exxon0993

EXXON COMPANY, U.S.A. QUARTERLY STATUS REPORT

July - September 1993 October 4, 1993 (Page 1 of 2)

RAS #7-3399 2991 Hopyard Road Pleasanton, California Job No: 130009

Work Performed During This Quarter

July through September 1993

- Submit final report for second quarter 1993 Quarterly Monitoring to Exxon August 2, 1993.
- o Performed bi-weekly monitoring on July 2, July 15, July 31, August 15, August 27, and September 15, 1993.
- Collected influent and effluent air samples for laboratory analysis of TPHg and BTEX from the interim vapor extraction and remediation system on September 15, 1993
- o Performed quarterly monitoring third quarter 1993 on September 24, 1993.

Groundwater Sampling (sampled 4/12/93) Results: (ug/L)

Well	TPHg	<u>B</u>	<u>T</u>	<u>E</u>	<u>x</u>	Historical Trends
MW-1		_	Well Inaccessi	ible		
MW-2			Well Destroy	red		
MW-3			Well Destroy	red		•
MW-4	360	20	10	22	80	Decreased
MW-5d	<50	1.0	1.0	2.5	7.4	Not Applicable
MW-5s	220	11	5.9	13	48	Not Applicable
MW-6			Well Destroy	red		
MW-7			Not Sample	:d		
MW-8	230	26	7.3	11	38	Increased
MW-9			Well Dry			
MW-10	350	21	11	21	75	Not Applicable
MW-11	<50	<0.5	<0.5	<0.5	< 0.5	Not Applicable

Free Phase Product Recovery

Not Applicable

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EXXON COMPANY, U.S.A. QUARTERLY STATUS REPORT

July - September 1993 October 4, 1993 (Page 2 of 2)

> RAS #7-3399 2991 Hopyard Road Pleasanton, California Job No: 130009

Work to be Performed Next Quarter

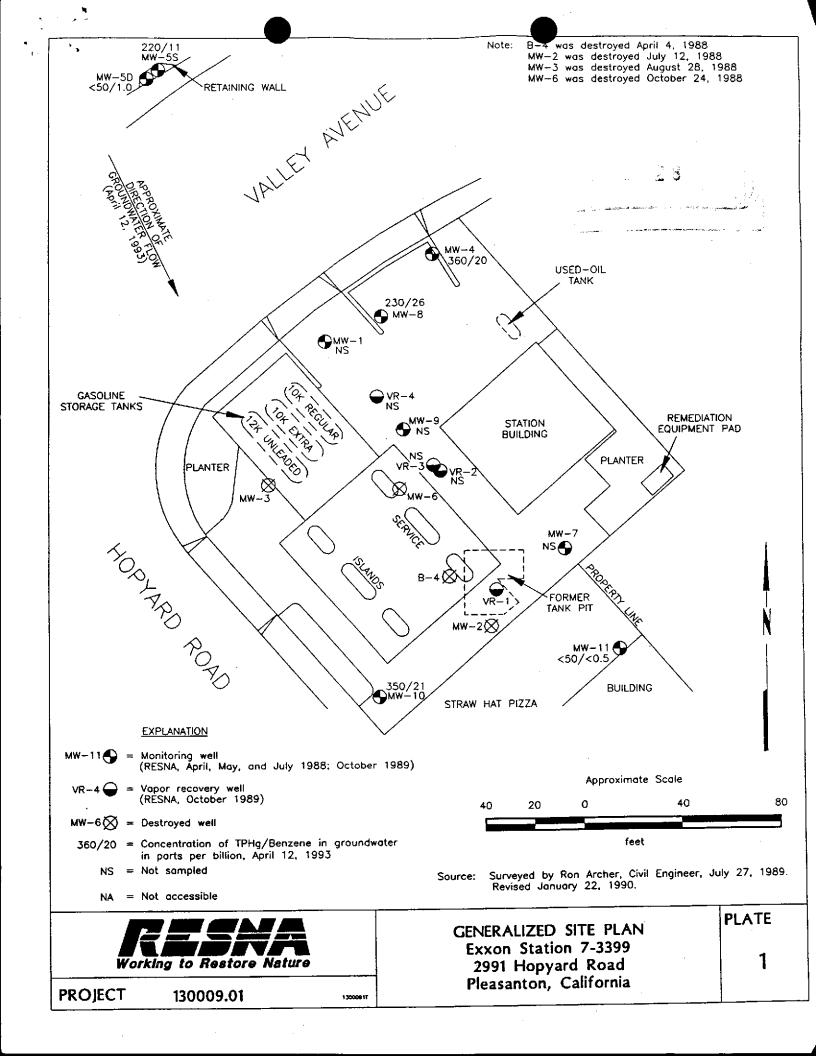
Estimated Completion Date 12/31/93

- Submit final report for third quarter 1993 Quarterly Monitoring to Exxon.
- Continue with bi-weekly monitoring of the carbon system, if any carbon breakthrough should occur, change out the carbon canisters.
- Perform quarterly monitoring for the fourth quarter 1993 on November 10, 1993.
- Submit final report for fourth quarter 1993 Quarterly Monitoring to Exxon.

Work to be Performed Next 12 Months

Estimated Completion Date 09/30/94

- Continue monthly monitoring and quarterly groundwater sampling program to evaluate the trends of gasoline hydrocarbons and groundwater gradient in first encountered groundwater below the site.
- Continue with bi-weekly monitoring of the carbon system, if any carbon breakthrough should occur, change out the carbon canisters.



EXXON COMPANY, U.S.A. QUARTERLY STATUS REPORT

July - September 1993 October 4, 1993 (Page 1 of 2)

> RAS #7-7003 349 Main Street Pleasanton, California Job No: 130015

Work Performed During This Quarter

July through September 1993

- Performed a vapor extraction test (VET) on the three vapor-extraction wells on August 5, 1993;
- Submitted final report for Second Quarter 1993 Quarterly Monitoring to Exxon on August 2, 1993.
- Performed quarterly monitoring third quarter 1993 on September 22 and 23, 1993.
- Initiated preparation of the Interim Remedial Action Plan.

Groundwater Sampling (sampled June 8 and 9, 1993) Results: (ug/L)

Well MW-1	<u>TPHg</u> 7,500	Benzene 42	Toluene 32	Ethyl- benzene 970	Total <u>Xylenes</u> 720	VOCs 1.8 ¹ 0.8 ² 1.0 ³	Historical Trends Decreased
MW-2	160	0.5	3.3	5.7	2.0	NA	Decreased
MW-3	<50	0.6	0.9	3.4	2.8	NA	Increased
MW-4	<50	0.7	0.9	0.7	<0.5	0.63	Decreased
MW-5	<50	< 0.5	<0.5	<0.5	< 0.5	NA	Decreased
MW-6	<50	0.6	0.7	1.7	1.8	NA	Increased
MW-7	<50	< 0.5	0.8	< 0.5	<0.5	NA	Decreased
MW-8	65	< 0.5	1.1	0.8	1.7	NA	Not Applicable
VE-1	5,800	<5.0	15	830	500	NA	Not Applicable
VE-2	7,000	10	18	900	340	NA	Not Applicable
VE-3	130	3.1	3.1	18	15	NA	Not Applicable

Chloroform

Free Phase Product Recovery

Not Applicable

Tetrachloroethene

^{1,2-}Dichloroethane

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EXXON COMPANY, U.S.A. QUARTERLY STATUS REPORT July - September 1993 October 4, 1993 (Page 2 of 2)

RAS #7-7003 349 Main Street Pleasanton, California Job No: 130015

Work to be Performed Next Quarter

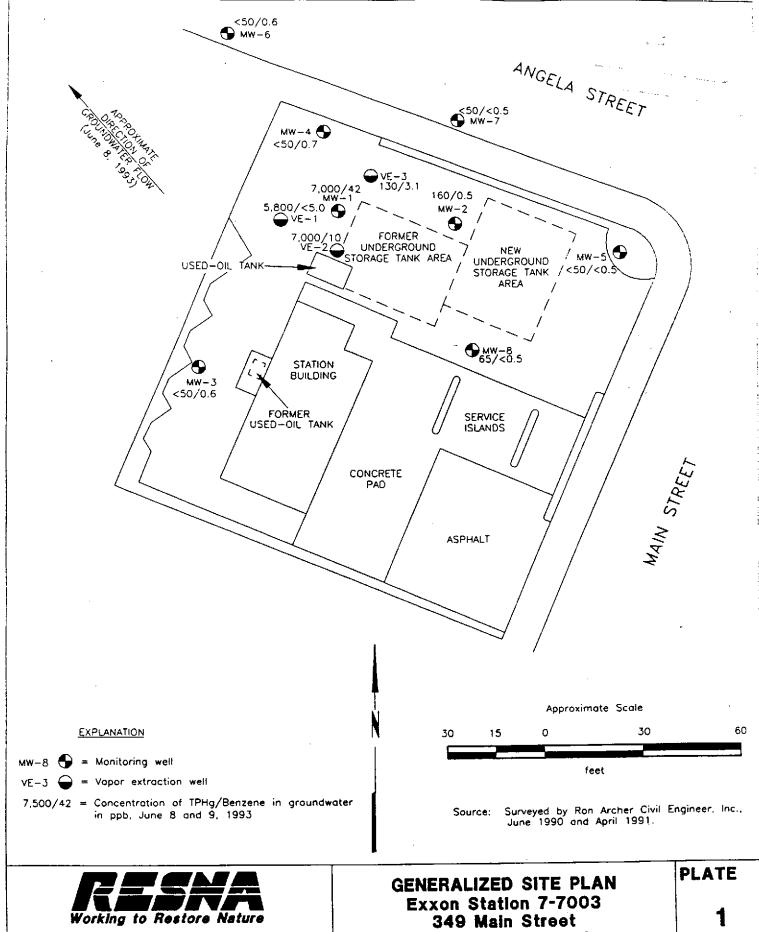
Estimated Completion Date 12/31/93

- Submit final report for third quarter 1993 Quarterly Monitoring to Exxon.
- Submit final Interim Remedial Action Plan to Exxon.
- Submit final Additional Investigation report to Exxon.
- Submit final report for third quarter 1993 Quarterly Monitoring to Exxon.
- o Perform quarterly monitoring for the fourth quarter 1993 on November 15 and 16, 1993.
- Submit final report for fourth quarter 1993 Quarterly Monitoring to Exxon.

Work to be Performed Next 12 Months

Estimated Completion Date 09/30/94

Continue quarterly groundwater monitoring and sampling program to evaluate the trends of gasoline hydrocarbons and groundwater gradient in first encountered groundwater below the site.



PROJECT

130015.01

Pleasanton, California





3315 Almaden Expressway, Suite 34 San Jose, CA 95118 Phone: (408) 264-7723 FAX: (408) 264-2435

> July 28, 1993 0610MGUE 130009.01

Ms. Marla D. Guensler Exxon Company U.S.A. 2300 Clayton Road, Suite 1250 P.O. Box 4032 Concord, California 94520

Subject:

Letter Report on Second Quarter 1993 Groundwater Monitoring and

Remediation Activities, at Exxon Station 7-3399, 2991 Hopyard Road,

Pleasanton, California.

Ms. Guensler:

As requested by Exxon Company U.S.A. (Exxon), this letter report summarizes the methods and results of the second quarter 1993 groundwater monitoring and remediation activities performed by RESNA Industries Inc. (RESNA) at the above-subject site. The Exxon station is located at the eastern corner of the intersection of Hopyard Road and Valley Avenue in Pleasanton, California as shown on Plate 1, Site Vicinity Map. The site is bounded on the northwest by Valley Avenue; on the southwest by Hopyard Road; on the northeast by a shopping center parking lot owned by Lucky Stores, Inc., of Dublin, California; and on the southeast by an access drive and Straw Hat pizza parlor owned by Mr. Ralph Henderlong of Alamo, California.

The objectives of this quarterly monitoring are to evaluate trends in the groundwater gradient and flow direction, and trends in concentrations of gasoline hydrocarbons in the local groundwater associated with former and existing gasoline underground storage tanks (USTs) at the site. Remediation activities at this site currently consists of vapor extraction to reduce gasoline hydrocarbons in the subsurface soils.

Prior to the present monitoring, RESNA and others performed environmental investigations and subsequent limited subsurface investigations related to the removal and replacement of three gasoline USTs and one used-oil UST in July 1988. The results of these investigations are presented in the reports listed in the references section. Quarterly groundwater monitoring began in April 1988, after RESNA (formerly Applied GeoSystems [AGS]) completed a limited subsurface environmental investigation (AGS, April 22, 1988).



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Site Setting and Background

The gasoline USTs in the southeastern portion of the site were removed and replaced in July 1988. The original service station on the site was demolished in September 1988, and new station facilities were constructed between September 1988 and February 1989. The new station facility is occupied by four gasoline USTs that contain premium unleaded, super-regular unleaded, regular unleaded gasoline, and used-oil (Plate 2, Generalized Site Plan).

Of the twelve original monitoring wells, nine wells are currently used to monitor groundwater at the site. Seven of the existing wells (MW-1, MW-4, MW-5s, MW-7, MW-9, MW-10, and MW-11) are screened in the first water-bearing unit beneath the site, well MW-5d is screened in the second water-bearing unit, and well MW-8 is screened in the third water-bearing unit. Monitoring wells MW-2, MW-3, and MW-6 were destroyed in 1988.

Prior to the recent drought, a groundwater recovery system was in operation at the site between 1988 and 1990, and consisted of pumping groundwater from well MW-7 (first water-bearing unit), passing it through an oil-water separator, and discharging the treated groundwater into the sanitary sewer under a permit from the Dublin-San Ramon Services District. It is anticipated that groundwater recovery from well MW-7 will continue once sufficient water has recharged in the first water-bearing unit.

On March 10, 1992, the existing vapor treatment system was modified to a vacuum pump and vapor-phase activated carbon system, permitted under Authority to Construct No. 7845, dated January 8, 1992 and Permit to Operate dated October 9, 1992. Start-up of the vapor-phase carbon system was initiated on October 12, 1992.

Groundwater Sampling and Gradient Evaluation

Monthly depth-to-water (DTW) levels were measured in monitoring wells MW-1, MW-4, MW-5d, MW-5s, and MW-7 through MW-11 on April 12 and June 1, 1993, and quarterly sampling was performed on April 12, 1993. Because wells MW-1 and MW-9 are coupled to the vapor extraction system, they are inaccessible for groundwater sampling. Well MW-7 was not accessible for purging and sampling due to the presence of a pump in the well. Field work at the site consisted of measuring DTW levels in the groundwater monitoring wells, subjectively analyzing water from the wells for the presence of free-phase hydrocarbons, and purging and sampling the groundwater from wells MW-4, MW-5d, MW-5s, and MW-8. Wells MW-10 and MW-11 were not purged due to insufficient water, but grab water samples were collected. Groundwater sampled collected from wells MW-4, MW-5d, MW-4, MW-4, MW-5d, MW-4, MW-4,



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5s, and MW-8 are considered grab water samples due to low purge volumes. Field methods are described in Appendix A, Groundwater Sampling Protocol and Well Purge Data Sheets.

Results of Groundwater Monitoring

7

RESNA calculated groundwater elevations for each well by subtracting the measured DTW from the elevation of the wellhead. The measured DTW levels, wellhead elevations, and groundwater elevations for this and previous monitorings at the site are summarized in Table 1, Cumulative Groundwater Monitoring Data.

Based on DTW measurements taken between April and June 1993 from wells in the first water-bearing unit, water levels have decreased approximately 0.3 feet in wells MW-1 and MW-5s, and have increased an average of 0.5 feet in wells MW-4, MW-7, and MW-11 since last quarter. The water level in wells MW-5d (second water-bearing unit) and MW-8 (third water-bearing unit) has increased approximately 6 feet since last quarter.

Based on the April 12, 1993, groundwater elevation data, the interpreted local groundwater gradient and flow direction of the shallowest water-bearing unit is approximately 0.02 toward the south-southeast. Based on the June 1, 1993, groundwater elevation data, the interpreted local groundwater gradient and flow direction of the shallowest water-bearing unit is approximately 0.02 toward the south. These flow directions are generally consistent with the south-southwest flow direction interpreted for February 1993.

No evidence of free-phase hydrocarbons was observed in the water samples collected for subjective analysis from wells MW-4, MW-5d, MW-5s, MW-8, MW-10 and MW-11. Results of the subjective analyses are summarized in Table 1, Cumulative Groundwater Monitoring Data.

Wells MW-4, MW-5d, MW-5s, and MW-8 were purged and sampled in accordance with the groundwater sampling protocol included in Appendix A, Groundwater Sampling Protocol and Well Purge Data Sheets. Well purge data sheets reporting the monitored parameters, temperature, pH, conductivity, and turbidity, are also included in Appendix A.

Results of Laboratory Analysis

The groundwater samples from monitoring wells MW-4, MW-5d, MW-5s, MW-8, MW-10, and MW-11 were analyzed by Pace Incorporated laboratories (California State Certification Number 1282) in Novato, California for total petroleum hydrocarbons as gasoline (TPHg) and the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) using modified Environmental Protection Agency (EPA) Methods 5030/8015/8020. The



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chain of custody record and laboratory analysis sheets are included in Appendix B, Laboratory Analysis Reports and Chain of Custody Record. The results of this and previous groundwater analyses are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples.

Results of this quarter's laboratory analyses of groundwater samples from wells MW-4, MW-5d, MW-5s, MW-8, MW-10, and MW-11 indicate:

- TPHg and BTEX was not detected in well MW-11;
- O TPHg was detected in wells MW-4, MW-5s, MW-8, and MW-10 at concentrations ranging from 220 parts per billion (ppb) (MW-5s) to 360 ppb (MW-4), and was not detected in well MW-5d;
- benzene was detected in wells MW-4, MW-5d, MW-5s, MW-8, and MW-10 at concentrations ranging from 1.0 ppb (MW-5d) to 26 ppb (MW-8). The concentrations in these wells are equal to or greater than the Department of Health Services (DHS) Maximum Contaminant Level (MCL) of 1.0 ppb benzene in drinking water;
- toluene, ethylbenzene, and total xylenes were detected in wells MW-4, MW-5d, MW-5s, MW-8, and MW-10 at concentrations that are less than the DHS Drinking Water Action Level (DWAL) of 100 ppb toluene, and MCLs of 680 ppb ethylbenzene and 1,750 ppb total xylenes in drinking water.

INTERIM SOIL REMEDIATION

Soil-Vapor Extraction System

Field organic vapor concentrations are being monitored using a FID (Flame Ionization Detector) and a PID (Photoionization Detector) at the system influent, effluent, and inbetween canisters as indicated in a letter to the Bay Area Air Quality Management District (BAAQMD) [RESNA, December 3, 1992]. Monitoring and carbon changeouts are being performed in accordance to the BAAQMD permit to operate conditions for this system. Cumulative results of field organic vapor measurements are summarized in Table 3.



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During this quarter, the influent organic vapor concentrations have ranged from 0.7 to approximately 5.0 ppm and the effluent concentrations were consistently 0.0 ppm (Table 3, Cumulative Results of Field Organic Vapor Measurements). The influent organic vapor concentrations this quarter appear to be generally lower than first quarter, 1993, results and appear to be continually decreasing with time. Carbon changeout has been occurring approximately every 30 days prior to January 21, 1993 as summarized in Table 3. There has been two carbon changeout events between January 21, 1993 and the present. This indicates a reduction of influent organic vapor concentrations. Approximately 1.2 lbs (19 gallons) of TPHg has been recovered this quarter.

Beginning February 16, 1993, the system has been alternately turned on and off (pulsed) approximately every two weeks. Organic vapor levels have been measured at each of the onsite vapor wells and any dry groundwater monitoring wells. The system is being pulsed to evaluate whether the lowered levels of organic vapor concentrations measured in the past few months are representative of the subsurface soils, and whether the system is efficiently removing gasoline hydrocarbons from beneath the site. As influent concentrations decrease, it is expected that the influent stream flowrate can be increased to the maximum organic vapor concentration loading rate allowed into the system without resulting in frequent carbon changeouts. The system influent flowrate can be increased by opening the valves further on the vapor extraction wells. Field monitoring of the carbon system will continue bi-weekly. If continued pulsing of the system results in consistently lower organic vapor concentrations, RESNA will submit a request to BAAQMD to perform less frequent field monitoring.

Limitations

This report was prepared in accordance with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This report has been prepared for Exxon Company U.S.A. and any reliance on this report by third parties shall be at such party's sole risk.

Copies of this report should be forwarded to:

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



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Mr. Jerry Killingstad
Alameda County Flood Control
and Water Conservation District (Zone 7)
5997 Parkside Drive
Pleasanton, California 94566

Mr. Steve Cusenza
City of Pleasanton Public Works Department
P.O. Box 520
Pleasanton, California 94566-0802

Mr. Rick Mueller Pleasanton Fire Department 4444 Railroad Street Pleasanton, California 94566

If you have any questions or comments, please call (408) 264-7723.

Sincerely,

RESNA Industries Inc.

Kana Michital

Jeanne Buckthal Geologic Technician

Narch-C

Naresh Channaveerappa

Staff Engineer

JAMES LEWIS NELSON

No. 1463

CERTIFIED ENGINEERING GEOLOGIST

E OF CALIFORN

James L No

C.E.G. No. 1463

A. S. C.



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Enclosures: References

Plate 1: Plate 2: Plate 3: Plate 4: Plate 5: Plate 6:	Site Vicinity Map Generalized Site Plan Groundwater Gradient Map (April 12, 1993) Groundwater Gradient Map (June 1, 1993) TPHg Concentrations in Groundwater Benzene Concentrations in Groundwater
Table 1: Table 2:	Cumulative Groundwater Monitoring Data Cumulative Results of Laboratory Analyses of Groundwater Samples Cumulative Results of Field Organic Vapor Measurements
Table 3: Table 4:	Cumulative Results of Field Organic Vapor Measurements Cumulative Results of Influent and Effluent Vapor Samples

Appendix A, Groundwater Sampling Protocol and Well Purge Data Sheet Appendix B, Laboratory Analysis Reports and Chain of Custody Record



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REFERENCES

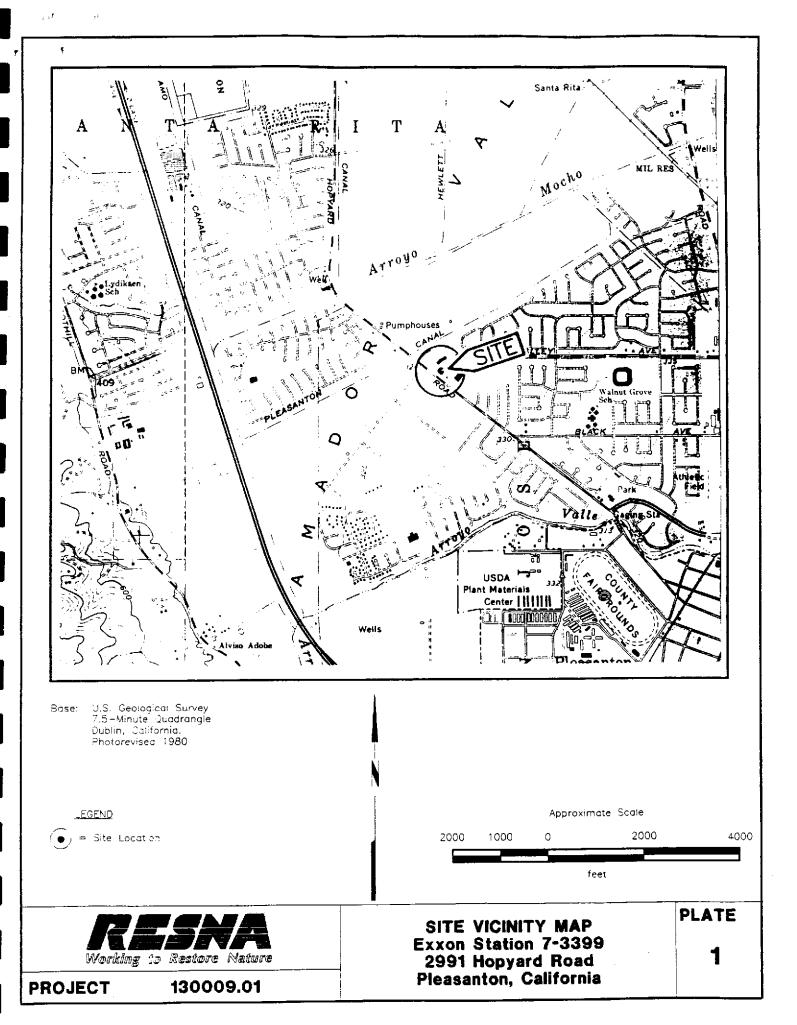
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- Applied GeoSystems. August 22, 1988. Report, Removal of Underground Gasoline Storage
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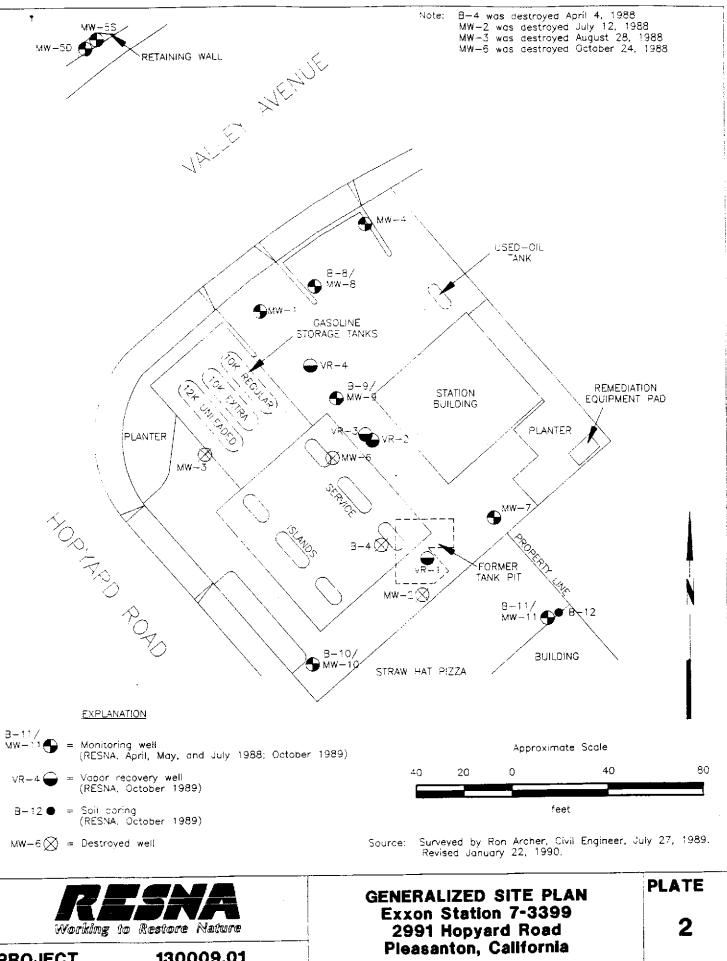


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REFERENCES (Continued)

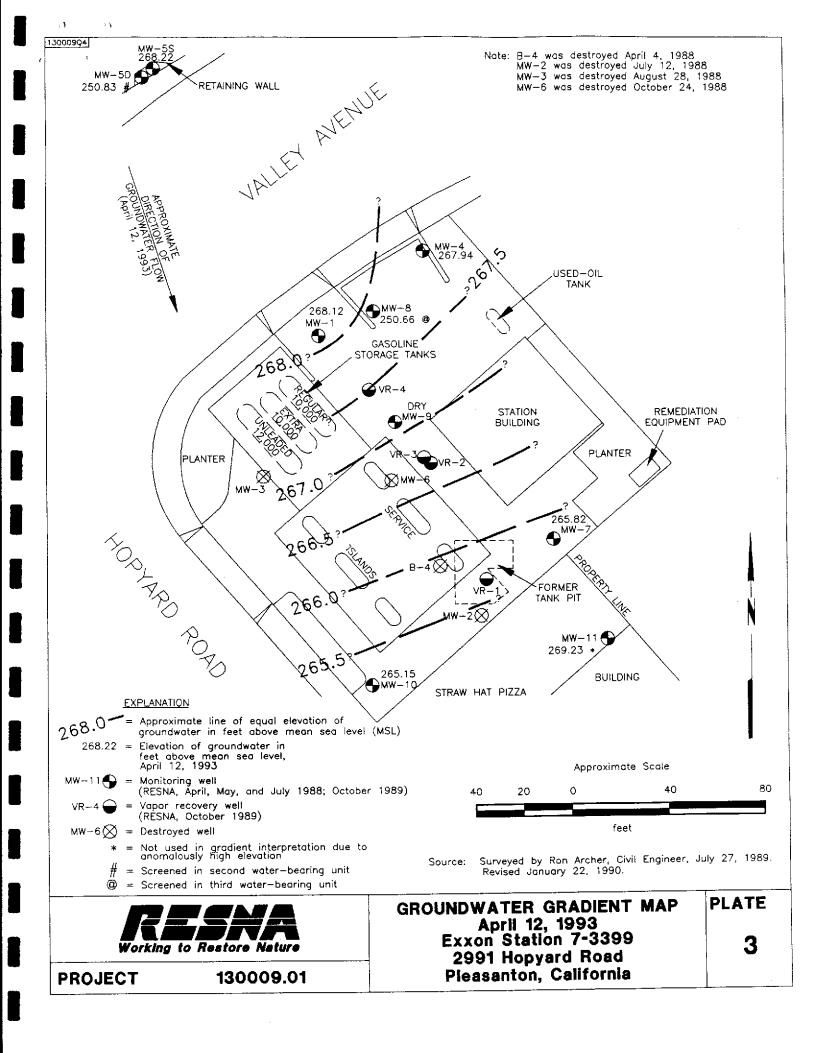
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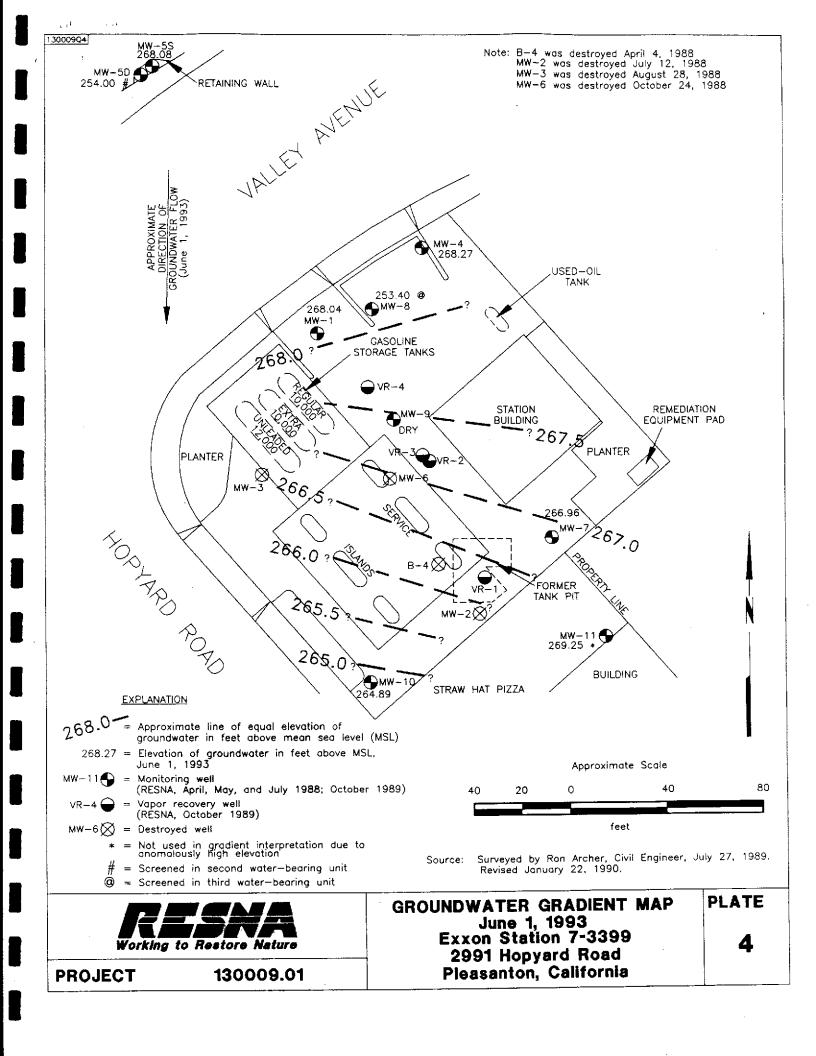


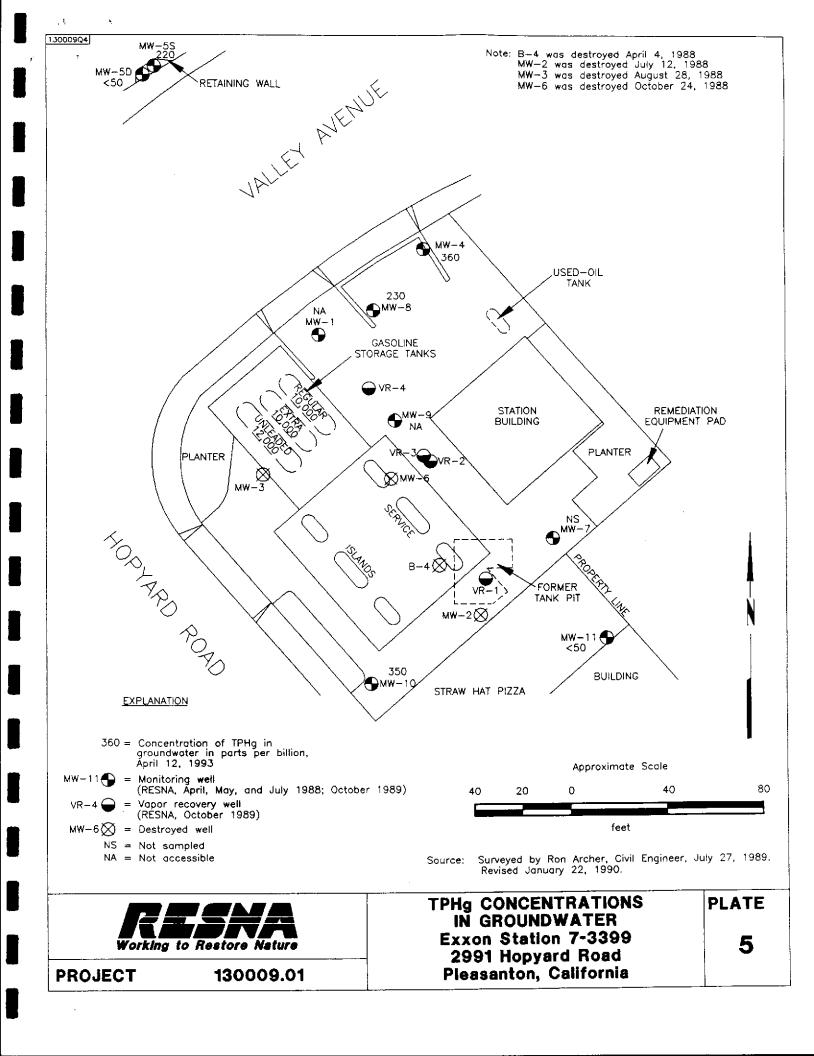


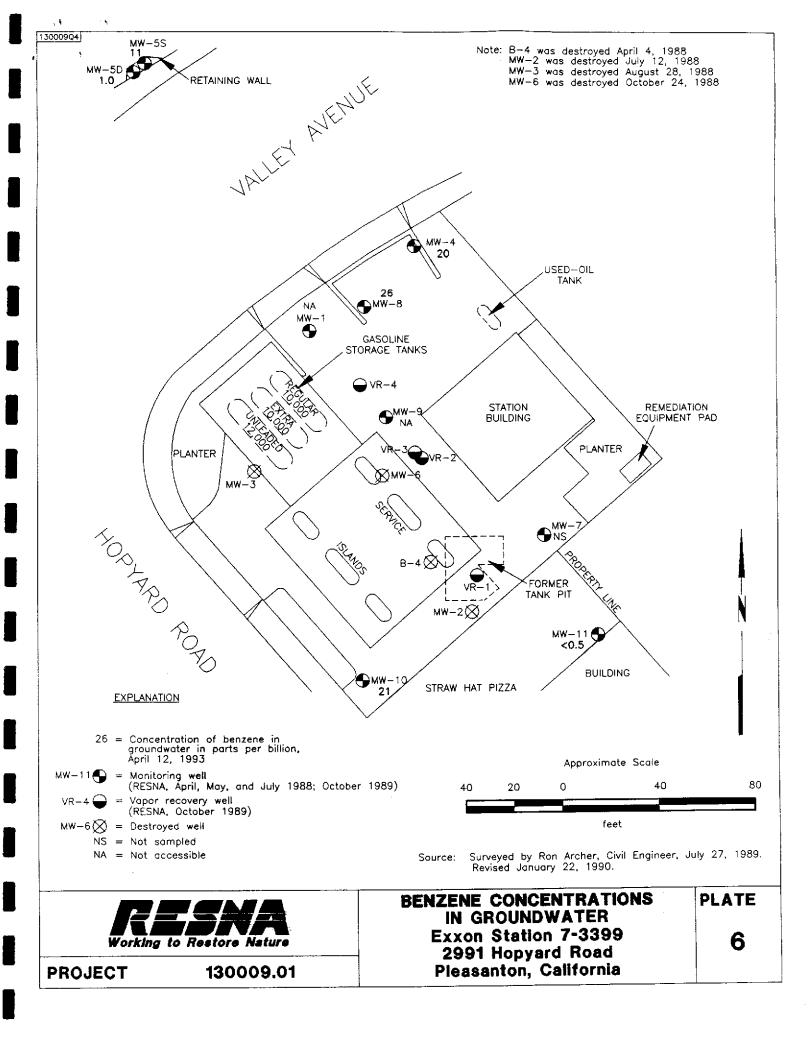
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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399 Pleasanton, California Page 1 of 16 See notes on page 16

WELL	DATE	WELL	DEPTH TO	GROUNDWATER	FLOATING
		ELEVATION	WATER	ELEVATION	PRODUCT
MW-1	04/06/88	321.44	36.34	285.10	None
	04/08/88		36.29	285.15	None
	04/19/88		36.36	285.08	None
	06/06/88		38.16	283.28	None
	06/23/88		38.71	282.73	None
	06/28/88		39.16	282.28	None
	07/06/88		39.73	281.71	None
	07/13/88		40.22	281.22	None
	08/12/88		NA		
	08/26/88		41.90	279.54	None
	09/07/88		42.27	279.17	None
	12/07/88		43.94	277.50	None
	12/19/88		43.70	277,74	None
	02/09/89		42.53	278.91	None
	03/08/89		41.96	279.48	None
	04/03/89		41.59	279.85	None
	04/26/89		41.67	279.77	None
	06/30/89		43.79	277.65	None
	07/17/89		44.74	276.70	None
	07/18/89		44.76	276.68	None
	07/19/89		44.82	276.62	None
	07/20/89		44.85	276.59	None
	07/21/89		44.95	276.49	None
	07/26/89		45.42	276.02	None
	08/02/89		NA		
	08/03/89		46.18	275.26	None
	08/17/89		47.12	274.32	None
	09/13/89		49.08	272.36	None
	11/28/89		50.21	271.23	None
	01/09/90		49.31	272.13	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399 Pleasanton, California Page 2 of 16 See notes on page 16

WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-1	01/26/90		49.29	272.15	None
cont.	02/23/90		#49.02	272.42	None
	02/23/90		49.02	272.42	None
	03/26/90	<u> </u>	#48.71	272.73	None
	03/26/90		48.70	272.74	None
	04/18/90		48.79	272.65	None
	05/17/90		49.40	272.04	None
	06/11/90		50.83	270.61	None
	07/30/90		52.17	269.27	None
!	08/27/90		53.44	268.00	None
	09/28/90		53.40	268.04	None
	12/27/90		NA		
	03/20/91		53.35	268.09	None
	06/20/91		53.55	267.89	None
	09/12/91		NA		
	12/30/91	ļ	NA		ļ
	01/30/92	1	NA		
	03/02/92		NA		
	03/24/92		NA		
	04/14/92		NA		
	05/21/92		NA		
	06/08/92		NA		
	07/14/92		NA		
1	08/10/92		NA		
	09/16/92		NA.		
	10/07/92		NA NA		
	11/09/92		DRY		
	12/10/92		. NA		
	01/26/93		NA.		
	02/16/93		NA NA		<u></u>



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399 Pleasanton, California Page 3 of 16 See notes on page 16

WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-1	03/11/93	to the state of th	53.09	268.35	None
cont.	04/12/93		53.32	268.12	None
	06/01/93		53.40	268.04	None
MW-2	04/02/88	NA	NA		3"
	04/04/88	:	NA		18.0"
	04/05/88		NA		18.0"
	04/06/88		39.31	NA	38,4"
	04/08/88		*	NA	*
,	04/19/88		38.90	NA	29.76**
	06/06/88		38.78	NA	3.12"
	06/23/88		39.23	NA	1.50"
	06/28/88		39.72	NA.	NA
	07/06/88		40.31	NA.	Slight
	07/12/88	'	Well De	estroyed	•
MW-3	04/06/88		37.19	NA	None
	04/08/88		37.14	NA	None
	04/19/88		37.22	NA	None
	06/06/88		39.02	NA	None
	06/23/88		39.58	NA	None
	06/28/88		40.04	NA	None
	07/06/88		40.60	NA	None
	07/13/88		41.09	NA	None
	08/12/88		NA		
	08/26/88		42.77	NA	None
	08/29/88	'	Well De	estroyed	•
MW-4	04/08/88	321.56	36.41	285.15	None
	04/19/88		36.51	285.05	None
	06/06/88		38.26	283.30	None
	06/23/88		38.83	282.73	None
	06/28/88	[39.28	282,28	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399
Pleasanton, California
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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-4	07/06/88		39.85	281.71	None
cont.	07/13/88		40.31	281.25	None
	08/12/88		NA ·		
	08/26/88		42.01	279.55	None
	09/07/88		NA		
	12/07/88		NA		
	12/19/88		43.83	<i>277.7</i> 3	None
	02/09/89		42.67	278.89	None
	03/08/89		42.11	279.45	None
	04/03/89		41.73	279.83	None
	04/26/89		41.79	279.77	None
	06/30/89		43.88	277.68	None
	07/17/89		44.85	276.71	None
	07/18/89		44.88	276.68	None
	07/19/89		44.92	276.64	None
	07/20/89		44.98	276,58	None
	07/21/89		45.04	276.52	None
	07/26/89		45.50	276.06	None
	08/02/89		NA		
	08/03/89		46.28	275.28	None
	08/17/89		47.22	274.34	None
	09/13/89		49.19	272.37	None
	11/28/89		50.34	271.22	None
	01/09/90		49.47	272.09	None
	01/26/90		49.36	272.20	None
	02/23/90		#49.18	272.38	None
1	02/23/90		49.15	272.41	None
	03/26/90		#48.84	272.72	None
	03/26/90		48.83	272.73	None
	04/18/90		48.90	272.66	None
	05/17/90		50.03	271.53	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399
Pleasanton, California
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WELL	DATE	WELL	DEPTH TO	GROUNDWATER	FLOATING
		ELEVATION	WATER	ELEVATION	PRODUCT
MW-4	06/11/90		50.98	270.58	None
cont.	07/30/90		53.57	267.99	None
	08/27/90		53.61	267.95	None
	09/28/90		53.57	267.99	None
:	12/27/90		53.68	267.88	None
	03/20/91		53.56	268.00	None
	06/20/91		53.75	267.81	None
	09/12/91		53.70	267.86	None
	12/30/91		DRY		
	01/30/92		DRY		
	03/02/92		53.83	267.73	None
	03/24/92		53.73	267.83	None
	04/14/92		53.76	267.80	None
	05/21/92		54.73	266.83	
	06/08/92	į.	53.80	267.76	None
	07/14/92		53.60	267.96	None
	08/10/92	:	53.71	267.85	None
	09/16/92		53.89	267.67	None
	10/07/92		DRY		
	11/09/92		DRY		
	12/10/92		53.83	267.73	None
	01/26/93		DRY		
	02/16/93		53.64	267.92	None
	03/11/93		53.54	268.02	None
	04/12/93		53.62	267.94	None
	06/01/93		53.52	268.27	None
MW-5d	05/25/88	321.79	38.55	283.24	None.
	06/06/88		38.90	282.89	None
	06/23/88		39.56	282.23	None
	06/28/88		40.23	281.56	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399 Pleasanton, California Page 7 of 16 See notes on page 16

WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-5d	07/30/90		53.47	268.32	None
cont.	08/27/90		58.24	263.55	None
	09/28/90		60.70	261.09	None
	12/27/90		62.52	259.27	None
	03/20/91		59.18	262.61	None
	06/20/91		65.02	256.77	None
	09/12/91		DRY		
	12/30/91		DRY		
	01/30/92		DRY		
	03/02/92		DRY		
	03/24/92		74.98	246.81	None
	04/14/92		74.42	247.37	None
	05/21/92		75.67	246.12	None
	06/08/92		DRY		
	07/14/92		DRY		
	08/10/92		DRY		
	09/16/92		DRY		
	10/07/92		DRY		
	11/09/92		DRY		
	12/10/92		DRY		
	01/26/93		DRY		
j	02/16/93		76.47	245.32	None
	03/11/93		74.03	247.76	None
	04/12/93		70.96	250.83	None
	06/01/93		67.64	254.00	None
MW-5s	05/25/88	321.64	38.46	283.18	None
	06/06/88		38.86	282.78	None
	06/23/88		39.52	282.12	None
	06/28/88	·	39.84	281.80	None
	07/06/88		40.45	281.19	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399 Pleasanton, California Page 8 of 16 See notes on page 16

WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-5s	07/13/88		40.90	280.74	None
cont.	07/22/88		41.30	280.34	None
	08/05/88		▼23.84	297.80	None
	08/12/88		42.21	279.43	None
	08/26/88		42.55	279.09	None
•	09/07/88		42.94	278.70	None
	12/07/88		44.67	276.97	None
	02/09/89		43.19	278.45	None
٠	03/08/89	'	Casing head cut to	o lower elevation	
			42.11	279.53	None
	04/26/89		41.84	279.80	None
	06/30/89		43.95	277.69	None
	07/17/89		44.91	276.73	None
	07/18/89		44.93	276.71	None
	07/19/89		44.98	276.66	None
	07/20/89		45.02	276.62	None
	07/21/89		45.10	276.54	None
	07/26/89	1	45.57	276.07	None
	08/02/89		NA		
	08/03/89		46.31	275.33	None
	08/17/89	•	47.25	274.39	None
	09/13/89		49.22	272.42	None
	11/28/89		50.39	271.25	None
	01/09/90	-	49.51	272.13	None
	01/26/90	ļ	49.40	272.24	None
	02/23/90		#49.20	272.44	None
	02/23/90		49.20	272.44	None
	03/26/90		#48.89	272.75	None
	03/26/90		48.88	272.76	None
	04/18/90		48.95	272.69	None
	05/17/90		50.06	271.58	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-5s	06/11/90		50.98	270.66	None
cont.	07/30/90		53,40	268.24	None
	08/27/90		53.60	268.04	None
	09/28/90		53.55	268.09	None
	12/27/90		53.61	268.03	None
	03/20/91		53.56	268.08	None
	06/20/91		53.73	267.91	None
	09/12/91	,	53.78	267.86	None
	12/30/91		53.80	267.84	None
	01/30/92		53.82	267.82	None
	03/02/92		53.82	267.82	None
	04/14/92		53.74	267.90	None
	05/21/92		53.77	267.87	None
	06/08/92		53.81	267.83	None
	07/14/92		53.74	267.90	None
•	08/10/92		53.78	267.86	None
	09/16/92		53.90	267.74	None
	10/07/92	•	DRY		
	11/09/92		53.87	267.77	None
	12/10/92		53.78	267.86	None
	01/26/93		53.38	268.26	None
	02/16/93		53.44	268.20	None
	03/11/93		53.28	268.36	None
	04/12/93		53.42	268.22	None
	06/01/93		53.56	268.08	None
MW-6	05/11/88	NA	37.31	NA	None
	06/06/88	[38.70	NA	None
	06/23/88		39.23	NA	None
,	06/28/88		39.74	NA	None
	07/13/88		40.78	NA	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-7	06/20/91		55.14	266.13	None
cont.	09/12/91		55.84	265.43	None
	12/30/91		55.21	266.06	None
	01/30/92		54.88	266.39	None
	03/02/92		NA		
	03/24/92		NA		
	04/14/92		NA		!
	05/21/92		53.36	267.91	None
	06/08/92		54.20	267.07	None
	07/14/92		53.31	267.96	None
	08/10/92		54.01	267.26	None
	09/16/92		55.97	265.30	None
	10/07/92		56.09	265.18	None
	11/09/92		54.16	267.11	None
	12/10/92		56.02	265.25	None
	01/26/93		56.15	265.12	None
	02/16/93		56.23	265.04	None
:	03/11/93		55.82	265.45	None
	04/12/93		55.45	265.82	None
	06/01/93		54.90	266.96	None
MW-8	10/01/89	321.86	53.88	267.98	None
	11/28/89		53.74	268.12	None
	01/09/90		57.90	263.96	None
	01/26/90		53.57	268.29	None
	02/23/90		52.16	269.70	None
	03/26/90		#52.80	269.06	None
	04/18/90		51.60	270.26	None
	05/17/90		58.21	263.65	None
	06/11/90		58.65	263.21	None
	07/30/90		64.33	257.53	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT			
MW-6	08/05/88	en e	41.72	NA	None			
cont.	08/12/88		42,14	NA NA	None			
	08/17/88		NA					
	08/26/88	-	42.51	NA	None			
	09/07/88		42.85	NA	None			
	10/24/88	Well Destroyed						
MW-7	07/13/88	321.27	40.50	280.77	None			
	07/22/88		#41.85	279.42	##None			
	08/05/88		#41.45	279.82	##None			
	08/12/88		42.69	278.58	NM			
	09/07/88		42.60	278.67	NM			
	12/07/88		NA					
	01/17/89		43.20	278.07	NM			
	02/09/89		NA					
	10/12/89		49,93	271.34	None			
	11/28/89		#57.61	263.66	NM			
	01/09/90		#57. 5 7	263.70	NM			
	01/26/90		#57.54	263.73	None			
	01/26/90		49.08	272.19	None			
	02/23/90		#55.26	266.01	None			
	02/23/90		48.93	272.34	None			
	03/26/90		#57.52	263.75	None			
	03/26/90		48.60	272.67	None			
	04/18/90		#57.55	263.72	None			
	05/17/90		#57.40	263.87	None			
	06/11/90		50.68	270.59	None			
	07/30/90		NA.					
	08/27/90		53.05	268.22	None			
	09/28/90		NA					
	12/27/90		NA					
	03/20/91		54.11	267.16	None			



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL	DEPTH TO	GROUNDWATER	FLOATING
WISEL		ELEVATION	WATER	ELEVATION	PRODUCT
MW-8	08/27/90		70.41	251.45	None
cont.	09/28/90		71.93	249.93	None
	12/27/90		66.60	255.26	None
	03/20/91	!	60.75	261.11	None
	06/20/91		88. 77	233.09	None
	09/12/91		103.17	218.69	None
	12/30/91		81.15	240.71	None
	01/30/92		81.69	240.17	None
	03/02/92	·	78.45	243.41	None
	03/24/92		76.55	245.31	None
	04/14/92		75.56	246.30	None
	05/21/92		86.99	234.87	None
	06/08/92		91.69	230.17	None
	07/14/92		94.65	227.21	None
	08/10/92		95.02	226.84	None
	09/16/92		91.90	229.96	None
	10/07/92		DRY		
	11/09/92		84.35	237.51	None
	12/10/92		82.20	239.66	None
	01/26/93		78.63	243.23	None
	02/16/93		76.90	244.96	None
	03/11/93		74.39	247.47	None
	04/12/93		71.20	250.66	None
	06/01/93		68.04	253.40	None
MW-9	10/12/89	321.44	50.24	271.20	None
	11/28/89		50.59	270.85	Heavy
	12/01/89		50.32	271.12	Heavy
	12/07/89		50.13	271.31	Heavy
	12/13/89		49.91	271.53	Slight
	12/20/89		49.78	271.66	Slight



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-9	01/02/89		NA		
cont.	01/09/90		49.39	272.05	Slight
	01/26/90		49.30	272.14	None
	02/23/90		#49.06	272.38	None
	02/23/90		49.05	272.39	None
	03/26/90		#48.75	272.69	None
	03/26/90		48.73	272,71	Very Slight
	04/18/90		48.81	272.63	Slight
	05/17/90		49.96	271.48	Slight
	06/11/90		51.58	269.86	NA
	07/30/90		DRY		
	08/27/90		DRY		
	09/28/90		DRY		
	12/27/90	i	NA		
	03/20/91		DRY		
	06/20/91		49.63	271.81	None
	09/12/91		NA		
	12/30/91		NA		
	01/30/92		NA		
	03/02/92		NA		
	03/24/92	:	NA		
	04/14/92		NA		
	05/21/92		NA		
	06/08/92		NA		
	07/14/92		NA		
	08/10/92		NA		
	09/16/92		NA		
	10/07/92		DRY		
	11/09/92		DRY		
	12/10/92		NA		
	01/26/93	1	DRY]



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Exxon Station 7-3399 Pleasanton, California Page 14 of 16 See notes on page 16

WELL	DATE	WELL	DEPTH TO	GROUNDWATER	FLOATING
		ELEVATION	WATER	ELEVATION	PRODUCT
MW-9	02/16/93		DRY		
cont.	03/11/93		DRY		
	04/12/93		DRY		
	06/01/93		DRY		
MW-10	10/12/89	322.99	51.93	271.06	None
	11/28/89		51.88	271.11	None
	12/20/89		51.47	271.52	None
	01/09/90		50.98	272.01	None
	01/26/90		50.87	272,12	None
	02/23/90		#5 0.67	272.32	None
	02/23/90		50.65	272.34	None
	03/26/90		#50.36	272.63	None
	03/26/90		50.35	272.64	None
	04/18/90		50.45	272.54	None
	06/11/90		51.16	271.83	None
	07/30/90		55.72	267.27	None
	08/27/90		57.75	265.24	None
	09/28/90		NA		
	12/27/90		58.08	264.91	None
	03/20/91		57.80	265.19	None
	06/20/91		58.00	264.99	None
	09/12/91		DRY		
	12/30/91		NA	!	
	01/30/92		DRY		
	03/02/92		DRY		
	03/24/92		58.53	264.46	None
	04/14/92		DRY		
	05/21/92		DRY		
	06/08/92		DRY]	
	07/14/92		DRY		



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-10	08/10/92		DRY		
cont.	09/16/92	1	DRY		
	10/07/92		DRY		
	11/09/92		DRY		
	12/10/92		DRY		
	01/26/93		DRY		•
	02/16/93		58.23	264.76	None
	03/11/93		57.81	265.18	None
	04/12/93		57.84	265.15	None
	06/01/93		57.88	264.89	None
MW-11	11/10/89	321.77	50.64	272.13	None
	11/28/89		50.51	272.26	None
	12/20/89		51.47	271.30	None
	01/09/90		49.68	273.09	None
	01/26/90		49,55	273.22	None
	02/23/90		#49.37	273,40	None
	02/23/90		49.35	273,42	None
	03/26/90		#49.03	273.74	None
	04/18/90		49.12	273.65	None
	05/17/90		50.30	272.47	None
	06/11/90		51.16	271.61	None
	07/30/90		53.50	269.27	None
	08/27/90		53.65	269.12	None
	09/28/90		53.62	269.15	None
	12/27/90		53.63	269.14	None
	03/20/91		53.26	269.51	None
	06/20/91		53.60	269.17	None
	09/12/91		53.60	269.17	None
	12/30/91		53.95	268.82	None
	01/30/92		53.65	269.12	None



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TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MW-11	03/02/92		53.68	269.09	None
cont.	03/24/92		53.70	269.07	None
	04/14/92		53.66	269.11	None
	05/21/92		53.62	269.15	None
	06/08/92		53.61	269.16	None
	07/14/92		53.53	269.24	None
	08/10/92		53.58	269.19	None
	09/16/92		53.60	269.17	None
	10/07/92		DRY		
	11/09/92		DRY		
	12/10/92	·	53.59	269.18	None
	01/26/93		53.67	269.10	None
	02/16/93		53.60	269.17	None
	03/11/93		53.58	269.19	None
	04/12/93		53.54	269.23	None
	06/01/93		53.52	269.25	None
VR-1	03/24/92		24.77		None

Well elev	ation relati	ve to Mean Sea Level (MSL).
Measurer	nents in fe	et
NA	:	Not accessible
*	:	Not measured because of installed product-skimmer pump.
**	:	Thickness of floating product after the well was allowed to recharge for approximately 3 hours.
▼	:	Anomalous water level possibley due to recharge from a perched water zone.
#	:	Water level during pumping of MW-7.
##	:	Water inspected in oil-water separator tank.

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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs
MW-1	04/02/88	<20	<0.5	1.7	<0.5	< 0.5	NA
	07/06/88	< 20	<0.5	<0.5	<0.5	<0.5	NA
	07/13/88	<20	< 0.5	<0.5	<0.5	<0.5	NA
	09/07/88	<20	<0.5	<0.5	<0.5	<0.5	NA
	03/03/89	<20	1.6	<0.5	<0.5	<0.5	NA
	06/30/89	<20	< 0.5	<0.5	<0.5	<0.5	NA
	07/17/89	23	< 0.5	<0.5	<0.5	< 0.5	NA
	07/20/89	<20	<0.5	<0.5	<0.5	< 0.5	NA
ļ	07/26/89	<20	< 0.5	<0.5	<0.5	<0.5	NA
1	08/02/89	<20	< 0.5	<0.5	<0.5	<0.5	NA
1 1	09/13/89	220	39	0.60	< 0.50	5.1	NA
	12/20/89	220	56	0.72	<0.50	0.71	NA
	01/25/90	57	18	1.6	< 0.50	1.8	NA
	02/27/90	55	3.2	2.3	< 0.50	3.2	NA
	03/26/90	<20	< 0.5	<0.5	<0.5	< 0.5	NA
	04/18/90	25	1,1	1.6	< 0.50	3.1	NA
	05/17/90	< 20	< 0.5	<0.5	< 0.5	<0.5	NA

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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs			
MW-1 cont.	06/11/90	<20	<0.5	<0.5	<0.5	< 0.5	NA			
	07/30/90	<20	<0.5	<0.5	< 0.5	<0.5	NA			
	08/27/90	<20	<0.5	<0.5	< 0.5	< 0.5	NA			
	09/28/90	< 50	<0.5	< 0.5	<0.5	<0.5	NA			
	12/10/92	Not Accessible								
]	02/16/93	Not Accessible								
	04/12/93			Not Acces	sible					
MW-2	07/06/88	62,000	25,700	18,500	2,900	21,400	NA			
	07/12/88	Well Destroyed								
MW-3	04/06/88	20	<0.5	<0.5	<0.5	<0.5	NA			
	07/06/88	<20	<0.5	<0.5	<0.5	<0.5	NA			
1	07/13/88	<20	< 0.5	<0.5	<0.5	<0.5	NA			
	08/26/88	<20	<0.5	<0.5	<0.5	<0.5	NA			
	08/29/88	'	·	Well Destr	oyed					
MW-4	04/11/88	80	1.8	16.3	0.6	7.1	NA			
1	07/06/88	<20	<0.5	<0.5	<0.5	<0.5	NA			
	07/13/88	<20	< 0.5	0.9	<0.5	<0.5	NA			

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Pleasanton, California
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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs
MW-4 cont.	03/08/89	440	3.8	1.0	< 0.5	<0.5	NA
	06/30/89	100	<0.5	< 0.5	< 0.5	<0.5	NA
	07/17/89	390	< 0.5	< 0.5	< 0.5	<0.5	NA
	07/20/89	200	<0.5	<0.5	< 0.5	<0.5	ND*
	07/26/89	66	<0.5	< 0.5	< 0.5	<0.5	NA
	08/02/89	NA	NA	NA	NA	NA.	ND**
	09/13/89	< 20	<0.5	<0.5	<0.5	<0.5	NA
	12/20/89	< 20	<0.5	<0.5	<0.5	<0.5	NA
	03/26/90	<20	<0.5	<0.5	<0.5	< 0.5	NA
	08/01/90	<20	<0.5	<0.5	<0.5	<0.5	NA
	12/27/90	< 50	< 0.5	<0.5	<0.5	<0.5	NA
	03/20/91	< 50	<0.5	< 0.5	<0.5	< 0.5	NA
	03/24/92	< 50	< 0.5	< 0.5	<0.5	< 0.5	NA
	12/10/92	'	'	Not Acces	sible	•	
1	02/16/93	600	57	34	11	200	NA
	04/12/93	360	20	10	22	80	NA

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Pleasanton, California
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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs
MW-5d	05/25/88	< 20	<0.5	3.1	<0.5	<0.5	NA
1	07/06/88	<20	<0.5	<0.5	<0.5	<0.5	NA
	07/13/88	40	<0.5	<0.5	<0.5	< 0.5	NA
	03/08/89	<20	<0.5	<0.5	< 0.5	<0.5	NA
	06/30/89	< 20	< 0.5	<0.5	<0.5	<0.5	NA
İ	07/17/89	< 20	<0.5	<0.5	<0.5	< 0.5	NA
	07/20/89	< 20	< 0.5	<0.5	<0.5	<0.5	NA
	07/26/89	<20	<0.5	<0.5	<0.5	<0.5	NA
	08/02/89	<20	<0.5	<0.5	<0.5	<0.5	NA
	09/13/89	<20	<0.5	<0.5	<0.5	<0.5	NA
	12/20/89	<20	< 0.5	<0.5	<0.5	<0.5	NA
	03/26/90	< 20	<0.5	< 0.5	<0.5	<0.5	NA
	08/01/90	< 20	<0.5	<0.5	<0.5	<0.5	NA
	12/27/90	< 50	<0.5	<0.5	< 0.5	< 0.5	NA
	03/20/91	< 50	<0.5	<0.5	<0.5	<0.5	NA
i	06/20/91	< 50	<0.5	<0.5	<0.5	< 0.5	NA
	12/10/92			Not Sam	oled	-	

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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs	
MW-5d	02/16/93		Not Sampled					
cont.	04/12/93	< 50	1.0	1.0	2.5	7.4	NA	
MW-5s	05/25/88	<20	<0.5	0.9	< 0.5	<0.5	NA	
	07/06/88	<20	< 0.5	<0.5	<0.5	<0.5	NA	
	07/13/88	<20	< 0.5	<0.5	<0.5	< 0.5	NA	
	07/22/88	50	0.9	4.1	1.3	8.7	NA	
	08/05/88	< 20	<0.5	<0.5	<0.5	<0.5	NA	
	09/07/88	<20	<0.5	<0.5	<0.5	<0.5	NA	
	03/08/89	<20	<0.5	< 0.5	< 0.5	<1.0	NA	
	06/30/89	<20	<0.5	< 0.5	<0.5	<0.5	NA	
	07/17/89	< 20	< 0.5	<0.5	<0.5	<0.5	NA	
	07/20/89	<20	<0.5	<0.5	< 0.5	<0.5	NA	
	07/26/89	< 20	<0.5	·<0.5	< 0.5	< 0.5	NA	
	08/02/89	<20	<0.5	<0.5	<0.5	<0.5	NA	
	09/13/89	<20	<0.5	< 0.5	<0.5	<0.5	NA	
	12/20/89	< 50	< 0.5	<0.5	<0.5	<0.5	NA	
	03/26/90	< 20	<0.5	<0.5	< 0.5	<0.5	NA	

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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs
MW-5s	08/01/90	<50	< 0.5	<0.5	<0.5	<0.5	NA
cont.	12/27/90	<50	<0.5	<0.5	<0.5	<0.5	NA
	12/10/92	'	•	Not Samp	oled	•	
	02/16/93			Not Samp	oled		
	04/12/93	220	11	5.9	13	48	NA
MW-6	05/17/88	<20	< 0.5	< 0.5	<0.5	<0.5	NA
	06/28/88	440	31.8	7.5	5.4	6.7	NA
	07/13/88	290	162.3	7.7	22.5	14.1	NA
	08/05/88	1180	245	5.2	47.1	23.7	NA
	09/07/88	2920	474	16	262	136	NA
	10/24/88	<u>'</u>	•	Well Destr	oyed		
MW-7	07/13/88	16700	860	1910	710	4420	NA
	07/22/88	460	136	85	5	58	NA
	08/05/88	270	73.3	52.8	2.3	28.1	NA
	02/09/89	6700	600	688	10	448	NA
	06/30/89	1100	180	50	13	40	NA
	08/02/89	31	1.6	< 0.5	<0.5	0.60	NA

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Pleasanton, California
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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs
MW-8 cont.	03/26/90	<20	<0.5	<0.5	<0.5	<0.5	NA
	(Blank)	<20	<0.5	<0.50	<0.5	<0.5	NA
	04/18/90	<20	< 0.50	0.58	< 0.50	1.1	NA
]	05/17/90	<20	<0.5	<0.5	<0.5	<0.5	NA
	06/11/90	<20	<0.5	<0.5	<0.5	<0.5	NA
1	08/01/90	<20	< 0.5	<0.5	<0.5	< 0.5	NA
1	08/27/90	<20	<0.5	<0.5	<0.5	0.5	NA
	09/28/90	<50	<0.5	<0.5	<0.5	0.5	NA
1	12/27/90	< 50	<0.5	<0.5	<0.5	0,6	NA
}	03/20/91	<50	< 0.5	<0.5	<0.5	<0.5	NA
1	06/20/91	<50	<0.5	<0.5	<0.5	0.6	NA
	10/14/91	< 50	< 0.5	<0.5	<0.5	< 0.5	NA
	12/30/91	< 50	< 0.5	<0.5	<0.5	< 0.5	NA
	03/24/92	< 50	< 0.5	< 0.5	<0.5	< 0.5	NA
]	06/08/92	< 50	< 0.5	< 0.5	<0.5	< 0.5	NA
	09/16/92	< 50	<0.5	0.9	< 0.5	< 0.5	NA
	12/10/92	<50	< 0.5	0.6	<0.5	<0.5	NA

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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs
MW-8 cont.	02/16/93	< 50	0.7	0.6	<0.5	2.3	NA
	04/12/93	230	26	7.3	11	38	NA
MW-9	10/03/89	89000	1000	9200	3000	13000	NA
	12/20/89	190000	6300	31000	9500	55000	NA
	01/25/90	77000	2400	9400	2700	15000	NA
	02/27/90	97000	1200	7100	2300	14000	NA
	03/26/90	89000	1800	7700	2000	11000	NA
	04/18/90	110000	2000	7500	2500	16000	NA
1	05/17/90	81000	1500	5700	2300	14000	NA
	06/20/90	430	<0.5	<0.5	<0.5	<0.5	NA
1	12/10/92		'	Not Acces	sible	•	
	02/16/93			Not Samp	pled		
	04/12/93			Not Sam	pled		
MW-10	10/12/89	20	<0.5	<0.5	<0.5	1.5	NA
	12/20/89	< 20	< 0.5	<0.5	<0.5	1.8	NA
	03/26/90	<20	< 0.5	< 0.5	<0.5	<0.5	NA
	08/01/90	<20	<0.5	<0.5	<0.5	< 0.5	NA

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Pleasanton, California
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WELL	DATE	тенд	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs			
MW-7 cont.	09/13/89	87	<0.5	2.6	<0.5	12	NA			
	12/20/89	<20	<0.5	<0.5	<0.5	<0.5	NA			
	06/20/91	74	< 0.5	1.8	0.6	4.1	NA			
	09/12/91	<50	3.5	< 0.5	1.7	6.8	NA			
	12/30/91	< 50	<0.5	< 0.5	<0.5	< 0.5	NA			
	06/08/92	<50	< 0.5	< 0.5	<0.5	<0.5	NA			
	12/10/92	Not Sampled								
	02/16/93	600	28	30	17	200	NA			
	04/12/93	Not Sampled								
Well #7	07/20/89	NA	NA	NA	NA	NA	ND*			
(City of	08/02/89	NA	NA	NA	NA.	NA	ND**			
Pleasanton)	03/26/90	< 50	< 0.50	< 0.50	< 0.50	< 0.50	NA NA			
MW-8	10/03/89	<20	<0.5	<0.5	<0.5	<0.5	NA			
	12/20/89	<20	< 0.50	< 0.50	< 0.50	0.61	NA			
	01/31/90	<20	<0.50	< 0.50	<0.50	0.87	NA			
]	02/09/90	< 20	<0.5	<0.5	<0.5	1.1	NA			
	(Blank)	< 20	<0.5	<0.5	<0.5	<0.5	NA			



Quarterly Groundwater Monitoring and Remediation Activities Exxon Station 7-3399, Pleasanton, California July 28, 1993 130009.01

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

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WELL	DATE	WELL ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	FLOATING PRODUCT
MOV 54	07 107 100				None
MW-5d	07/06/88		40.69	281.10	
cont.	07/13/88		41.22	280.57	None None
	08/12/88		42.34	279.45	None None
	08/26/88		42.60	279.19	None None
	09/07/88		42.99	278.80 277.21	None
	12/07/88		44.58		None
	02/09/89		Casing head damag	•	
	03/08/89		Casing head cut to		l No
			42.49	279.30	None
	04/03/89		42.21	279.58	None
	04/26/89	,	42.36	279.43	None
	06/30/89		44.79	277.00	None
	07/17/89		45.73	276.06	None
	07/18/89	•	45.75	276.04	None
	07/19/89		44.89	276.90	None
	07/20/89		46.02	275.77	None
	07/21/89		46.18	275.61	None
	07/26/89		46.83	274.96	None
	08/02/89		NA		
	08/03/89		47.67	274.12	None
	08/17/89		48.27	273.52	None
	09/13/89		50.60	271.19	None
	11/28/89		51.16	270.63	None
	01/09/90		50.42	271.37	None
	01/26/90		50.10	271.69	None
	02/23/90		50.08	271.71	None
	03/26/90		*49.80	271.99	None
	03/26/90		49.77	272.02	None
	04/18/90		49.80	271.99	None
	05/17/90		51.32	270.47	None
	06/11/90		52.10	269.69	None

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WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	VOCs		
MW-10	12/10/92	manning of the second	Not Sampled						
cont.	02/16/93			Not Samp	pled				
	04/12/93	350	21	11	21	75	NA		
MW-11	11/16/89	150	4.1	9.4	0.74	20	NA		
	12/20/89	150	7.2	7.5	2.9	13	NA		
•	03/26/90	32	<0.5	<0.5	<0.5	2.7	NA		
	07/30/90	26	<0.5	<0.5	<0.5	3.8	NA		
	12/10/92	Not Sampled							
	02/16/93	Not Sampled							
	04/12/93	< 50	<0.5	<0.5	<0.5	<0.5	NA		
VR-1	03/24/92	<50	1.7	<0.5	<0.5	<0.5	NA		
	12/10/92	Not Sampled							
	04/12/93	Not Sampled							
	MCLs		1.0		680	1,750			
	DWAL			100					

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TABLE 3 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

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Results in parts per billion (ppb).

<

: Less than the laboratory detection limit.

NA : Not Analyzed

ND: Not detected at or above method detection limit

: Not Applicable

TPHg : Total petroleum hydrocarbons as gasoline analyzed using modified EPA method 5030/8015.

BTEX: Analyzed using modified EPA method 5030/8020.

VOCs : Volatile organic compounds

* VOCs analyzed using EPA method 502.2.
** VOCs analyzed using EPA method 524.2.

MCLs: Maximum Contaminant Levels, DHS (October 1990).

DWAL: Drinking Water Action Level, DHS (October 1990).



Quarterly Groundwater Sampling and Remediation Activities Exxon Station 7-3399, Pleasanton, California

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TABLE 3 CUMULATIVE RESULTS OF FIELD ORGANIC VAPOR MEASUREMENTS

Exxon Station 7-3399 Pleasanton, California Page 1 of 2 See notes on page 2

DATE	INFLUENT	BETWEEN CANISTERS 1 AND 2	BETWEEN CANISTERS 2 AND 3	EFFLUENT
10/22/92	280	NM	0	0
10/23/92	90	NM	0	0
10/26/92	145	NM	10	0
10/27/92	190	NM	10	0
10/28/92	270	NM	30	10
11/02/92	120	NM	40	0
11/03/92*	210	10	20	0
11/04/92	129.5	6.8	0	0
11/05/92	20	0	0	0
11/09/92	76.4	41	0	0
11/10/92	100	20	10	0
11/13/92	49.5	3.1	0	0
11/16/92	45.9	5.2	2.4	0
11/17/92	110	30	0	0
11/18/92	100	30	5	0
11/19/92	83.4	4.5	2.4	0
11/20/92	90	20	20	15
11/23/92	93	10.1	1.4	0
11/24/92	115.4	5.6	1.4	0
11/25/92	105.3	16.2	4,9	0
11/30/92	161.2	4.2	2.7	0
12/01/92*	14.7	6.9	3.3	0
12/02/92	20	20	10	0
12/03/92	70	20	10	0
12/11/92	7.8	9.0	4.8	0
12/16/92	2.5	3.2	1.6	0



Quarterly Groundwater Sampling and Remediation Activities Exxon Station 7-3399, Pleasanton, California

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TABLE 3 CUMULATIVE RESULTS OF FIELD ORGANIC VAPOR MEASUREMENTS

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See notes on page 2

DATE	INFLUENT	BETWEEN CANISTERS 1 AND 2	BETWEEN CANISTERS 2 AND 3	EFFLUENT
12/21/92	74.8	5.7	2.8	0
12/31/92	2.4	6.6	10.8	0
01/05/93	0,2	0.2	1.6	0
01/11/93	30.8	7.4	24.4	0
01/21/93*	8.0	4,4	0	0
01/26/93	0	0	0	0
02/01/93	0	0	0	0
02/08/93	8.7	13	0.7	0
02/16/93	2.9	0	0	0
02/26/93	1.6	0.3	0.5	0
03/01/93	2.4	2.7	43	0
03/17/93	9.4	0.3	1,0	2.4
05/17/93*	5.0	0.0	0.0	0.0
06/01/93	0.7	0.0	0.0	0.0
06/16/93	2.0	0.0	0.0	0.0

Field measurements in parts per million using a Photoionization Dectector (PID) (shaded area) and Flame Ionization Dectector (FID) (unshaded area)

FID readings are non-methane measurements

NM

No measurements--only two carbon canisters in-series

.

:

influent carbon changeout



Quarterly Groundwater Monitoring and Remediation Activity Exxon Station 7-3399, Pleasanton, California

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TABLE 4 CUMULATIVE RESULTS OF INFLUENT AND EFFLUENT VAPOR SAMPLES Exxon Station 7-3399 Pleasanton, California

DATE	SAMPLE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES					
11/30/90	influent	1800*	19*	21*	15*	52*					
12/14/90	influent	1.4	< 0.0001	0.0005	0.0003	0.0008					
12/17/90	influent	0.20	0.0024	0.016	0.0010	0.0026					
	effluent	< 0.05	< 0.0005	< 0.0005	< 0.0005	< 0.0005					
12/28/90	influent	< 0.05	< 0.0005	< 0.0005	< 0.0005	< 0.0005					
	effluent	< 0.05	< 0.0005	< 0.0005	< 0.0005	< 0.0005					
01/04/91	influent	0.94	0.013	0.0005	0.0006	0.0015					
01/14/91	influent	1.2	0.0023	0.0013	0.0009	0.0039					
01/28/91	influent	0.96	0.028	0.0008	0.0005	0.0005					
02/28/91		•	System Inope	System Inoperative							
03/18/91	influent	0.91	0.0037	0.0015	0.0018	0.0091					
04/22/91	'		System Inope	rative	•	•					
05/03/91	influent	0.62	< 0.0005	< 0.0005	< 0.0005	0.0009					
06/20/91	influent	0.49	0.026	0.041	0.0089	0.050					
10/12/92	influent	97*	<0.5*	. 0.7*	<0.5*	0.7*					
	between canisters	<50*	<0.5*	<0.5*	<0.5*	1.0*					
	effluent	<50*	<0.5*	<0.5*	<0.5*	0.7*					

Results are in parts per million (ppm)

< : Less than the method detection limit.

TPH: total petroleum hydrocarbons as gasoline analyzed by modified EPA method 5030/8015.

: Results in milligrams per cubic meter (mg/m³).

APPENDIX A

GROUNDWATER SAMPLING PROTOCOL AND WELL PURGE DATA SHEETS

GROUNDWATER SAMPLING PROTOCOL

The static water level and free-phase hydrocarbon level, if present, in each well that contained water and/or free-phase hydrocarbons are measured with an ORS Interphase Probe Model No. 106801, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from wellhead elevations and corrected for product thickness, when necessary, by multiplying product thickness (PT) by a correction factor 0.8 and subtracting from the DTW level (Adjusted DTW = DTW - [PT x 0.8]).

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples are checked for measurable free-phase hydrocarbons or sheen. Any free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until stabilization of the temperature, pH, and conductivity is obtained. Approximately four well casing volumes are purged before those characteristics stabilize. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples". Turbidity measurements are also collected from the purged well water. The quantity of water purged from each well is calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

r = radius of the well casing in feet.
h = column of water in the well in feet
(depth to bottom - depth to water).
7.48 = conversion constant from cubic feet to
gallons

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples". Water samples were collected with an Environmental Protection Agency (EPA) approved Teflon® sampler which has been cleaned with Alconox® and deionized water. The groundwater was carefully poured into 40-milliliter (ml) glass vials, which are filled so as to produce a positive

meniscus. Each vial is preserved with hydrochloric acid, sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace which would allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody form, to a California-certified laboratory.

Project Name: Exxon 7-3399

Job No. <u>130009.01</u>

Date: <u>April 12, 1993</u>

Page <u>1</u> of <u>1</u>

Well No. MW-4

Time Started 4:25

TIME (hr)	GALLONS (cum.)	TEMP. (F)	рн	CONDUCT.	TURBIDITY (NTU)
4:25	Start pu	rging MW-4			
4:25	0	74.9	7.15	1.47	>200
4:28	2	74.0	7.35	1.45	>200
4:32	4	73.9	7.34	1.44	>200
	4	Dry			
5:02	5	79.8	7.27	1.56	>200
	5	Dry			
	Stop pu	rging MW-4			

Notes:

Well Diameter (inches): 4

Depth to Bottom (feet): 59.92

Depth to Water - initial (feet): 53.62

Depth to Water - final (feet): 53.62

% recovery : 100

Time Sampled: 7:45

Gallons per Well Casing Volume: 4.11

Gallons Purged: 5

Well Casing Volume Purged : 1.2

Approximate Pumping Rate (gpm): 0.1

purge sequence 4/93

mw-8 mw-5d .5s

-4

10?

11 7

Project Name: Exxon 7-3399 Job No. 130009.01

Date: <u>April 12, 1993</u> Page <u>1</u> of <u>1</u>

Time Started 3:20 Well No. MW-5s

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pН	CONDUCT. (micromho)	TURBIDITY (NTU)
3:20	Start pu	rging MW-5s	3		
3:20	0	76.4	6.87	2.13	>200
3:25	1	75.7	6.87	2.15	>200
3:28	2	76.1	6.91	2.13	>200
	2	Dry			
<u> </u>	Stop pu	rging MW-5	3		
Notes:		Dept th to Wate	h to Botter - initiate - final	(inches): om (feet): al (feet): (feet): recovery: e Sampled:	57.86 53.42 53.42 100

Gallons per Well Casing Volume: 2.90

Gallons Purged: 2

Well Casing Volume Purged: 0.7
Approximate Pumping Rate (gpm): 0.2

Project Name: <u>Exxon 7-3399</u>

Job No. <u>130009.01</u>

Date: <u>April 12, 1993</u> Page <u>1</u> of <u>1</u>

Well No. <u>MW-5d</u> Time Started <u>2:46</u>

TIME (hr)	GALLONS (cum.)	TEMP. (F)	ДŢ	conduct.	TURBIDITY (NTU)
2:46	Start pu	rging MW-5d			
2:46	0	72.6	7.22	1.31	148.6
2:51	7	70.4	7.18	1.29	42.6
3:00	14	70.5	7.09	1.35	5.8
3:09	21	69.2	7.06	1.31	2.6
3:17	28	70.9	7.06	1.38	2.8
3:17	Stop pu	rging MW-56	1		
Notes:	•	Dept	h to Botte	(inches) : om (feet) :	82.32

Depth to Water - initial (feet): 70.96

Depth to Water - final (feet): 70.98

% recovery : 99

Time Sampled: 6:45

Gallons per Well Casing Volume: 7.41

Gallons Purged: 30

Well Casing Volume Purged: 4.04

Approximate Pumping Rate (gpm): 0.9

Project Name: _Exxon 7-3399 Job No. <u>130009.01</u>

Date: <u>April 12, 1993</u> Page <u>1</u> of <u>1</u>

Well No. <u>MW-8</u> Time Started 12:50

TIME (hr)	GALLONS (cum.)	TEMP. (F)	рн	CONDUCT. (micromho)	TURBIDITY (NTU)
12:50	Start pu	rging MW-8			- 111
12:50	0	77.4	7.50	7.45	17.5
1:02	20	72.1	7.46	8.48	8.4
1:16	40	74.0	7.24	8.47	4.3
1:29	60	75.0	7.22	8.74	1.9
1:43	80	76.8	7.27	9.06	1.2
1:45					
1:45	Stop pu	rging MW-8			
37 a b a a a					

Notes:

Well Diameter (inches): 4
Depth to Bottom (feet): 139.00

Depth to Water - initial (feet) : 71.20

Depth to Water - final (feet): 71.20

% recovery : 100

Time Sampled: 6:30

Gallons per Well Casing Volume : 44.27

Gallons Purged: 84

Well Casing Volume Purged: 1.90

Approximate Pumping Rate (gpm): 1.5

APPENDIX B

LABORATORY ANALYSIS REPORTS AND CHAIN OF CUSTODY RECORD



April 26, 1993

Mr. Dave Higgins RESNA 3315 Almaden Expressway Suite 34 San Jose, CA 95118

RE: PACE Project No. 430415.504

Client Reference: Exxon 7-3399 (EE)

Dear Mr. Higgins:

Enclosed is the report of laboratory analyses for samples received April 15, 1993.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Stephanie Matzo For Project Manager

Carol Reid

Enclosures



RESNA

3315 Almaden Expressway Suite 34

San Jose, CA 95118

Attn: Mr. Dave Higgins

Client Reference: Exxon 7-3399 (EE)

April 26, 1993

PACE Project Number: 430415504

rusate.

PACE Sample Number:

Date Collected:

Date Received:

70 0050456 04/12/93

04/15/93 **NW-8-71**.2-

Parameter Units MDL R DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):
Purgeable Fuels, as Gasoline (EPA 8015M) ug/L
PURGEABLE AROMATICS (BTXE BY EPA 8020M):
Benzene ug/L

Toluene Ethylbenzene ug/L ug/L ug/L 0.5 0.5 0.5

ND 1.4 ND

ND

ND

04/21/93 04/21/93 04/21/93 04/21/93

04/21/93

04/21/93

Xylenes, Total

ug/L

0.5

50

04/21/93



Mr. Dave Higgins

Page

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number: Date Collected:

Date Received:

Client Sample ID: Parameter

70 0050480 04/12/93 04/15/93 MW4-53.62-

DATE ANALYZED

ORGANIC ANALYSIS

Xylenes, Total

PURGEABLE FUELS AND AROMATICS TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene Toluene **Ethylbenzene**

04/21/93 ND 50 04/21/93 04/21/93 ND 04/21/93

0.8

0.5 0.5 0.5

0.5

MDL

Units

ug/L

ug/L

ug/L

ug/L

1.7 ND

04/21/93 04/21/93

04/21/93



Mr. Dave Higgins

Page

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number: Date Collected:

Date Received:

Client Sample ID:

70 0050499

04/12/93

04/15/93 MW10-57.84

Parameter MDL DATE ANALYZED Units

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L PURGEABLE AROMATICS (BTXE BY EPA 8020M): Benzene

Toluene Ethylbenzene

Xylenes, Total

50 350 21

11

0.5 ug/L ug/L 0.5 0.5 ug/L

21 04/23/93 75

04/23/93

04/23/93

04/23/93

04/23/93

04/23/93



Mr. Dave Higgins

Page

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number:

Date Collected:

Date Received:

Client Sample ID:

70 0050502

04/12/93

04/15/93 MW11-53.54

Parameter Units MDL DATE ANALYZED

ug/L

ug/L

ug/L

ug/L

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L PURGEABLE AROMATICS (BTXE BY EPA 8020M): Benzene

Toluene Ethylbenzene

Xylenes, Total

04/22/93

ND 50 0.5 0.5

ND ND 0.5 ND

ND

04/22/93 04/22/93 04/22/93

04/22/93

04/22/93

0.5



Mr. Dave Higgins

Page

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number: Date Collected:

Date Received:

Client Sample ID:

70 0050510

04/12/93 04/15/93

MW8-71.2

MDL DATE ANALYZED Parameter Units

ug/L

ug/L

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT): Purgeable Fuels, as Gasoline (EPA 8015M) ug/L

PURGEABLE AROMATICS (BTXE BY EPA 8020M): Benzene

Toluene

Xylenes, Total

Ethylbenzene

04/22/93

230 50 04/22/93 04/22/93 0.5 26 04/22/93 04/22/93 7.3 0.5

ug/L 0.5 11 ug/L

0.5 38 04/22/93



Mr. Dave Higgins

Page

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number: Date Collected:

Date Received:

Client Sample ID:

70 0050529

04/12/93

04/15/93 5S-53.42

Parameter Units DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene Toluene Ethylbenzene

ug/L ug/L ug/L

0.5 0.5 0.5

50

MDL

04/22/93 11 04/22/93 04/22/93 5.9

13 48 04/22/93

04/22/93

04/22/93

Xylenes, Total

ug/L

0.5

220



Mr. Dave Higgins

Page 7

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number: Date Collected:

Date Received:

Client Sample ID: Parameter

70 0050537

04/12/93

04/15/93

5D-70.98 DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015M) ug/L PURGEABLE AROMATICS (BTXE BY EPA 8020M):

Benzene Toluene

Ethylbenzene Xylenes, Total 1/L 50 ND -1/L 0.5 1.0

ug/L 0.5 ug/L 0.5 ug/L 0.5

Units

ug/L

0.5

MDL

04/22/93 04/22/93

7.4

1.0

2.5

04/22/93

04/22/93

04/22/93

04/22/93



Mr. Dave Higgins

Page 8

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PACE Sample Number:

Date Collected:

Date Received: Client Sample ID: 70 0050545

04/12/93

04/15/93 MW4-53.62

Parameter

Units

MDL

DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT): 04/22/93 Purgeable Fuels, as Gasoline (EPA 8015M) ug/L 50 360 04/22/93 04/22/93 PURGEABLE AROMATICS (BTXE BY EPA 8020M): Benzene 0.5 20 04/22/93 ug/L 04/22/93 Toluene ug/L 0.5 10 Ethylbenzene 22 04/22/93 0.5 ug/L

Xylenes, Total

ug/L

0.5

80

04/22/93

These data have been reviewed and are approved for release.

Q.C. Caen

Darrell C. Cain Regional Director



Mr. Dave Higgins

Page 9

FOOTNOTES

for pages 1 through

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

MDL

Method Detection Limit

ND Not detected at or above the MDL.



Mr. Dave Higgins

QUALITY CONTROL DATA

April 26, 1993

Page 10

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PURGEABLE FUELS AND AROMATICS

Batch: 70 20573

Samples: 70 0050456, 70 0050480

METHOD BLANK:

Parameter TOTAL FUEL HYDROCARBONS, (LIGHT):	<u>Units</u>	MDL	Method Blank
Purgeable Fuels, as Gasoline (EPA 8015M PURGEABLE AROMATICS (BTXE BY EPA 8020M)	ug/L	50	ND -
Benzene Toluene Ethylbenzene	ug/L ug/L ug/L	0.5 0.5 0.5	ND ND ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

			Reference		Dupl	
Parameter	Units	MDL	Value	Recv	Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	96%	94%	2%
Benzene	ug/L	0.5	40.0	88%	88%	0%
Toluene	ug/L	0.5	40.0	90%	88%	2%
Ethylbenzene	ug/L	0.5	40.0	88%	86%	2%
Xylenes, Total	ug/L	0.5	120	90%	88%	2%



Mr. Dave Higgins

QUALITY CONTROL DATA

April 26, 1993

Page 11

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

PURGEABLE FUELS AND AROMATICS

Batch: 70 20575

Samples: $70\ 0050499$, $70\ 0050502$, $70\ 0050510$, $70\ 0050529$, $70\ 0050537$

70 0050545

METHOD BLANK:

Parameter TOTAL FUEL HYDROCARBONS, (LIGHT):	<u>Units</u>	MDL	Method Blank
Purgeable Fuels, as Gasoline (EPA 8015M PURGEABLE AROMATICS (BTXE BY EPA 8020M)	ug/L	50	ND -
Benzene Toluene Ethylbenzene	ug/L ug/L ug/L	0.5 0.5 0.5	ND ND ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

			Reference		Dupl	
Parameter	Units	MDL	Value	Recv	Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	$\overline{ug/L}$	50	1000	113%	114%	0%
Benzene	ug/L	0.5	40.0	93%	92%	1%
Toluene	ug/L	0.5	40.0	95%	91%	4%
Ethylbenzene	ug/L	0.5	40.0	95%	93%	2%
Xylenes, Total	ug/L	0.5	120	93%	90%	3%



Mr. Dave Higgins

Page 12

FOOTNOTES

for pages 10 through 11

April 26, 1993

PACE Project Number: 430415504

Client Reference: Exxon 7-3399 (EE)

MDL

Method Detection Limit

ND

Not detected at or above the MDL.

RPD

Relative Percent Difference

EXXON COMPANY, U.S.A.

P.O. Box 4415, Houston, TX 77210-4415

CHAIN OF CUSTODY

Novato, CA, 11 Digital Drive, 94949 (415) 883-6100

Huntington Beach, CA, 5702 Bolsa Avenue, 92649 (714) 892-2565

Consultant's Name:	RISI	JA II	1	+ rie													Page of 2
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Project #:									Con	Site Location: Hayard Rd Consultant Work Release #: CH3CC140 [CC#1]							
Project Contact:	Dave H) ((CL) NS				Phone	#4	18 21	4.7	723	Fax	.#:26	4-243			Work Rel	Ĭ ·
EXXON Contact:		T 1 1 7 7 7 7		EE [☐ C&M	Phone	: #: <u>(</u> 5	10)2	46-	877	⟨r Fax	c#:		EXX	ON RA	S #:	1-3399
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Shipment Method:	Burli					Air B	ill#:	178	27	€83				Ship	ment Da	ite: 🏥	1493
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731.						TPH/GAS/BTEX EPA 8015/8020	lesel 115	418.1									Cooler #:
Sample Description	Collection Date/Time	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH/G	TPH/Diesel EPA 8015	TRPH EPA 41									COMMENTS
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HW-11-93.5A	1905			3	17050.2	X						ļ					Recid took only
HWY 71.2-6	1830			2	5245,6	(\mathcal{Y})	De	K/L	RU	<u>jtr</u>	1151	ins	itela	50,			``
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5D-70.98	V1850		V	3	5053.	X											(H-4-17-43)
Relinqu	iished by/Affi	liation		Date	Time			Accepte	d by/A	ffiliation	1		Date	Tim			Comments: 178 270 831
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Distribution: 15/3	3 White	- Original		Yellow	- Exxon		Pink	- Lab	<u> </u>		Golde	nrod - C	onsultant Fi	eld Staff	a	age,	Rinsates onthio on hold perjoeresn 3 (Spm)

PACE BY DRAYED

EXXON COMPANY, U.S.A.

430417.504

P.O. Box 4415, Houston, TX 77210-4415

CHAIN OF CUSTODY

THE ASSURANCE O	IF QUALITY	4	Novato, (415) 8		l Digital D 0	rive, 9	4949							intington 14) 892-		CA, 57	702 Bolsa Avenue, 92649
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EXXON Contact:		_)		ee [C&M						Fax			1			-3311
Sampled by (print):	ام د ا ا	`						gnature									
Shipment Method:	Burli					Air B	ill#:	70	270	831	ı			Shipn	ent Dat	e: 4	193
TAT: 24 hr	48 hr	3	S s	tondard	(5 day)						LYSIS F	REQUI	RED				Sample Condition as Received
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						TEX 020				-							Inbound Scal Yes No Outbound Scal Yes No
			_	<i>4</i> 1 - 6	PACE	AS/E	iesel 115	418.1									Outpound Scal Tea 140
Sample Description	Collection Date/Time	Matrix Soil/Water	Prsv	# of Cont	Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 4]									COMMENTS
Mu4-53,1d-R	4112195	water	44	7	5048,0	(X)							1	run	this	מחות	te de sista Cresna
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