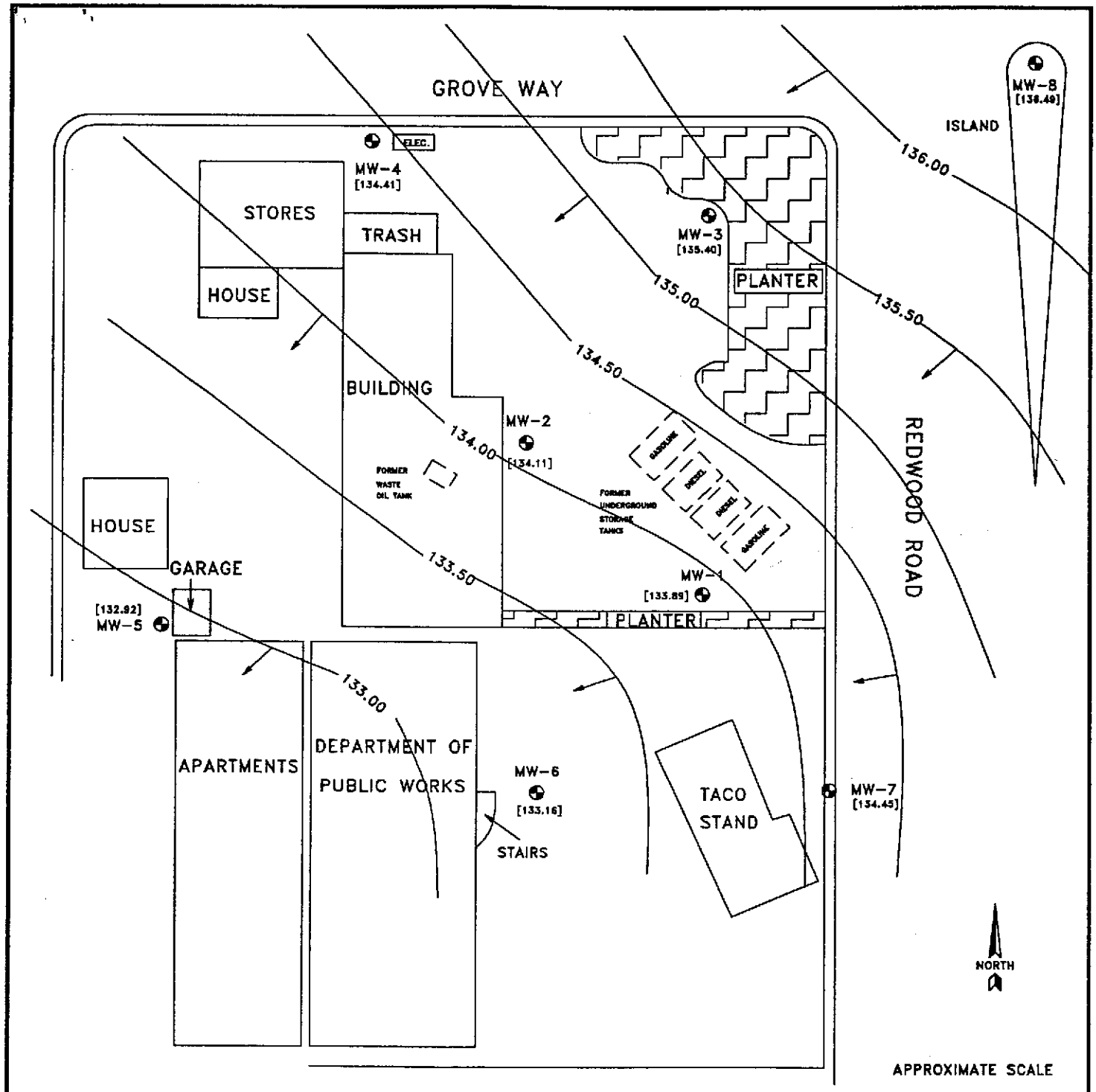

FIGURE 3
GROUND WATER CONTOUR MAP 05-18-93
FORMER BEACON STATION
22315 REDWOOD ROAD
CASTRO VALLEY, CA

Project No. 19021.01	Drawn SAL	Acton • Mickelson • van Dam, Inc.
File No. UL021GWC	Prepared HEH	Consulting Scientists, Engineers, and Geologists
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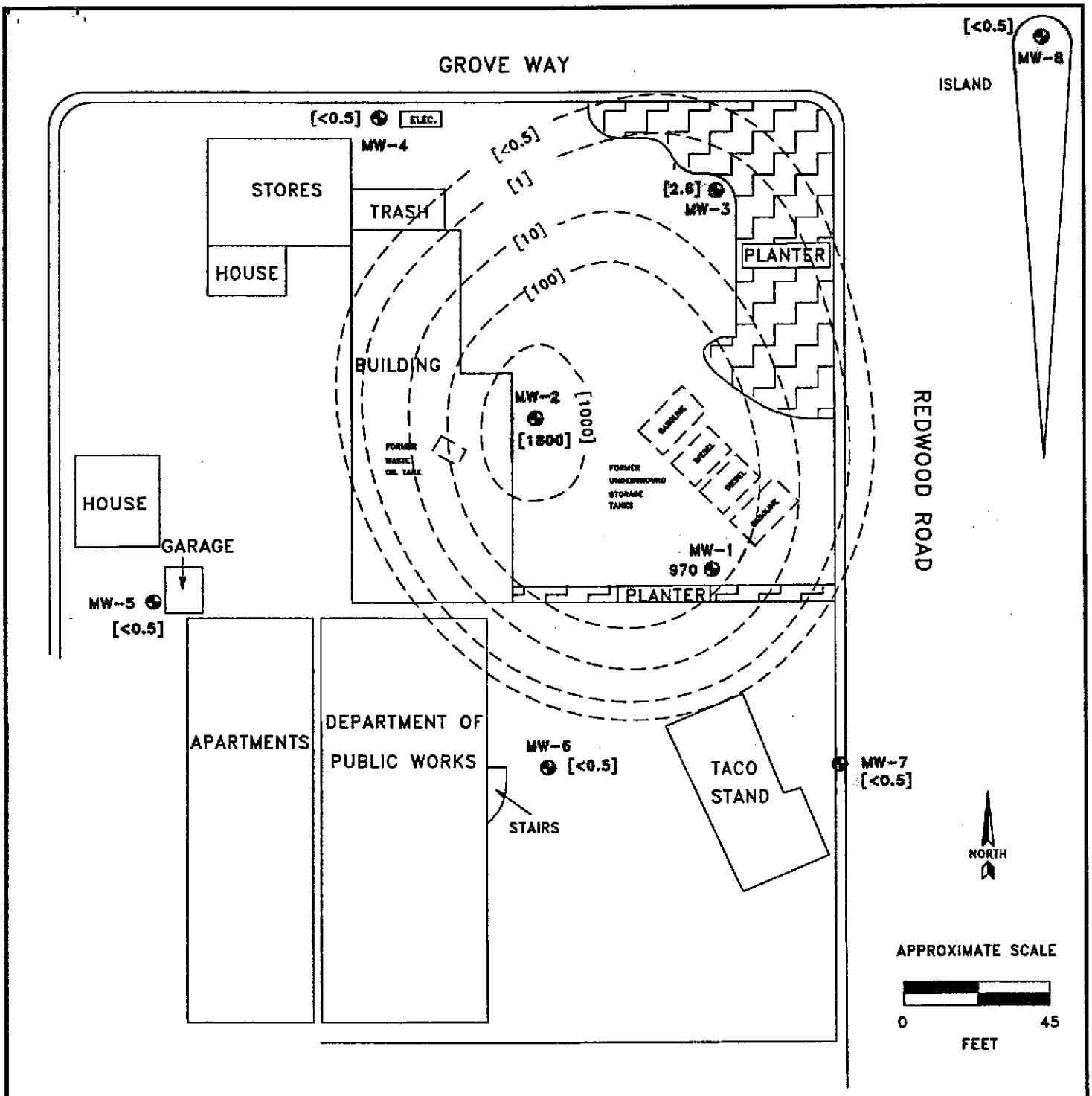

LEGEND

MW-6 — GROUND WATER MONITORING WELL AND NUMBER

GASOLINE — FORMER UNDERGROUND STORAGE TANK LOCATION

[<0.5] — INFERRED BENZENE ISOCONCENTRATION CONTOUR–CONCENTRATIONS IN MICROGRAMS PER LITER

FIGURE 4
BENZENE CONCENTRATION CONTOUR MAP (5-7-93/5-18-93)
FORMER BEACON STATION
22315 REDWOOD ROAD
CASTRO VALLEY, CA

Project No. 19021.01	Drawn SAL
File No. UL0218ZC	Prepared HEH
Revision	Reviewed

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ENCLOSURE A

SAMPLING TECHNIQUES

ENCLOSURE A

SAMPLING TECHNIQUES

Proper sampling techniques were followed to assure that samples represented actual field conditions and that samples were labeled, preserved, and transported properly to retain sample integrity. This exhibit describes procedures followed by Acton • Mickelson • van Dam, Inc. (AMV), during collection of samples of subsurface soil and ground water. Sampling guidance documents from the American Society of Testing and Materials (ASTM), U.S. Environmental Protection Agency (EPA), and California Department of Health Services (DHS) were followed for all sampling procedures. Actual sampling procedures employed were based on field conditions and may differ from those described here.

1.0 WATER LEVEL AND LIQUID-PHASE HYDROCARBON (LPH) THICKNESS MEASUREMENTS AND GROUND WATER SAMPLING

1.1 Water Level and LPH Thickness Measurements

The static water level and/or LPH thickness in each well was measured prior to purging or sampling.

The depth to water/product was measured using an electronic interface probe. The wire of the interface probe is marked at 0.01 foot intervals. One tone is emitted from the interface probe if LPH is encountered; another tone for water. The wire of the interface probe was lowered slowly until LPH or water was encountered. At this point, the mark on the interface wire opposite the permanent reference point on the top of the well casing was read to the nearest 0.01 foot and recorded. If the first encountered substance was LPH, the probe was lowered until the tone corresponding to water was emitted. This depth was also recorded. The difference between the two depths corresponds to the LPH thickness. The interface probe was rinsed in deionized water between measurements in different wells.

A permanent reference point was marked on the well casings. The permanent reference point on the well casings was surveyed to a common reference point. All well casing riser elevations are known to within 0.01 foot.

Prior to well development, a disposable bailer was used to collect a sample of LPH, if present in a well, for subjective analysis. The sample was collected by gently lowering the bailer approximately one-half the bailer length past the air/LPH interface. The appearance (color, opacity, "freshness") was described and noted on field notes.

1.2 Well Evacuation and Development

After the static water level in a well was determined and prior to collection of a ground water sample, stagnant water was removed from the well casing and the surrounding gravel pack by bailing, pumping, or with a vacuum truck. At least three casing volumes of water were removed from each well from which a sample was collected. The volume of water in the casing was determined from the known elevation of the water surface, the well bottom elevation (as measured when the well is installed), and the well diameter.

If the well was bailed or pumped during purging, samples were collected and field analyzed for pH, temperature, and specific conductance. The well was considered stabilized when repeated readings of the following parameters were within the ranges indicated as follows:

- Specific conductance ±10 percent of the reading range
- pH ±0.1 pH unit
- Temperature ±0.5° C.

After stabilization, and after at least three well volumes were evacuated, a sample was collected for analysis. The field container used for well stabilization measurements, and the pH, temperature, and conductivity probes were rinsed between wells with deionized water.

All purge water was containerized and properly handled and documented for disposal. If the containers were stored on site, a label specifying the date of purging, source, and the known or suspected nature of the contents was affixed to each container.

1.3 Sample Collection, Preservation, and Handling

After purging, a new polyethylene disposable bailer was used to collect samples for analysis. The bailer was attached to a new disposable rope and lowered slowly into the water to avoid agitation of the collected sample. Containers for volatile organics analyses were filled completely so no airspace remained in the vial after sealing.

All sample containers were prewashed and prepared at the analyzing laboratory in accordance with quality assurance/quality control protocols of the laboratory. Only sample containers appropriate for the intended analyses were used.

After sample collection, the samples were placed into coolers with ice packs. Internal temperature of the cooler was maintained at approximately 4 degrees Celsius. Samples were kept in coolers during transport to the analyzing laboratory.

2.0 DECONTAMINATION AND DISPOSAL PROCEDURES

2.1 Equipment Decontamination

Sampling equipment was decontaminated as follows:

1. Prior to individual sample collection, any sampling device was cleaned in a TSP solution and rinsed twice in clean water. Any visible soil residue was removed.

2. Water sampling containers were cleaned and prepared by the respective analytical laboratories.

3. Field monitoring equipment (pH, conductivity, or temperature probes) was rinsed with clean water prior to use and between samples.

3.0 FIELD MEASUREMENTS

Field data were collected during various sampling and monitoring activities; this section describes routine procedures followed by personnel performing field measurements. The methods presented below are intended to ensure that field measurements are consistent and reproducible when performed by various individuals.

3.1 Conductivity, Temperature, and pH

Specific conductance, water temperature, and pH measurements were made when a water sample was collected. Regardless of the sample collection method, a representative water sample was placed in a transfer bottle used solely for field parameter determinations. A conventional pH meter with a combination electrode or equivalent was used for field-specific conductance measurements. Temperature measurements were performed using standard thermometers or equivalent temperature meters. Combination instruments capable of measuring two or all three of the parameters may have also been used.

All instruments were calibrated in accordance with manufacturer methods. The values for conductivity standards and pH buffers used in calibration were recorded daily in a field notebook. All probes were thoroughly cleaned and rinsed with fresh water prior to any measurements, in accordance with Section 3.1.

4.0 SAMPLE CUSTODY

This section describes standard operating procedures for sample custody and custody documentation. Sample custody procedures were followed through sample collection, transfer, analysis, and ultimate disposal. The purpose of these procedures is to assure that (1) the integrity of samples was maintained during their collection, transportation, and storage prior to analysis and (2) post-analysis sample material was properly disposed of. Sample custody is divided into field procedures and laboratory procedures, as described below.

4.1 Field Custody Procedures

Sample quantities, types, and locations were determined before the actual fieldwork commenced. As few people as possible handled samples. The field sampler was personally responsible for the care and custody of the collected samples until they were properly transferred.

4.1.1 Field Documentation

Each sample was labeled and sealed properly immediately after collection. Sample identification documents were carefully prepared so that identification and chain-of-custody records could be maintained and sample disposition could be controlled. Forms were filled out with waterproof ink. The following sample identification documents were utilized.

- Sample labels
- Field notebook
- Chain-of-custody forms

4.1.2 Sample Labels

Sample labels provide identification of samples. Preprinted sample labels were provided. Where necessary, the label was protected from water and solvents with clean label-protection tape. Each label contained the following information:

- Name of collector
- Date and time of collection
- Place of collection
- AMV project number
- Sample number
- Preservative (if any)

4.1.3 Field Notebook

Information pertinent to a field survey, measurements, and/or sampling were recorded in a bound notebook. Entries in the notebook may have included the following:

- Name and title of author, date and time of entry, and physical/environmental conditions during field activity.
- Location of sampling or measurement activity.
- Name(s) and title(s) of field crew.
- Type of sampled or measured media (e.g., soil, ground water, air, etc.)
- Sample collection or measurement method(s).
- Number and volume of sample(s) taken.
- Description of sampling point(s).
- Description of measuring reference points.
- Date and time of collection or measurement.
- Sample identification number(s).
- Sample preservative (if any).
- Sample distribution (e.g., laboratory).
- Field observations/comments.
- Field measurements data (pH, etc.).

4.1.4 Chain-of-Custody Record

A chain-of-custody record was filled out for and accompanied every sample and every shipment of samples to the analytical laboratories in order to establish the documentation necessary to trace sample possession from the time of collection. The record contained the following information:

- Sample or station number or sample I.D.
- Signature of collector, sampler, or recorder.
- Date and time of collection.
- Place of collection.
- Sample type.
- Signatures of persons involved in the chain of possession.
- Inclusive dates of possession.

The laboratory portion of the form was completed by laboratory personnel and contains the following information:

- Name of person receiving the sample.
- Laboratory sample number.
- Date and time of sample receipt.
- Analyses requested.
- Sample condition and temperature.

4.1.5 Sample Transfer and Shipment

Samples were always accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving the samples signed, dated, and noted the time on the chain-of-custody record. Samples were packaged properly for shipment and dispatched to the

appropriate laboratory for analysis. The chain-of-custody record accompanied each shipment. The method of shipment, courier name(s), and other pertinent information was entered in the chain-of-custody record.

4.2 Laboratory Custody Procedures

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample label matched that on the chain-of-custody record. Information regarding method of delivery and sample conditions was also checked on the chain-of-custody record. The custodian then entered the appropriate data into the laboratory sample tracking system. The laboratory custodian may have used the sample number on the sample label or may have assigned a unique laboratory number to each sample. The custodian then transferred the sample(s) to the proper analyst(s) or stored the sample(s) in the appropriate secure area.

Laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted. Once at the laboratory, the samples are handled in accordance with U.S. Environmental Protection Agency SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Third Edition, for the intended analyses. All data sheets, chromatographs, and laboratory records were filed as part of the permanent documentation.

4.3 Corrections to Documentation

Original data recorded in field notebooks, chain-of-custody records, and other forms were written in ink. These documents were not altered, destroyed, or discarded, even if they were illegible or contained inaccuracies that required a replacement document.

If an error was made or found on a document, the individual making the corrections did so by crossing a single line through the error, entering the correct information, and initialing and dating the change. The erroneous information was obliterated. Any subsequent error(s) discovered on a document were corrected. All corrections were initialed and dated.

4.4 Sample Storage and Disposal

Samples and extracts were retained by the analytical laboratory for 60 days after a written report was issued by the laboratory. Unless notified by the program manager, excess or unused samples were disposed of by the laboratory in an appropriate manner consistent with applicable government regulations.

ENCLOSURE B

SOIL BORING LOGS

Acton • Mickelson • van Dam, Inc.

Consulting Scientists, Engineers, and Geologists

Log of Soil Boring MW-4

Casing Elevation: 151.96 ft

Completion Depth: 28 feet

Logged by: Hal E. Hansen

Checked by:

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	11:40
Finish	05-13-93	12:00

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 17.55 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/ Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
0		lawn								
1		SILTY CLAY, olive brown, moderately plastic, moist (CL)	CL							
2										
3										
4		GRAVELLY SAND, brown, fine- to coarse-grained, moist (SW)	SW		8					
5					9					
6					10	18	18		MW4-1	0
7										
8										
9										
10					50/6	6	3		MW4-2	0
11										
12										
13										
14										
15		SILTY CLAY, brown, moderately plastic, very moist (CL)	CL		10					
16					15					
17					20	18	18		MW4-3	0
18										
19		SILTY SAND, brown, fine-grained, saturated (SM)	SM		27					
20					37					
21					40	18	18		MW4-4	0
22										
23		SAND, greenish gray, fine-grained saturated (SP)	SP		8					
24					12					
25					14	18	6		MW4-5	0

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Consulting Scientists, Engineers, and Geologists

Log of Soil Boring MW-4

Casing Elevation: 151.96 ft

Completion Depth: 28 feet

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	11:40
Finish	05-13-93	12:00

Logged by: Hal E. Hansen

Checked by:

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 17.55 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
25		continued from above SAND, greenish gray, fine-grained, saturated (SP)	SP		8 12 14	18	8		MW4-5	0
26										
27										
28		Terminated drilling at 28 feet.								
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										

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Log of Soil Boring MW-5

Casing Elevation: 148.68 ft

Completion Depth: 25 feet

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	1:30
Finish	05-13-93	2:10

Logged by: Hal E. Hansen

Checked by:

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 15.72 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/ Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
0		asphalt								
1		CLAYEY SAND, brown, fine- to coarse-grained, moist (SC)								
2										
3			SC							
4										
5	■				11 13 18	18	15		MW5-1	0
6		SILTY SAND, brown, fine-grained, moist (SM)								
7										
8			SM							
9					11 12					
10	■				20	18	16		MW5-2	0
11		GRAVELLY SAND, brown, fine- to coarse-grained, common plastic fines, saturated (SW)								
12										
13										
14			SW		14 22					
15	■				50					
16					3	15	15		MW5-3	0
17										
18		SILTY SAND, greenish gray, fine-grained, saturated (SM)								
19					6 10					
20	■				14	18	18		MW5-4	0
21			SM							
22										
23										
24					6 12					
25	■	Terminated drilling at 25 feet.			14	18	5		MW5-5	0

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Log of Soil Boring MW-6

Casing Elevation: 153.96 ft

Completion Depth: 30 feet

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	8:40
Finish	05-13-93	9:05

Logged by: Hal E. Hansen

Checked by:

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 20.80 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/ Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
0		asphalt / roadbase								
1		**SILTY CLAY**, dark gray, moderately plastic, slightly moist (CL)								
2										
3										
4			CL							
5		color change to olive			5 8					
6					18	18	18		MW6-1	0
7										
8										
9		**SILTY SAND**, yellowish brown, fine-grained, moist (SM)								
10					9 12					
11			SM		17	18	18		MW6-2	0
12										
13										
14		**SILTY CLAY**, olive, moderately plastic, very moist (CL)								
15					5 10					
16					21	18	18		MW6-3	0
17			CL							
18										
19										
20		**SANDY SILT**, brown, non-plastic, fine-grained sand, [illegible] (ML)			7 14 16	18	18		MW6-4	0
21										
22										
23			ML							
24					5 12					
25					19	18	15		MW6-5	1

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Log of Soil Boring MW-6

Casing Elevation: 153.96 ft

Completion Depth: 30 feet

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	8:40
Finish	05-13-93	9:05

Logged by: Hal E. Hansen

Checked by:

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 20.80 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
25		continued from above **SANDY SILT**, brown, non-plastic, fine-grained sand, [redacted] (ML)	ML		5 12 19	18	15		MW6-5	1
26										
27										
28		**GRAVELLY SAND**, olive, fine- to coarse-grained, [redacted] (SW)	SW							
29					5 14				MW6-6	
30					23	18	17			1
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										

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Log of Soil Boring MW-7

Casing Elevation: 156.09 ft

Completion Depth: 30 feet

Logged by: Hal E. Hansen

Checked by:

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	9:50
Finish	05-13-93	10:40

OVM/OVA hNu PID with 10.2 eV Probe | Water Depth 22.64 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
0		asphalt								
1		SILTY CLAY, dark gray, moderately plastic, slightly moist (CL)	CL							
2										
3										
4		GRAVELLY SAND, brown, fine- to coarse-grained, moist (SM)			19					
5					21 23	18	18		MW7-1	0
6										
7										
8										
9										
10			SW		17					
11					25 40	18	18		MW7-2	0
12										
13										
14										
15					25					
16					50 6	12	12		MW7-3	0
17										
18		CLAYEY SILT, brown, non-plastic, [illegible] (ML)								
19										
20					7 11					
21					23	18	18		MW7-4	0
22			ML							
23										
24					8 15					
25					16	18	18		MW7-5	2

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Log of Soil Boring MW-7

Casing Elevation: 156.09 ft

Completion Depth: 30 feet

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	9:50
Finish	05-13-93	10:40

Logged by: Hal E. Hansen

Checked by:

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 22.64 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
25		continued from above CLAYEY SILT, brown, non-plastic [redacted] (ML)	ML		8 15 16	18	18		MW7-5	[redacted]
26										
27										
28		SILTY SAND, greenish blue, fine- to coarse-grained, [redacted]ed, common plastic fines (SM)	SM							
29					9 22				MW7-6	
30					23	18	12			0
		Terminated drilling at 30 feet.								
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										

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Log of Soil Boring MW-8

Casing Elevation: 158.04 ft

Completion Depth: 35 feet

Logged by: Hal E. Hansen

Checked by:

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	3:00
Finish	05-13-93	3:40

OVM/OVA hNu PID with 10.2 eV Probe | Water Depth 21.55 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
0		concrete								
1		SILTY CLAY, brown, moderately plastic, moist (CL)	CL							
2										
3										
4		GRAVELLY SAND, brown, fine- to coarse-grained, moist (SW)	SW		5					
5	■				8 13	18	18		MW8-1	0
6										
7										
8										
9		SAND, yellowish brown, fine-grained, moist (SP)	SP		7					
10	■				15 19	18	18		MW8-2	0
11										
12										
13										
14										
15	■				11 17					
16					20	18	18		MW8-3	0
17										
18										
19										
20	■				12 50					
21					6	12	12		MW8-4	0
22		SILTY CLAY, brown, moderately plastic, saturated (CL)	CL							
23										
24					9					
25	■				17 22	18	18		MW8-5	0

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Log of Soil Boring MW-8

Casing Elevation: 158.04 ft

Completion Depth: 35 feet

Project No.	Location:
19021.01	Former Beacon #574 22315 Redwood Rd, Castro Valley, CA

Drilling Company: Woodward Drilling
Driller: Eric Forestrom
Drilling and Sampling Methods:
B-57 Mobile Drill Rig with Hollow Stem Auger
California modified split-spoon sampler
fitted with 6" brass sample sleeves

Drilling	Date	Time
Start	05-13-93	3:00
Finish	05-13-93	3:40

Logged by: Hal E. Hansen

Checked by:

OVM/OVA hNu PID with 10.2 eV Probe

Water Depth 21.55 ft

Depth (feet)	Sample Int.	DESCRIPTION	Graphic Log	Boring/ Well Detail	Blows/6 in	Inches Driven	Inches Recov'd	Comments	Sample #	Field OVM/OVA Reading (ppm)
25		continued from above SILTY CLAY, brown, moderately plastic, saturated (CL)	CL		9 17 22	18	18		MW8-5	0
26										
27										
28		SILTY SAND, greenish gray, fine-grained, saturated (SM)								
29			SM		8 13				MW8-6	
30					14	18	18			0
31										
32										
33		SAND, greenish gray, medium-grained, saturated (SP)	SP							
34										
35					50/5	5	5		MW8-7	0
		Terminated drilling at 35 feet.								
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										

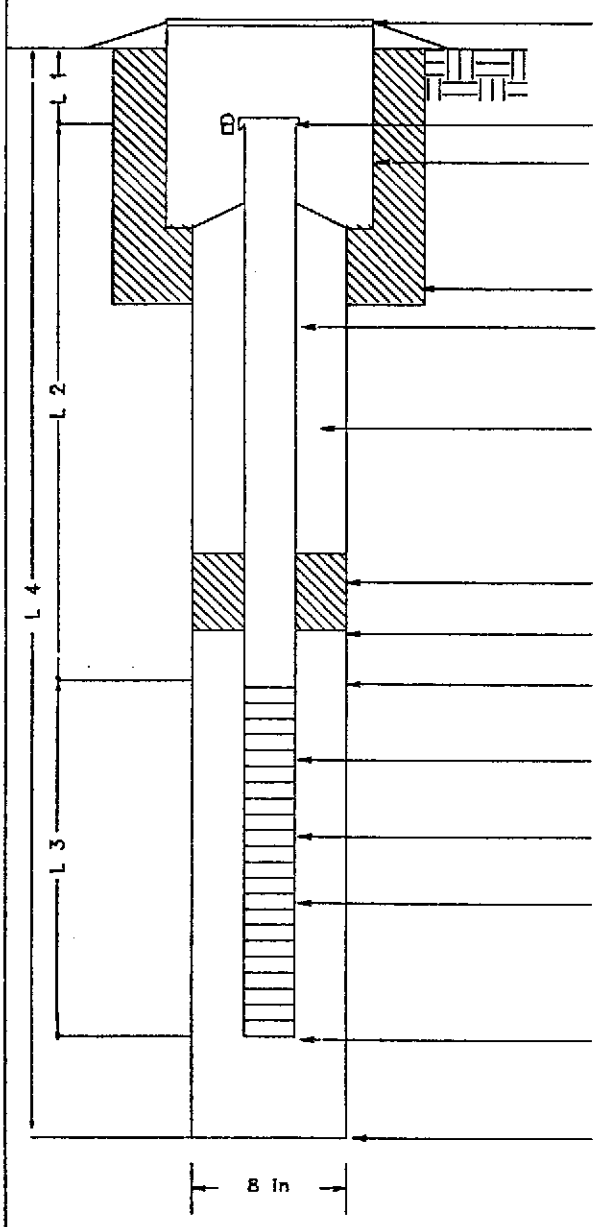
ENCLOSURE C

MONITORING WELL CONSTRUCTION DETAILS

MONITORING WELL CONSTRUCTION DETAILS

PROJECT: Former Beacon #574
22315 Redwood Rd
Castro Valley, CA

MONITORING WELL NO.: MW-4
ELEVATION: 151.96 ft



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	8-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	2 feet
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 15 feet
Depth to Bottom of Monitoring Well	28 feet
Depth to the Bottom of Filter Sand	28 feet

L1 = 0.25 ft
L2 = 12.75 ft
L3 = 15 ft
L4 = 28 ft

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL*
05-18-93	8:22	17.55 ft

*Measuring Point Top of casing

Completion Date and Time
05-13-93 12:25

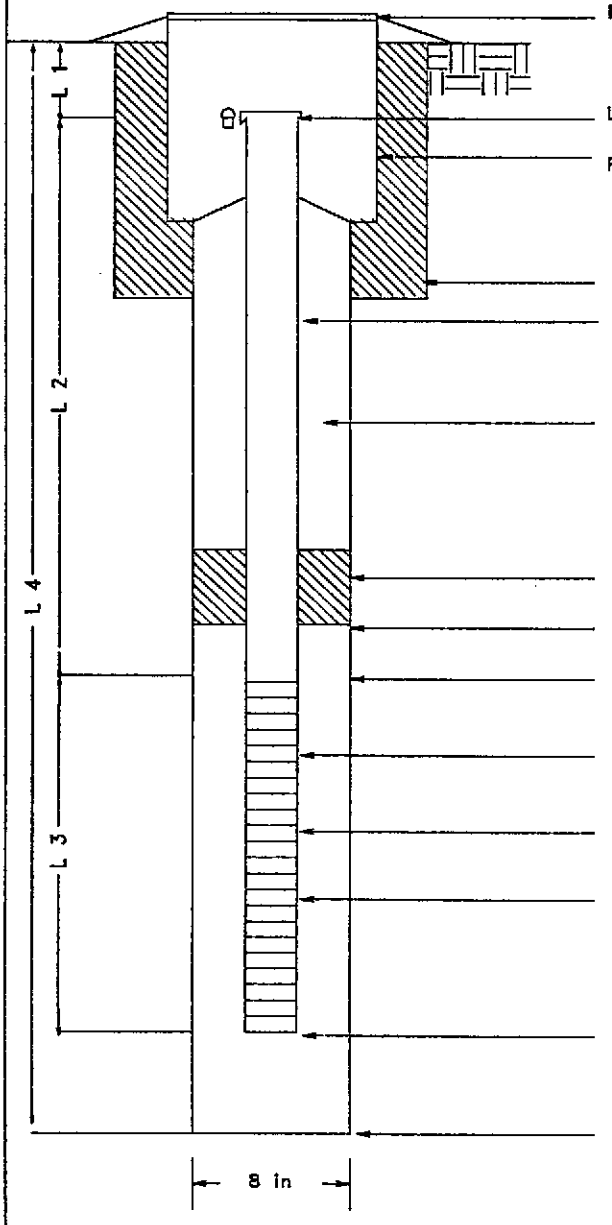
ACTON • MICKELSON • VAN DAM, INC.

File #19021010

MONITORING WELL CONSTRUCTION DETAILS

PROJECT: Former Beacon #574
22315 Redwood Rd
Castro Valley, CA

MONITORING WELL NO.: MW-5
ELEVATION: 148.68 ft



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	8-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	2 feet
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 15 feet
Depth to Bottom of Monitoring Well	25 feet
Depth to the Bottom of Filter Sand	25 feet

L1 = 0.25 ft
L2 = 9.75 ft
L3 = 15 ft
L4 = 25 ft

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL*
05-18-93	8:27	15.72 ft

Completion Date and Time

05-13-93 2:30

*Measuring Point Top of casing

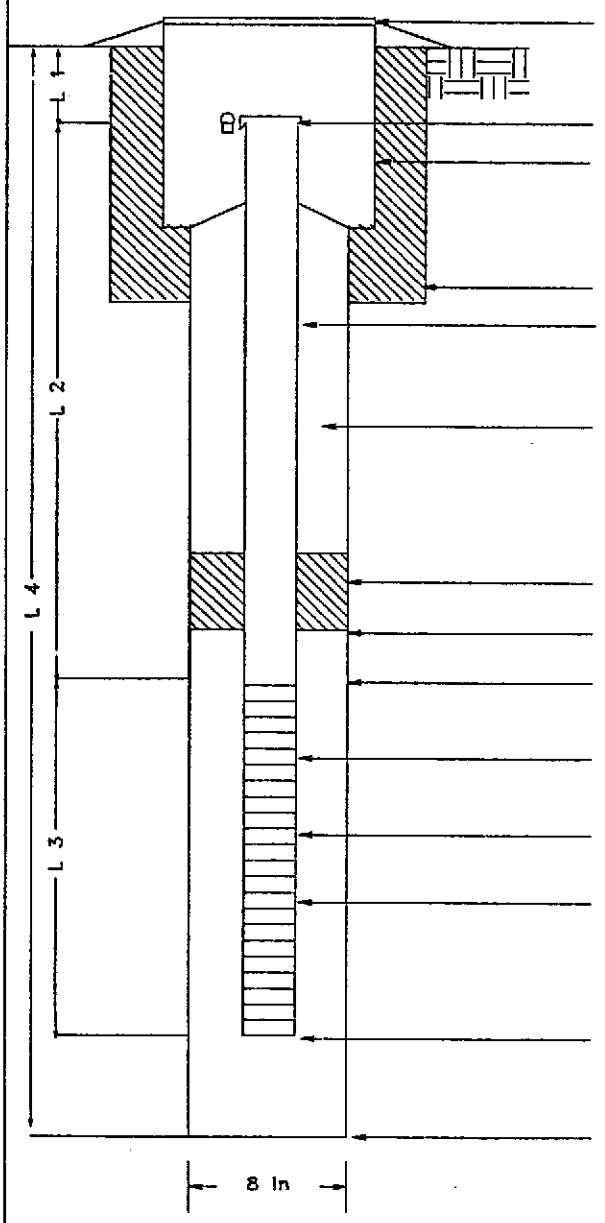
ACTON • MICKELSON • VAN DAM, INC.

File #19021011

MONITORING WELL CONSTRUCTION DETAILS

PROJECT: Former Beacon #574
22315 Redwood Rd
Castro Valley, CA

MONITORING WELL NO.: MW-6
ELEVATION: 153.96 ft



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	8-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	2 feet
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 15 feet
Depth to Bottom of Monitoring Well	30 feet
Depth to the Bottom of Filter Sand	30 feet

L1 = 0.25 ft
L2 = 14.75 ft
L3 = 15 ft
L4 = 30 ft

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL*
05-18-93	8:07	20.80 ft

Completion Date and Time
05-13-93 9:30

*Measuring Point Top of casing

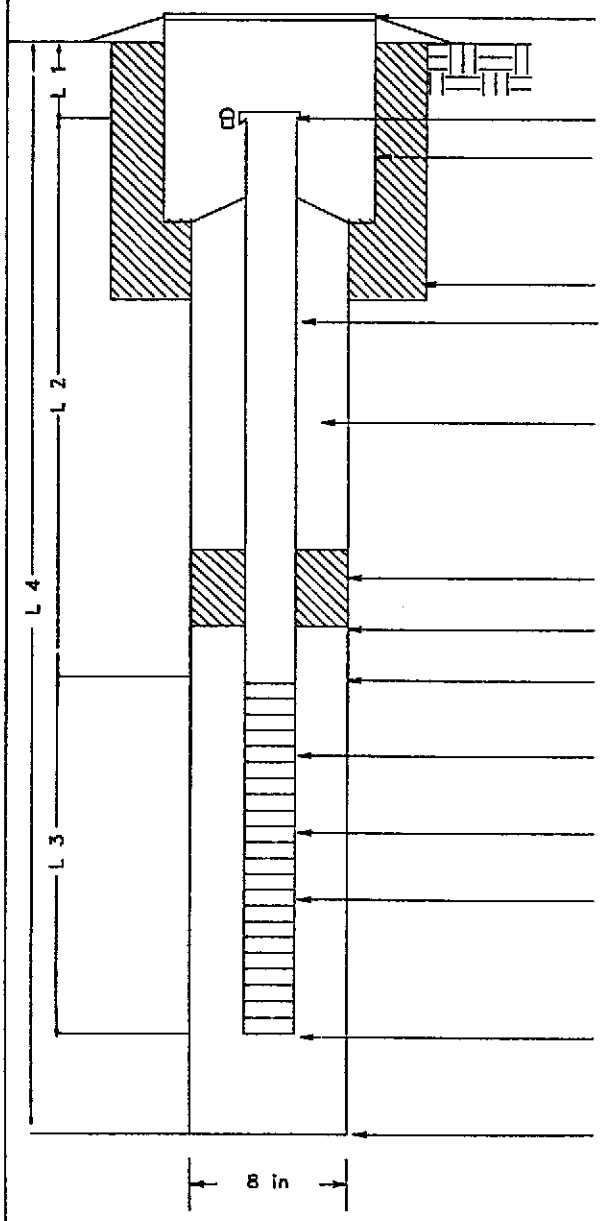
ACTON • MICKELSON • VAN DAM, INC.

File #19021012

MONITORING WELL CONSTRUCTION DETAILS

PROJECT: Former Beacon #574
22315 Redwood Rd
Castro Valley, CA

MONITORING WELL NO.: MW-7
ELEVATION: 156.09 ft



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	8-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	2 feet
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 15 feet
Depth to Bottom of Monitoring Well	30 feet
Depth to the Bottom of Filter Sand	30 feet

L1 = 0.25 ft
L2 = 14.75 ft
L3 = 15 ft
L4 = 30 ft

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL*
05-18-93	8:13	22.64 ft

Completion Date and Time

05-13-93 10:55

*Measuring Point Top of casing

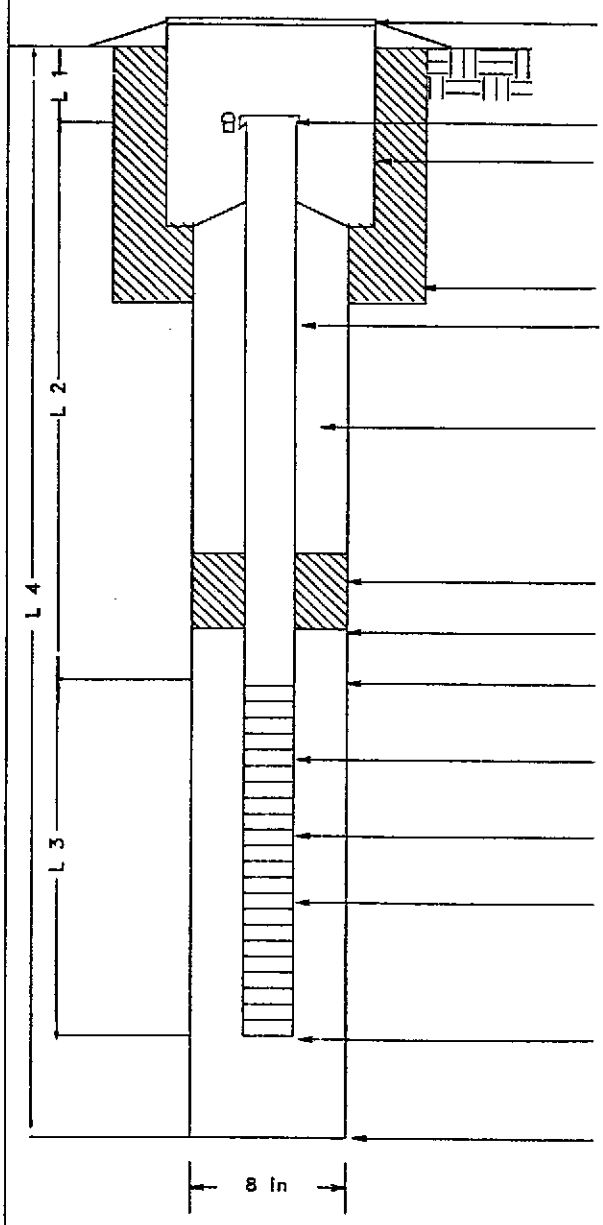
ACTON • MICKELSON • VAN DAM, INC.

File #19021013

MONITORING WELL CONSTRUCTION DETAILS

PROJECT: Former Beacon #574
22315 Redwood Rd
Castro Valley, CA

MONITORING WELL NO.: MW-8
ELEVATION: 158.04 ft



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	8-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	2 feet
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 15 feet
Depth to Bottom of Monitoring Well	33 feet
Depth to the Bottom of Filter Sand	33 feet

L1 = 0.25 ft
L2 = 17.75 ft
L3 = 15 ft
L4 = 33 ft

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL*
05-18-93	8:16	21.55 ft

*Measuring Point Top of casing

Completion Date and Time

05-13-93 5:00

ACTON • MICKELSON • VAN DAM, INC.

File #19021014

ENCLOSURE D

SOIL ANALYTICAL REPORTS

May 27, 1993
Sample Log 6460

Hal Hansen
Acton, Mickelson & van Dam
5090 Robert J. Matthews Pkwy
El Dorado Hills, CA 95762

Subject: Analytical Results for 5 Water Samples
Identified as: Project # UIT 21.01 (Former Beacon 574)
Received: 05/19/93

Dear Mr. Hansen:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on May 27, 1993 and describes procedures used to analyze the samples.

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

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

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

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

Approved by:

Joel Kiff
Senior Chemist

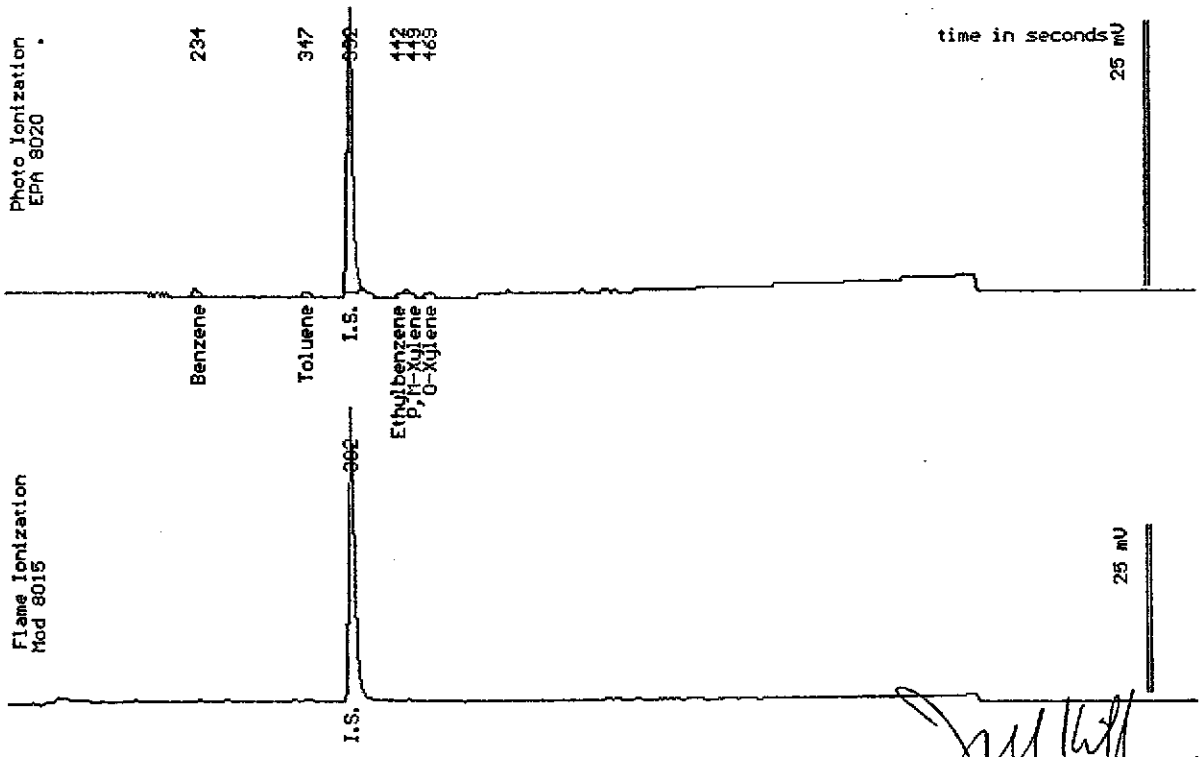
Sample Log 6460

6460-1

Sample: **MW-4**

From : Project # UIT 21.01 (Former Beacon 574)
Sampled : 05/18/93
Dilution : 1:1 QC Batch : 6022a
Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50



Date Analyzed: 05-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Senior Chemist

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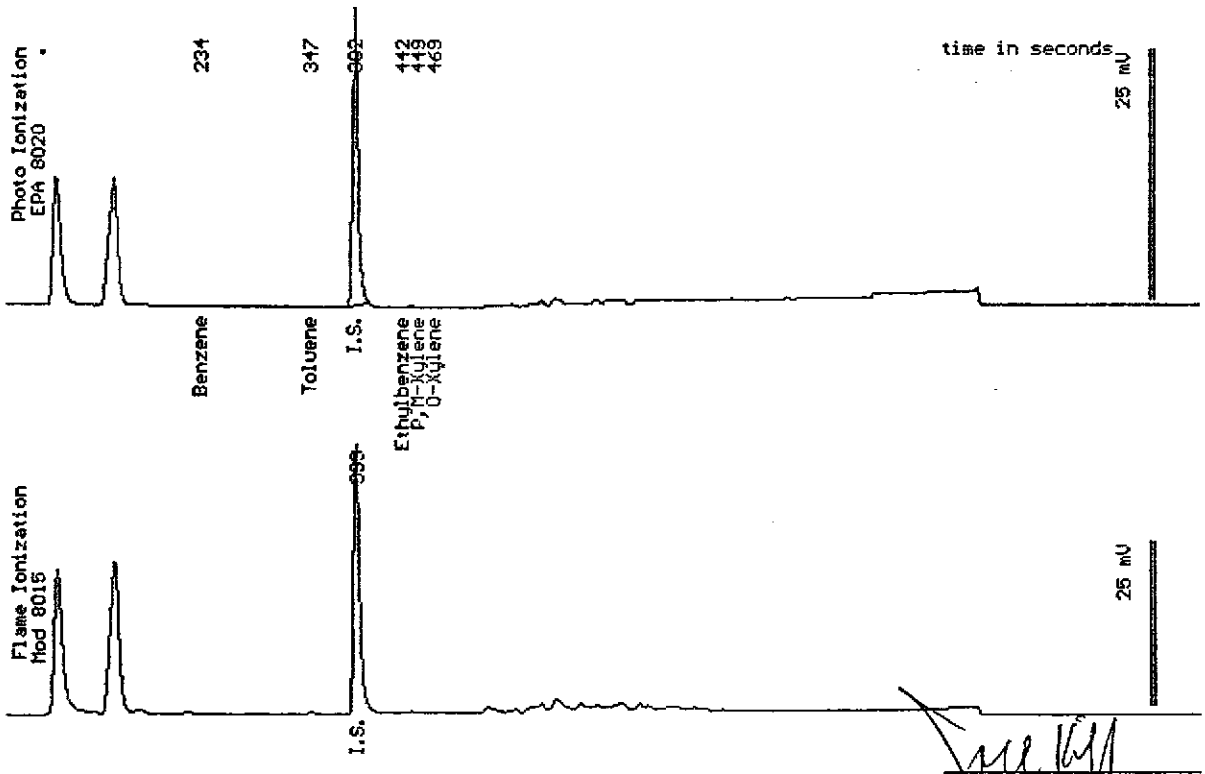
Sample Log 6460

6460-2

Sample: **MW-5**

From : Project # UIT 21.01 (Former Beacon 574)
Sampled : 05/18/93
Dilution : 1:1 QC Batch : 6022a
Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50



Date Analyzed: 05-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Senior Chemist

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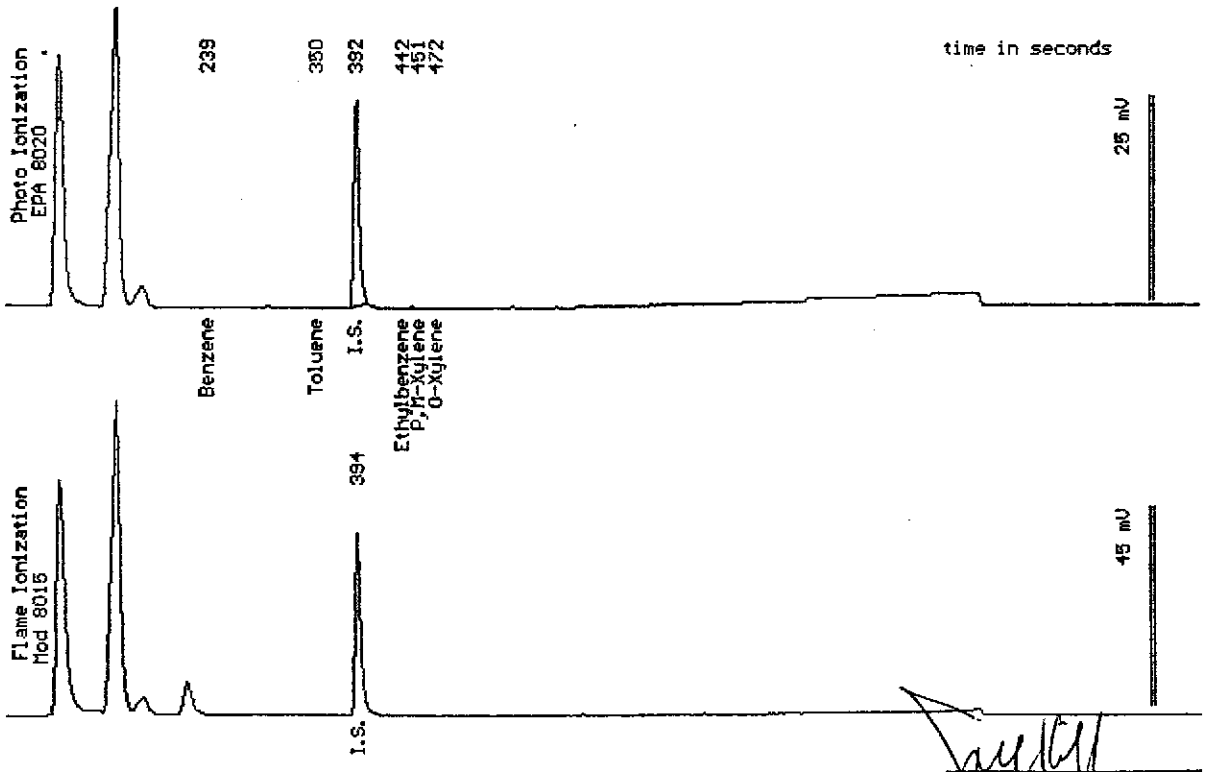
Sample Log 6460
6460-3

Sample: **MW-6**

From : Project # UIT 21.01 (Former Beacon 574)
Sampled : 05/18/93
Dilution : 1:1 QC Batch : 6022a
Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	170



Date Analyzed: 05-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Senior Chemist

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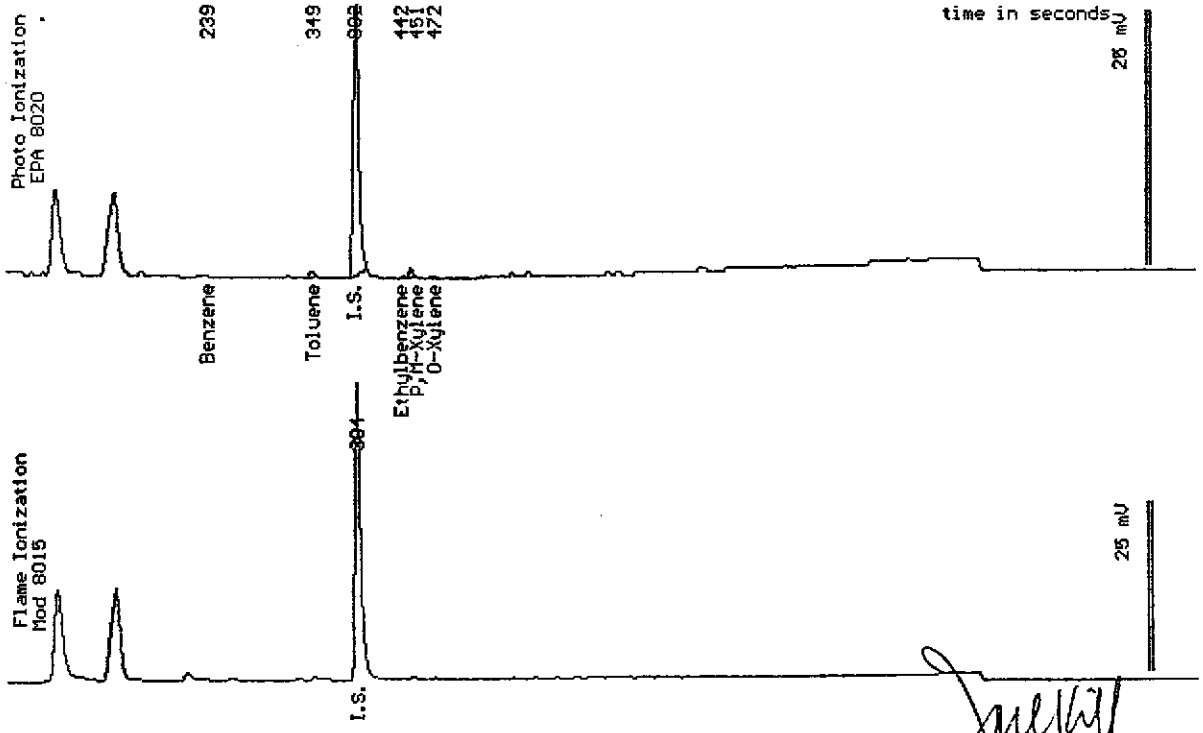
Sample Log 6460

6460-4

Sample: **MW-7**

From : Project # UIT 21.01 (Former Beacon 574)
Sampled : 05/18/93
Dilution : 1:1 QC Batch : 6022a
Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50



Date Analyzed: 05-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
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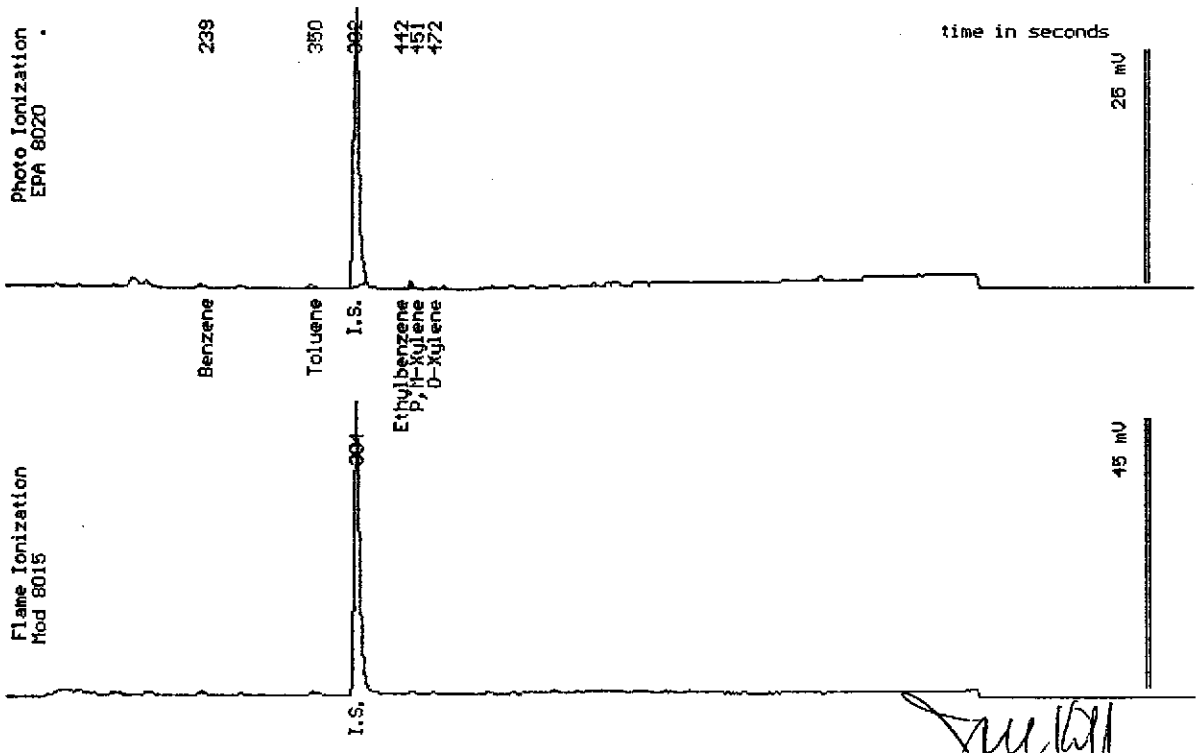
Sample Log 6460
6460-5

Sample: **MW-8**

From : Project # UIT 21.01 (Former Beacon 574)
Sampled : 05/18/93
Dilution : 1:1 QC Batch : 6022a
Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50



Date Analyzed: 05-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Senior Chemist

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Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. Former Beacon Station #574	Sampler (Print Name) Hal Hansen	ANALYSES	Date 5-18-93	Form No. 1 of 1
Project No. UIT21.01	Sampler (Signature) Hal Hansen			
Project Location 22315 E Fremont St Stockton Ca	Affiliation AMV inc		1 week TAT	

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)						No. of Containers	REMARKS
MW-4	5-18-93			X	X							3	
MW-5	↓			X	X							3	
MW-6	↓			X	X							3	
MW-7	↓			X	X							3	
MW-8	↓			X	X							3	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen AMV inc	5-18-93	5/[illegible]	Marjorie R Nanbo	5/19/93	10:45 am
Marjorie R Nanbo	5/19/93	8:30 pm	Janice Oakley	5/19/93	1235 pm

RECEIVED by W.E.S.T. date 5/19/93

Report To: Hal Hansen AMV inc

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Kenneth Earnest

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

32-8003 1/90

ENCLOSURE E

GROUND WATER ANALYTICAL RESULTS

May 24, 1993
Sample Log 6425

Hal Hansen
Acton, Mickelson & van Dam
5090 Robert J. Matthews Pkwy
El Dorado Hills, CA 95762

Subject: Analytical Results for 18 Soil Samples
Identified as: Project # UIT21.01 (Former Beacon #574)
Received: 05/14/93

Dear Mr. Hansen:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on May 24, 1993 and describes procedures used to analyze the samples.

Sample(s) were received in brass sleeves that were sealed with PTFE sheets and plastic endcaps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

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

"BTEX" (EPA Method 8020/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

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

Approved by:

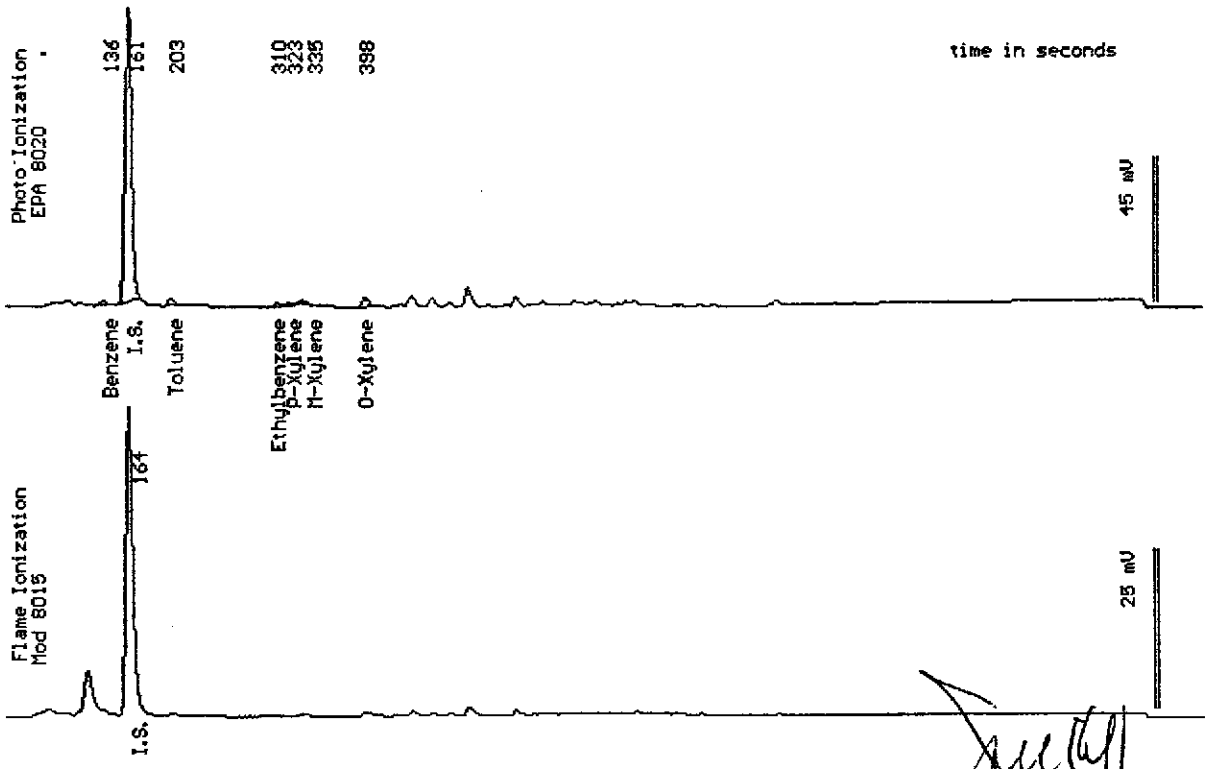
Joel Kiff
Senior Chemist

Sample Log 6425
6425-1

Sample: **MW-4-1**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006a
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

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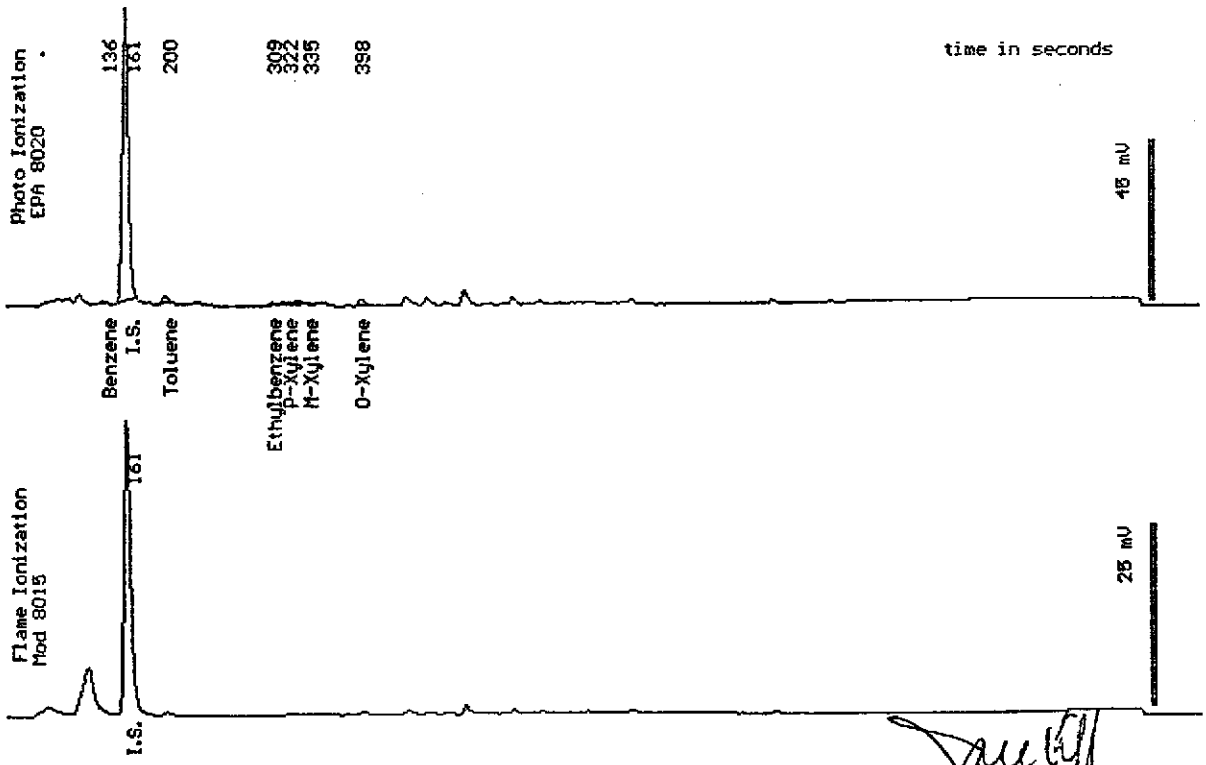
Sample Log 6425

6425-2

Sample: **MW-4-3**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006a
Matrix : Soil

Parameter	(MDL) ug/kg	Measured Value ug/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

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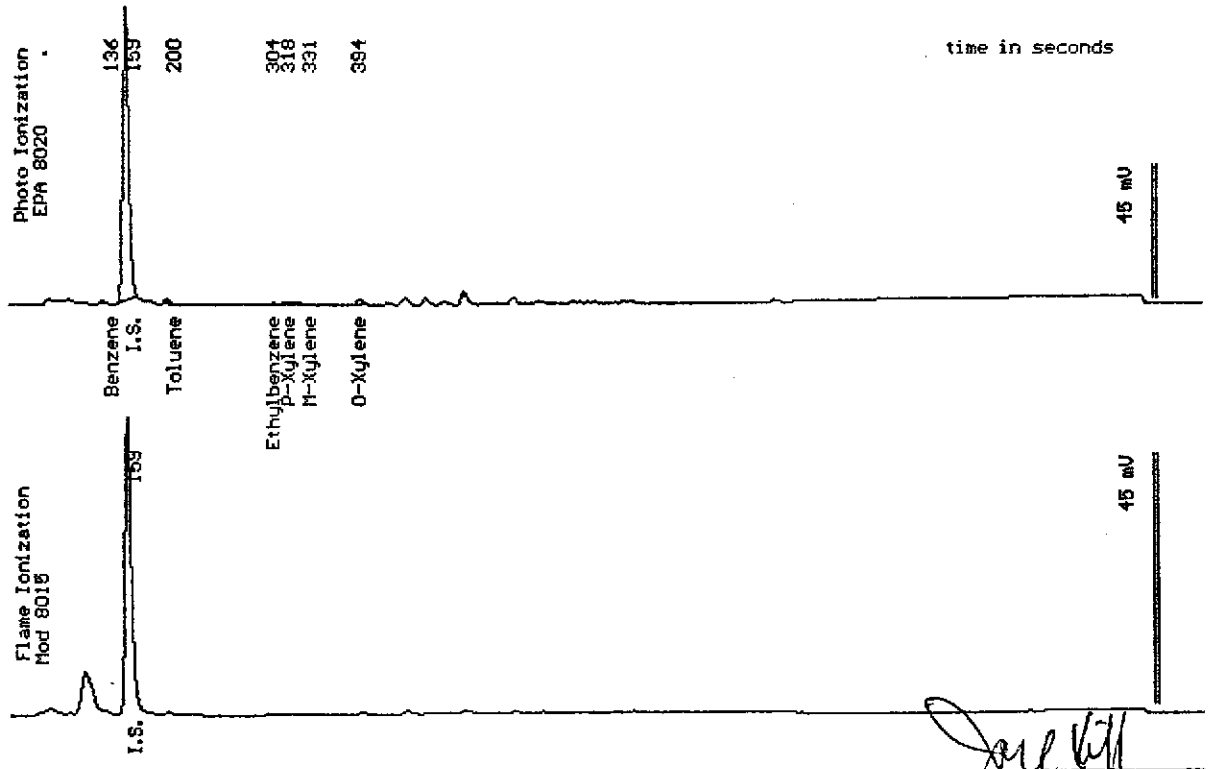
Sample Log 6425

6425-3

Sample: **MW-4-4**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006a
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

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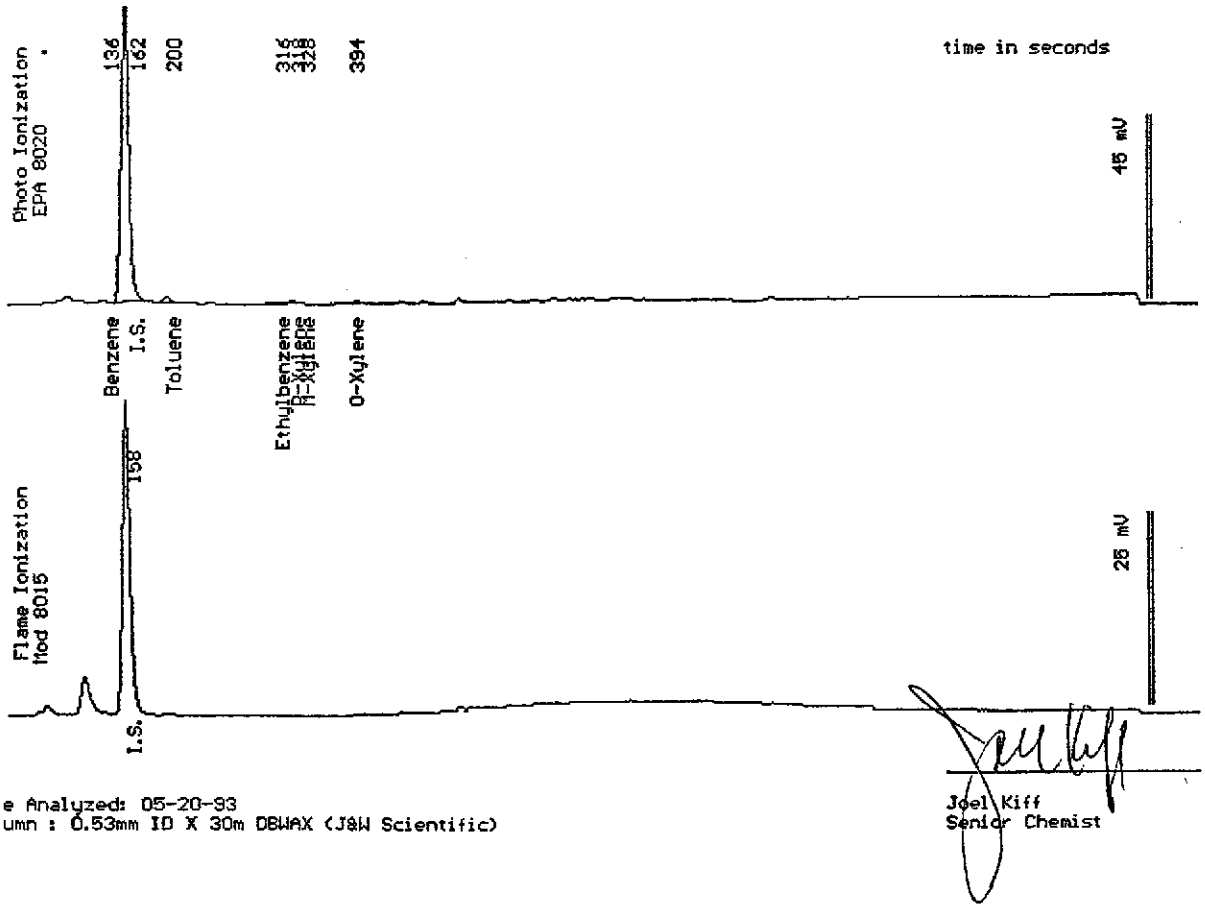
Sample Log 6425

6425-4

Sample: **MW-5-1**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006b
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

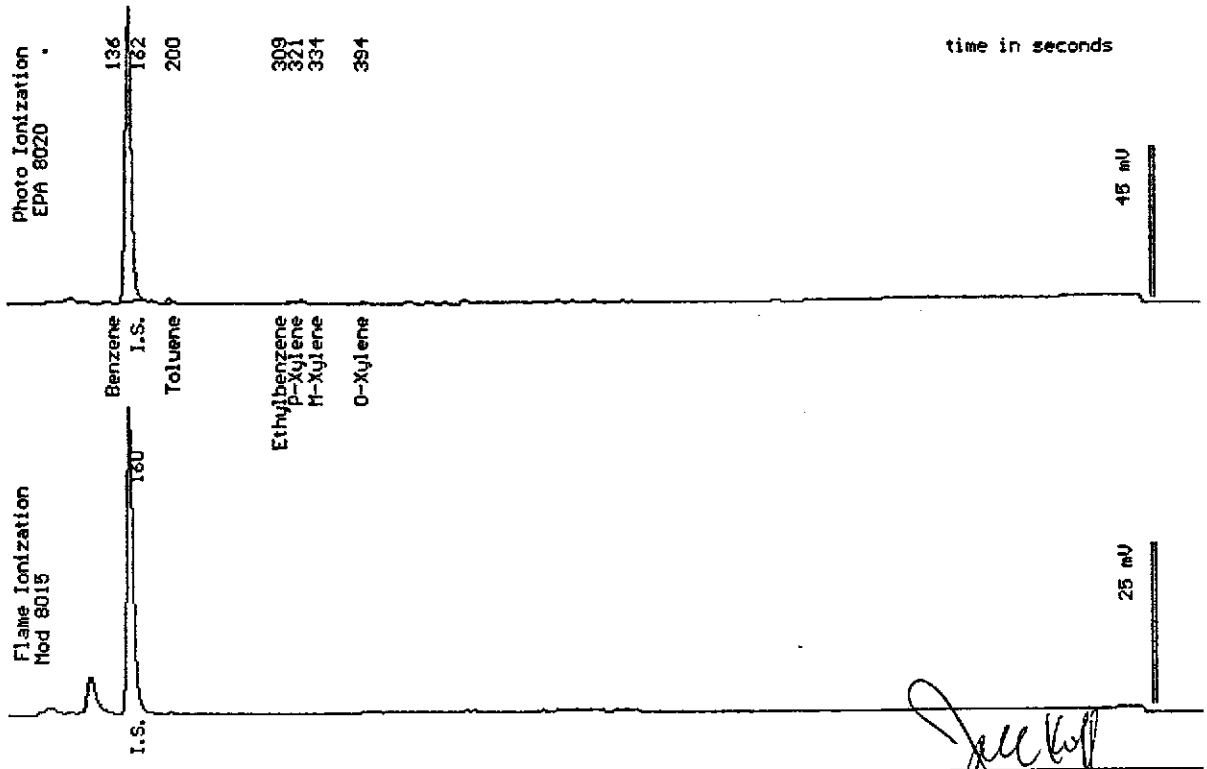
Sample Log 6425

6425-5

Sample: **MW-5-2**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006b
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

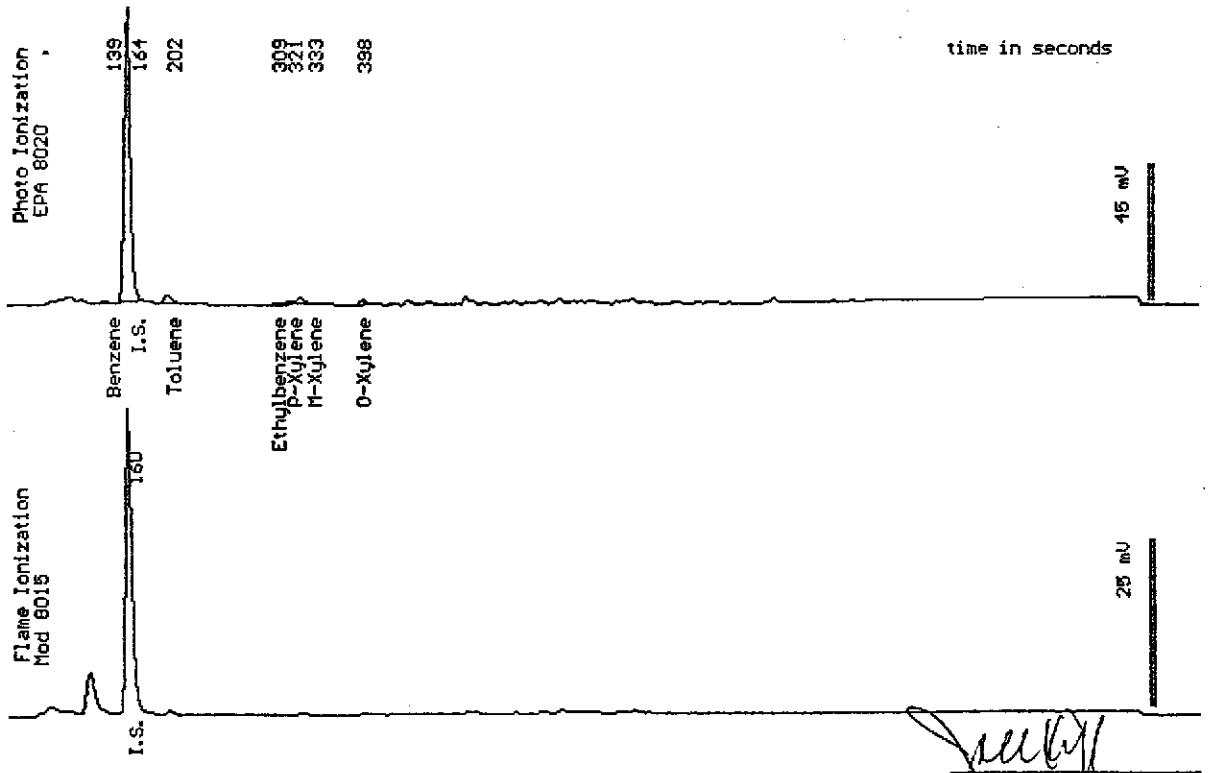
Sample Log 6425

6425-6

Sample: **MW-5-3**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006b
Matrix : Soil

Parameter	(MDL) ug/kg	Measured Value ug/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

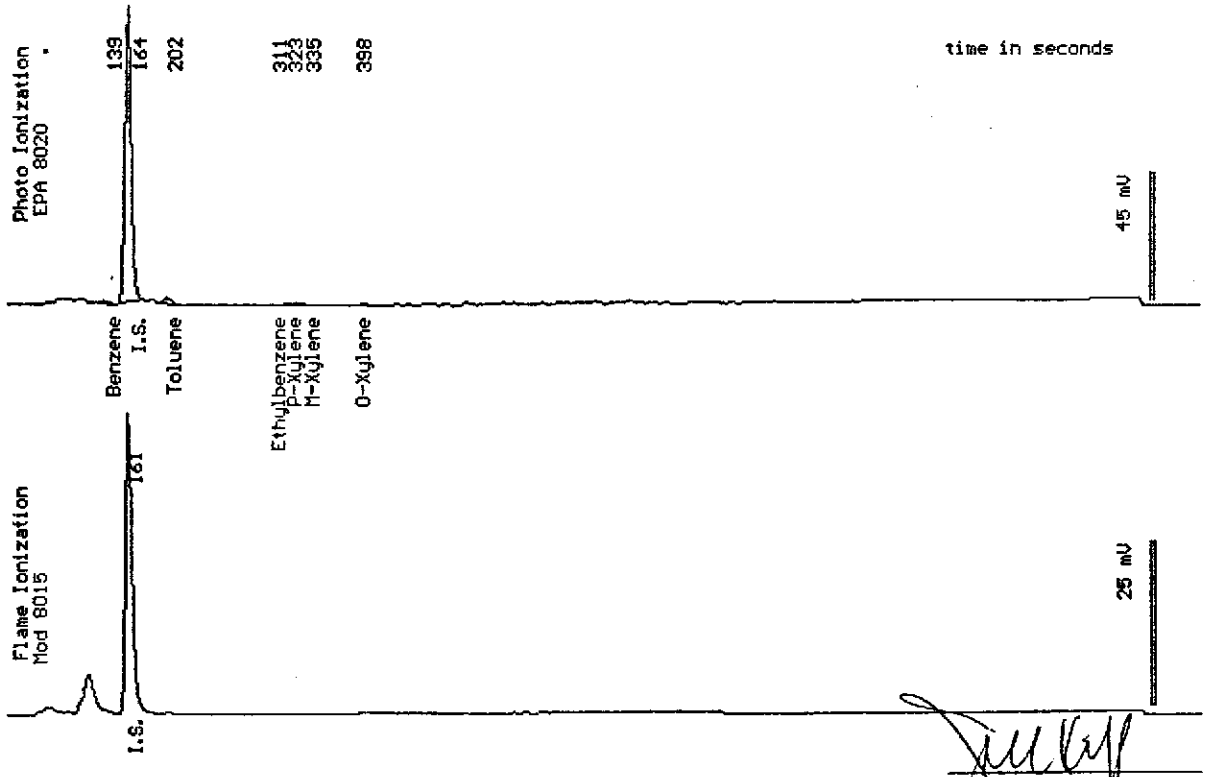
Joel Kiff
Senior Chemist

Sample Log 6425
6425-7

Sample: **MW-6-1**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006b
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

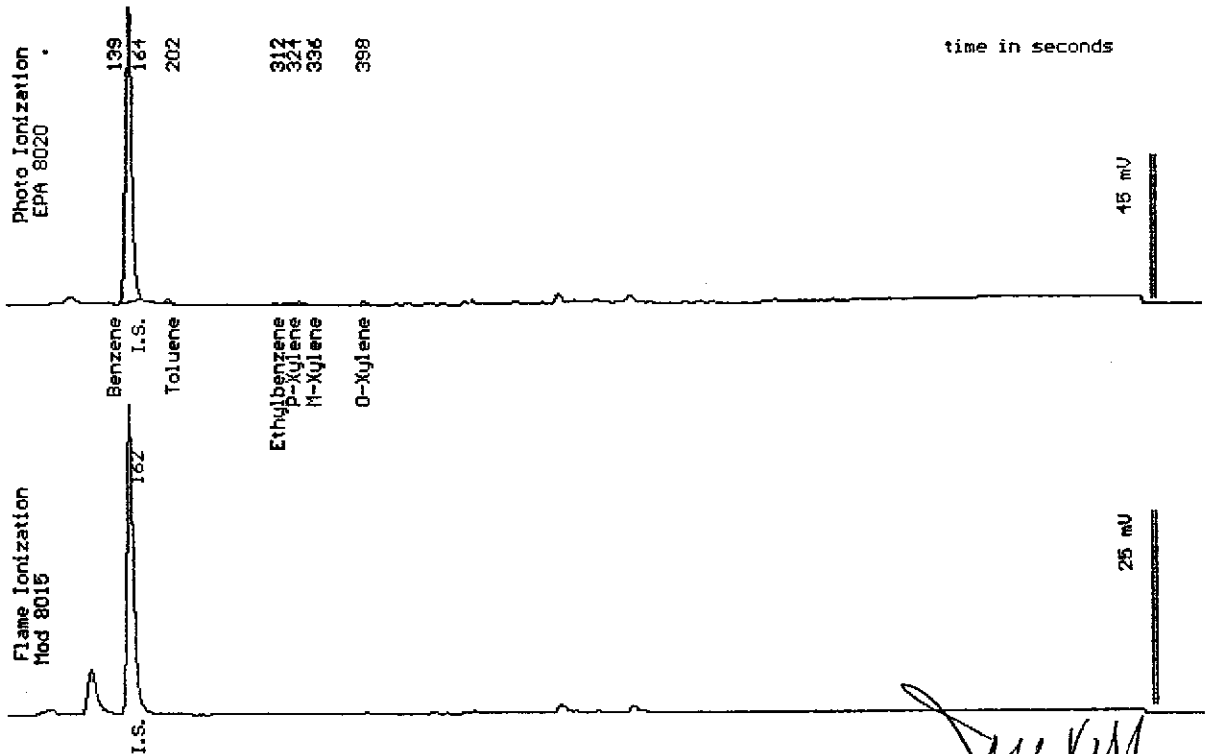
Sample Log 6425

6425-8

Sample: **MW-6-2**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006b
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

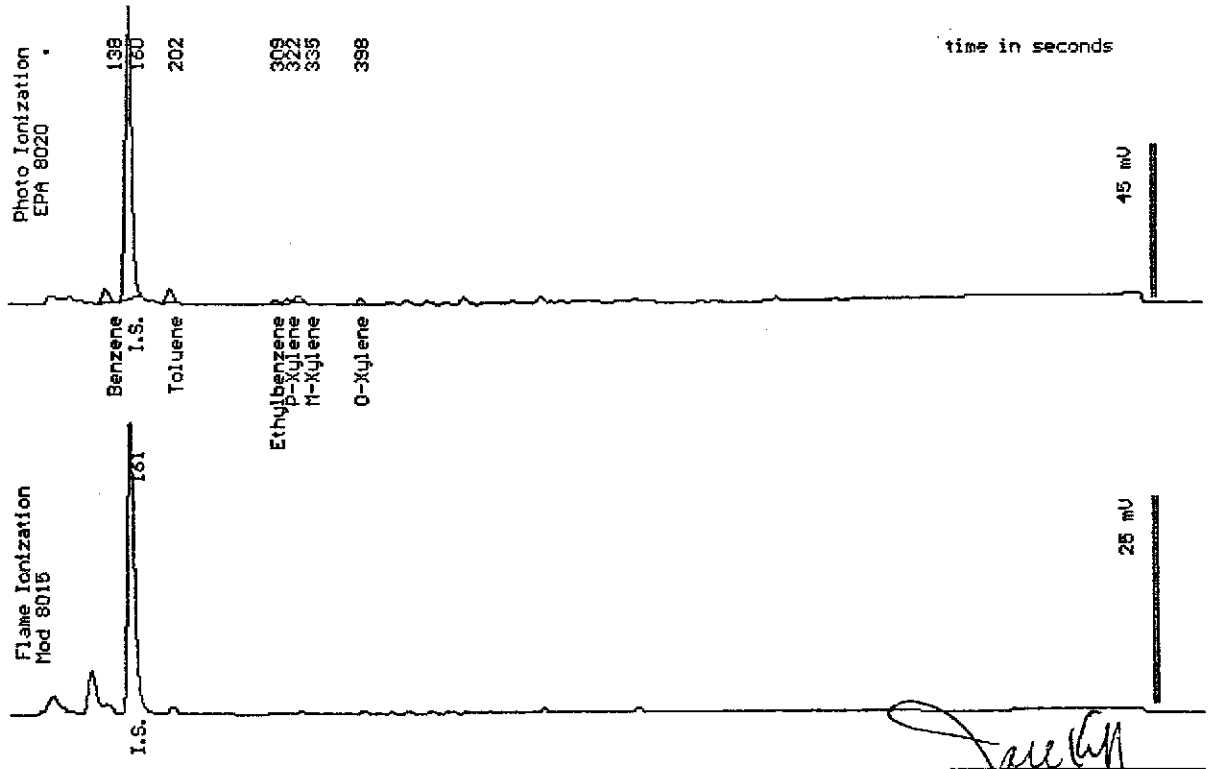
Sample Log 6425

6425-9

Sample: **MW-6-3**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006c
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

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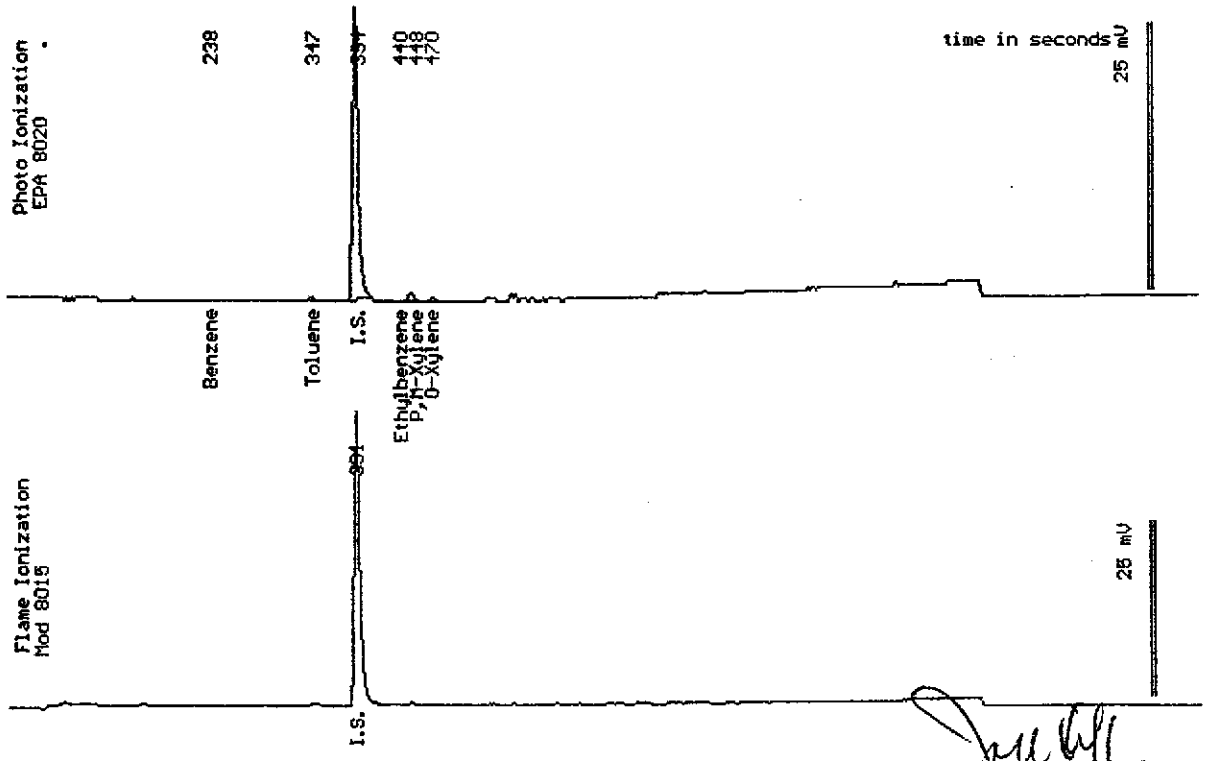
Sample Log 6425
6425-10

Sample: **MW-6-4**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 6021C
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-21-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Senior Chemist

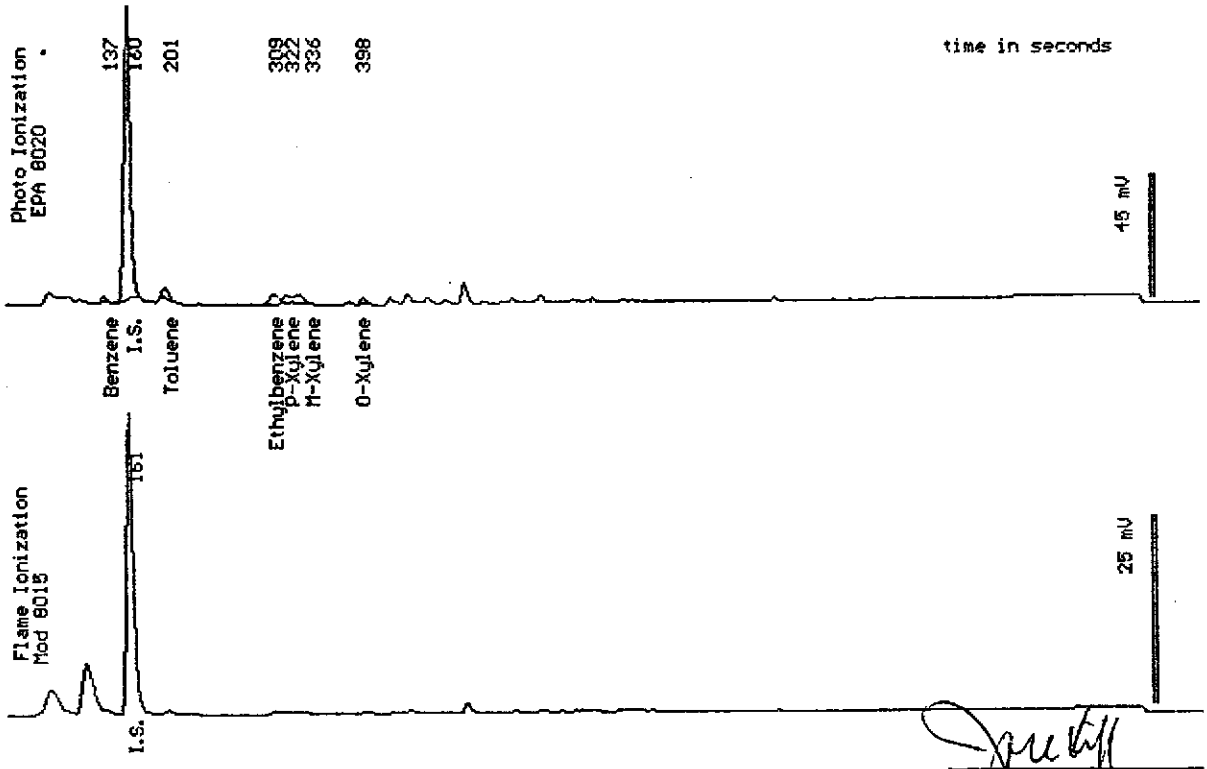
Sample Log 6425

6425-11

Sample: **MW-7-1**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006c
Matrix : Soil

Parameter	(MDL) ug/kg	Measured Value ug/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

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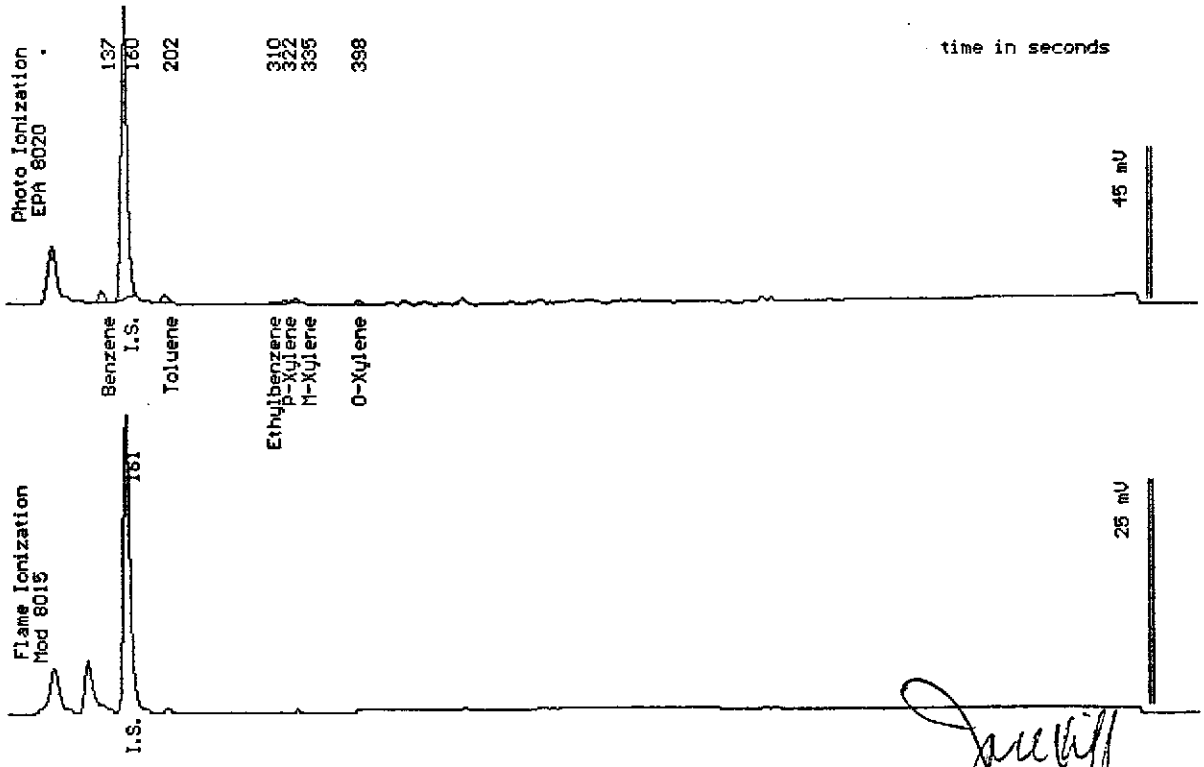
Sample Log 6425

6425-12

Sample: **MW-7-2**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006c
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
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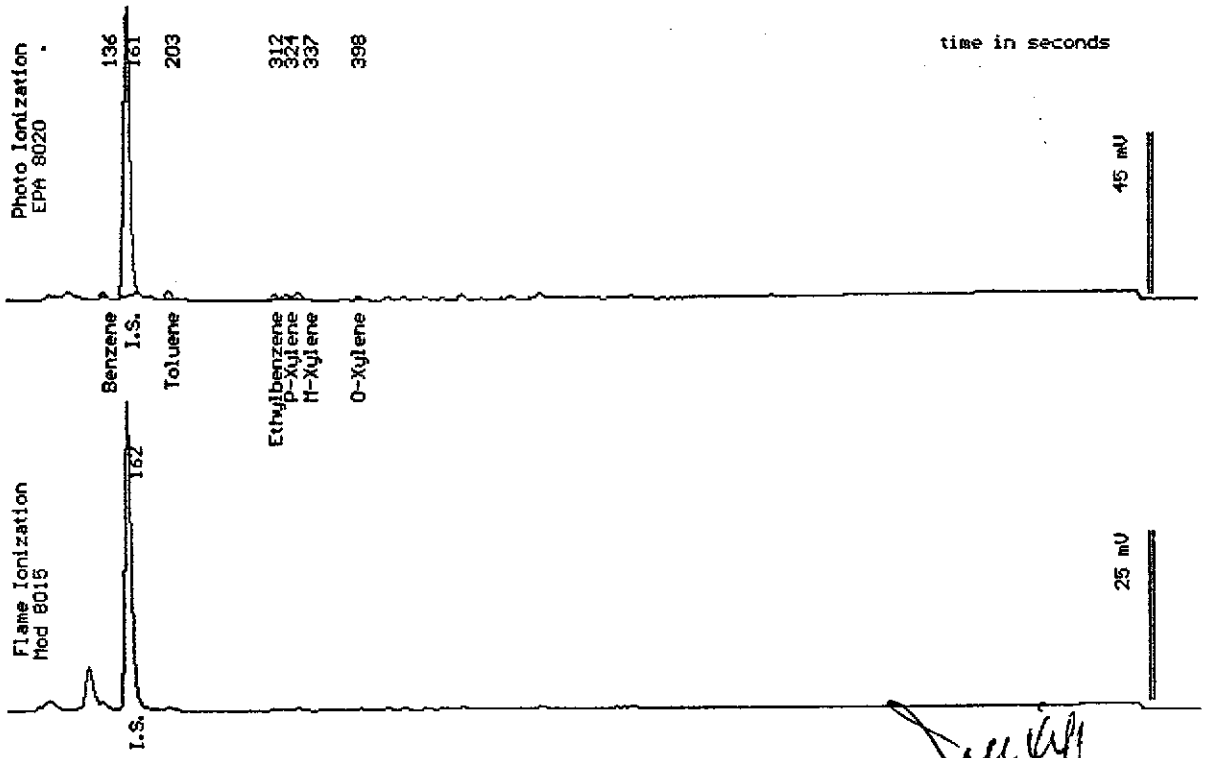
Sample Log 6425

6425-13

Sample: **MW-7-3**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006d
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

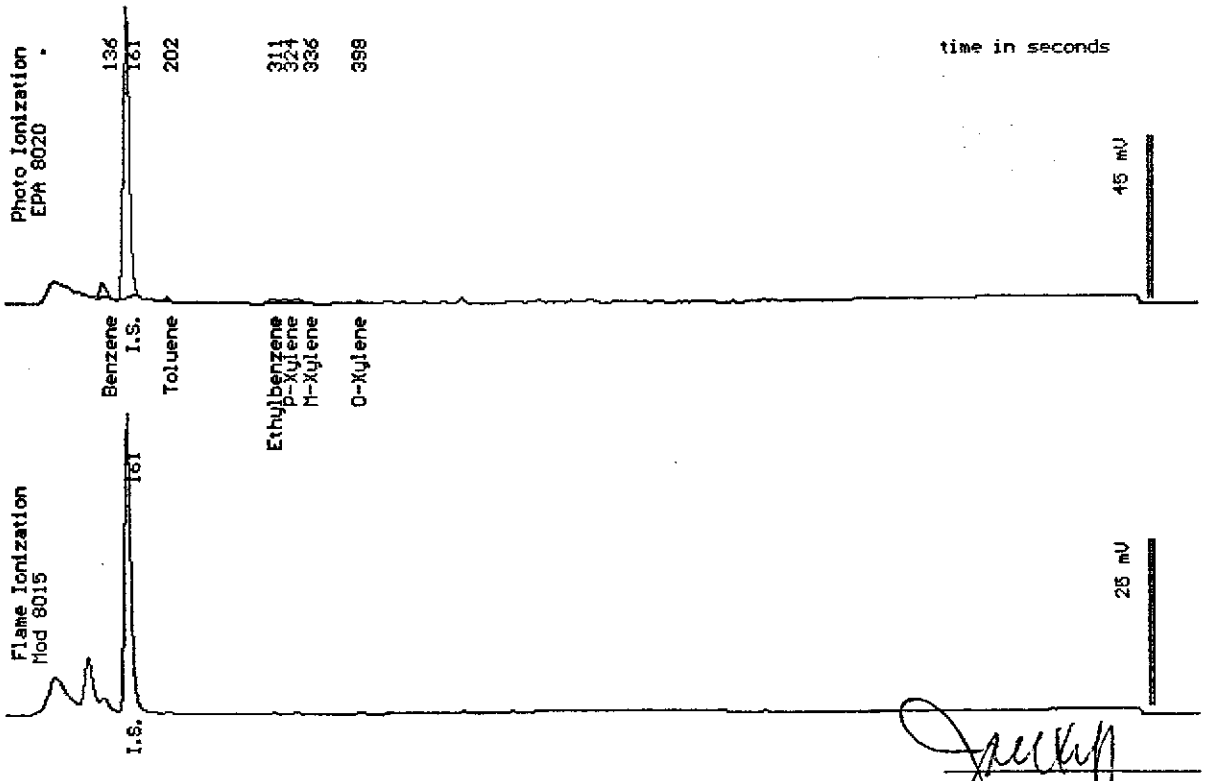
Sample Log 6425

6425-14

Sample: **MW-7-4**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006d
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

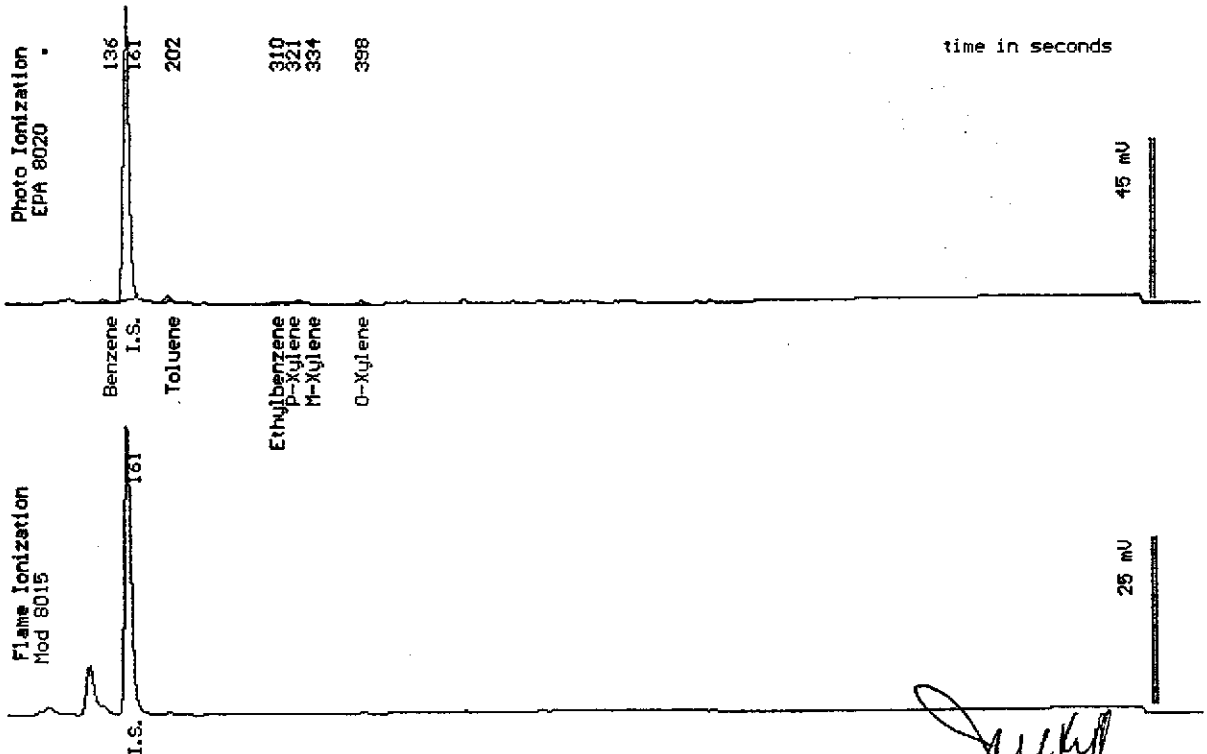
Sample Log 6425

6425-15

Sample: **MW-8-1**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006d
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

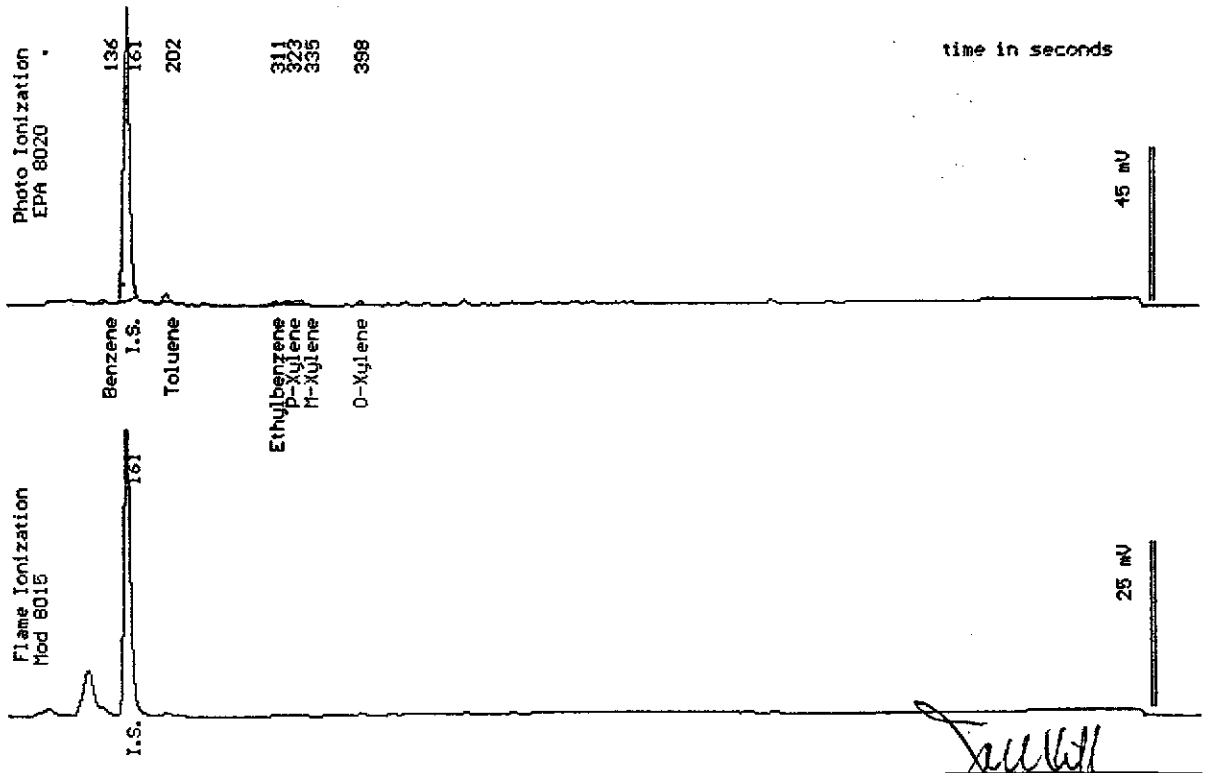
Sample Log 6425

6425-16

Sample: **MW-8-2**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006d
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-20-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

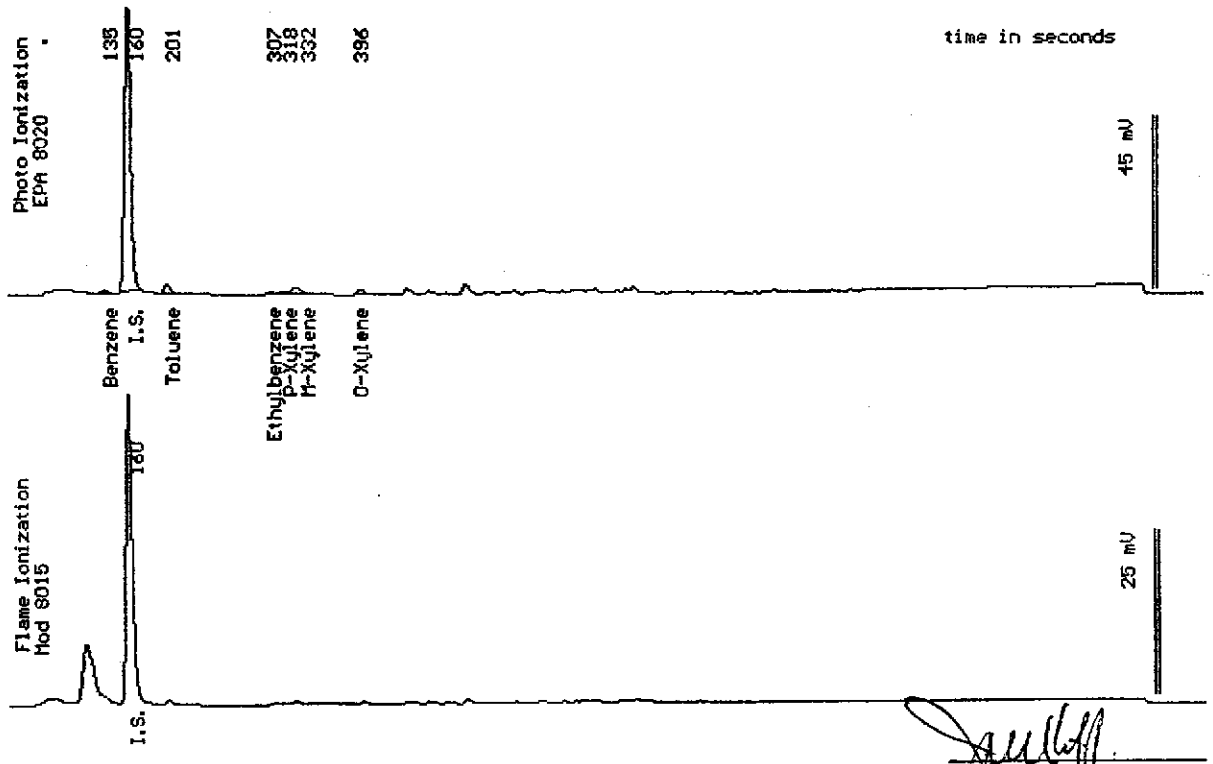
Sample Log 6425

6425-17

Sample: **MW-8-3**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006d
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-21-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

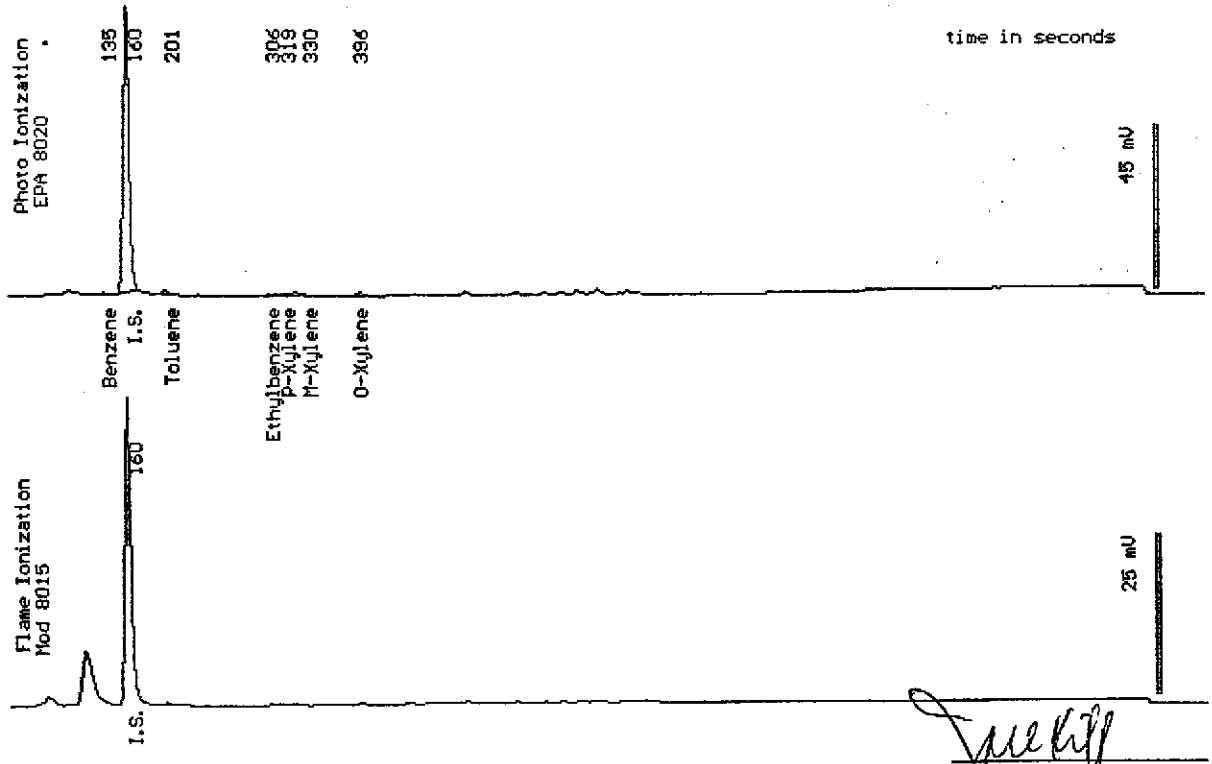
Sample Log 6425

6425-18

Sample: **MW-8-4**

From : Project # UIT21.01 (Former Beacon #574)
Sampled : 05/14/93
Dilution : 1:1 QC Batch : 4006d
Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 05-21-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist

Ultramar Inc.

CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
Former Beacon 574	Hal Hansen	5-14-93	1 of 2

Project No. UIT21.01	Sampler (Signature) [signature]
Project Location 22315 Redwood Rd. Castro Valley	Affiliation AMV

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)						No. of Containers	REMARKS
													ST
MW-4-1	5-14-93			X	X							1	RECEIVED by W.E.S.T. date [illegible]
MW-4-3	↓			↓	↓							↓	
MW-4-4	↓			↓	↓							↓	
MW-5-1	↓			↓	↓							↓	
MW-5-2	↓			↓	↓							↓	
MW-5-3	↓			↓	↓							↓	
MW-6-1	↓			↓	↓							↓	
MW-6-2	↓			↓	↓							↓	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
[signature] AMV	5-14-93	1000			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			[signature]	5/14/93	10:20

Report To: Hal Hansen AMV

Bill to: ULTRAMAR INC
525 West Third Street
Hanford, CA 93230
Attention: Kenneth Earnest

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

32-8003 1/90

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. Former Beacon 574	Sampler (Print Name) Hal Hansen	Date 5-14-93	Form No. 2 of 3
Project No. UIT21.01	Sampler (Signature) Hal Hansen		
Project Location 22315 Redwood Rd Castro Valley	Affiliation AMV		

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)					No. of Containers	REMARKS
MW-6-3	5-13-93			X	X						X	ST
MW-6-4												
MW-7-1												
MW-7-2												
MW-7-3												
MW-7-4												
MW-8-1												
MW-8-2												

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen AMV	5-14-93	1000			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation) [signature]	5/14/93	1010

Report To: Hal Hanson AMV

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Kenneth Earnest

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

32-8003 1/90

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. Former Beacon 574	Sampler (Print Name) Hal Hansen			ANALYSES					Date 5-14-93	Form No. 3 of 3
Project No. 9IT21.01	Sampler (Signature) Hal Hansen								ST	
Project Location 22315 Redwood Rd Castro Valley	Affiliation AMV									
Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)	Organic lead	No. of Containers	REMARKS	
MW-8-3	5-14-93			X	X			1		
MW-8-4	↓			↓	↓			↓		
64231 stockpile ABCD	↓			X	X		X	↓	composite to 1 24 hr rush	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen AMV	5-14-93	1000			
			[signature]	5/14/93	10:00

Report To: Hal Hansen AMV

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Kenneth Earnest

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32-8003 1/90