

Mr. Barney Chan
Division of Hazardous Materials
Department of Environmental Health
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502

ARCADIS Geraghty & Miller, Inc. 1050 Marina Way South Richmond California 94804 Tel 510 233 3200 Fax 510 233 3204

Subject:

Results of Quarterly Groundwater Monitoring, First Quarter 1999 Former Penske Truck Leasing Company Facility 725 Julie Ann Way Oakland, California WESTERN REGION

Dear Mr. Chan:

The above referenced report is being forwarded to you at the request of Penske Truck Leasing Co. The report details the results of quarterly groundwater monitoring and sampling for the first quarter 1999 at the Former Penske Truck Leasing Facility at 725 Julie Ann Way, Oakland.

Richmond, California, August 27, 1999

Contact: Paul V. Hehn

In response to the request in your letter of February 22, 1999, biodegradation parameters have been collected and reported as part of this current report. Also in response to your February 22, 1999 letter, proposed alternatives for remediation, including the estimate amount and cost of adding oxygen-releasing compound, have been presented to Penske. Penske is currently evaluating the various options for this remediation.

Extension: (510) 233-3200

Please also note the reductions in concentrations for most constituents since mid-1997 as shown in Table 2.

If you have any questions, please do not hesitate to call

Sincerely,

ARCADIS Geraghty Miller, Inc.

Paul Hehn, R.G.

Project Geologist/Project Manager

Copies:

Mr. Richard G. Saut Penske Truck Leasing Co.

Files - Project No. RC000019.0010

Our ref.:

Project No. RC000321.0002/aclt899



Via Fax 510-233-3204

August 16, 1999

RECEIVED

AUG 2 3 1999

ARCADIS Geraghty & Miller

Mr. Paul Hehn Arcadis, Inc. 1050 Marina Way South Richmond, CA 94804

Re: First Quarter 1999

Groundwater Monitoring Report

Former Penske Truck Leasing Facility

725 Julie Ann Way

Oakland, CA

Dear Paul,

I have reviewed and approve the above referenced report. Please forward the appropriate number of copies to the required regulatory agencies. Please provide two copies for my file with a copy of your report transmittal letters to the agencies. If you have questions or need assistance, please call my office at 610-775-6010.

Sincerely,

Richard G. Saut

Environmental Project Manager

March Saut

RGS/csk L1081699.rgs

Results of Quarterly Groundwater Monitoring

First Quarter 1999

Former Penske Truck Leasing Facility 725 Julie Ann Way Oakland, California

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ARCADIS

GERAGHTY & MILLER

1050 Marina Way South Richmond, CA 94804 (510) 233-3200

QUARTERLY REPORT

Prepared June 11, 1999



Mr. Richard G. Saut Environmental Project-Manager Penske Truck Leasing Company, L.P. Route 10, Green Hills P.O. Box 7635 Reading, Pennsylvania 19603-7635 ARCADIS Geraghty & Miller, Inc. 1050 Marina Way South Richmond California 94804 Tel 510 233 3200 Fax 510 233 3204

WESTERN REGION

Subject:

Results of Quarterly Groundwater Monitoring, First Quarter 1999 Former Penske Truck Leasing Facility 725 Julie Ann Way, Oakland, California.

Dear Mr. Saut:

This report presents the results of the first quarter 1999 quarterly groundwater monitoring and sampling activities performed on March 2-4, 1999, at the former Penske Truck Leasing Co. (Penske) facility referenced above (Figure 1).

The scope of work for this project was presented to Penske in an Geraghty & Miller letter dated January 25, 1996. The scope of work for groundwater monitoring and sampling consists of collecting depth-to-water measurements, total-well-depth measurements, and water samples for laboratory analysis from selected wells. The scope of work also includes preparation of quarterly groundwater sampling and monitoring reports based on the data and groundwater samples collected during each quarterly event.

This quarterly groundwater sampling and monitoring program is related to the containment zone (CZ) concept remedial approach approved by the Alameda County Health Care Services Agency (ACHCSA) and the California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) in its letter to Penske dated March 25, 1994.

As requested by the ACHCSA in its letter to Penske dated February 22, 1999, additional monitoring and sampling were performed during this quarterly sampling event on Observation Wells OW-1 and OW-2. The details of this additional monitoring and sampling are discussed in this report.

Discussion on Recent Regulatory Requested Changes

A letter dated December 9, 1997 from Mr. Barney Chan at the ACHCSA was received by Penske. In his letter, Mr. Chan stated that Monitoring Wells MW-3 and MW-6 no longer needed to be sampled. He also stated that there was no need to run total dissolved solids (TDS) from any of the wells being sampled at the site.

Richmond, June 11, 1999

Contact: Paul V. Hehn

Extension: 510 233 3200

Our ref.: Penske/RC019010/QTGWRPTS/1197.DOC/rpt699

Consequently, TDS is no longer being analyzed for groundwater samples collected, and Monitoring Wells MW-3 and MW-6 are no longer being sampled.

Mr. Chan also requested that dissolved oxygen (DO) and oxygen-reduction potential (redox) measurements be collected from all wells during all future quarterly sampling events (Figure 4). These measurements will collect information to monitor biodegradation activity.

In order to provide a baseline of DO and redox information, these measurements were collected from all available wells during the current fourth quarter sampling event. Measurements were collected from Wells MW-2, MW-3, MW-5, MW-6, and MW-8. DO and redox measurements were not collected from Wells MW-1, MW-4 and MW-7 since globular masses of weathered product in the water in these wells coated the measuring instruments making measurements inaccurate.

In another letter from the ACHCSA to Penske dated June 25, 1998, Mr. Chan stated that the monitoring of Well MW-5 could be reduced to semi-annual. The fourth quarter 1998 sampling event represented the initial semi-annual sampling of this well. Monitoring Well MW-5 will be sampled again during the second quarter of 1999 and then every other quarter thereafter.

In an additional letter from the ACHCSA to Penske dated February 22, 1999, Mr. Chan reiterated his interest in the collection of biodegradation parameter information. Some of this information was collected during the current quarterly event reported herein. The measurements for dissolved oxygen and redox will continue in future quarterly groundwater sampling events.

In his February 22, 1999 letter, Mr. Chan also requested that the amount of oxygen-releasing compound be estimated, and methods of remediation on the remaining petroleum hydrocarbons at the facility be proposed. Proposed alternatives for remediation, including the estimate amount and cost of adding oxygen-releasing compound, has been presented to Penske. Penske is currently evaluating the various options for this remediation.

Field Procedures

The subject quarterly groundwater monitoring was performed on March 2-4, 1999. The monitoring-well locations are shown in Figure 2. Monitoring was completed and groundwater samples were collected from Monitoring Wells MW-1, MW-2, MW-4, MW-5, and MW-7 in accordance with the CZ remedial approach monitoring and sampling plan referenced above. As requested by the ACHCSA, additional

monitoring and sampling was performed for UST excavation backfill observation wells OW-1 and OW-2.

As a result of authorization by the ACHCSA, Wells MW-3 and MW-6 are no longer being sampled. However, Wells MW-3 and MW-6 are still being measured for depth-to-water during each quarterly monitoring and sampling event to provide information for the groundwater contour map. Monitoring Well MW-5 also was not sampled during the current quarterly event since this well is being sampled on a semiannual basis, and was previously sampled during the fourth quarter of 1998. Well MW-5 will be sampled again during the second quarter of 1999.

The ACHCSA also requested that all wells be monitored for dissolved oxygen and redox. Both measurements were attempted during this quarter. The redox measurements were collected for all wells but due to equipment failure, the dissolved oxygen measurements could not be collected. These measurements will be collected again during the following quarter.

Monitoring Well MW-8 was not sampled during the current sampling event since the analytical results of the groundwater samples collected during the previous quarter were within the authorized compliance level. Further discussion of the compliance results is presented in the Discussion and Compliance with Containment Zone Approach section of this report.

Prior to sampling, depth-to-water measurements were obtained from all on-site wells. Additionally, the wells were checked for the presence of liquid-phase hydrocarbons. All equipment that entered the well was washed in a solution of nonphosphate detergent and water and then triple rinsed in deionized water. Each well sampled was purged of at least four casing volumes of water. At Penske's request, additional purging was performed to remove dissolved-phase petroleum hydrocarbons from the groundwater. Due to the purging equipment used to perform the extra purging, the exact amount of water purged from each well cannot be accurately determined but definitely exceeded the amount necessary for a minimum four full well volume purge. The approximate well volume estimated by the field personnel indicates that the extra purge volume generally exceeds the four volume purge requirements by 15 to 50%. During the current event, it was estimated that 2,300 gallons were purged from eight wells at the site. This total is five times the groundwater purged than would normally be required by a four volume well purge for all of wells sampled during this event.

Purged water was monitored for pH, temperature, and specific conductance. A summary of the field data is presented in Table 1. Following purging, groundwater samples were collected using a new disposable polyethylene bailer for each well.

The purged water was removed by a Penske-contracted vacuum truck for proper disposal.

Groundwater samples were put into the appropriate USEPA-approved containers, placed on ice, and transported to Quanterra Laboratory in West Sacramento, California, under appropriate chain-of-custody documentation. The water samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (USEPA Method 8015, modified); TPH as diesel (USEPA Method 8015, modified); benzene, toluene, ethylbenzene, and total xylenes (BTEX) (USEPA Method 8020); and methyl tertiary butyl ether (MTBE) (USEPA Method 8020). The groundwater samples collected from Observation Wells OW-1 and OW-2 were also analyzed for ferrous iron (USEPA Method 6010B), nitrate (USEPA Method 300), and sulfate (USEPA Method 300).

Additional Activities During the Quarter

During the first quarter of 1999, the ORC™ socks placed in Observation Wells OW-1 and OW-2 were changed. To complete this change, the existing ORC™ socks were removed from the wells. Once the socks were removed from the wells, the wells were monitored for dissolved oxygen and redox measurements using down well field instruments. Following these measurements, the wells were purged, monitored and sampled using the normal well purging and sampling procedures followed for this site. The groundwater samples collected from Observation Wells OW-1 and OW-2 were analyzed for TPH as diesel. Originally, the groundwater from these wells was also to be analyzed for TPH as gasoline, BTEX, and MTBE. However, due to an error, the samples for these additional analytes were not collected. Groundwater samples were also collected and analyzed for biodegradation parameters, specifically nitrate, sulfate and ferrous iron as requested by the ACHCSA. Following the collection of the groundwater samples, additional groundwater was also purged from the wells using the vacuum-enhanced purging method. Upon completion of the well purging and sampling, the replacement ORC™ socks were installed in Wells OW-1 and OW-2.

The details of the measurements and analytical results of the groundwater monitored and sampled from Observation Wells OW-1 and OW-2 are included in Table 1, 2 and 3 of this report.

Results

Shallow Groundwater Flow

A summary of the depth-to-water data is presented in Table 1. Depth to water ranged from 4.13 feet (Monitoring Well MW-4) to 5.85 feet (Monitoring Well MW-3) below the ground surface. A contour map based on the groundwater elevation data collected March 4, 1999, is presented in Figure 2. The historic shallow groundwater flow is generally toward the west; however, there are local variations in flow directions at the facility, as indicated by the groundwater contours from the data collected during March 1999. Liquid-phase hydrocarbons were measured in Wells MW-1 (0.07 foot) and MW-7 (0.29 foot) during this monitoring event.

The difference in the elevation of the groundwater surface between Wells MW-2 and MW-1 is 0.19 feet, producing a hydraulic gradient (slope of the groundwater surface) of approximately 0.0021 feet/foot in a southwesterly direction. The groundwater gradient and groundwater contours for the current quarter are consistent with those presented during previous quarters.

Field Parameters

As in all previous quarterly sampling events at this facility, the specific conductance measurements for the groundwater purged during the sampling continue to be high. The results of the specific conductance, dissolved oxygen and the redox are presented in Table 1.

Groundwater Analytical Results

A summary of the groundwater analytical results is presented in Table 2. Copies of the certified laboratory reports and chain-of-custody documentation are included in Attachment 1. TPH as gasoline was detected in the groundwater samples from Monitoring Wells MW-1 (95 μ g/L) and MW-7 (820 μ g/L). TPH as diesel was detected in the groundwater samples collected from Monitoring Wells MW-1 (62,000 μ g/L), MW-2 (1,200 μ g/L), MW-4 (2,900 μ g/L), MW-5 (780 μ g/L), MW-7 (170,000 μ g/L), OW-1 (31,000 μ g/L), and OW-2 (6,400 μ g/L). Benzene was only detected in the groundwater samples collected from Monitoring Wells MW-1 (8 μ g/L) and MW-7 (57 μ g/L) (Figure 3). All other BTEX constituent results are presented in Table 2. TPH as gasoline, BTEX and MTBE were not detected in the trip blank. The results of the ferrous iron, nitrate and sulfate analysis are presented in Table 3.

Discussion and Compliance with Containment Zone Approach

Benzene was not detected at concentrations exceeding the compliance concentration of 71 μ g/L in the shallow groundwater sample collected from designated CZ-concept Guard Well MW-7 (57 μ g/L). Since the benzene concentration detected in Guard Well MW-7 was below the compliance level during the previous quarterly sampling event (fourth quarter 1998), downgradient Well MW-8 was not sampled during the current fourth quarter sampling event. Sampling of Well MW-8 will be suspended. If any future quarterly sampling event detects benzene concentrations in excess of the compliance level in Guard Well MW-7, downgradient Well MW-8 will again be sampled during the next quarterly event following the out of compliance detection.

Increases in TPH as gasoline concentrations were not detected in the samples collected from any of the wells sampled during this event. Decreases were detected in the groundwater samples collected from Wells MW-1 (from 2,000 μ g/L to 95 μ g/L). MW-2 (from 67 μ g/L to not detected [ND]) and MW-7 (from 3,900 μ g/L to 820 μ g/L). TPH as gasoline was ND in Wells MW-2, MW-4, and MW-5.

Increases in TPH as diesel concentrations were detected only in the samples collected from Well MW-2 (from 1,200 μ g/L to 2,000 μ g/L). Decreases were detected in the groundwater samples collected from Wells MW-1 (from 79,000 μ g/L to 62,000 μ g/L), MW-4 (from 3,700 μ g/L to 2,900 μ g/L), MW-5 (from 890 μ g/L to 780 μ g/L) and MW-7 (from 240,000 μ g/L to 170,000 μ g/L).

Increases in benzene concentrations were only detected in the samples collected from Well MW-7 (from 51 μ g/L to 57 μ g/L). Decreases in benzene concentrations were detected in the groundwater samples collected from Well MW-1 (from 32 μ g/L to 8 μ g/L). Benzene was ND in Wells MW-2, MW-4, and MW-5.

Concentrations of petroleum hydrocarbons continue to be detected, but at overall decreasing concentrations in Wells MW-1, MW-4 and MW-7, all of which are located immediately downgradient from the former UST excavation. These decreases in the concentrations of petroleum hydrocarbons may indicate that the mass of petroleum hydrocarbons present is being reduced by the additional vacuum-enhanced purging. The reductions could also indicate increased biodegradation activity taking place in the vicinity of these wells as a result of the addition of the ORCTM socks in Observation Wells OW-1 and OW-2 which are both located upgradient from Wells MW-1, MW-4 and MW-7.

At the request of Penske, additional groundwater purging using the vacuumenhanced purging method will be continued during future quarterly events. The additional purging will help to remove additional mass of petroleum hydrocarbons

from the groundwater downgradient from the former tank excavation which will aid in the remediation of the groundwater at this former facility.

Additional Groundwater Biodegradation Monitoring Results

The results of this additional sampling and monitoring of biodegradation parameters indicate that active biodegradation is occurring beneath the facility. However, based on the low sulfate, nitrate and redox results, the biodegradation of the petroleum hydrocarbons in the area of the former UST excavation, and Monitoring Well MW-1, MW-4 and MW-7 is limited by the low level of available alternative electron acceptors, and the general anaerobic conditions indicated by the low to negative redox measurements.

ARCADIS Geraghty & Miller appreciates the opportunity to be of service to Penske. If you have any questions regarding this report, please do not hesitate to call us.

Sincerely,

ARCADIS Geraghty & Miller, Inc.

Paul V. Hehn, R.G.

Project Geologist/Project Manager

Donald C. Trueblood Regional Manager

Attachments: References

Table 1 Summary of Field Sampling, Depth-to-Water, and

PAUL V. HEHN

No. 6571

Casing Elevation Data

Table 2 Summary of Groundwater Analytical Results-

Monthly and Quarterly Sampling

Figure 1 Site Location Map

Figure 2 Shallow Groundwater Contours - First Quarter

1999

Figure 3 Benzene Concentrations - First Quarter 1999

Figure 4 Biodegradation Parameter Results - First Quarter

1999

Attachment 1 Copies of Certified Laboratory Reports and Chain-

of-Custody Documentation

References

Alameda County Health Care Services Agency. December 6, 1996. Letter to Penske Truck Leasing Co. on Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, CA 94621. -. December 9, 1997. Letter to Penske Truck Leasing Co. on Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, CA 94621. -. May 20, 1998. Letter to Penske Truck Leasing Co. on Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, CA 94621. June 25, 1998. Letter to Penske Truck Leasing Co. on Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, CA 94621. -. December 28, 1998. Letter to Penske Truck Leasing Co. on Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, CA 94621. - February 22, 1999. Letter to Penske Truck Leasing Co. on Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, CA 94621. Geraghty & Miller, Inc. November 15, 1990. Results of Initial Soil and Ground-Water Assessment Activities, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California. -. February 7, 1991. Scope of Work and Project Budget Estimate for Ground-Water Monitoring Activities for the Period February 1991 through February 1992, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California. -. January 25, 1995. Work Plan and Budget Cost Estimate for Groundwater Sampling Coordination, Quarterly Report Preparation, and Purge Water Disposal Assistance, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California. January 25, 1996. Work Plan and Budget Cost Estimate for Groundwater Sampling Coordination, Quarterly Report Preparation, and Purge Water Disposal Assistance, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California.

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measurer				Casing
		Water (a)	Elevation	Elevation	of Well (a)	Purge Volume (b)	Volume		Temp.	sc`	DO		Diamete
Well	Date	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	pН	(°F)	(µS/cm)	(mg/L)	(mv)	(Inches)
MW-1	2-Oct-90	9.76	5.42	-4.34	37.28	58.56	47	6.71	87.5	5,280			4
	28-Feb-91	8.54		-3.12	33.58	65.00	70	6.30	66.0	9,700			
ř	25-Маг-91	7.35		-1.93	33.50	71.00	75	6.50	64.0	7,200			
	1-May-91	7.91		-2.49	33.70	67.00	51	6.20	65.0	3,500			
	5-Aug-91	8.63		-3.21	NM	51.00	68	NM	63.6	7,690			
	23-Oct-91	9.00		-3.58	33.77	67.00	67	9.40	64.2	7,470			
	6-Jan-92	8.52		-3.10	33.87	65.00	69	9.40	63.2	6,640			
	20-Jul-92	7.94		-2.52	33.95	65.02	66	7.20	65.7	6,410			
	23-Oct-92	8.62		-3.20	33.57	64.80	60	7.50	69.8	1,930			
	4-Feb-93	6.55	5.43 (c)	-1.1 2	33.84	70,96	71	8.02	65.0	9,520			
	8-Apr-93	6.37	• • • • • • • • • • • • • • • • • • • •	-0.94	33.80	71.32	65	6.60	66.7	>2,000			
	6-Aug-93	7.39		-1.96	33.88	68.67	69	7.22	68.1	5,890			
	28-Oct-93	7.85		-2.42	33.80	67.48	68	7.00	68.3	5,910			
	1-Feb-94	7.25		-1.82	33.99	69.52	70	7.63	63.2	7,610			
	12-Sep-94	6.75		-1.32	33.95	70.72	70	6.90	75.8	7,950			
	23-Nov-94	6.13		-0.70	33.93	72.28	73	6.10	66.2	>2,000			
	21-Feb-95	6.00		-0.57	34.00	55,44	56	7.36	70	890			
	23-May-95	6.04		-0.61	34.00	54.52	56	7.11	66.2	5,920			
	16-Aug-95	6.03		-0.60	34.00	55.94	56	7.27	69.3	5,510			
	21-Nov-95	6.90		-1.47	34.00	52.85	54	7.19	67.8	5,720			
	13-Feb-96	5.18		0.25	33.87	74.59	>75	7	71.2	6,070			
	13-May-96			-0.67	NM	72.20 (f)	>73	6.5	76.4	14,370			
	28-Aug-96			-0.74	33.85	71.96	>72	7	85.5	4,820			
	21-Nov-96	6.09		-0.66	33.92	72.43	>73	6.5	77.8	7,890			
	20-Feb-97			0.02	33.94	74.17	>75	6.0	66.3	1,900			
	28-May-97			-0.55	NM	72.69 (f)	>73	8.0	77	9,000			
	19-Sep-97			-1.02	33.80	71.12	>72	7.4	71.3	5,500			
	17-Nov-97			-0.71	34.03	72.51	>73	7.12	75	6,690			
	27-Feb-98			0.60	33.97	75.76	>76	6.80	65	6,680			
	27-100-98 27-May-98			-0.99	34.00	71.60	72	6.79	62.42	7,990			
	1-Oct-98			-1.06	34.00	71.52	>72	8.01	65.7	5,220			
	22-Dec-98			-0.92	34.00	71.89	>72	6.82	63.4	5,860	NM	NM	
	4-Mar-99		•	0.38	NM	75.27 (f)	>75	7.53	69.4	4,900	NM	NM	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to Water (a)	Top of Casing Elevation	Top of Water Elevation	Measured Depth of Well (a)	Calculated Purge Volume (b)	Actual Purge Volume	Field	Measurer Temp.	ments (SC	DO	Redox	Casing Diamete
Well	Date	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	рΗ	(°F)	(µS/cm)	(mg/L)	(mv)	(inches)
MW-2	2-Oct-90	10.38	6.21	-4.17	32.97	48.07	47	6.92	86.4	5,460			4
	28-Feb-91	9.19		-2.98	29,39	53.00	55	6.60	64.0	9,000			
,	25-Mar-91	7.95		-1.74	29.39	57.00	70	6.60	63.0	6,400			
	1-May-91	8.58		-2.37	29.60	55.00	50	6.20	64.0	3,000			
	5-Aug-91	9.33	4	-3.12	NM	40.00	54	NM	65.1	5,680			
	23-Oct-91	9.57		-3.36	29.35	52.00	53	7.60	65.4	7,970			
	6-Jan-92	9.08		-2.87	29.50	53.00	53	9.18	62.8	6,990			
	20-Jul-92	8.60		-2.39	29.45	54.21	55	6.50	65.2	6,690		•	
	23-Oct-92	9.33		-3.12	29.18	51.60	55	7.20	69.8	1,900			
	4-Feb-93	7.17	6.20 (c)	-0.97	29.37	57.72	55	8.25	64.0	10,310			
	8-Apr-93	6.95	• • •	-0.75	29.32	58.16	60	6.90	66.7	>2,000			
	6-Aug-93	8.05		-1.85	29.33	55.33	66,5	7.26	66.4	6,250			
	28-Oct-93	8.50		-2.30	29.43	54.40	55	7.08	71.2	6,780			
	1-Feb-94	7.87		-1.67	29.54	56.32	57	8.35	62.4	8,250			
	12-Sep-94	7.42		-1.22	29.45	57.24	66	(e)	69.9	8,130			
	22-Nov-94			-0.55	29.50	59.15	60	6.8	67.6	>2,000			
	21-Feb-95			0.00	30.00	47.12	48	6.97	64	1,050			
	23-May-95		•	0.10	30.00	46.60	48	7.18	70.3	7,710			
	16-Aug-95			-0.49	30.00	46.62	46	7.42	65	6,790			
	21-Nov-95			-1.42	30.00	43.64	45	7.30	67.6	7,250			
	13-Feb-96			0.39	29.47	61.51	>62	7	71.8	2,890			
	13-May-96			-0.20	NM	59.98 (f)	>60	5.5	74.4	860			
	28-Aug-96			-0.91	29.42	58.00	>58	6	83.5	590			
	21-Nov-96		•	-0.21	29.43	59.85	>60	6,5	76.3	4,160			
	20-Feb-97			-0.06	29.54	60.52	>61	6.5	65.2	1,940			
	28-May-97			-0.45	NM	59.51 (f)	>60	7.0	73.6	5,540			
	19-Sep-97			-0.70	29.47	58.68	>59	6.9	69.7	12,630			
	17-Nov-97			-0.55	29.56	59.31	>60	80.8	75.7	710			
	27-Feb-98			0.89	29.45	62.76	>63	6.50	67.3	530			
	27-May-98			0.33	29.47	61.36	62	6.95	63.5	5,870			
	1-Oct-98			-0.75	29.45	58.52	>59	7.96	66.7	1,100			
	22-Dec-98			-0.50	29.23	58.58	>59	6.74	52.8	450	0.30	-242	
	4-Mar-99			0.57	29.35	61.67	>62	7.00	61.6	870	EQ	-212	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measurer				Casing
		Water (a)	Elevation	Elevation	of Well (a)	Purge Volume (b)	Volume		Temp.	SC,	DO	Redox	Diamete
Well	Date	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	pН	(°F)	(µS/cm)	(mg/L)	(mv)	(inches)
MW-3	2-Oct-90	10.38	6.10	-4.28	37.08	56.82	54	6.89	88.4	639			4
	28-Feb-91	9.45	•	-3.35	31.61	58.00	60	6.10	66.0	1,020			
e .	25-Mar-91	7.98		-1.88	31.60	70.00	75	6.40	65.0	8,200			
	1-May-91	8.58		-2.48	33.70	65.00	50	6.40	67.0	4,100			
	5-Aug-91	9.26		-3.16	NM	50.00	67	NM	64.1	6,190			
	23-Oct-91	9.60		-3.50	33.48	66.00	66	7.30	67.3	8,430			
	6-Jan-92			-2.98	33.66	64.00	64	9.98	61.7	7,010			
	20-Jul-92	8.59		-2.49	33.76	65.44	66	6.80	66.0	7,540			
	23-Oct-92	9.30		-3.20	33.47	63.40	65	7.50	71.6	1,800			
	4-Feb-93	7.19	6.10 (c)	-1.09	33.65	68.79	65	8.29	64.0	10,290			
	8-Арг-93	6.98	` '	-0.88	33.55	69.08	72	6,90	68.2	>2,000			
	6-Aug-93	8.01		-1.91	33.55	66.40	56 (d)	7.43	67.3	6,490			
	28-Oct-93	8.45		-2.35	33.60	65.40	66	7.02	72.0	6,590			
	1-Feb-94	8.03		-1.93	33.74	66.84	67	8.32	63.3	8,400			
	12-Sep-94	7.39		-1.29	33.70	68.40	70	7.73	68.7	8,030			
	22-Nov-94	6.76		-0,66	33.75	70.17	70	6.60	65.8	>2,000			
	21-Feb-95	6.36		-0.26	33.50	53.74	54	6.99	85.4	880			
	23-May-95	6.48		-0.38	33.50	5 2 .69	54	7.25	68.7	6,060			
	16-Aug-95	6.63		-0.53	33.50	53.74	54	7.53	66.1	5,390			
	21-Nov-95			-1.41	33.50	50.68	52	7.34	67.4	5,730			
	13-Feb-96			0.19	33.69	72.24	>73	7	71.5	6,790			
	13-May-96			-0.26	NM	71.06 (f)	>72	6.5	76.7	14,360			
	28-Aug-96			-1.05	33.52	68.56	>69	8	79.2	2,930			
	21-Nov-96			-0.54	33.54	69.94	>70	6.5	77.0	7,500			
	20-Feb-97			-0.26	33.67	71.00	>72	6.5	68.7	4,180			
	28-May-97			-0.52	NM	70.33 (f)	>71	7.0	74.1	6,580			
	19-Sep-97			-0.73	33.55	69.48	>70	7.0	70.8	8,570			
	17-Nov-97			-0,67	33.59	69.73	>70	7.08	75.0	6,580			
	27-Feb-98			0.72	33.60	73.37	>74	7.0	65.9	7,530			
	27-May-98			0.05	33.63	71.72	72	8.28	64.8	6,880			
	1-Oct-98			-0.85	33.70	69.56	>70	7.71	67.1	6,380			
	22-Dec-98			-0.63	33.60	NS	NS	NS	NS	NS	0.80	118	
	4-Mar-99			0.25	33.55	NS	NS	NS	NS	NS	EQ	159	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		D - 4h 4a	Top of Cacina	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measurer	ments ;			Casing
		Depth to	Top of Casing Elevation	Elevation	of Well (a)	Purge Volume (b)	Volume		Temp.	sc '	DO	Redox	Diamete
Well	Date	Water (a) (feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	рН	(°F)	(µ\$/cm)	(mg/L)	(mv)	(inches)
vveii	Date	(ieet)	(1000)	(,,,,	<u> </u>								
MW-4	4-Feb-93	6.68	5.18 (c)	-1.50	32.70	64.38	60 (d)	NM	63.5	14,100			4
	8-Apr-93	6.21		-1.03	33.04	69.76	70	6.80	69.1	>2,000			
	6-Aug-93	7.20		-2.02	32.92	66,87	60 (d)	7.44	68.9	13,900			
	28-Oct-93	7.64		-2.46	32.98	65,88	66	6.79	72.1	11,940			
	1-Feb-94	7.26		-2.08	33,31	67.7 2	68	8.65	63.6	18,110			
	12-Sep-94	6.55		-1.37	33.41	69.84	60 (d)	6.03	77.5	16,710			
	23-Nov-94	6.08		-0.90	33.35	70.90	55 (d)	5.60	66.7	>2,000			
	21-Feb-95	5.36		-0.18	33.50	55.71	48 (d)	6.83	80.2	880			
	23-May-95	5.05		0.13	33.50	55.48	59	6.71	66.5	12,090			
	16-Aug-95	5.63		-0.45	33,50	55.74	33 (d)	7.34	69.8	8,670			
	21-Nov-95	6.63		-1.45	33.50	52.39	34 (d)	7.03	68.2	10,380			
	13-Feb-96	5.14		0.04	33,25	73.08	>74	7	75.3	6,090			
	13-May-96	5.75	•	-0.57	NM	71.50 (f)	>72	7	76.1	>20,000			
	28-Aug-96	6.04		-0.86	33.20	70.61	>71	7.4	83.9	2,600			
	21-Nov-96	7.90		-2.72	33.17	65.70	>66	6.5	75.9	8,940			
	20-Feb-97	5.29		-0.11	33.28	72.77	>73	6.5	66.1	2,110			
	20-Feb-97 28-May-97			-0.48	NM	71.81 (f)	>72	7.0	74	6,480			
	•			-0.82	33.31	71.00	>71	7.4	71	4,330			
	19-Sep-97 17-Nov-97			-0.88	33.35	70.95	>71	6.81	70	11,020			
				0.52	33.22	74.25	>75	7.30	65.9	15,720			
	27-Feb-98			0.80	33.00	70.40	35 (d)	6.89	62.4	10,980			
	27-May-98 1-Oct-98			-0.05	33.26	72.88	>73	7.87	66.8	3,390			
				-1.39	33.52	70.07	>70	6.25	57,7	13,000	NM	NM	
	22-Dec-98 4-Mar-99			1.05	NM	76.41 (f)	>77	7.64	64.7	8,700	NM	NM	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measurer	ments			Casing
Well	Date	Water (a) (feet)	Elevation (feet)	Elevation (feet)	of Well (a) (feet)	Purge Volume (b) (gallons)	Volume (gallons)	рН	Temp. (°F)	SC [`] (µS/cm)	DO (mg/L)	Redax (mv)	Diamete: (Inches)
MW-5	4-Feb-93	8,94	4.71 (c)	-4.23	31.40	61.65	40 (d)	8.43	63.2	16,870			4
141 44-7	8-Apr-93	5.43	1.71 (4)	-0.72	31.36	67.4 2	68	7.20	68.0	>2,000			
i	6-Aug-93	6.19		-1.48	31.30	65.29	68	7.47	63.6	5,180			
	28-Oct-93	6.86		-2.15	31.43	62.72	48 (d)	7.12	70.6	4,980			
	1-Feb-94	6.48		-1.77	31.43	64.84	49 (d)	(e)	63.1	6,120			
	12-Sep-94	5.89	•	-1.18	31.43	66.40	39 (d)	(e)	69.4	5,020			
	22-Nov-94	5.66		-0.95	31.44	6 7.02	58 (d)	6.80	68.4	>2,000			
	21-Feb-95	4.90		-0.19	31.00	51.68	45 (d)	7.30	82.5	880			
	23-May-95	4.86		-0.15	31.00	50.97	52	7.03	66.5	4,320			
	16-Aug-95	4.97		-0.26	31.00	52.06	36 (d)	7.48	67.5	3,900			
	21-Nov-95	5.82		-1.11	31.00	49.10	32 (d)	7.26	67.0	4,110			
	13-Feb-96	4.86		-0.15	31.41	69.03	>69	7	68.3	5,950			
		5.06		-0.35	NM	68.51 (f)	>69	6.5	71.9	9,830			
	13-May-96	5.29		-0.58	31.34	67.73	>68	7.9	79.6	2,590			
	28-Aug-96	5.44		-0.73	31.33	67.31	>67	6.5	76.0	7,260			
	21-Nov-96	4.68		0.03	31.46	69.62	>70	6.5	60.7	1,990			
	20-Feb-97			-0.50	NM	68.25 (f)	>69	7.8	70.7	11,500			
	28-May-97	5.21		-0.72	31.46	67.68	>68	7.1	67.9	3,920			
	19-Sep-97	5.43			31.44	68.02	>69	7.0	73.0	5,180			
	17-Nov-97	5.28		-0.57	31.49	71.21	>72	6.8	62.5	1,650			
	27-Feb-98			0.61	32,00	70.40	70	6.89	64.2	4,830			
	27-May-98			-0.69		67.68	>68	7.65	65.6	4,290			
	1-Oct-98			-0.71	31.45	67.73	>68	7.21	57.7	3,920	0.30	67,3	
	22-Dec-98			-0.69	31.45		>71	7.52	56.3	3,130	EQ	213.0	
	4-Mar-99	4.50		0.21	31.50	70.20	-/1	7.54	30.3	3,130	LQ	21000	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measurer	nents :			Casing
Well	Date	Water (a) (feet)	Elevation (feet)	Elevation (feet)	of Well (a) (feet)	Purge Volume (b) (gallons)	Volume (galions)	рН	Temp. (°F)	SC ` (µS/cm)	DO (mg/L)	Redox (mv)	Diameter (Inches)
MW-6	12-Sep-94	6,56	5.37	-1.19	24.85	47.55	41 (d)	(e)	71.2	12,970			4
11111 0	22-Nov-94	6.04		-0.67	24.88	48.98	. 50	6.70	66.4	>2,000			
	21-Feb-95	NS		NS	NS	NS	NS	NS	NS	NS			
	23-May-95	5.32		0.05	24.70	NS	NS	NS	NS	NS			
	16-Aug-95			-0.60	24.70	NS	NS	NS	NS	NS			
	21-Nov-95			-1.41	24.70	NS	NS	NS	NS	NS			
	13-Feb-96			0.23	2 4.71	NS	NS	NS	NS	NS			
	13-May-96			-0.27	NM	NS	NS	NS	NS	NS			
	28-Aug-96			-0.78	24.67	NS	NS	NS	NS	NS			
	21-Nov-96			-0.34	24.65	NS	NS	NS	NS	NS			
	20-Feb-97			-0.01	24.79	NS	NS	NS	NS	NS			
	28-May-97			-0.56	NM	NS	NS	NS	NS	NS			
	19-Sep-97			-0.78	2 4.76	NS	NS	NS	NS	NS			
	17-Nov-97			-0.69	27.71	NS	NS	NB	NS	NS			
	27-Feb-98			0.63	24.64	NS	NS	NS	NS	NS			
	27-May-98			-0.03	29	NS	NS	NS	NS	NS			
	1-Oct-98			~1.00	24.72	NS	NS	NS	NS	NS			
	22-Dec-98			-0.69	2 4.70	NS	NS	NS	NS	NS	5.4	202	
-	4-Mar-99			0.38	24.65	· NS	NS	NS	NS	NS	EQ	346	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measurer	ments			Casing
Well	Date	Water (a) (feet)	Elevation (feet)	Elevation (feet)	of Well (a) (feet)	Purge Volume (b) (gallons)	Volume (gallons)	рН	Temp. (*F)	SC ((µS/cm)	DO (mg/L)	Redox (mv)	Diameter (inches)
MW-7	12-Sep-94	6,16	5.38	-0.78	28.51	58.08	60	6.65	73.5	7,920			4
17111	23-Nov-94	5.61		-0.23	28.46	59.40	60	6.00	64.6	>2,000			
· ·	21-Feb-95	5.25		0.13	28.30	45.64	46	7.46	69,5	910			
	23-May-95	5.10		0.28	28.30	45.24	46	7.21	65.0	5,740			
	16-Aug-95	5.42		-0.04	28.30	45.76	46	7.36	66.8	5,560			
	21-Nov-95	6.28		-0.90	28.30	42.99	44	7.29	65.9	5,650			
	13-Feb-96	4.64		0.74	28.39	61.75	>62	7	70.1	7,050			
	13-May-96	5.36		0.02	NM	59.88 (f)	>60	6.5	76.6	15,030			
	28-Aug-96	6.20		-0.82	28.30	57.46	>58	7.4	76.4	3,980			
	21-Nov-96	6.12		-0.74	28.30	57.66	>58	6,5	75.2	8,400			
	20-Feb-97	5.70		-0.32	28.46	59.17	>60	6.5	63.9	4,410			
	28-May-97	5.46		-0.08	NM	59.80 (f)	>60	7.5	71.3	9,790			
	19-Sep-97	5.91		-0.53	28.49	58.72	>59	7.3	71.4	4,910			
	17-Nov-97	5.59		-0.21	23.39	46.28	>47	6.97	71.0	6,410			
	27-Feb-98	4.68		0.70	23.40	74.63	>75	6.80	64.0	7,070			
	27-May-98			0.21	30.00	66.00	65	6.89	63.0	4,980			
	1-Oct-98			-0.42	30.00	62.92	>63	7.58	64.1	4,000			
	1-Oct-98 22-Dec-98			-0.40	30.00	62.97	>63	7.07	64.2	4,210	NM	NM	
	4-Mar-99			0.70	NM	62.97 (f)	>63	7.42	67.3	3,810	NM	NM	

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

		Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field !	Measurer	nents			Casing
Well	Date	Water (a) (feet)	Elevation (feet)	Elevation (feet)	of Well (a) (feet)	Purge Volume (b) (gallons)	Volume (gallons)	рН	Temp. (*F)	SC ¹ (µS/cm)	DO (mg/L)	Redox (mv)	Diameter (inches)
MW-8	12-Sep-94	6.46	5.44	-1.02	25.15	48.56	55	(e)	(e)	11,400			4
141.44 - 0	23-Nov-94	6.01	0.71	-0.57	25.66	78.60	75	5.60	61.5	>2,000			
0.5	21-Feb-95	NS		NS	NS	NS	NS	N8	NS	NS			
	23-May-95	5.53		-0.09	25,40	NS	NS	NS	NS	NS			
	16-Aug-95	5.68		-0.24	25.40	NS	NS	NS	NS	NS			
	21-Nov-95	6.37		-0.93	25.40	NS	NS	NS	NS	NS			
	13-Feb-96	5.36		0.08	25.54	NS	NS	NS	NS	NS			
	13-May-96	5,62		-0.18	NM	NS	NS	NS	NS	NS			
	28-Aug-96			-0.73	25.52	NS	NS	NS	NS	NS			
	21-Nov-96	5.74		-0.30	25.45	51.24	>52	6.5	73.6	9,300			
	20-Feb-97	5,10		0.34	25.54	53.14	>54	6.5	61.5	4,950			
	28-May-97	5,68		-0.24	NM	51.63 (f)	>54	7.5	71.2	14,930			
	19-Sep-97	5.95		-0.51	25.41	50,60	>51	7.0	67.8	7,860			
	17-Nov-97	5.91		-0.47	25.59	51.17	>52	7.49	70.2	8,320			
	27-Feb-98	4.50		0.94	25.58	54.80	>55	7.00	63.8	6,310			
	27-May-98	6.10		-0.66	31.00	65.00	65	7.19	63.9	6,460			
	1-Oct-98	6.13		-0.69	25.50	50.36	>51	7.74	63.7	6,880			
	22-Dec-98	6.10		-0.66	31.00	NS	NS	NS	NS	NS	0.30	123	•
	4-Mar-99			0.65	25.46	53.74	>54	7.29	70.4	6,110	EQ	179	
OW-1	4-Mar-99		5.09	0.51	14.65	26.18	27.00	7.51	60.0	2,910	EQ	-88	. 4
OW-2	4-Mar-99	4.60	5.39	0.79	14.00	24.44	25.00	7.52	57.9	2,570	EQ	44	4

Notes appear on the following page.

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data Former Penske Truck Leasing Facility,

725 Julie Ann Way, Oakland, California.

			Depth to	Top of Casing	Top of Water	Measured Depth	Calculated	Actual Purge	Field	Measure	ments ;			Casing
Well		Date	Water (a) (feet)	Elevation (feet)	Elevation (feet)	of Well (a) (feet)	Purge Volume (b) (gallons)	Volume (gallons)	рН	Temp. (*F)	SC (µS/cm)	DO (mg/L)	Redox (mv)	Diameter (inches)
(a) (b) (c) (d) (e) (f)	Based All we Well w No rea	on four c ill elevation vent dry d iding - ins	uring purging trument malf	s. d to site benchmar g. function.		, 1993	arter.							
SC (µS/cm) (mg/L) (mv) NM NS EQ	Micros milligr millive Not m Well n	rams per l olt easured not sample	er centimeter iter	ed during this qua	rterly event.									

All elevations are measured relative to a site benchmark (elevation 6.62') based on the City of Oakland datum which is

3 feet higher than mean sea level.

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (µg/L)	TPH Diesel (a) (μg/L)	Benzene (b) (µg/L)	Toluene (b) (µg/L)	Ethylbenzene (b) (µg/L)	Xylenes (b) (μg/L)	MTBE (b) (μg/L)	Total Dissolved Solids (c) (mg/L)
MW-1	2-Oct-90	170	2,900	20	18	1.9	5.7	\	
1,1,1,	28-Feb-91	260	550	43	1	7	1		
	25-Mar-91	73	160	10	ND(<0.3)	0.5	ND(<0.3)		
	1-May-91	ND(<50)	(d)	2.2	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	5-Aug-91	310	330	22	5.5	9.5	23		
	23-Oct-91	440	1,800	23	21	6.2	35		
	6-Jan-92	430	1,600	56	8.4	18	22		
	20-Jul-92	ND(<50)	25,000	0.4	0.8	1	2.1		
	23-Oct-92	280	6,500	9.3	13	8.2	15		~ -
	4-Feb-93	68 (f)	320	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	8-Apr-93	180	7,800	0,5	2.1	0.8	13		
	6-Aug-93	740	17,000	75	100	25	130		3,500
	28-Oct-93	140	7,600	4.7	1.9	3.2	5.4		3,500
	1-Feb-94	430	10,000	8.2	1.1	3.5	4.8		3,800
	12-Sep-94	230	22,000	0.7	1.7	2.0	3.7		4,000
	23-Nov-94	ND(<50)	1,700	ND(<0.5)	ND(<0.5)	ND(<0.5)	0.6		3,600
	21-Feb-95	ND(<50)	4,200	ND(<0.5)	ND(<0.5)	0.8	0.6	•	4,200
	23-May-95	ND(<50)	300	ND(<0.5)	ND(<0.5)	2 .1	2.0		3,800
	16-Aug-95	ND(<50)	740	ND(<0.5)	ND(<0.5)	1.4	1.4		3,800
	21-Nov-95	ND(<50)	410	ND(<0.5)	ND(<0.5)	0.7	0.8		4,100
	13-Feb-96	ND(<50)	400	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,600
	13-May-96	310 (k)	12,000	13	14	2.4	11		3,500
	28-Aug-96	11,000 (k)	56,000	110	ND(<50)	ND(<50)	ND(<50)		3,300
	21-Nov-96	65 (k)	1,500	3.3	0.51	0.59	0.84		3,400
	20-Feb-97	2,900 (k)	200,000	260	61	42	96		1,400
	28-May-97	2,100	28,000 (o)	230	42	55	110		3,100
	19-Sep-97	110,000	2,700,000	230	140	250	700	ND (<500)	3,200
	17-Nov-97	40,000 (r)	950,000 (r)	240 (r)	190 (r)	270 (r)	880 (r)	ND (<300) (r)	3,400
	27-Feb-98	380,000	1,200,000	50	50	200	800	ND (<500)	3,600
	29-May-98	13,000	280,000	110	13	66	390	ND (<50)	
	1-Oct-98	1,300 (t)	63,000	43	1.2	15	84	ND (<10)	
	22-Dec-98	2,000 (y,z)	79,000 (y,aa)	32 (y)	ND(<5.0) (y)	23 (y)	130 (y)	ND(<50) (y)	
	4-Mar-99	95 (ad)	62,000 (ac,y,ae)	8.0	ND(<0.50)	1.0	2.8	ND(<5.0)	

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling
Former Penske Truck Leasing Facility,
725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (μg/L)	TPH Diesel (a) (µg/L)	Benzene (b) (µg/L)	Toluene (b) (µg/L)	Ethylbenzene (b) (µg/L)	Xylenes (b) · (με/L)	MTBE (b)	Total Dissolve Solids (c) (mg/L)
MW-2	2-Oct-90	ND(<50)	80	0.4	ND(<0.3)	ND(<0.3)	0.5	1	
14144-2	28-Feb-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		- -
	25-Mar-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	1-May-91	ND(<50)	(d)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	5-Aug-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	23-Oct-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	6-Jan-92	11,000	1200 (e)	ND(<0.3)	83	82	940		
	20-Jul-92	73	120	1.7	3,3	. 1.1	9.6		
	23-Oct-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	0.5		
	4-Feb-93	ND(<50)	330 (e)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	8-Apr-93	150	74 (h)	1	2.1	1	- 13		
	6-Aug-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		990
	28-Oct-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		1,500
	1-Feb-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,000
	12-Sep-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,100
	22-Nov-94	ND(<50)	51 (h)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,400
	21-Feb-95	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		5,700
	23-May-95	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		5,100
	16-Aug-95	ND(<50)	190	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		5,400
	21-Nov-95	ND(<50)	. 180	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		5,800
	13-Feb-96	ND(<50)	1,500	ND(<0.5)	ND(<0.5)	ND(<0.5)	8.7		1,100
	13-May-96	ND(<50)	25,000 (l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		150
	28-Aug-96	ND(<50)	680	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		410
	21-Nov-96	ND(<50)	1,800 (n)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		720
	20-Feb-97	ND(<50)	1,000 (n)	ND(<0.50)	ND(<0,50)	ND(<0.50)	ND(<0.50)		1,400
	28-May-97	ND(<50)	3,700 (n) (o)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)		830
	19-Sep-97	ND(<50)	4,100	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	1,200
	17-Nov-97	ND(<50)	1,300	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	340
	27-Feb-98	ND(<50)	340	ND(<0.5)	0.9	ND(<0.5)	ND(<2)	ND(<5)	210
	27-May-98	ND(<50)	1,300	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	
	1-Oct-98	3,200 (t)	3,500 (v)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<2)	ND(<10)	
	22-Dec-98	67 (t)	1,200 (ab)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<1)	ND(<5)	
	4-Mar-99	ND(<50)	2,000 (af,ag)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<1)	ND(<5)	

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

337-11	Data	TPH Gasoline (a)	TPH Diesel (a)	Benzene (b)	Toluene (b)	Ethylbenzene (b)	Xylenes (b)	МТВЕ (b)	Total Dissolved Solids (c)
Well	Date	[μg/L)	(µg/L)	(μg/L)	(μ g /L)	(μg/L)	(μ g/ Ľ)	(μ g/L) ·	(mg/L)
MW-3	2-Oct-90	ND(<50)	90	28	3.1	0.6	1.5	1	
MW-3	2-061-90 28-Feb-91	ND(<50)	ND(<50)	6	ND(<0.3)	ND(<0.3)	ND(<0.3)		
•	28-reo-91 25-Mar-91	ND(<50)	ND(<50)	0.6	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	23-May-91 1-May-91	ND(<50)	(d)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	1-May-91 5-Aug-91	ND(<50)	ND(<50)	1.7	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	23-Oct-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	6-Jan-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	0-Jan-92 20-Jul-92	66	ND(<50)	1.1	2.2	0.7	6.4		
	23-Oct-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)		
	4-Feb-93	270	ND(<100)(g)	9.8	4.6	4.5	8.7		
	4-ren-93 8-Apr-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		
	-	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		3,400
	6-Aug-93 28-Oct-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		2,700
	28-061-93 1-Feb-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,400
		ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,500
	12-Sep-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,400
	22-Nov-94 21-Feb-95	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		4,200
		ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		4,100
	23-May-95	ND(<50)	240	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		4,100
	16-Aug-95	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		4,200
	21-Nov-95	ND(<50)	72	16	ND(<0.5)	ND(<0.5)	0.73		3,400
	13-Feb-96	•	250 (m)	1.7	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,700
	13-May-96	ND(<50) ND(<50)	1,200	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,200
	28-Aug-96	ND(<50)	ND(<50)	0.82	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,500
	21-Nov-96	ND(<50)	140 (n)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)		2,900
	20-Feb-97	ND(<50)	240 (n) (o)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)		1,900
	28-May-97	ND(<50)	ND(<50)	0.7	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	3,300
	19-Sep-97	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	3,400
	17-Nov-97	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	3,800
	27-Feb-98	ND(<50) ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	
	27-May-98	• -	56 (w)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1)	ND(<5)	
	1-Oct-98	ND(<50) NS	NS	NS	NS	NS	NS	NS	
	22-Dec-98	NS	NS	NS	NS	NS	NS	NS	
	4-Mar-99	149	1413	1113	* 10	• ÷=			

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling
Former Penske Truck Leasing Facility,
725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (μg/L)	TPH Diesel (a) (µg/L)	Benzene (b)	Toluene (b)	Ethylbenzene (b) (μg/L)	Xylenes (b) (μg/L)	MTBE (b)	Total Dissolved Solids (c) (mg/L)
MW-4	4-Feb-93	58 (f)	450	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)	,	
101 01 -	8-Apr-93	74	220	Ì 19	0.4	ND(<0.3)	ND(<0.9)		
	6-Aug-93	95	ND(<50)	68	0,9	1.1	ND(<0.9)		5,800
	28-Oct-93	160	600	46.	0.7	1.6	1.2		5,200
	1-Feb-94	320	160	290	0.6	6.7	3.2		6,200
	12-Sep-94	390	95	120	3.9	14	14		6,000
	23-Nov-94	100	1,800	9.9	0.7	1.6	3.8		5,600
	21-Feb-95	91	680	23	ND(<0.5)	1.0	ND(<0.5)		7,100
	23-May-95	ND(<50)	270	5.3	ND(<0.5)	ND(<0.5)	ND(<0.5)		8,300
	16-Aug-95	ND(<50)	610	4.1	ND(<0.5)	ND(<0.5)	ND(<0.5)		7,100
	21-Nov-95	ND(<50)	280	1.0	ND(<0.5)	ND(<0.5)	ND(<0.5)		9,800
	13-Feb-96	980 (i)	7,500	570	ND(<0.5)	9.2	13		3,600
	13-May-96	150 (k)	1,200	45	ND(<1.0)	ND(<1.0)	1.5		7,900
	28-Aug-96	70,000 (k)	1,300,000	340	ND(<200)	ND(<200)	ND(<200)		1,800
	21-Nov-96	52,000 (i)	40,000	130	ND(<100)	ND(<100)	ND(<100)		5,400
	20-Feb-97	64,000 (i)	470,000	ND(<100)	ND(<100)	ND(<100)	ND(<100)		1,500
	28-May-97	11,000 (i)	1.000,000 (o)	ND(<100)	ND(<100)	ND(<100)	ND(<100)		1,700
	19-Sep-97	37,000	2,600,000	260	ND(<30)	ND(<30)	ND(<100)	ND(<300)	2,700
	17-Nov-97	4,400 (r)	57,000 (r)	25 (r)	ND(<5) (r)	ND(<5) (r)	ND(<20) (r)	ND(<50) (r)	7,900
	27-Feb-98	580	9,300	2.7	0.8	0.8	3	ND(<50)	9,700
	29-May-98	3,900	11,000	1.4	0.6	ND(<0.5)	ND(<2)	ND(<5)	
	1-Oct-98	2,400 (u)	670,000	5.7	ND(<2.0)	ND(<10)	4.6	ND(<10)	
	22-Dec-98	ND(<250) (y)	3,700 (y,ac)	ND(<2.5) (y)	ND(<2.5) (y)	ND(<2.5) (y)	ND(<5) (y)	ND(<25) (y)	
	4-Mar-99	ND(<50)	2,900 (ah,ag,y)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<1.0)	ND(<5.0)	

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling
Former Penske Truck Leasing Facility,
725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a)	TPH Diesel (a) (µg/L)	Benzene (b) (μg/L)	Toluene (b) (μg/L)	Ethylbenzene (b) (µg/L)	Xylenes (b) (μg/L)	MTBE (b)	Total Dissolved Solids (c) (mg/L)
MW-5	4-Feb-93	ND(<50)	240	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)	1	
14144-2	8-Apr-93	ND(<50)	480	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		- -
	6-Aug-93	ND(<50)	120	0.8	ND(<0.3)	ND(<0.3)	ND(<0.9)		2,800
	28-Oct-93	ND(<50)	370	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)		2,400 -
,	1-Feb-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,500
	12-Sep-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,600
	22-Nov-94	ND(<50)	160	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,600
	21-Feb-95	ND(<50)	170	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,800
	23-May-95	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		4,100
	16-Aug-95	ND(<50)	590	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,800
	21-Nov-95	ND(<50)	500	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,800
	13-Feb-96	ND(<50)	830	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,000
	13-May-96	ND(<50)	870	0.59	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,700
	28-Aug-96	ND(<50)	1,000	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,000
	21-Nov-96	ND(<50)	610	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		2,700
	20-Feb-97	ND(<50)	1,100 (n)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)		1,300
	28-May-97	60 (i)	560 (p) (o)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)		2,500
	19-Sep-97	70	1,000	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	2,400
	17-Nov-97	70	1,100	0.6	0.7	0.5	ND(<2)	5	2,800
	27-Feb-98	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	5	330
	29-May-98	ND(<50)	770	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	
	1-Oct-98	ND(<50)	630	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.0)	ND(<5.0)	
	22-Dec-98	ND(<50)	890 (ab)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.0)	ND(<5.0)	
	4-Mar-99	ND(<50)	780 (ab)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<1.0)	ND(<5.0)	

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling
Former Penske Truck Leasing Facility,
725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (µg/L)	TPH Diesel (a) (µg/L)	Benzene (b) (μg/L)	Toluene (b) (μg/L)	Ethylbenzene (b) (µg/L)	Xylenes (b) (µg/L)	MTBE (b) (μ g/L)	Total Dissolved Solids (c) (mg/L)
MW-6	12-Sep-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	1	560
IV1 VV - O	12-36p-94 22-Nov-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	1.5		1,800
	21-Feb-95	NS NS	NS	NS	NS	NS	NS		NS
	21-F60-93 23-May-95	NS	NS	NS	NS	NS	NS		NS
	25-May-95 16-Aug-95	NS	NS	NS	NS	NS	NS		NS
	21-Nov-95	NS	NS	NS	NS	NS	NS		NS
	13-Feb-96	NS	NS	NS	NS	NS	NS		NS
	13-F60-90 13-May-96	NS	NS	NS	NS	NS	NS		NS
	,	NS NS	NS	NS	NS	NS	NS		NS
	28-Aug-96 21-Nov-96	NS	NS	NS	NS	NS	NS		NS
		NS NS	NS	NS	NS	NS	NS		NS
	20-Feb-97	NS	NS	NS	NS	NS	NS		NS
	28-May-97	NS NS	NS	NS	NS	NS	NS	NS	NS
	19-Sep-97	NS NS	NS	NS	NS	NS	NS	NS	NS
	17-Nov-97		NS NS	NS	NS	NS	NS	NS	NS
	27-Feb-98	NS		NS	NS	NS	NS	NS	
	29-May-98	NS	NS	NS NS	NS	NS	NS	NS	
	1-Oct-98	NS	NS		NS NS	NS	NS	NS	
	22-Dec-98	NS	NS	NS		NS	NS	NS	
	4-Mar-99	NS	NS	NS	NS	No	149	140	

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling
Former Penske Truck Leasing Facility,
725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a)	TPH Diesel (a) (μg/L)	Benzene (b)	Toluene (b) (µg/L)	Ethylbenzene (b) (µg/L)	Xylones (b) (µg/L)	MTBE (b) (μg/L)	Total Dissolve Solids (c) (mg/L)
MW-7	12-Sep-94	160	620	2.7	1.3	ND(<0.5)	2.1	i,	1,100
TAT AA - 1	23-Nov-94	ND(<50)	150	2,4	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,600
	21-Feb-95	93	1,400	0.6	0.8	0.8	3.3		4,000
	23-May-95	ND(<50)	360	ND(<0.5)	ND(<0,5)	ND(<0.5)	ND(<0.5)		3,400
	16-Aug-95	53	1,100	0.5	ND(<0.5)	ND(<0.5)	0.5		4,000
	21-Nov-95	87	9,100	1,4	ND(<0.5)	1.0	1.5		4,200
	13-Feb-96	1,800,000 (j)	5,000,000	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)		3,900
	13-May-96	ND(<50,000)	2,300,000	ND(<500)	ND(<500)	ND(<500)	500 (i)		3,500
	28-Aug-96	59,000 (k)	640,000	ND(<200)	ND(<200)	ND(<200)	600		3,100
	21-Nov-96	3,800 (k)	780,000	130	93	33	64		3,400
	20-Feb-97	15,000 (i)	1,500,000	81	51	ND(<50)	ND(<50)		3,300
	28-May-97	390,000 (i)	440,000 (o)	ND(<1000)	ND(<1000)	ND(<1000)	ND(<1000)		3,500
	19-Sep-97	3,600	910,000	110	64	37	ND(<100)	ND(<300)	3,200
	17-Nov-97	15,000 (r)	18,000,000 (r)	110 (r)	41 (r)	12 (r)	110 (r)	ND(<50) (r)	3,300
	27-Feb-98	45,000	290,000	80	60	ND(<50)	ND(<200)	ND(<500)	3,300
	29-May-98	140	1,600	2.3	0.9	0.9	3	ND(<5)	- -
	1-Oct-98	710 (u)	89,000	39	2.4	11	31	ND(<10)	
	22-Dec-98	3,900 (z)	240,000 (ac)	51	ND(<25)	ND(<25)	ND(<50)	ND(<250)	
	4-Mar-99	820 (u,ag)	170,000(ah,ae,y)	57 (y)	ND(<50)	ND(<50)	ND(<50)	ND(<500)	

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a)	TPH Diesel (a) (μg/L)	Benzene (b)	Toluene (b) (μg/L)	Ethylbenzene (b) (µg/L)	Xylenes (b) (µg/L)	MTBE (b)	Total Dissolved Solids (c) (mg/L)
10110	10.0 04	170	850	2.7	0.5	ND(<0.5)	2	1	5,500
MW-8	12-Sep-94	ND(<50)	570	1.5	ND(<0.5)	ND(<0.5)	ND(<0.5)		6,300
	23-Nov-94 21-Feb-95	NS	NS	NS	NS	NS	NS		NS
	21-F60-93 23-May-95	NS NS	NS	NS	NS	NS	NS		NS
		NS NS	NS	NS	NS	NS	NS		NS
	16-Aug-95 21-Nov-95	NS NS	NS	NS	NS	NS	NS		NS
	21-Nov-95 13-Feb-96	NS	NS	NS	NS	NS	พร		NS
	13-P00-90 13-May-96	NS	NS	NS	NS	NS	NS		NS
	•	NS	NS	NS	NS	NS	NS		NS
	28-Aug-96 21-Nov-96	400 (k)	2,200	4.6	37	4.6	68		5,100
	20-Feb-97	340 (k)	2,500	2.1	53	7.1	94		3,800
		480 (k)	200 (q) (o)	2.5	12	ND(<2.5)	76		4,100
	28-May-97	1,000	7,000	0.8	5.0	0.5	130	ND(<5)	5,000
	19-Sep-97	250	520	1.4	2.1	0.7	3	ND(<5)	4,600
	17-Nov-97		150	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	3,500
	27-Feb-98	ND(<50)	70	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)	
	29-May-98	ND(<50)	• •	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1)	ND(<5)	
	1-Oct-98	ND(<50)	440 (x) NS	NS NS	NS NS	NS	NS	NS	
	22-Dec-98	NS	NS NS	NS	NS	NS	NS	NS	
	4-Mar-99	NS	No	143	1113	110	*	- "	
OW-1	4-Mar-99		31,000 (ac,ae,y)	. 					
OW-2	4-Mar-99		6,400 (ai,ae,y)						
TB-LB	4-Mar-99	ND(<50)	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1)	ND(<5.0)	NA

Notes appear on the following page.

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (µg/L)	TPH Diesel (a) (μg/L)	Benzene (b) (με/L)	Toluene (b)	Ethylbenzene (b)	Xylenes (b) (µg/L)	MTBE (b)	Total Dissolved Solids (c) (mg/L)
(a)	Analyzed by I	USEPA Method 8015, modified	1.					ţ	
(b)	Analyzed by U	USEPA Method 8020.							
(c)	Analyzed by U	USEPA Method 160.1.	•						
(d)	No results - 6	ample for TPH as diesel not col	llected.						
(c)	Diesel range o	concentration reported. A nons	standard diesel pattern wa	s observed in the					

- (f) Does not match typical gasoline pattern. Pattern of peaks observed in the chromatograms is indicative of hydrocarbons heavier than gasoline.
- (g) Detection limit increased due to insufficient sample amount.

chromatogram.

- (h) Diesel range concentration reported. The chromatogram shows only a single peak in the diesel range.
- Laboratory reports that chromatogram indicates unidentified hydrocarbons >C8.
- (j) Laboratory reports that chromatogram indicates unidentified hydrocarbons >C9.
- (k) Laboratory reports that chromatogram indicates gasoline and unidentified hydrocarbons >C8.
- (l) Laboratory reports that chromatogram indicates diesel and unidentified hydrocarbons >C16.
- (m) Laboratory reports that chromatogram indicates diesel and discrete peaks.
- (n) Laboratory reports that chromatogram indicates diesel and unidentified hydrocarbons >C20.
- (o) Laboratory reports that the laboratory control sample failed for this batch, as well as when it was initially analyzed on 6/3/97. All results should be considered as estimated values. No additional sample was available for re-extraction.
- (p) Laboratory reports that chromatogram indicates diesel and unidentified hydrocarbons >C24.
- (q) Laboratory reports that chromatogram indicates diesel and unidentified hydrocarbons <C15.
- (r) Laboratory reports reporting limits for diesel and gas/BTEX elevated due to high levels of target compound. Samples run at dilution.
- (s) Laboratory reports analysis was performed outside of hold time due to improper preservation. Results are estimated.
- (i) Laboratory reports the peak pattern present in this sample represents an unknown mixture atypical of gasoline in the range of n-C09 to greater than n-C12. Quantitation is based on a gasoline reference in the range of n-C07 to n-C12 only.
- (u) Laboratory reports the peak pattern present in this sample represents an unknown mixture atypical of gasoline in the range of n-C07 to greater than n-C12. Quantitation is based on a gasoline reference in the range of n-C07 to n-C12 only.
- (v) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C08 to n-C40. Quantitation is based on a diesel reference between n-C10 and n-C24 only.
- (w) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C12 to n-C28. Quantitation is based on a diesel reference between n-C10 and n-C24 only.
- (x) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C10 to n-C28.

 Quantitation is based on a dieset reference between n-C10 and n-C24 only.

Notes continue on the following page.

Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (µg/L)	TPH Diesel (a) (µg/L)	Benzene (b) (μg/L)	Toluene (b) (μg/L)	Ethylbenzene (b) (μg/L)	Xylenes (b) (μg/L)	MTBE (b)	Total Dissolved Solids (c) (mg/L)
(y)	Laboratory re	ports reporting limit(s) raised du	se to high lovel of analyte	present in sample.				1	
(z)		ports the peak pattern present in			atypical of gasoline i	n the range of			
	n-C10 to gre	ater than n-C12. Quantitation is	based on a gasoline refer	ence in the range of	n-C07 to n-C12 onl	y.			
(aa)	Laboratory re	ports the hydrocarbon pattern p	resent in this sample repr	esents an unknown t	nixture in the range	of n-C09 to n-C36.		-	
•	Quantitation i	is based on a diesel reference be	tween n-C10 and n-C24	only.					
(ab)	Laboratory re	ports the hydrocarbon pattern p	resent in this sample repr	esents an unknown i	nixture in the range	of n-C10 to n-C40.			
	Quantitation i	is based on a diesel reference be	tween n-C10 and n-C24	only.					
(ac)	Laboratory re	ports the hydrocarbon pattern p	resent in this sample repr	esents an unknown i	nixture in the range	of n-C10 to n-C26.	•		
	•	is based on a diesel reference be		•					
(ad)	Laboratory re	ports the peak pattern present it	this sample represents a	n unknown mixture	atypical of gasoline	in the range of			

- n-C07 to greater than n-C12 and may contain weathered gasoline. Quantitation is based on a gasoline reference in the range of n-C07 to n-C12 only.

 (ae) Laboratory reports spiked analyte not detected because of required sample dilution.
- (af) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C09 to n-C40. Quantitation is based on a diesel reference between n-C10 and n-C24 only.
- (ag) Laboratory reports aurrogate recovery outside of limits due to sample matrix interference.
- (ah) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C09 to n-C26.

 Quantitation is based on a diesel reference between n-C10 and n-C24 only.
- (ai) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C09 to n-C32.

 Quantitation is based on a diesel reference between n-C10 and n-C24 only.
- () Reported detection limit
- -- Not analyzed
- ND Not detected
- µg/L Micrograms per liter
- mg/L Milligrams per liter
- NS Well not sampled or monitored during this quarterly event.

Analysis prior to May 28, 1997 by Sequoia Analytical, Walnut Creek, California.

Analysis after May 28, 1997 by American Environmental Netwark (AEN), Pleasant Hill, California.

Analysis beginning October 1, 1998 by Quanterra Incorporated, West Sacramento, California.

Table 3: Summary of Groundwater Analytical Results Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California.

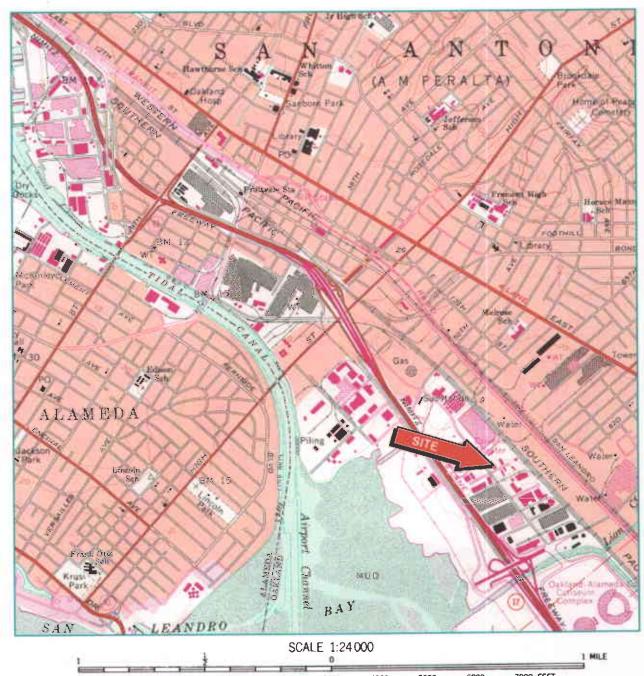
Well	Date	Ferrous Iron (mg/L)(a)	Nitrate (mg/L)(b)	Sulfate (mg/L)(b)
OW-1	4-Mar-99	5.6	0.054	9.0
OW-2	4-Mar-99	1.9	2.7	65.9

⁽a) Analyzed by USEPA Method 6010B.

Analysis by Quanterra Incorporated, West Sacramento, California.

⁽b) Analyzed by USEPA Method 300.

mg/L Milligrams per liter

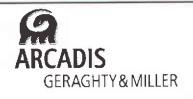






Reference: U.S.G.S. 7-minute Quadrangle, Oakland East, California, revised, Photorevised 1980.

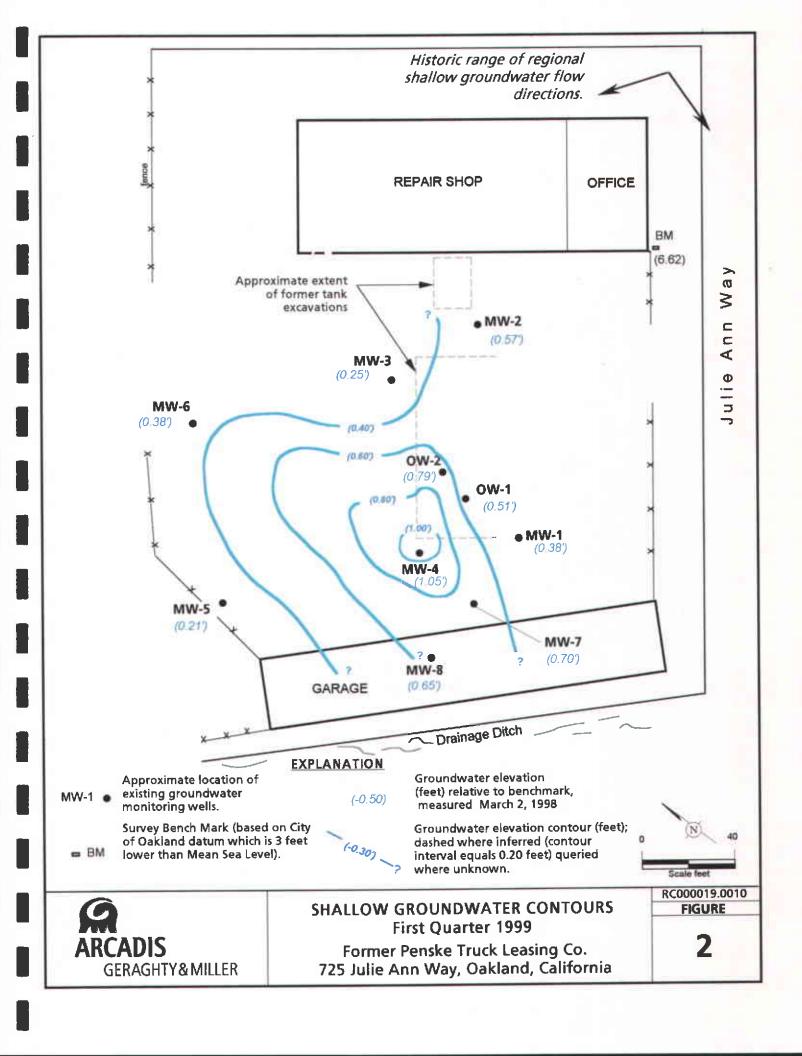


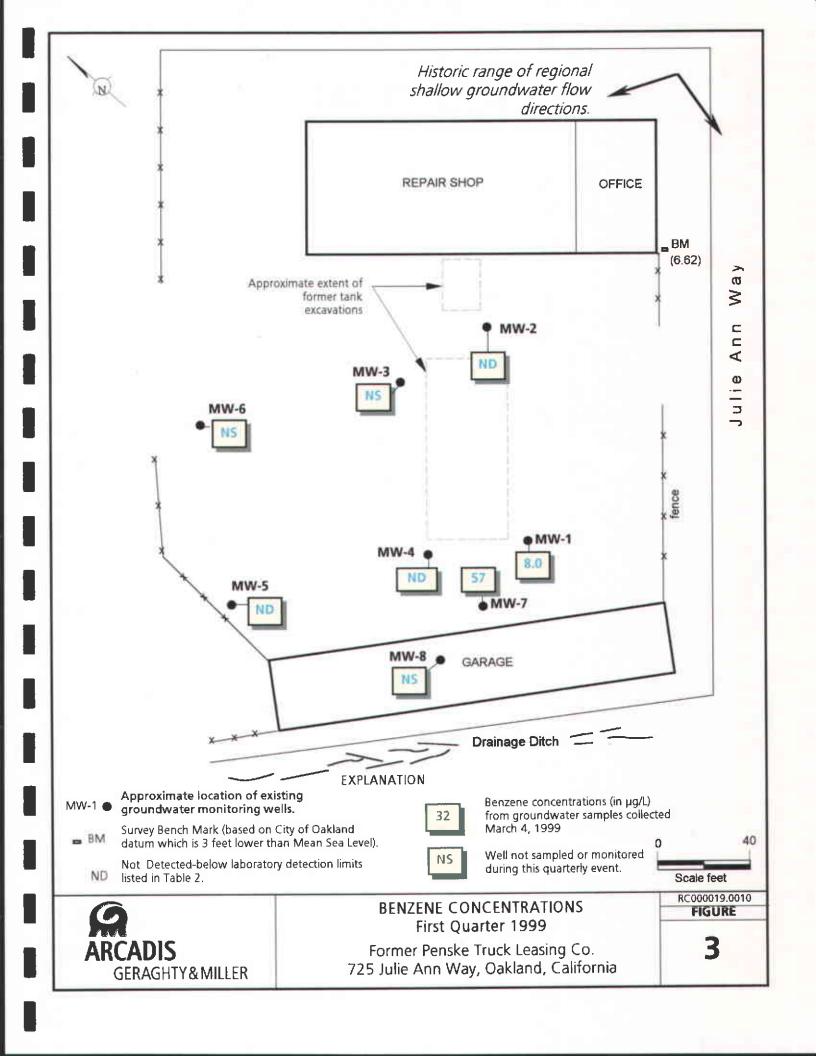


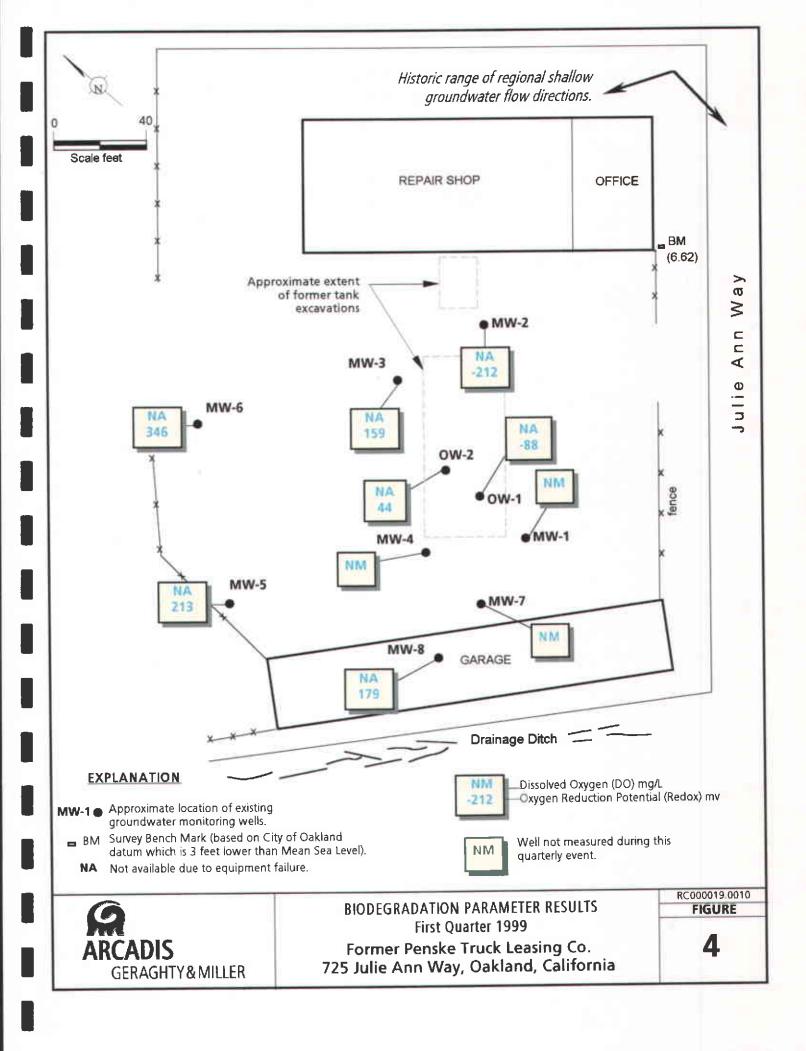
SITE LOCATION MAP
Former Penske Truck Leasing Co. Facility
725 Julie Ann Way
Oakland, California

RC000019.0000 FIGURE

1







ATTACHMENT 1

COPIES OF CERTIFIED LABORATORY REPORTS

AND CHAIN-OF-CUSTODY DOCUMENTATION



Quanterra Incorporated 880 Riverside Parkway West Sacramento, California 95605

916 373-5600 Telephone 916 372-1059 Fax

April 9, 1999

QUANTERRA INCORPORATED PROJECT NUMBER: 304494

PO/CONTRACT: RC000019.0010

Paul Hehn ARCADIS Geraghty & Miller, Inc. 1050 Marina Way South Richmond, CA 94804

Dear Mr. Hehn,

This report contains the analytical results for the eight samples received under chain of custody by Quanterra Incorporated on March 5, 1999. These samples are associated with your PENSKE/Oakland project.

The case narrative is an integral part of this report.

South

If you have any questions, please feel free to call me at (916)374-4383.

Sincerely,

Calvin Tanaka Project Manager



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QUANTERRA INCORPORATED PROJECT NUMBER 304494

Case Narrative

Quanterra's Quality Assurance Program

Sample Description Information

Chain of Custody Documentation

Total Petroleum Hydrocarbons (Gas) - Method 8021

Samples: 1 - 6

Sample Data Sheets Method Blank Reports Laboratory QC Reports

Total Petroleum Hydrocarbons (BTEX) - Method 8021

Samples: 1 - 6

Sample Data Sheets Method Blank Reports Laboratory QC Reports

Total Petroleum Hydrocarbons (Diesel) - Method 8015

Samples: 1 - 5, 7, 8

Sample Data Sheets Method Blank Reports Laboratory QC Reports



CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 304494

General Comments

The sample containers were received intact and in good condition.

Two samples, OW-1 and OW-2, were received, but not listed on the Chain of custody form. The samples were analyzed for TPH as Diesel.

Where applicable, the reporting limits are adjusted to reflect any dilutions.

The method blank and LCS results for this set met the specified QC criteria for acceptance. Where QC criteria were not initially met, corrective actions are documented.

There were no anomalies associated with this project.



Quanterra - Western Region Quality Control Definitions

QC Parameter	Definition
QC Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Duplicate Control Sample (DCS)	Consist of a pair of LCSs analyzed within the same QC batch to monitor precision and accuracy independent of sample matrix effects. This QC is performed only if required by client or when insufficient sample is available to perform MS/MSD.
Duplicate Sample (DU)	A second aliquot of an environmental sample, taken from the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative of the precision for other samples in the batch.
Laboratory Control Sample (LCS)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which is spiked with known amounts of representative target analytes and required surrogates. An LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MSs/MSDs are carried through the entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank (MB)	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate Spike	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.

Source: Quanterra® Quality Control Program, Policy QA-003, Rev. 0, 8/19/96.

ARCADIS GERAGHTY&MILLER		atory Task Or		P.O. No		CF	AIN-OF	-CUSTO	DY REC	.URD	Page	o	
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Sampler(s)/Affiliation/	RK_) / / \								
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Sample ID/Location	Matrix	Sampled	Lab ID	((\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			/	 1	/	- Indika		
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, <u>,</u>						SPECIFY			. 77.740		SF	PECIFY	*C 00 0007

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SAMPLE DESCRIPTION INFORMATION for Geraghty & Miller, Inc.

Lab ID	Client ID	Matrix	Sampled Date Time	Received Date
304494-0001-SA 304494-0002-SA 304494-0003-SA 304494-0005-SA 304494-0006-TB 304494-0007-SA 304494-0008-SA	MW-1 MW-2 MW-4 MW-5 MW-7 TB-LB OW-1 OW-2	AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS	04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99	04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99 04 MAR 99



Total Petroleum Hydrocarbons (Gas) - Method 8021



Client Name: Geraghty & Miller, Inc.

Client ID:

MW - 1

304494-0001-SA

LAB ID: Matrix:

AQUEOUS

Sampled: 04 MAR 99

Received: 04 MAR 99

Authorized:

04 MAR 99

Prepared: NA

Analyzed: 10 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Gasoline	ND	ug/L	50	1
Unknown hydrocarbon	95	ug/L	50	

Surrogate Recovery Acceptable Range 87 - 122 4-Bromofluorobenzene 94 %

Note 1 = The peak pattern present in this sample represents an unknown mixture atypical of gasoline in the range of n-C7 to greater than n-C12 and may contain weathered gasoline. Quantitation is based on a gasoline reference in the range of n-C7 to n-C12 only.

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Mike Orbanosky



Client Name: Geraghty & Miller, Inc.

Client ID:

Authorized:

MW-2 LAB ID:

304494-0002-SA

Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99

Prepared: NA

Received: 04 MAR 99

Analyzed: 10 MAR 99

Dilution Factor: 1.0=

Parameter		Result	Units	Reporting Limit	Qualifier
Gasoline Unknown hydrocarbon	· .	ND ND	ug/L ug/L	50 50	

Surrogate

4-Bromofluorobenzene

Recovery

Acceptable Range

97 %

87 - 122

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Mike Orbanosky



Client Name: Client ID: Geraghty & Miller, Inc.

Authorized:

MW-4

LAB ID:

304494-0003-SA

Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99

98 %

Prepared: NA

Received: 04 MAR 99

Analyzed: 10 MAR 99

87 - 122

Dilution Factor: 1.0

4-Bromofluorobenzene

Parameter	Result	Units	Reporting Limit	Qualifier	
Gasoline Unknown hydrocarbon	ND ND	ug/L ug/L	50 50		
Surrogate	Recove	ry	Acceptab1	e Range	

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Mike Orbanosky



Geraghty & Miller, Inc. Client Name:

Client ID: LAB ID:

Authorized:

MW-5

304494-0004-SA

Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99

Prepared: NA

Received: 04 MAR 99

Analyzed: 10 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Gasoline	ND	ug/L	50	
Unknown hydrocarbon	NO	ug/L	50	

Surrogate

4-Bromofluorobenzene

Recovery

Acceptable Range

95 %

87 - 122

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Mike Orbanosky



Geraghty & Miller, Inc. Client Name:

Client ID: LAB ID:

MW - 7

304494-0005-SA

Matrix:

AQUEOUS

Sampled: 04 MAR 99

Received: 04 MAR 99

Authorized:

04 MAR 99

Prepared: NA

Analyzed: 10 MAR 99

Dilution Factor: 1.0~

Parameter	Result	Units	Reporting Limit	Qualifier
Gasoline	ND	ug/L	50	1
Unknown hydrodarbon	820	ug/L	50	

Acceptable Range Recovery Surrogate 87 - 122 Ι 84 % 4-Bromofluorobenzene

Note 1 = The peak pattern present in this sample represents an unknown mixture atypical of gasoline in the range of n-C7 to greater than n-C12. Quantitation is based on a gasoline reference in the range of n-C7 to n-C12. Note I = Surrogate recovery outside of limits due to sample matrix interference.

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Mike Orbanosky



Client Name: Geraghty & Miller, Inc.

Client ID: LAB ID:

Authorized:

TB-LB

304494-0006-TB

Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99

Prepared: NA

Received: 04 MAR 99

Analyzed: 09 MAR 99

Dilution Factor: 1.0

Parameter

Units Result

Reporting Limit

Qualifier

Gasoline

Unknown hydrocarbon

ND ND ug/L ug/L 50 50

Surrogate

Recovery

Acceptable Range

4-Bromofluorobenzene

98 %

87 - 122

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Mike Orbanosky



QC LOT ASSIGNMENT REPORT Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (LCS/BLANK)
304494-0001-SA 304494-0002-SA 304494-0003-SA 304494-0004-SA 304494-0005-SA 304494-0006-TB	AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS	TPH-GAS-A TPH-GAS-A TPH-GAS-A TPH-GAS-A TPH-GAS-A TPH-GAS-A	09 MAR 99-651 09 MAR 99-651 09 MAR 99-651 09 MAR 99-651 09 MAR 99-651 09 MAR 99-651	09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A



Qualifier

METHOD BLANK REPORT Volatile Organics by GC Project: 304494

TPH-GAS-TR-A Test: P/T-GAS-TR AQUEOUS Method: Matrix:

09 MAR 99-651

QC Lot: Analyzed: 09 MAR 99 🚽 Total Petroleum Hydrocarbons (Gasoline)

09 MAR 99-65A QC Run:

Time: 13:43

Reporting Result Limit Units Analyte 50 ND ug/L Gasoline ug/L 50 ND Unknown hydrocarbon

Surrogate

4-Bromofluorobenzene

Acceptable Range % Recovery

87 -122 99



LABORATORY CONTROL SAMPLE REPORT

Volatile Organics by GC

Project: 304494

Category: TPH-GAS-A TPH by Purge and Trap GC-FID Testcode: TPH-GAS-TR-A Matrix: AQUEOUS Concentrat Method: P/T-GAS-TR

Concentration Units: ug/L QC Run: 09 MAR 99-65A QC Lot: 09 MAR 99-651

Analyzed Date: 09 MAR 99 Time: 14:22

----Concentration----Accuracy (%) Analyte Spiked Measured LCS Limits 1000 98 Gasoline 985 74-120 ----Concentration----Accuracy(%) Surrogate Spiked Measured LCS Limits 4-Bromofluorobenzene 20.0 21.8 109 87-122

Calculations are performed before rounding to avoid round-off errors in calculated results.



MATRIX SPIKE QC REPORT Volatile Organics by GC Project: 304494

TPH-GAS-A TPH by Purge and Trap GC-FID Category:

TPH-GAS-TR-A Test Matrix AQUEOUS 304474-0007

Sample MS Run 09 MAR 99-65A

Units ug/L Units Qualifier: Wet Weight

Analyte	Sample Result	-Concentration MS Result	Amount Spiked	Percent Recovery	Control Limits	RPD Limit
Gasoline	ND	997	1000	100	74-120	15
4-Bromofluorobenzene	98	111		0.0	87-122	0

ND = Not Detected

Calculations are performed before rounding to avoid round-off errors in calculated results.



Total Petroleum Hydrocarbons (BTEX) - Method 8021



Client Name: Geraghty & Miller, Inc.

Client ID: LAB ID:

MW-I

304494-0001-SA

Matrix: Authorized: **AQUEOUS** 04 MAR 99 Sampled: 04 MAR 99

Prepared: NA

Received: 04 MAR 99

Analyzed: 10 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Benzene	8.0	ug/L	0.50	
Toluene	ND	ug/L	0.50	
Ethylbenzene	1.0	ug/L	0.50	
M&P Xylene	1.7	ug/L	1.0	
o-Xylene	1.1	ug/L	0.50	
Methyl-t-butyl ether (MTBE)	ND	ug/L	5.0	

Surrogate	Recovery	Acceptable Range
a,a,a-Trifluorotoluene	84 %	70 - 130

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Calvin Tanaka



Client Name:

Geraghty & Miller, Inc.

Client ID:

Authorized:

MW-2

LAB ID:

304494-0002-SA

Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99

Prepared: NA

Received: 04 MAR 99

Analyzed: 10 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Benzene Toluene Ethylbenzene M&P Xylene o-Xylene Methyl-t-butyl ether (MTBE)	ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 1.0 0.50 5.0	
	_			_

Surrogate

a,a,a-Trifluorotoluene

Recovery

Acceptable Range

87 %

70 - 130

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Calvin Tanaka



Geraghty & Miller, Inc. Client Name:

Client ID:

MW-4

LAB ID:

304494-0003-SA

Matrix:

AQUEOUS

Sampled: 04 MAR 99

Received: 04 MAR 99

Authorized:

04 MAR 99

Prepared: NA

Analyzed: 10 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Benzene	ND	ug/L	0.50	
Toluene	ND	ug/L	0.50	
Ethylbenzene	ND	ug/L	0.50	
M&P Xylene	ND	ug/L	1.0	
o-Xylene	ND	ug/L	0.50	
Methyl-t-butyl ether (MTBE)	NO	ug/L	5.0	

Surrogate

a, a, a-Trifluorotoluene

Recovery

Acceptable Range

85 %

70 - 130

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Calvin Tanaka



Client Name:

Geraghty & Miller, Inc.

Client ID:

MW-5

LAB ID:

304494-0004-SA

Matrix:

AQUEOUS

Sampled: 04 MAR 99 Prepared: NA

Received: 04 MAR 99

Authorized:

04 MAR 99

Analyzed: 10 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Benzene Toluene Ethylbenzene M&P Xylene o-Xylene Methyl-t-butyl ether (MTBE)	ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 1.0 0.50 5.0	

Surrogate

Recovery

Acceptable Range

a, a, a-Trifluorotoluene

83 %

70 - 130

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Calvin Tanaka



Geraghty & Miller, Inc. Client Name:

Client ID:

Authorized:

MW-7

LAB ID:

304494-0005-SA

Matrix:

AQUEOUS 04 MAR 99

Sampled: 04 MAR 99 Prepared: NA

Received: 04 MAR 99

Analyzed: 10 MAR 99

Dilution Factor: 10=

Parameter	Result	Units	Reporting Limit	Qualifier
Benzene	57	ug/L	5.0	0
Toluene	ND	ug/L	5.0	
Ethylbenzene	17	ug/L	5.0	
M&P Xylene	27	ug/L	10	
o-Xylene	19	ug/L	5.0	
Methyl-t-butyl ether (MTBE)	ND	ug/L	50	

Surrogate	Recovery	Acceptable Range
a,a,a-Trifluorotoluene	84 %	70 - 130

Note o = Reporting limit(s) raised due to high level of analyte present in sample. NA = Not Applicable

ND = Not Detected

Reported By: Karen Mason

Approved By: Calvin Tanaka



Geraghty & Miller, Inc. Client Name: Client ID:

Authorized:

TB-LĔ

LAB ID:

304494-0006-TB

Matrix:

AQUEQUS

04 MAR 99

Sampled: 04 MAR 99

Prepared: NA

Received: 04 MAR 99 Analyzed: 09 MAR 99

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
Benzene Toluene Ethylbenzene M&P Xylene o-Xylene Methyl-t-butyl ether (MTBE)	ND ND ND ND NO ND	ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 1.0 0.50	

Surrogate	Recovery	Acceptable Range
a,a,a-Trifluorotoluene	89 %	70 - 130

NA = Not Applicable ND = Not Detected

Reported By: Karen Mason

Approved By: Calvin Tanaka



QC LOT ASSIGNMENT REPORT - MS QC Volatile Organics by GC

Laboratory Sample Number	QC_Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (BLANK/LCS)	MS QC Run Number (SA,MS,SD,DU)
304494-0001-SA 304494-0002-SA 304494-0003-SA 304494-0004-SA 304494-0005-SA 304494-0006-TB	AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS	TPH-BTEX-A TPH-BTEX-A TPH-BTEX-A TPH-BTEX-A TPH-BTEX-A TPH-BTEX-A	09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A	09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A 09 MAR 99-65A	



METHOD BLANK REPORT Volatile Organics by GC Project: 304494

TPH-GBX-A Test:

5030/GC/PID/FID

AQUEOUS Matrix:

Method:

QC Lot: 09 MAR 99-65A Analyzed: 09 MAR 99=

Total Petroleum Hydrocarbons (Gasoline) and BTEX

QC Run: Time: 09 MAR 99-65A

13:43

Analyzed. Us MAK 33.	Time.	13.43		Reporting	
Analyte		Result	Units*	Limit	Qualifier
Benzene Toluene Ethylbenzene M&P Xylene o-Xylene Methyl-t-butyl ether (MTBE)	ND ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 1.0 0.50 5.0	

Acceptable Range Surrogate % Recovery 70 -130 87 a,a,a-Trifluorotoluene



DUPLICATE CONTROL SAMPLE REPORT Volatile Organics by GC Project: 304494

Category: TPH-BTEX-A TPH and BTEX (Gasoline) Testcode: TPH-GBX-A

Method: 5030/GC/PID/FID

Concentration Units: ug/L O MAR 99 Time: 05:58 AQUEOUS Matrix: Analyzed Date: 10 MAR 99 09 MAR 99-65A QC Lot:

Analyte	Spiked	Concentrat Me DCSI	ion asured DCS2	Accur (S DCS1	racy %) DCS2	Limits	Precision (RPD) DCS Limit
Benzene Toluene Ethylbenzene M&P Xylene o-Xylene	10.0 10.0 10.0 10.0 10.0	9.26 9.13 9.17 18.8 9.36	9.31 9.09 8.90 18.0 9.04	93 91 92 188 94	93 91 89 180 90	79-121 76-120 79-119 79-119 79-119	0.51 10 0.37 10 3.0 15 4.6 15 # 3.4 15
Surrogate	Spiked	-Concentrat Me DCSI	ion asured DCS2	Accui DCS1	racy(%) DCS2	Limits	
a,a,a-Trifluorotoluene	20.0	17.4	16.9	87	84	70-130	

Note #: Outside of control limits. Calculations are performed before rounding to avoid round-off errors in calculated results.



Total Petroleum Hydrocarbons (Diesel) - Method 8015



73 - 134

Н

Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc.

Client ID: MW-1

LAB ID: 304494-0001-SA

Matrix: AQUEOUS Sampled: 04 MAR 99 Received: 04 MAR 99
Authorized: 04 MAR 99 Prepared: 09 MAR 99 Analyzed: 11 MAR 99

Dilution Factor: 100

o-Terphenyl

Reporting Parameter Result Limit Units Qualifier Diesel Fuel ND 5000 ug/L Unknown hydrocarbon 62000 5000 1 ug/L Surrogate Recovery Acceptable Range

ND %

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in the range of n-ClO to n-C26. Quantitation is based on a diesel reference between n-ClO and n-C24 only.

Note H = Spiked analyte not detected because of required sample dilution.

Note o = Reporting limit(s) raised due to high level of analyte present in sample. ND = Not Detected

Reported By: Cindy Jervi

Approved By: Emily Uebelhoer



Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc. Client ID: MW-2

LAB ID:

304494-0002-SA

Matrix: Authorized: AOUEOUS

04 MAR 99

Sampled: 04 MAR 99

Prepared: 09 MAR 99

Received: 04 MAR 99

Analyzed: 11 MAR 99

Dilution Factor: 2.0

Parameter	Result	Reporting Limit Qualifie			
Diesel Fuel Unknown hydrocarbon	ND 2000	ug/L ug/L	100 100	0	
Surrogate	Recove	Acceptab	le Range		
o-Terphenyl	151 %		73 -	134	I

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in

the range of n-C09 to n-C40. Quantitation is based on a diesel reference between C10 and n-C24 only.

Note I = Surrogate recovery outside of limits due to sample matrix interference.

Note o = Reporting limit(s) raised due to high level of analyte present in sample. ND = Not Detected

Reported By: Cindy Jervi

Approved By: Emily Uebelhoer



Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc.

Client ID:

Authorized:

MW-4

304494-0003-SA

LAB ID: Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99 Prepared: 09 MAR 99 Received: 04 MAR 99

Analyzed: 11 MAR 99

Ι

Dilution Factor: 2.0

Parameter	Result	Units	Reporting Limit	Qualifier	
Diesel Fuel Unknown hydrocarbon	ND 2900	ug/L ug/L	100 100	o 1	
Supposato	Pagayany		Accontable Dange		

Surrogate Recovery Acceptable Range o-Terphenyl 221 % 73 - 134

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in the range of n-C09 to n-C26. Quantitation is based on a diesel reference between n-ClO and n-C24 only.

Note I = Surrogate recovery outside of limits due to sample matrix interference. Note o = Reporting limit(s) raised due to high level of analyte present in sample. ND = Not Detected

Reported By: Cindy Jervi

Approved By: Emily Uebelhoer



Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc.

Client ID: MW-5

LAB ID: 304494-0004-SA

Matrix: AQUEOUS Sampled: 04 MAR 99 Received: 04 MAR 99 Authorized: 04 MAR 99 Prepared: 09 MAR 99 Analyzed: 11 MAR 99

Dilution Factor: I.0

Parameter	Result	Units	Reporting Limit	Qualifier	
Diesel Fuel Unknown hydrocarbon	ND 780	ug/L ug/L	50 50	1	
Surrogate	Recove	Recovery		Acceptable Range	
o-Terphenyl	123 %		73 - 134		

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in the range of n-C10 to n-C40. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

ND = Not Detected

Reported By: Cindy Jervi -

Approved By: Emily Uebelhoer



Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc.

Client ID: MW-7

LAB ID: 304494-0005-SA

Matrix: AQUEOUS Sampled: 04 MAR 99 Received: 04 MAR 99 Authorized: Prepared: 09 MAR 99 04 MAR 99 Analyzed: 11 MAR 99

Dilution Factor: 100

. <u> </u>	Reporting				
Parameter	Result	Units	Limit	Qualifier	
Diesel Fuel Unknown hydrocarbon	ND 170000	ug/L ug/L	5000 5000	o I	
Surrogate	Recovery		Acceptable Range		
o-Terphenyl	ND %		73 -	134 н	

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in the range of n-C09 to n-C26. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

Note H = Spiked analyte not detected because of required sample dilution. Note o = Reporting limit(s) raised due to high level of analyte present in sample.

ND = Not Detected

Reported By: Cindy Jervi Approved By: Emily Uebelhoer



Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc.

Client ID: OW-1

LAB ID:

304494-0007-SA Matrix:

AOUEOUS Authorized: 04 MAR 99

Sampled: 04 MAR 99 Prepared: 09 MAR 99

Received: 04 MAR 99 Analyzed: 12 MAR 99

Dilution Factor: 20-

	Reporting					
Parameter	Result	Units	Limit	Qualifier		
Diesel Fuel Unknown hydrocarbon	ND 31000	ug/L ug/L	1000 1000	o 1		
Surrogate	Recove	Recovery		Acceptable Range		
o-Terphenyl	ND.	ND %		134 H		

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in the range of n-C10 to n-C26. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

Note H = Spiked analyte not detected because of required sample dilution.

Note o = Reporting limit(s) raised due to high level of analyte present in sample.

ND = Not Detected

Reported By: Cindy Jervi

Approved By: Emily Uebelhoer



Total Petroleum Hydrocarbons by GC/FID (Triregional) Method TPH-D-TRIREGIONAL

Client Name: Geraghty & Miller, Inc.

Client ID: LAB ID:

Authorized:

OW-2

304494-0008-SA

Matrix:

AQUEOUS

04 MAR 99

Sampled: 04 MAR 99 Prepared: 09 MAR 99 Received: 04 MAR 99

Analyzed: 12 MAR 99

Dilution Factor: 5.0=

Parameter	Result	Units	Reporting Limit	Qualifier
Diesel Fuel	ND	ug/L	250	0
Unknown hydrocarbon	6400	ug/L	250	1

Surrogate Recovery Acceptable Range

o-Terphenyl

ND %

73 - 134

Н

Note 1 = The hydrocarbon patter present in this sample represents an unknown mixture in the range of n-C09 to n-C32. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

Note H = Spiked analyte not detected because of required sample dilution. Note o = Reporting limit(s) raised due to high level of analyte present in sample. ND = Not Detected

Reported By: Cindy Jervi

Approved By: Emily Uebelhoer



QC LOT ASSIGNMENT REPORT Hydrocarbon Work Cell

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (LCS/BLANK)
304494-0001-SA 304494-0002-SA 304494-0003-SA 304494-0004-SA 304494-0005-SA 304494-0007-SA 304494-0008-SA	AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS	TPH-D-TR-A TPH-D-TR-A TPH-D-TR-A TPH-D-TR-A TPH-D-TR-A TPH-D-TR-A TPH-D-TR-A	09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R	09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R 09 MAR 99-11R



METHOD BLANK REPORT Hydrocarbon Work Cell Project: 304494

Test:

TPH-D-TR-A

Method:

TPH-D-TRIREGIONAL

Matrix:

AQUEOUS

QC Lot:

09 MAR 99-11R

Analyzed: 11 MAR 99≤

QC Run:

09 MAR 99-11R

Time:

08:11

Analyte

Diesel Fuel Unknown hydrocarbon Result ND

ND

Units ug/L ug/L

Total Petroleum Hydrocarbons by GC/FID (Triregional)

Limit

50

Reporting

Qualifier

Surrogate

o-Terphenyl

% Recovery

Acceptable Range

93

73 -134



DUPLICATE CONTROL SAMPLE REPORT

Hydrocarbon Work Cell

Project: 304494

Category: TPH-D-TR-A Petroleum Hydrocarbons (Diesel), Tri-Regional

Testcode: TPH-D-TR-A Method: TPH-D-TRIREGIONA

Matrix: AQUEOUS Concentration Units: ug/L QC Lot: 09 MAR 99-IIR Analyzed Date: 11 MAR 99 Time: 09:12

-----Concentration-----Accuracy Precision Analyte Spiked -----Measured----(RPD) DCS1 DCS2 DCSI DCS2 DCS Limit Limits Diesel Fuel 300 252 262 84 87 57-112 3.8 23

--Concentration-----Surrogate Spiked -----Measured----Accuracy(%) DCS1 DCS2 DCS1 Limits o-Terphenyl 40.0 39.8 41.4 99 103 73-134

Calculations are performed before rounding to avoid round-off errors in calculated results.