# ARCADIS GERAGHTY & MILLER

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

WESTERN REGION

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

Subject:
Results of Quarterly Groundwater Monitoring, Second Quarter 1999
Former Penske Truck Leasing Company Facility
725 Julie Ann Way
Oakland, California

Richmond, California,
September 14, 1999

Contact:
Paul V. Hehn

Extension:
(510) 233-3200

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 second quarter 1999 at the Former Penske Truck Leasing Facility at 725 Julie Ann Way, Oakland.

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 evaluating the various remedial options.

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

99 SEP 15 PM 4:22
ENVIRONMENTAL PROTECTION

Our ref.:
Project No. RC000321.0002/acht999

PENSKE
Truck Leasing

ENVIRONMENTAL PROTECTION
99 SEP 29 PM 4:20

September 29, 1999

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Remediation Planning and Change in Consultant
Former Penske Truck Leasing Facility
725 Julie Ann Way
Oakland, CA

Dear Mr. Chan,

In reviewing our remedial options, the progress of the project to date, the overall cost to reach this point and then complete the project, Penske Truck Leasing Co., L.P. has elected to retain SECOR International, Inc. to initiate further site remediation. SECOR has submitted a proposal to remediate the site to acceptable levels using a Fenton's agent injection program. A work plan detailing this remedial option will be delivered for your review by October 30, 1999.

We plan to retain Arcadis - Geraghty & Miller to complete the 1999 3rd Quarter monitoring. SECOR will provide the 1999 4th Quarter monitoring and all monitoring related to the remedial work plan.

Following your review and approval of the work plan, we would like to schedule a meeting and a site visit for all involved parties to better understand the project and initiate a closer working relationship towards completing the remediation. If you have questions or would like to discuss the project, please call my office at 610-775-6010.

Sincerely,

Richard G. Saut

Richard G. Saut
Environmental Project Manager

RGS/csk
L1092799.rgs

cc: D. Pratt
A. McGrath

Questions re: fenton's agent
- Pilot Study? # of applications
- pH
- Concentration of $H_2O_2$
- Will Toc be run?
- Confirmation / initial sampling

PENSKE
Truck Leasing

***Via Fax 510-233-3204***

August 16, 1999

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

Re: Second 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 Saut

Richard G. Saut
Environmental Project Manager

RGS/csk
L2081699.rgs

# Results of Quarterly Groundwater Monitoring
## Second Quarter 1999

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

ARCADIS
GERAGHTY & MILLER

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

QUARTERLY REPORT

Prepared August 20, 1999

# ARCADIS GERAGHTY & MILLER

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

WESTERN REGION

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

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

Richmond,
August 20, 1999

Contact:
Paul V. Hehn

Extension:
510 233 3200

Dear Mr. Saut:

This report presents the results of the second quarter 1999 quarterly groundwater monitoring and sampling activities performed on June 3, 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 ARCADIS 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 it's letter to Penske dated February 22, 1999, additional monitoring for dissolved oxygen and oxygen reduction potential (redox) was performed during this quarterly sampling event. The details of this additional monitoring and sampling are discussed in this report.

## Discussion on 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 need to be sampled. He also stated that there was no need to analyze for total dissolved solids (TDS) from any of the wells being sampled at the site. Consequently, TDS is no longer an analyte for groundwater samples collected. 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 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 and evaluated for all available wells during the fourth quarter 1998 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 was sampled again during the current second quarter of 1999 sampling event and will be sampled every other quarter going forward.

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. This information was collected and reported during the previous (1st Quarter 1999) quarterly event report. 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 second quarter groundwater monitoring was performed on June 3, 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 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 was also sampled during the current quarterly event. 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 fourth quarter of 1999.

The ACHCSA also requested that all wells be monitored for dissolved oxygen and redox. Both measurements were collected during this quarter. Wells that detected measurable liquid-phase hydrocarbons (LPH) were not measured for dissolved oxygen and redox since the probes become fouled if they are lowered into the LPH layer. These measurements will be collected again during the next 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 LPH. 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 full four well volume purge. The approximate well volume estimated by the field personnel indicates that the extra purge volume generally exceed the four volume purge requirements by 15 to 50%. During the current event, it was estimated that 700 gallons were purged from eight wells at the site. This total is more than twice the normal amount of groundwater that would be purged during a four volume well-purge for all of the wells sampled during this event.

) if ORC is added do not over purge wells.

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 United States Environmental Protection Agency (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).

## Results

### Shallow Groundwater Flow

A summary of the depth-to-water data is presented in Table 1. Depth to water ranged from 5.20 feet (Monitoring Well MW-5) to 6.79 feet (Monitoring Well MW-2) below the ground surface. A contour map based on the groundwater elevation data collected June 3, 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 June 1999. **LPH were measured in wells MW-1 (0.01 foot) and MW-7 (0.08 foot) during this monitoring event.**

The difference in the elevation of the groundwater surface between wells MW-2 and MW-1 is 0.04 feet, producing a hydraulic gradient (slope of the groundwater surface) of approximately 0.0004 foot/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 redox measurements 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 (960 µg/L), MW-2 (81 µg/L), MW-4 (210 µg/L) and MW-7 (690 µg/L). TPH as diesel was detected in the groundwater samples collected

TPH d

from Monitoring Wells MW-1 (82,000 µg/L), MW-2 (1,900 µg/L), MW-4 (2,500 µg/L), MW-5 (800 µg/L), and MW-7 (1,300,000 µg/L). Benzene was detected in the groundwater samples collected from Monitoring Wells MW-1 (23 µg/L), MW-4 (0.70 µg/L), and MW-7 (34 µg/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.

## Discussion and Compliance with Containment Zone Approach

Benzene was not detected at concentrations exceeding the compliance concentration of 71 µg/L in the shallow groundwater sample collected from designated CZ-concept Guard Well MW-7 (34 µg/L). Since the benzene concentration detected in Guard Well MW-7 was below the compliance level during the previous quarterly sampling event (1st quarter 1999), downgradient well MW-8 was not sampled during the current second 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 detected in the groundwater samples collected from wells MW-1 (from 95 µg/L to 960 µg/L), MW-2 (from not detected [ND] to 81 µg/L), and MW-4 (from ND to 210 µg/L), Decreases were detected in the groundwater samples collected from well MW-7 (from 820 µg/L to 690 µg/L). TPH as gasoline was ND in well MW-5.

Increases in TPH as diesel concentrations were detected in the samples collected from wells MW-1 (from 62,00 µg/L to 82,000 µg/L), MW-2 (from 1,200 µg/L to 1,900 µg/L), MW-5 (from 780 µg/L to 800 µg/L), and MW-7 (from 170,000 µg/L to 1,300,000 µg/L). Decreases were detected in the groundwater samples collected from well MW-4 (from 2,900 µg/L to 2,500 µg/L).

Increases in benzene concentrations were detected in the samples collected from wells MW-1 (from 8.0 µg/L to 23 µg/L) and MW-4 (from ND to 0.70 µg/L). Decreases in benzene concentrations were detected in the groundwater samples collected from well MW-7 (from 57 µg/L to 34 µg/L). Benzene was ND in wells MW-2, and MW-5.

Varying 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 ORC™ 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 vacuum-enhanced 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.

**Additional Groundwater Biodegradation Monitoring Results**

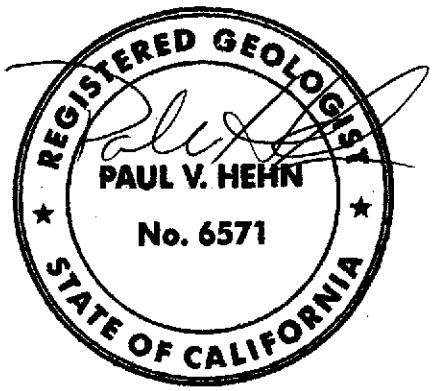
The results of this additional sampling and monitoring of biodegradation parameters appears to indicate that active biodegradation is occurring beneath the facility. However, based on the low dissolved oxygen and redox results, the biodegradation of the petroleum hydrocarbons in the area of the former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

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 Casing Elevation Data |
| Table 2 | Summary of Groundwater Analytical Results-Monthly and Quarterly Sampling |
| Figure 1 | Site Location Map |
| Figure 2 | Shallow Groundwater Contours - Second Quarter 1999 |
| Figure 3 | Benzene Concentrations - Second Quarter 1999 |
| Figure 4 | Biodegradation Parameter Results - Second 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.

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (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 | | | |
| | 25-Mar-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) | -1.12 | 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 | 6.10 | | -0.67 | NM | 72.20 (f) | >73 | 6.5 | 76.4 | 14,370 | | | |
| | 28-Aug-96 | 6.17 | | -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 | 5.41 | | 0.02 | 33.94 | 74.17 | >75 | 6.0 | 66.3 | 1,900 | | | |
| | 28-May-97 | 5.98 | | -0.55 | NM | 72.69 (f) | >73 | 8.0 | 77 | 9,000 | | | |
| | 19-Sep-97 | 6.45 | | -1.02 | 33.80 | 71.12 | >72 | 7.4 | 71.3 | 5,500 | | | |
| | 17-Nov-97 | 6.14 | | -0.71 | 34.03 | 72.51 | >73 | 7.12 | 75 | 6,690 | | | |
| | 27-Feb-98 | 4.83 | | 0.60 | 33.97 | 75.76 | >76 | 6.80 | 65 | 6,680 | | | |
| | 27-May-98 | 6.42 | | -0.99 | 34.00 | 71.60 | 72 | 6.79 | 62.42 | 7,990 | | | |
| | 1-Oct-98 | 6.49 | | -1.06 | 34.00 | 71.52 | >72 | 8.01 | 65.7 | 5,220 | | | |
| | 22-Dec-98 | 6.35 | | -0.92 | 34.00 | 71.89 | >72 | 6.82 | 63.4 | 5,860 | NM | NM | |
| | 2-Mar-99 | 5.05 | | 0.38 | NM | 71.89 (f) | >72 | 7.53 | 69.4 | 4,900 | NM | NM | |
| | **3-Jun-99** | **5.98** | | **-0.55** | **NM** | **72.85 (f)** | **>73** | **6.79** | **72.3** | **5,100** | **NM** | **NM** | |

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (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 | | -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 | 6.75 | | -0.55 | 29.50 | 59.15 | 60 | 6.8 | 67.6 | >2,000 | | | |
| | 21-Feb-95 | 6.20 | | 0.00 | 30.00 | 47.12 | 48 | 6.97 | 64 | 1,050 | | | |
| | 23-May-95 | 6.10 | | 0.10 | 30.00 | 46.60 | 48 | 7.18 | 70.3 | 7,710 | | | |
| | 16-Aug-95 | 6.69 | | -0.49 | 30.00 | 46.62 | 46 | 7.42 | 65 | 6,790 | | | |
| | 21-Nov-95 | 7.62 | | -1.42 | 30.00 | 43.64 | 45 | 7.30 | 67.6 | 7,250 | | | |
| | 13-Feb-96 | 5.81 | | 0.39 | 29.47 | 61.51 | >62 | 7 | 71.8 | 2,890 | | | |
| | 13-May-96 | 6.40 | | -0.20 | NM | 59.98 (f) | >60 | 5.5 | 74.4 | 860 | | | |
| | 28-Aug-96 | 7.11 | | -0.91 | 29.42 | 58.00 | >58 | 6 | 83.5 | 590 | | | |
| | 21-Nov-96 | 6.41 | | -0.21 | 29.43 | 59.85 | >60 | 6.5 | 76.3 | 4,160 | | | |
| | 20-Feb-97 | 6.26 | | -0.06 | 29.54 | 60.52 | >61 | 6.5 | 65.2 | 1,940 | | | |
| | 28-May-97 | 6.65 | | -0.45 | NM | 59.51 (f) | >60 | 7.0 | 73.6 | 5,540 | | | |
| | 19-Sep-97 | 6.90 | | -0.70 | 29.47 | 58.68 | >59 | 6.9 | 69.7 | 12,630 | | | |
| | 17-Nov-97 | 6.75 | | -0.55 | 29.56 | 59.31 | >60 | 8.08 | 75.7 | 710 | | | |
| | 27-Feb-98 | 5.31 | | 0.89 | 29.45 | 62.76 | >63 | 6.50 | 67.3 | 530 | | | |
| | 27-May-98 | 5.87 | | 0.33 | 29.47 | 61.36 | 62 | 6.95 | 63.5 | 5,870 | | | |
| | 1-Oct-98 | 6.95 | | -0.75 | 29.45 | 58.52 | >59 | 7.96 | 66.7 | 1,100 | | | |
| | 22-Dec-98 | 6.70 | | -0.50 | 29.23 | 58.58 | >59 | 6.74 | 52.8 | 450 | 0.30 | -242 | |
| | 4-Mar-99 | 5.63 | | 0.57 | 29.35 | 61.67 | >62 | 7.00 | 61.6 | 870 | NM | -212 | |
| | **3-Jun-99** | **6.79** | | **-0.59** | **29.20** | **58.26** | **>59** | **7.56** | **68.3** | **1,210** | **0.80** | **-222** | |

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (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 | | | |
| | 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 | 9.08 | | -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-Apr-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 | 52.69 | 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 | 7.51 | | -1.41 | 33.50 | 50.68 | 52 | 7.34 | 67.4 | 5,730 | | | |
| | 13-Feb-96 | 5.91 | | 0.19 | 33.69 | 72.24 | >73 | 7 | 71.5 | 6,790 | | | |
| | 13-May-96 | 6.36 | | -0.26 | NM | 71.06 (f) | >72 | 6.5 | 76.7 | 14,360 | | | |
| | 28-Aug-96 | 7.15 | | -1.05 | 33.52 | 68.56 | >69 | 8 | 79.2 | 2,930 | | | |
| | 21-Nov-96 | 6.64 | | -0.54 | 33.54 | 69.94 | >70 | 6.5 | 77.0 | 7,500 | | | |
| | 20-Feb-97 | 6.36 | | -0.26 | 33.67 | 71.00 | >72 | 6.5 | 68.7 | 4,180 | | | |
| | 28-May-97 | 6.62 | | -0.52 | NM | 70.33 (f) | >71 | 7.0 | 74.1 | 6,580 | | | |
| | 19-Sep-97 | 6.83 | | -0.73 | 33.55 | 69.48 | >70 | 7.0 | 70.8 | 8,570 | | | |
| | 17-Nov-97 | 6.77 | | -0.67 | 33.59 | 69.73 | >70 | 7.08 | 75.0 | 6,580 | | | |
| | 27-Feb-98 | 5.38 | | 0.72 | 33.60 | 73.37 | >74 | 7.0 | 65.9 | 7,530 | | | |
| | 27-May-98 | 6.05 | | 0.05 | 33.63 | 71.72 | 72 | 8.28 | 64.8 | 6,880 | | | |
| | 1-Oct-98 | 6.95 | | -0.85 | 33.70 | 69.56 | >70 | 7.71 | 67.1 | 6,380 | | | |
| | 22-Dec-98 | 6.73 | | -0.63 | 33.60 | NS | NS | NS | NS | NS | 0.80 | 118 | |
| | 22-Dec-98 | 5.85 | | 0.25 | 33.55 | NS | NS | NS | NS | NS | NM | 159 | |
| | **3-Jun-99** | **6.70** | | **-0.60** | **33.60** | **NS** | **NS** | **NS** | **NS** | **NS** | **0.80** | **153** | |

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 4-Feb-93 | 6.68 | 5.18 (o) | -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 | 67.72 | 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 | | | |
| | 28-May-97 | 5.66 | | -0.48 | NM | 71.81 (f) | >72 | 7.0 | 74 | 6,480 | | | |
| | 19-Sep-97 | 6.00 | | -0.82 | 33.31 | 71.00 | >71 | 7.4 | 71 | 4,330 | | | |
| | 17-Nov-97 | 6.06 | | -0.88 | 33.35 | 70.95 | >71 | 6.81 | 70 | 11,020 | | | |
| | 27-Feb-98 | 4.66 | | 0.52 | 33.22 | 74.25 | >75 | 7.30 | 65.9 | 15,720 | | | |
| | 27-May-98 | 5.98 | | -0.80 | 33.00 | 70.40 | 35 (d) | 6.89 | 62.4 | 10,980 | | | |
| | 1-Oct-98 | 5.23 | | -0.05 | 33.26 | 72.88 | >73 | 7.87 | 66.8 | 3,390 | | | |
| | 22-Dec-98 | 6.57 | | -1.39 | 33.52 | 70.07 | >70 | 6.25 | 57.7 | 13,000 | NM | NM | |
| | 22-Dec-98 | 4.13 | | 1.05 | NM | 70.07 (f) | >71 | 7.64 | 64.7 | 8,700 | NM | NM | |
| | **3-Jun-99** | **5.51** | | **-0.33** | **NM** | **72.82 (f)** | **>73** | **6.60** | **67.9** | **9,810** | **0.90** | **-168.5** | |

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (Inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 4-Feb-93 | 8.94 | 4.71 (o) | -4.23 | 31.40 | 61.65 | 40 (d) | 8.43 | 63.2 | 16,870 | | | 4 |
| | 8-Apr-93 | 5.43 | | -0.72 | 31.36 | 67.42 | 68 | 7.20 | 68.0 | >2,000 | | | |
| | 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 | 67.02 | 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 | | | |
| | 13-May-96 | 5.06 | | -0.35 | NM | 68.51 (f) | >69 | 6.5 | 71.9 | 9,830 | | | |
| | 28-Aug-96 | 5.29 | | -0.58 | 31.34 | 67.73 | >68 | 7.9 | 79.6 | 2,590 | | | |
| | 21-Nov-96 | 5.44 | | -0.73 | 31.33 | 67.31 | >67 | 6.5 | 76.0 | 7,260 | | | |
| | 20-Feb-97 | 4.68 | | 0.03 | 31.46 | 69.62 | >70 | 6.5 | 60.7 | 1,990 | | | |
| | 28-May-97 | 5.21 | | -0.50 | NM | 68.25 (f) | >69 | 7.8 | 70.7 | 11,500 | | | |
| | 19-Sep-97 | 5.43 | | -0.72 | 31.46 | 67.68 | >68 | 7.1 | 67.9 | 3,920 | | | |
| | 17-Nov-97 | 5.28 | | -0.57 | 31.44 | 68.02 | >69 | 7.0 | 73.0 | 5,180 | | | |
| | 27-Feb-98 | 4.10 | | 0.61 | 31.49 | 71.21 | >72 | 6.8 | 62.5 | 1,650 | | | |
| | 27-May-98 | 5.40 | | -0.69 | 32.00 | 70.40 | 70 | 6.89 | 64.2 | 4,830 | | | |
| | 1-Oct-98 | 5.42 | | -0.71 | 31.45 | 67.68 | >68 | 7.65 | 65.6 | 4,290 | | | |
| | 22-Dec-98 | 5.40 | | -0.69 | 31.45 | 67.73 | >68 | 7.21 | 57.7 | 3,920 | 0.30 | 67.3 | |
| | 4-Mar-99 | 4.50 | | 0.21 | 31.50 | 70.20 | >71 | 7.52 | 56.3 | 3,130 | NM | 213.0 | |
| | **3-Jun-99** | **5.20** | | **-0.49** | **31.28** | **67.80** | **>68** | **7.27** | **69.4** | **4,310** | **0.90** | **-70.7** | |

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing 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 |
| | 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 | 5.97 | | -0.60 | 24.70 | NS | NS | NS | NS | NS | | | |
| | 21-Nov-95 | 6.78 | | -1.41 | 24.70 | NS | NS | NS | NS | NS | | | |
| | 13-Feb-96 | 5.14 | | 0.23 | 24.71 | NS | NS | NS | NS | NS | | | |
| | 13-May-96 | 5.64 | | -0.27 | NM | NS | NS | NS | NS | NS | | | |
| | 28-Aug-96 | 6.15 | | -0.78 | 24.67 | NS | NS | NS | NS | NS | | | |
| | 21-Nov-96 | 5.71 | | -0.34 | 24.65 | NS | NS | NS | NS | NS | | | |
| | 20-Feb-97 | 5.38 | | -0.01 | 24.79 | NS | NS | NS | NS | NS | | | |
| | 28-May-97 | 5.93 | | -0.56 | NM | NS | NS | NS | NS | NS | | | |
| | 19-Sep-97 | 6.15 | | -0.78 | 24.76 | NS | NS | NS | NS | NS | | | |
| | 17-Nov-97 | 6.06 | | -0.69 | 27.71 | NS | NS | NS | NS | NS | | | |
| | 27-Feb-98 | 4.74 | | 0.63 | 24.64 | NS | NS | NS | NS | NS | | | |
| | 27-May-98 | 5.40 | | -0.03 | 29 | NS | NS | NS | NS | NS | | | |
| | 1-Oct-98 | 6.37 | | -1.00 | 24.72 | NS | NS | NS | NS | NS | | | |
| | 22-Dec-98 | 6.06 | | -0.69 | 24.70 | NS | NS | NS | NS | NS | 5.4 | 202 | |
| | 4-Mar-99 | 4.99 | | 0.38 | 24.65 | NS | NS | NS | NS | NS | NM | 346 | |
| | **3-Jun-99** | **5.90** | | **-0.53** | **24.65** | **NS** | **NS** | **NS** | **NS** | **NS** | **4.4** | **264** | |

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing 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 |
| | 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 | 5,360 | | | |
| | 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 | 5.17 | | 0.21 | 30.00 | 66.00 | 65 | 6.89 | 63.0 | 4,980 | | | |
| | 1-Oct-98 | 5.80 | | -0.42 | 30.00 | 62.92 | >63 | 7.58 | 64.1 | 4,000 | | | |
| | 22-Dec-98 | 5.78 | | -0.40 | 30.00 | 62.97 | >63 | 7.07 | 64.2 | 4,210 | NM | NM | |
| | 4-Mar-99 | 4.68 | | 0.70 | NM | 62.97 (f) | >63 | 7.42 | 67.3 | 3,810 | NM | NM | |
| | **3-Jun-99** | **6.37** | | **-0.99** | **NM** | **61.43 (f)** | **>62** | **7.12** | **69.5** | **4,590** | **NM** | **NM** | |

ARCADIS GERAGHTY&MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-8 | 12-Sep-94 | 6.46 | 5.44 | -1.02 | 25.15 | 48.56 | 55 | (e) | (e) | 11,400 | | | 4 |
| | 23-Nov-94 | 6.01 | | -0.57 | 25.66 | 78.60 | 75 | 5.60 | 61.5 | >2,000 | | | |
| | 21-Feb-95 | NS | | NS | NS | NS | NS | NS | 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 | 6.17 | | -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 | 4.79 | | 0.65 | 25.46 | 53.74 | >54 | 7.29 | 70.4 | 6,110 | NM | 179 | |
| | **3-Jun-99** | **5.39** | | **0.05** | **25.68** | **52.75** | **>53** | **7.01** | **60.5** | **5,530** | **0.90** | **-116.7** | |
| OW-1 | 4-Mar-99 | 4.58 | 5.09 | 0.51 | 14.65 | 26.18 | 27.00 | 7.51 | 60.0 | 2,910 | 16.10 | -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 | 16.50 | 44 | 4 |

Notes appear on the follwong page.

ARCADIS GERAGHTY & MILLER

## Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data

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

| Well | Date | Depth to Water (a) (feet) | Top of Casing Elevation (feet) | Top of Water Elevation (feet) | Measured Depth of Well (a) (feet) | Calculated Purge Volume (b) (gallons) | Actual Purge Volume (gallons) | Field Measurements pH | Temp. (°F) | SC (µS/cm) | DO (mg/L) | Redox (mv) | Casing Diameter (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

(a) Measured from top of PVC casing.
(b) Based on four casing volumes.
(c) All well elevations resurveyed to site benchmark on February 10, 1993.
(d) Well went dry during purging.
(e) No reading - instrument malfunction.
(f) Purge volume estimated using well depth-to-bottom measurements from 4th quarter 1998.

SC Specific Conductance
(µS/cm) Microsiemens per centimeter
(mg/L) milligrams per liter
(mv) millivolt
NM Not measured
NS Well not sampled or monitored during this quarterly 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.

ARCADIS GERAGHTY & MILLER

## 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 | | - - |
| | 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) | - - |
| | **3-Jun-99** | **960** | **82,000 (v)** | **23** | **12** | **0.77** | **39** | **ND(<5.0)** | - - |

ARCADIS GERAGHTY&MILLER

## 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-2 | 2-Oct-90 | ND(<50) | 80 | 0.4 | ND(<0.3) | ND(<0.3) | 0.5 | | -- |
| | 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) | 1,200 (af,ag) | ND(<0.50) | ND(<0.50) | ND(<0.50) | ND(<1) | ND(<5) | -- |
| | **3-Jun-99** | **81 (aj)** | **1,900 (v)** | **ND(<0.50)** | **ND(<0.50)** | **ND(<0.50)** | **ND(<1)** | **ND(<5)** | -- |

ARCADIS GERAGHTY & MILLER

## 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-3 | 2-Oct-90 | ND(<50) | 90 | 28 | 3.1 | 0.6 | 1.5 | | -- |
| | 28-Feb-91 | ND(<50) | ND(<50) | 6 | ND(<0.3) | ND(<0.3) | ND(<0.3) | | -- |
| | 25-Mar-91 | ND(<50) | ND(<50) | 0.6 | 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) | 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) | | -- |
| | 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 | | -- |
| | 8-Apr-93 | ND(<50) | ND(<50) | ND(<0.3) | ND(<0.3) | ND(<0.3) | ND(<0.9) | | -- |
| | 6-Aug-93 | ND(<50) | ND(<50) | ND(<0.3) | ND(<0.3) | ND(<0.3) | ND(<0.9) | | 3,400 |
| | 28-Oct-93 | ND(<50) | ND(<50) | ND(<0.3) | ND(<0.3) | ND(<0.3) | ND(<0.9) | | 2,700 |
| | 1-Feb-94 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 3,400 |
| | 12-Sep-94 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 3,500 |
| | 22-Nov-94 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 3,400 |
| | 21-Feb-95 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 4,200 |
| | 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) | 240 | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 4,100 |
| | 21-Nov-95 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 4,200 |
| | 13-Feb-96 | ND(<50) | 72 | 16 | ND(<0.5) | ND(<0.5) | 0.73 | | 3,400 |
| | 13-May-96 | ND(<50) | 250 (m) | 1.7 | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 3,700 |
| | 28-Aug-96 | ND(<50) | 1,200 | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 2,200 |
| | 21-Nov-96 | ND(<50) | ND(<50) | 0.82 | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 3,500 |
| | 20-Feb-97 | ND(<50) | 140 (n) | ND(<0.50) | ND(<0.50) | ND(<0.50) | ND(<0.50) | | 2,900 |
| | 28-May-97 | ND(<50) | 240 (n) (o) | ND(<0.50) | ND(<0.50) | ND(<0.50) | ND(<0.50) | | 1,900 |
| | 19-Sep-97 | ND(<50) | ND(<50) | 0.7 | ND(<0.5) | ND(<0.5) | ND(<2) | ND(<5) | 3,300 |
| | 17-Nov-97 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<2) | ND(<5) | 3,400 |
| | 27-Feb-98 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<2) | ND(<5) | 3,800 |
| | 27-May-98 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<2) | ND(<5) | -- |
| | 1-Oct-98 | ND(<50) | 56 (w) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<1) | ND(<5) | -- |
| | 22-Dec-98 | NS | NS | NS | NS | NS | NS | NS | -- |
| | 4-Mar-99 | NS | NS | NS | NS | NS | NS | NS | -- |
| | **3-Jun-99** | **NS** | **NS** | **NS** | **NS** | **NS** | **NS** | **NS** | -- |

ARCADIS GERAGHTY & MILLER

## 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-4 | 4-Feb-93 | 58 (f) | 450 | ND(<0.3) | ND(<0.3) | ND(<0.3) | ND(<0.3) | | - - |
| | 8-Apr-93 | 74 | 220 | 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 | 0.80 | 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) | - - |
| | **3-Jun-99** | **210** | **2,500 (ak)** | **0.70** | **ND(<0.50)** | **0.56** | **ND(<1.0)** | **ND(<5.0)** | - - |

ARCADIS GERAGHTY & MILLER

## 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-5 | 4-Feb-93 | ND(<50) | 240 | ND(<0.3) | ND(<0.3) | ND(<0.3) | ND(<0.3) | | -- |
| | 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) | -- |
| | **3-Jun-99** | **ND(<50)** | **800 (v)** | **ND(<0.50)** | **ND(<0.50)** | **ND(<0.50)** | **ND(<1.0)** | **ND(<5.0)** | -- |

ARCADIS GERAGHTY & MILLER

## 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-6 | 12-Sep-94 | ND(<50) | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 560 |
| | 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 |
| | 23-May-95 | NS | NS | NS | NS | NS | NS | | NS |
| | 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-May-96 | NS | NS | NS | NS | NS | NS | | NS |
| | 28-Aug-96 | NS | NS | NS | NS | NS | NS | | NS |
| | 21-Nov-96 | 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 |
| | 19-Sep-97 | 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 | NS | NS |
| | 29-May-98 | 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 | NS | -- |
| | 4-Mar-99 | NS | NS | NS | NS | NS | NS | NS | -- |
| | 3-Jun-99 | NS | NS | NS | NS | NS | NS | NS | -- |

ARCADIS GERAGHTY & MILLER

## 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-7 | 12-Sep-94 | 160 | 620 | 2.7 | 1.3 | ND(<0.5) | 2.1 | | 1,100 |
| | 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) | -- |
| | **3-Jun-99** | **690 (am)** | **1,300,000 (al)** | **34** | **6.4** | **1.7** | **15.8** | **ND(<5)** | -- |

ARCADIS GERAGHTY & MILLER

**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-8 | 12-Sep-94 | 170 | 850 | 2.7 | 0.5 | ND(<0.5) | 2 | | 5,500 |
| | 23-Nov-94 | ND(<50) | 570 | 1.5 | ND(<0.5) | ND(<0.5) | ND(<0.5) | | 6,300 |
| | 21-Feb-95 | NS | NS | NS | NS | NS | NS | | NS |
| | 23-May-95 | NS | NS | NS | NS | NS | NS | | NS |
| | 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-May-96 | NS | NS | NS | NS | NS | NS | | NS |
| | 28-Aug-96 | NS | NS | NS | NS | NS | NS | | NS |
| | 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 |
| | 28-May-97 | 480 (k) | 200 (q) (o) | 2.5 | 12 | ND(<2.5) | 76 | | 4,100 |
| | 19-Sep-97 | 1,000 | 7,000 | 0.8 | 5.0 | 0.5 | 130 | ND(<5) | 5,000 |
| | 17-Nov-97 | 250 | 520 | 1.4 | 2.1 | 0.7 | 3 | ND(<5) | 4,600 |
| | 27-Feb-98 | ND(<50) | 150 | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<2) | ND(<5) | 3,500 |
| | 29-May-98 | ND(<50) | 70 | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<2) | ND(<5) | -- |
| | 1-Oct-98 | ND(<50) | 440 (x) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<1) | ND(<5) | -- |
| | 22-Dec-98 | NS | NS | NS | NS | NS | NS | NS | -- |
| | 4-Mar-99 | NS | NS | NS | NS | NS | NS | NS | -- |
| | 3-Jun-99 | NS | NS | NS | NS | NS | NS | NS | -- |
| OW-1 | 4-Mar-99 | -- | 31,000 (ac,ae,y) | -- | -- | -- | -- | -- | -- |
| OW-2 | 4-Mar-99 | -- | 6,400 (ai,ae,y) | -- | -- | -- | -- | -- | -- |
| TB-LB | 3-Jun-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.

ARCADIS GERAGHTY & MILLER

## 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) |
|---|---|---|---|---|---|---|---|---|---|

(a) Analyzed by USEPA Method 8015, modified.
(b) Analyzed by USEPA Method 8020.
(c) Analyzed by USEPA Method 160.1.
(d) No results - sample for TPH as diesel not collected.
(e) Diesel range concentration reported. A nonstandard diesel pattern was observed in the chromatogram.
(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.
(h) Diesel range concentration reported. The chromatogram shows only a single peak in the diesel range.
(i) 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.
(t) 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 diesel reference between n-C10 and n-C24 only.

Notes continue on the following page.

ARCADIS GERAGHTY & MILLER

## 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) |
|---|---|---|---|---|---|---|---|---|---|

(y) Laboratory reports reporting limit(s) raised due to high level of analyte present in sample.

(z) Laboratory reports the peak pattern present in this sample represents an unknown mixture atypical of gasoline in the range of n-C10 to greater than n-C12. Quantitation is based on a gasoline reference in the range of n-C07 to n-C12 only.

(aa) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C09 to n-C36. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

(ab) Laboratory reports the hydrocarbon pattern 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.

(ac) Laboratory reports the hydrocarbon pattern 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.

(ad) 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 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 surrogate 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.

(aj) Laboratory reports the peak pattern present in this sample represents an unknown mixture atypical of gasoline in the range of n-C08 to greater than n-C12. Quantitation is based on a gasoline reference in the range of n-C07 to n-C12 only.

(ak) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C10 to n-C30. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

(al) Laboratory reports the hydrocarbon pattern present in this sample represents an unknown mixture in the range of n-C08 to n-C26. Quantitation is based on a diesel reference between n-C10 and n-C24 only.

(am) Laboratory reports the gasoline pattern appears degraded.

( ) 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.

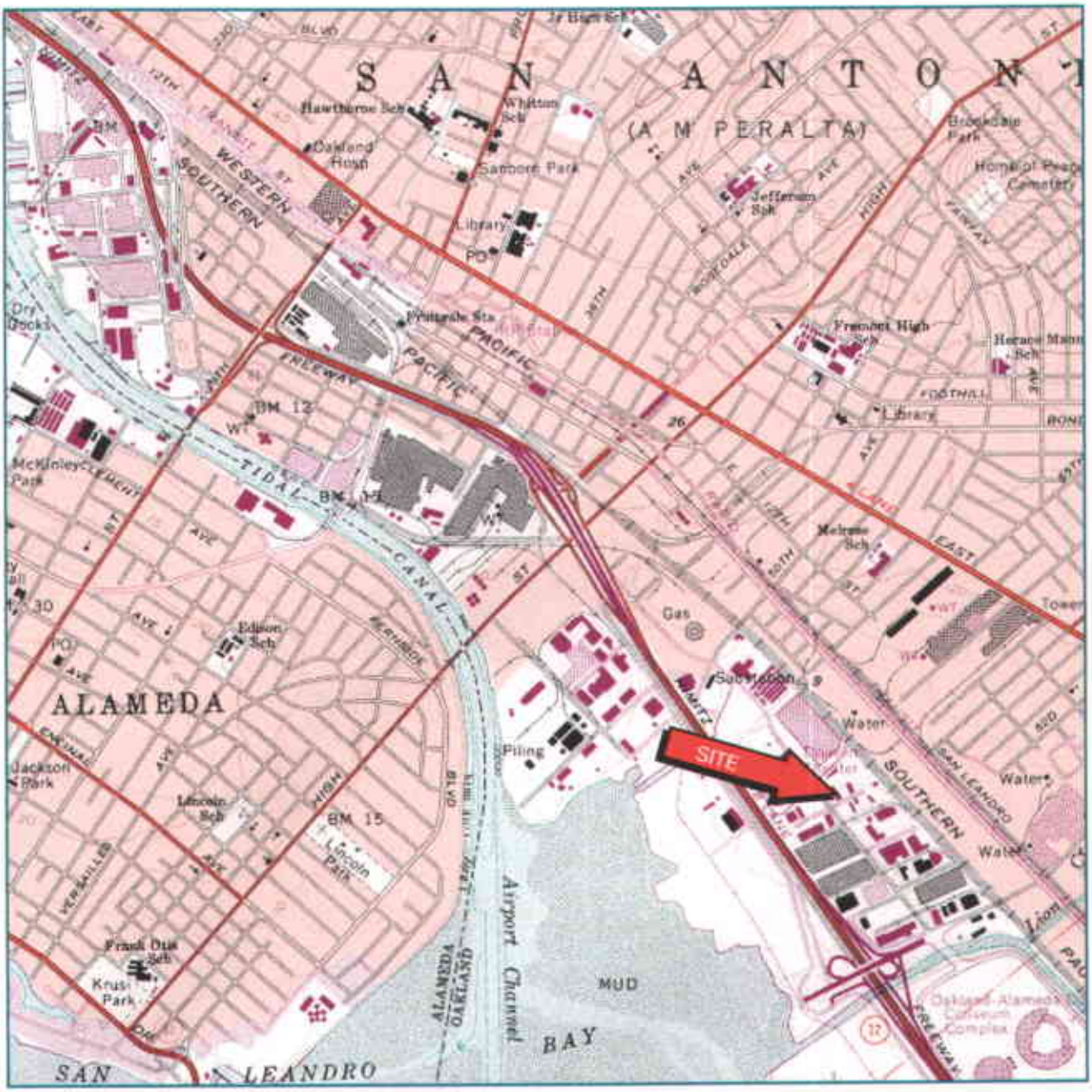
Analysis after May 28, 1997 by American Environmental Network (AEN), Pleasant Hill, California.

ARCADIS GERAGHTY & MILLER

## 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) |
|---|---|---|---|---|---|---|---|---|---|

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




SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET

QUADRANGLE LOCATION

UTM GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

ARCADIS GERAGHTY & MILLER

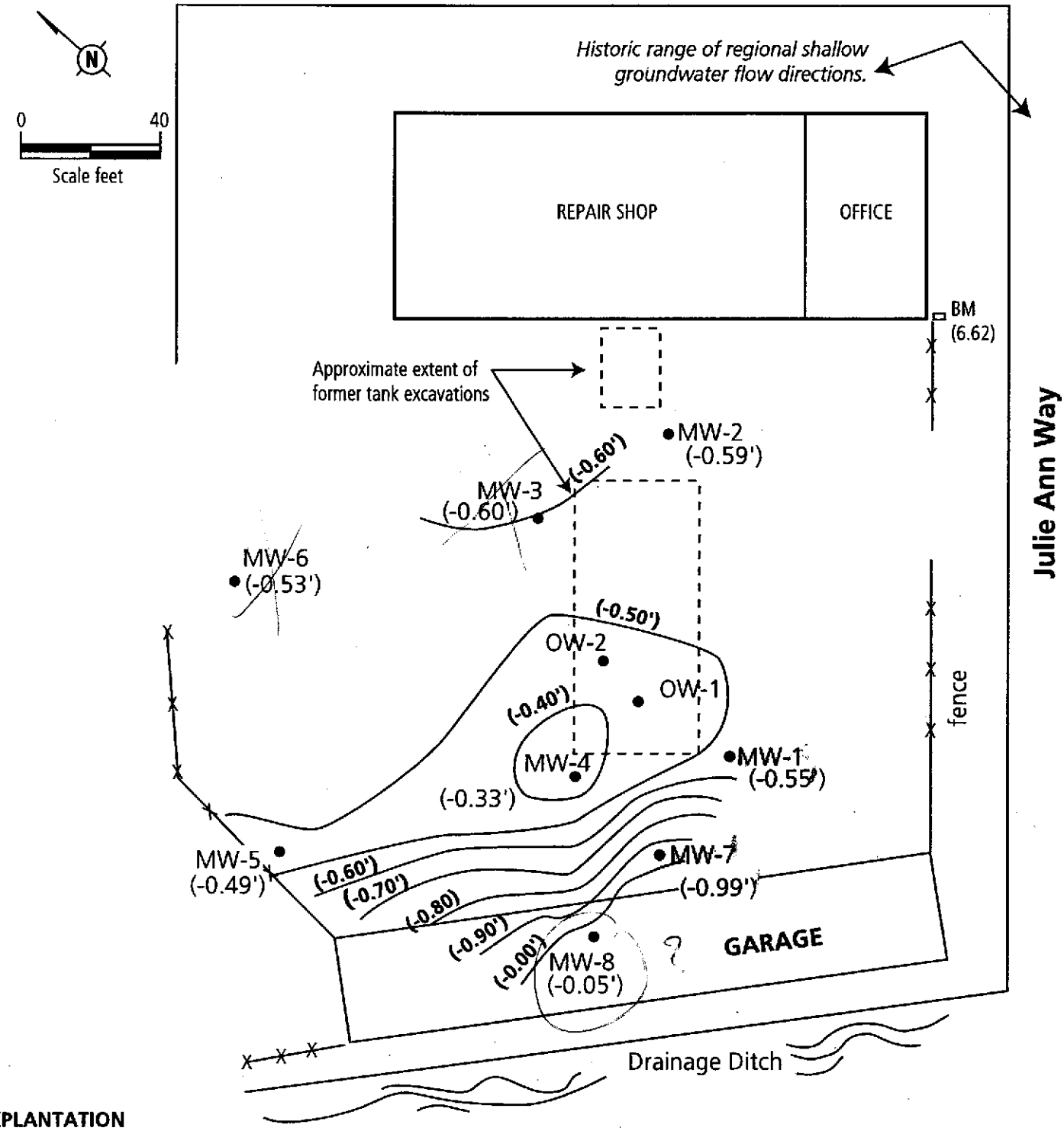
**SITE LOCATION MAP**

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

RC000019.0000

**FIGURE**

**1**




**EXPLANTATION**

MW-1 ● Approximate location of existing groundwater monitoring wells.

BM ▫ Survey Bench Mark (based on City of Oakland datum which is 3 feet lower than Mean Sea Level).

(-0.50') Groundwater elevation (feet) relative to benchmark measured June 3,1999

(-0.30') Groundwater elevation contour (feet); dashed where inferred (contour interval equals 0.10 feet) queried where unknown

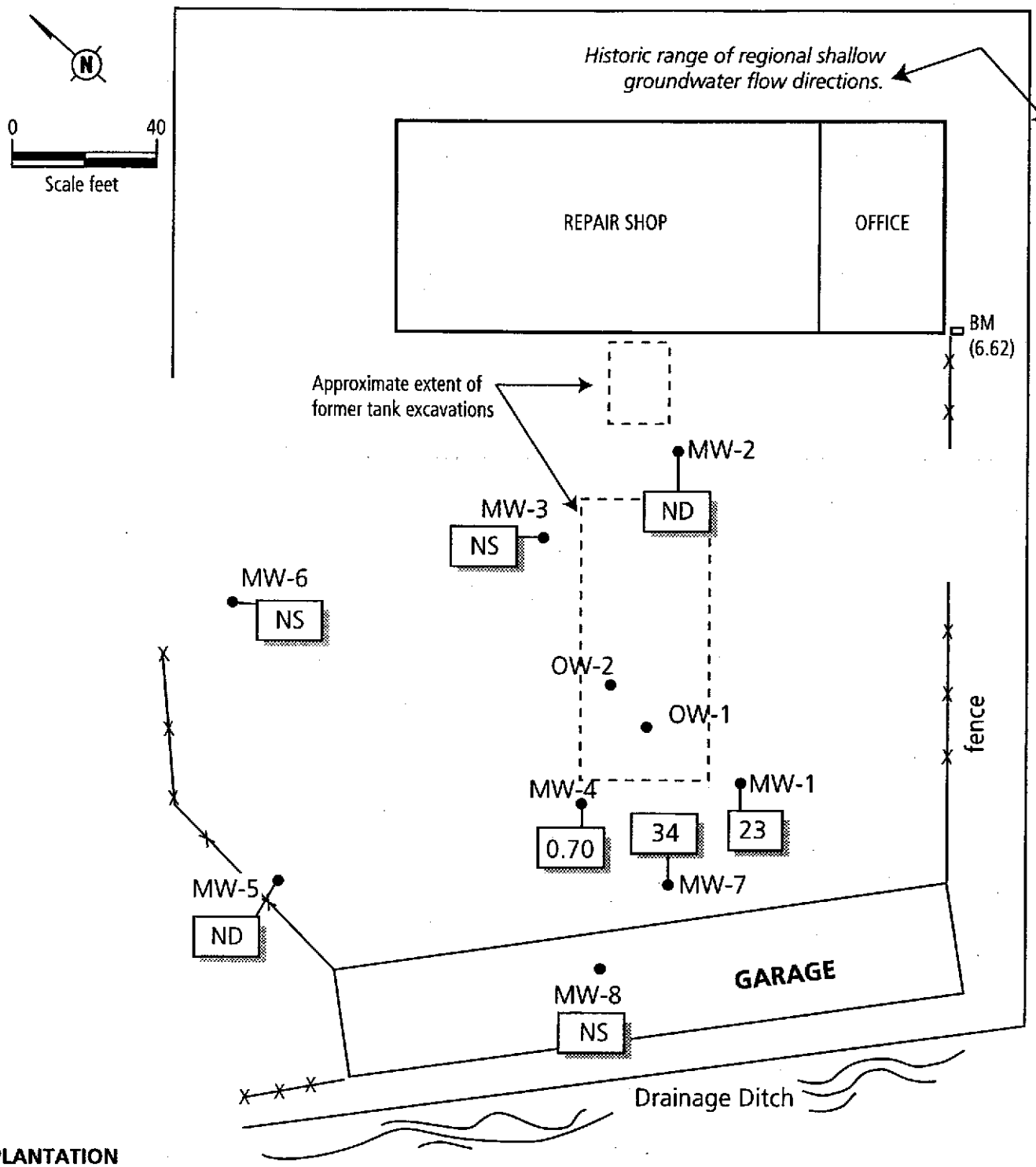
ARCADIS GERAGHTY&MILLER

**SHALLOW GROUNDWATER CONTOURS**
**Second Quarter 1999**
Former Penske Truck Leasing Co.
725 Julie Ann Way, Oakland California

RC000019.0010

**FIGURE**

**2**




**EXPLANTATION**

- MW-1 ● Approximate location of existing groundwater monitoring wells.
- ▭ BM Survey Bench Mark (based on City of Oakland datum which is 3 feet lower than Mean Sea Level).
- ND Not Detected-below laboratory detection limits listed in Table 2
- 32 Benzene concentrations (in µg/L) from groundwater samples collected June 3, 1999
- NS Well not sampled or monitored during this quarterly event.

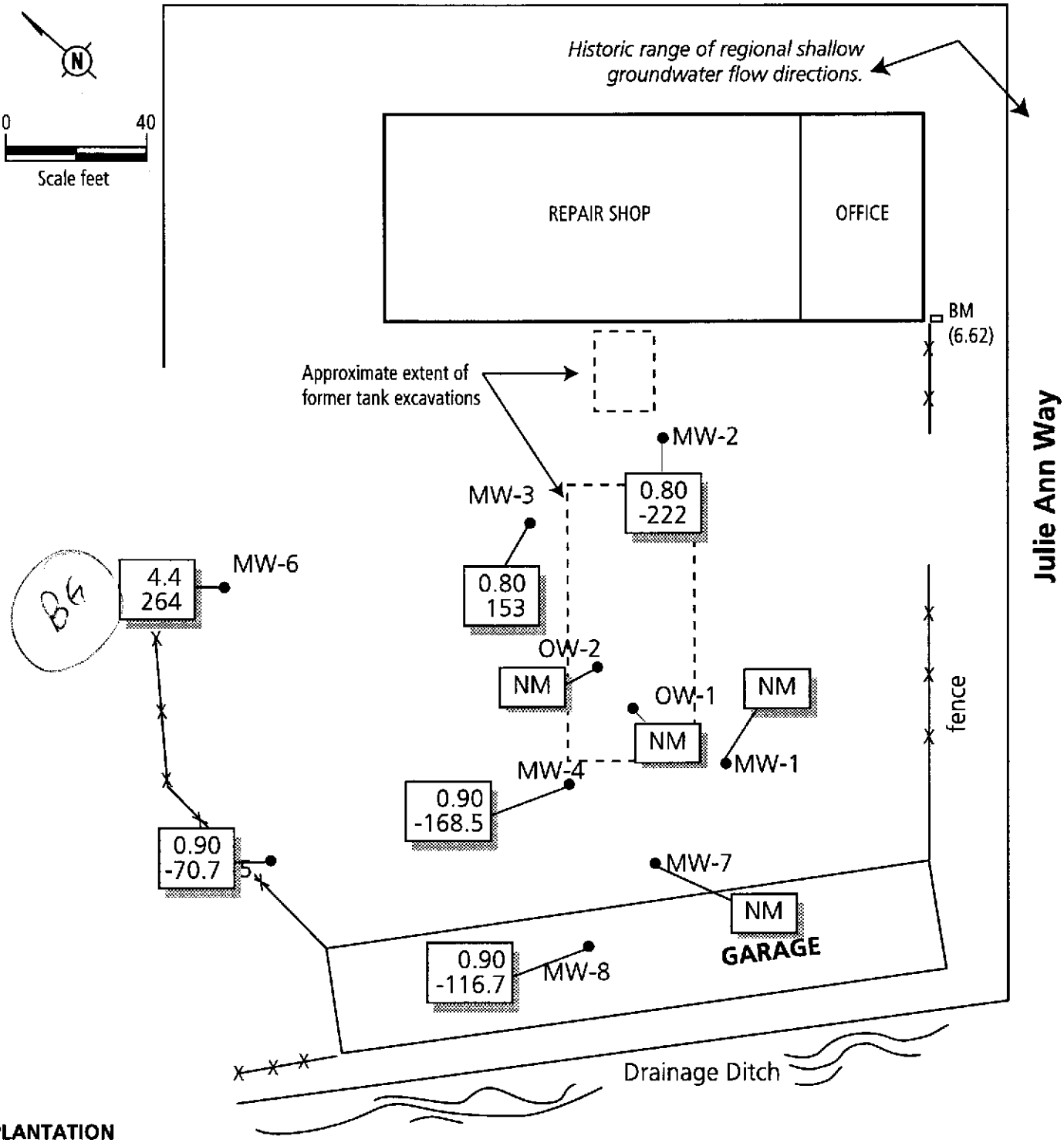
ARCADIS GERAGHTY & MILLER

**BENZENE CONCENTRATIONS**
**Second Quarter 1999**
Former Penske Truck Leasing Co.
725 Julie Ann Way, Oakland California

RC000019.0010

**FIGURE**

**3**




**EXPLANTATION**

MW-1 ● Approximate location of existing groundwater monitoring wells.

▭ BM Survey Bench Mark (based on City of Oakland datum which is 3 feet lower than Mean Sea Level).

0.67 / -212 — Dissolved Oxygen (DO) mg/L; Oxygen Reduction Potential (Redox) mw Measured June 3, 1999

NM — Well not measured during this quarterly event

ARCADIS GERAGHTY & MILLER

**BIODEGRADATION PARAMETER RESULTS**
**Second Quarter 1999**
Former Penske Truck Leasing Co.
725 Julie Ann Way, Oakland California

RC000019.0010

**FIGURE**

**4**

# 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*

July 20, 1999

QUANTERRA INCORPORATED PROJECT NUMBER: G9F050163
PO/CONTRACT: RC000019.0010

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

Dear Mr. Hehn,

This report contains the analytical results for the six samples received under chain of custody by Quanterra Incorporated on June 4, 1999. These samples are associated with your Penske project.

The case narrative is an integral part of this report.

Preliminary results were provided via facsimile July 15, 1999.

If you have any questions, please feel free to call me at (916) 374-4414.

Sincerely,

for Bonnie McNeill
Project Manager

Quanterra

# TABLE OF CONTENTS

## QUANTERRA INCORPORATED PROJECT NUMBER G9F050163

Quanterra

# CASE NARRATIVE

## QUANTERRA INCORPORATED PROJECT NUMBER G9F050163

### General Comments

Samples were received at 3 degrees C. A trip blank was received but not listed on the chain of custody form. The sample was logged and analyzed.

### Total Petroleum Hydrocarbons (Diesel) – Method 8015M

Sample CWK2T-1-04 had an oil layer approximately ¾ inch thick. The oil layer was removed and the remaining aqueous portion extracted and analyzed.

### Total Petroleum Hydrocarbons (Gasoline)/BTEX/MtBE – Method 8015M/8021

The initial and continuing calibrations' percent difference (%D) for MtBE were below the 15% criteria on both channels. The average %D of all analytes were less than 15%. As no MtBE was present in the samples, no further corrective action was taken.

There were no other anomalies associated with this project.

Quanterra

*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.

# SAMPLE SUMMARY

**G9F050163**

| WO # | SAMPLE# | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|---|
| CWK2N | 001 | MW-1 | 06/03/99 | 12:04 |
| CWK2P | 002 | MW-2 | 06/03/99 | 13:02 |
| CWK2Q | 003 | MW-4 | 06/03/99 | 12:15 |
| CWK2R | 004 | MW-5 | 06/03/99 | 12:47 |
| CWK2T | 005 | MW-7 | 06/03/99 | 12:32 |
| CWK2V | 006 | TRIP BLANK | 06/03/99 | |

**NOTE(S):**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

# Chain of Custody Record

Quanterra

QUA-4124

| Client | Project Manager | Date | Chain Of Custody Number |
|---|---|---|---|
| ARCADIS GERAGHTY & MILLER | PAUL HEIN | 6-4-99 | 41453 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 1** |
| 1000 MARINA BLVD SOUTH | 510-233-3200 510-233-3204 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | | |
| RICHMOND / CA / 94804 | | | |
| **Project Name** | **Carrier/Waybill Number** | | |
| PENSKE / ~~[redacted]~~ OAKLAND | | | |
| **Contract/Purchase Order/Quote No.** | | | |
| RC000019.0010 | | | |

| Sample I.D. No. and Description | Date | Time | Sample Type | Total Volume | Containers Type | Containers No. | Preservative | Condition on Receipt | Analysis: TPH-G/BTEX/MTBE | Analysis: TPH-D |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 6-3-99 | 1204 | L | | VOA 4IT | 4 | HCl / DRY | good | X | X |
| MW-2 | ↓ | 1302 | L | | 1 1 | 4 | 1 1 | ↓ | X | X |
| MW-4 | | 1215 | L | | 1 1 | 4 | 1 1 | | X | X |
| MW-5 | | 1247 | L | | 1 1 | 4 | 1 1 | | X | X |
| MW-7 | ↓ | 1232 | L | | 1 1 | 4 | 1 1 | ↓ | X | X |
| | | | | | | | | OK 6-4-99 | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | Rec'd 1TB | | | | | | | | | |
| | 6-4-99 | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Special Instructions:** SAMPLE DISSOLVED PHASE ONLY

**Possible Hazard Identification:** ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal:** ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

**Turn Around Time Required:** ☐ Normal ☐ Rush

**QC Level:** ☐ I. ☐ II. ☐ III.

**Project Specific (Specify):**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 6-4-99 | 1200 | 1. Received By | 6/4/99 | 1200 |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

**Comments:**

**DISTRIBUTION:** WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Quanterra

# Total Petroleum Hyddrocarbons (Gasoline)/BTEX/MtBE – Method 8015M/8021

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-1

GC Volatiles

| | | | |
|---|---|---|---|
| **Lot-Sample #...:** G9F050163-001 | **Work Order #...:** CWK2N105 | **Matrix.....:** WATER | |
| **Date Sampled...:** 06/03/99 | **Date Received..:** 06/04/99 | | |
| **Prep Date.....:** 06/16/99 | **Analysis Date..:** 06/16/99 | | |
| **Prep Batch #...:** 9177244 | | | |
| **Dilution Factor:** 1 | **Method.....:** DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| **Benzene** | **23** | **0.50** | **ug/L** |
| **Ethylbenzene** | **12** | **0.50** | **ug/L** |
| **Toluene** | **0.77** | **0.50** | **ug/L** |
| **m-Xylene & p-Xylene** | **26** | **1.0** | **ug/L** |
| **o-Xylene** | **13** | **0.50** | **ug/L** |
| Methyl tert-butyl ether | ND | 5.0 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 89 | (70 - 130) |

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-1

GC Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-001 | **Work Order #...:** | CWK2N103 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/16/99 | **Analysis Date..:** | 06/16/99 | | |
| **Prep Batch #...:** | 9177243 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| **TPH (as Gasoline)** | **960** | **50** | **ug/L** |
| Unknown Hydrocarbon | ND | 50 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 92 | (70 - 130) |

**NOTE(S):**

The gasoline pattern appears degraded.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-2

GC Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-002 | **Work Order #...:** | CWK2P103 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/16/99 | **Analysis Date..:** | 06/16/99 | | |
| **Prep Batch #...:** | 9177243 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Gasoline) | ND | 50 | ug/L |
| **Unknown Hydrocarbon** | **81** | **50** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 101 | (70 - 130) |

**NOTE(S):**

The unknown from n-C08 to n-C12 is quantitated based on a gasoline reference of n-C07 to n-C12.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-2

GC Volatiles

**Lot-Sample #...:** G9F050163-002 **Work Order #...:** CWK2P105 **Matrix.....:** WATER
**Date Sampled...:** 06/03/99 **Date Received..:** 06/04/99
**Prep Date.....:** 06/16/99 **Analysis Date..:** 06/16/99
**Prep Batch #...:** 9177244
**Dilution Factor:** 1 **Method.....:** DHS CA LUFT

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| Benzene | ND | 0.50 | ug/L |
| Ethylbenzene | ND | 0.50 | ug/L |
| Toluene | ND | 0.50 | ug/L |
| m-Xylene & p-Xylene | ND | 1.0 | ug/L |
| o-Xylene | ND | 0.50 | ug/L |
| Methyl tert-butyl ether | ND | 5.0 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 102 | (70 - 130) |

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-4

GC Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-003 | **Work Order #...:** | CWK2Q103 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/17/99 | **Analysis Date..:** | 06/17/99 | | |
| **Prep Batch #...:** | 9177243 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Gasoline) | ND | 50 | ug/L |
| **Unknown Hydrocarbon** | **210** | **50** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 100 | (70 - 130) |

**NOTE(S):**

The unknown from n-C07 to n-C12 is quantitated based on a gasoline reference of n-C07 to n-C12.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-4

GC Volatiles

**Lot-Sample #...:** G9F050163-003 **Work Order #...:** CWK2Q105 **Matrix.....:** WATER
**Date Sampled...:** 06/03/99 **Date Received..:** 06/04/99
**Prep Date.....:** 06/17/99 **Analysis Date..:** 06/17/99
**Prep Batch #...:** 9177244
**Dilution Factor:** 1 **Method.....:** DHS CA LUFT

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| **Benzene** | **0.70** | **0.50** | **ug/L** |
| Ethylbenzene | ND | 0.50 | ug/L |
| **Toluene** | **0.56** | **0.50** | **ug/L** |
| m-Xylene & p-Xylene | ND | 1.0 | ug/L |
| o-Xylene | ND | 0.50 | ug/L |
| Methyl tert-butyl ether | ND | 5.0 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 96 | (70 - 130) |

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-5

GC Volatiles

| | | | |
|---|---|---|---|
| **Lot-Sample #...:** G9F050163-004 | **Work Order #...:** CWK2R103 | **Matrix.....:** WATER | |
| **Date Sampled...:** 06/03/99 | **Date Received..:** 06/04/99 | | |
| **Prep Date.....:** 06/17/99 | **Analysis Date..:** 06/17/99 | | |
| **Prep Batch #...:** 9177243 | | | |
| **Dilution Factor:** 1 | **Method.....:** DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Gasoline) | ND | 50 | ug/L |
| Unknown Hydrocarbon | ND | 50 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 97 | (70 - 130) |

**NOTE(S):**

The unknown from n-C10 to n-C12 is quantitated based on a gasoline reference of n-C07 to n-C12.

Quanterra

**ARCADIS GERAGHTY & MILLER, INC**

**Client Sample ID: MW-5**

**GC Volatiles**

**Lot-Sample #...:** G9F050163-004 **Work Order #...:** CWK2R105 **Matrix.....:** WATER
**Date Sampled...:** 06/03/99 **Date Received..:** 06/04/99
**Prep Date.....:** 06/17/99 **Analysis Date..:** 06/17/99
**Prep Batch #...:** 9177244
**Dilution Factor:** 1 **Method.....:** DHS CA LUFT

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| Benzene | ND | 0.50 | ug/L |
| Ethylbenzene | ND | 0.50 | ug/L |
| Toluene | ND | 0.50 | ug/L |
| m-Xylene & p-Xylene | ND | 1.0 | ug/L |
| o-Xylene | ND | 0.50 | ug/L |
| Methyl tert-butyl ether | ND | 5.0 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 90 | (70 - 130) |

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-7

GC Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-005 | **Work Order #...:** | CWK2T103 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/17/99 | **Analysis Date..:** | 06/17/99 | | |
| **Prep Batch #...:** | 9177243 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| **TPH (as Gasoline)** | **690** | **50** | **ug/L** |
| Unknown Hydrocarbon | ND | 50 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 94 | (70 - 130) |

**NOTE(S):**

The gasoline pattern appears degraded.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-7

GC Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-005 | **Work Order #...:** | CWK2T105 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/17/99 | **Analysis Date..:** | 06/17/99 | | |
| **Prep Batch #...:** | 9177244 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| **Benzene** | **34** | **0.50** | **ug/L** |
| **Ethylbenzene** | **6.4** | **0.50** | **ug/L** |
| **Toluene** | **1.7** | **0.50** | **ug/L** |
| **m-Xylene & p-Xylene** | **10** | **1.0** | **ug/L** |
| **o-Xylene** | **5.8** | **0.50** | **ug/L** |
| Methyl tert-butyl ether | ND | 5.0 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 84 | (70 - 130) |

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: TRIP BLANK

GC Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-006 | **Work Order #...:** | CWK2V103 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/17/99 | **Analysis Date..:** | 06/17/99 | | |
| **Prep Batch #...:** | 9177243 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | DHS CA LUFT | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Gasoline) | ND | 50 | ug/L |
| Unknown Hydrocarbon | ND | 50 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 97 | (70 - 130) |

Quanterra

**ARCADIS GERAGHTY & MILLER, INC**

**Client Sample ID: TRIP BLANK**

**GC Volatiles**

**Lot-Sample #...:** G9F050163-006 **Work Order #...:** CWK2V104 **Matrix.....:** WATER
**Date Sampled...:** 06/03/99 **Date Received..:** 06/04/99
**Prep Date.....:** 06/17/99 **Analysis Date..:** 06/17/99
**Prep Batch #...:** 9177244
**Dilution Factor:** 1 **Method.....:** DHS CA LUFT

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| Benzene | ND | 0.50 | ug/L |
| Ethylbenzene | ND | 0.50 | ug/L |
| Toluene | ND | 0.50 | ug/L |
| m-Xylene & p-Xylene | ND | 1.0 | ug/L |
| o-Xylene | ND | 0.50 | ug/L |
| Methyl tert-butyl ether | ND | 5.0 | ug/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 94 | (70 - 130) |

Quanterra

# QC DATA ASSOCIATION SUMMARY

**G9F050163**

Sample Preparation and Analysis Control Numbers

| SAMPLE# | MATRIX | ANALYTICAL METHOD | LEACH BATCH # | PREP BATCH # | MS RUN# |
|---|---|---|---|---|---|
| 001 | WATER | DHS CA LUFT | | 9177243 | |
| | WATER | DHS CA LUFT | | 9177244 | |
| 002 | WATER | DHS CA LUFT | | 9177243 | |
| | WATER | DHS CA LUFT | | 9177244 | |
| 003 | WATER | DHS CA LUFT | | 9177243 | |
| | WATER | DHS CA LUFT | | 9177244 | |
| 004 | WATER | DHS CA LUFT | | 9177243 | |
| | WATER | DHS CA LUFT | | 9177244 | |
| 005 | WATER | DHS CA LUFT | | 9177243 | |
| | WATER | DHS CA LUFT | | 9177244 | |
| 006 | WATER | DHS CA LUFT | | 9177243 | |
| | WATER | DHS CA LUFT | | 9177244 | |

Quanterra

# METHOD BLANK REPORT

## GC Volatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CXEQH101 **Matrix.....:** WATER
**MB Lot-Sample #:** G9F260000-243

**Prep Date.....:** 06/16/99
**Analysis Date..:** 06/16/99 **Prep Batch #...:** 9177243
**Dilution Factor:** 1

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| TPH (as Gasoline) | ND | 50 | ug/L | DHS CA LUFT |
| Unknown Hydrocarbon | ND | 50 | ug/L | DHS CA LUFT |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 99 | (70 - 130) |

**NOTE(S):**

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

Quanterra

## METHOD BLANK REPORT

### GC Volatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CXEQJ101 **Matrix.....:** WATER
**MB Lot-Sample #:** G9F260000-244

**Prep Date.....:** 06/16/99
**Analysis Date..:** 06/16/99 **Prep Batch #...:** 9177244
**Dilution Factor:** 1

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| Benzene | ND | 0.50 | ug/L | DHS CA LUFT |
| Ethylbenzene | ND | 0.50 | ug/L | DHS CA LUFT |
| Toluene | ND | 0.50 | ug/L | DHS CA LUFT |
| m-Xylene & p-Xylene | ND | 1.0 | ug/L | DHS CA LUFT |
| o-Xylene | ND | 0.50 | ug/L | DHS CA LUFT |
| Methyl tert-butyl ether | ND | 5.0 | ug/L | DHS CA LUFT |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 96 | (70 - 130) |

**NOTE(S):**

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

Quanterra

## LABORATORY CONTROL SAMPLE DATA REPORT

### GC Volatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CXEQH102-LCS **Matrix.....:** WATER
**LCS Lot-Sample#:** G9F260000-243 CXEQH103-LCSD
**Prep Date.....:** 06/16/99 **Analysis Date..:** 06/16/99
**Prep Batch #...:** 9177243
**Dilution Factor:** 1

| PARAMETER | SPIKE AMOUNT | MEASURED AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|
| **TPH (as Gasoline)** | **1000** | **1090** | **ug/L** | **109** | | **DHS CA LUFT** |
| | **1000** | **1100** | **ug/L** | **110** | **1.2** | **DHS CA LUFT** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 107 | (70 - 130) |
| | 112 | (70 - 130) |

**NOTE(S):**

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

Bold print denotes control parameters

Quanterra

# LABORATORY CONTROL SAMPLE DATA REPORT

## GC Volatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CXEQJ102-LCS **Matrix.....:** WATER
**LCS Lot-Sample#:** G9F260000-244 CXEQJ103-LCSD
**Prep Date.....:** 06/16/99 **Analysis Date..:** 06/16/99
**Prep Batch #...:** 9177244
**Dilution Factor:** 1

| PARAMETER | SPIKE AMOUNT | MEASURED AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|
| **Benzene** | **10.0** | **9.28** | **ug/L** | **93** | | **DHS CA LUFT** |
| | **10.0** | **9.15** | **ug/L** | **92** | **1.4** | **DHS CA LUFT** |
| **Ethylbenzene** | **10.0** | **9.59** | **ug/L** | **96** | | **DHS CA LUFT** |
| | **10.0** | **9.49** | **ug/L** | **95** | **0.97** | **DHS CA LUFT** |
| **Methyl tert-butyl ether** | **10.0** | **8.20** | **ug/L** | **82** | | **DHS CA LUFT** |
| | **10.0** | **7.91** | **ug/L** | **79** | **3.5** | **DHS CA LUFT** |
| **Toluene** | **10.0** | **9.30** | **ug/L** | **93** | | **DHS CA LUFT** |
| | **10.0** | **9.21** | **ug/L** | **92** | **0.93** | **DHS CA LUFT** |
| **m-Xylene & p-Xylene** | **20.0** | **19.1** | **ug/L** | **96** | | **DHS CA LUFT** |
| | **20.0** | **18.9** | **ug/L** | **94** | **1.3** | **DHS CA LUFT** |
| **o-Xylene** | **10.0** | **9.25** | **ug/L** | **92** | | **DHS CA LUFT** |
| | **10.0** | **9.10** | **ug/L** | **91** | **1.6** | **DHS CA LUFT** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 97 | (70 - 130) |
| | 95 | (70 - 130) |

**NOTE(S):**

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

Bold print denotes control parameters

Quanterra

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

### GC Volatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CXEQH102-LCS **Matrix.....:** WATER
**LCS Lot-Sample#:** G9F260000-243 CXEQH103-LCSD
**Prep Date.....:** 06/16/99 **Analysis Date..:** 06/16/99
**Prep Batch #...:** 9177243
**Dilution Factor:** 1

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **TPH (as Gasoline)** | **109** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **110** | **(70 - 130)** | **1.2** | **(0-35)** | **DHS CA LUFT** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 4-Bromofluorobenzene | 107 | (70 - 130) |
| | 112 | (70 - 130) |

**NOTE(S):**

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

Bold print denotes control parameters

Quanterra

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

### GC Volatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CXEQJ102-LCS **Matrix.....:** WATER
**LCS Lot-Sample#:** G9F260000-244 CXEQJ103-LCSD
**Prep Date.....:** 06/16/99 **Analysis Date..:** 06/16/99
**Prep Batch #...:** 9177244
**Dilution Factor:** 1

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **Benzene** | **93** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **92** | **(70 - 130)** | **1.4** | **(0-35)** | **DHS CA LUFT** |
| **Ethylbenzene** | **96** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **95** | **(70 - 130)** | **0.97** | **(0-35)** | **DHS CA LUFT** |
| **Methyl tert-butyl ether** | **82** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **79** | **(70 - 130)** | **3.5** | **(0-35)** | **DHS CA LUFT** |
| **Toluene** | **93** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **92** | **(70 - 130)** | **0.93** | **(0-35)** | **DHS CA LUFT** |
| **m-Xylene & p-Xylene** | **96** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **94** | **(70 - 130)** | **1.3** | **(0-35)** | **DHS CA LUFT** |
| **o-Xylene** | **92** | **(70 - 130)** | | | **DHS CA LUFT** |
| | **91** | **(70 - 130)** | **1.6** | **(0-35)** | **DHS CA LUFT** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| a,a,a-Trifluorotoluene | 97 | (70 - 130) |
| | 95 | (70 - 130) |

**NOTE(S):**

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

Bold print denotes control parameters

Quanterra

# Total Petroleum Hyddrocarbons (Diesel) – Method 8015M

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-1

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-001 | **Work Order #...:** | CWK2N104 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/09/99 | **Analysis Date..:** | 06/25/99 | | |
| **Prep Batch #...:** | 9160337 | | | | |
| **Dilution Factor:** | 40 | **Method.....:** | SW846 8015 MOD | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Diesel) | ND | 2000 | ug/L |
| **Unknown Hydrocarbon** | **82000** | **2000** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 0.0 SRD | (66 - 136) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

The unknown from n-C08 to n-C40 was quantitiated based a diesel reference from n-C10 to n-C24.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-2

GC Semivolatiles

| | | | |
|---|---|---|---|
| Lot-Sample #...: G9F050163-002 | Work Order #...: CWK2P104 | Matrix.....: WATER | |
| Date Sampled...: 06/03/99 | Date Received..: 06/04/99 | | |
| Prep Date.....: 06/09/99 | Analysis Date..: 06/25/99 | | |
| Prep Batch #...: 9160337 | | | |
| Dilution Factor: 4 | Method.....: SW846 8015 MOD | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Diesel) | ND | 200 | ug/L |
| **Unknown Hydrocarbon** | **1900** | **200** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 138 * | (66 - 136) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

The surrogate recovery in the sample is outside control limits due to confirmed matrix effect.

The unknown from n-C08 to n-C40 was quantitiated based on a diesel reference from n-C10 to n-C24.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-4

GC Semivolatiles

| | | | |
|---|---|---|---|
| **Lot-Sample #...:** G9F050163-003 | **Work Order #...:** CWK2Q104 | **Matrix.....:** WATER | |
| **Date Sampled...:** 06/03/99 | **Date Received..:** 06/04/99 | | |
| **Prep Date.....:** 06/09/99 | **Analysis Date..:** 06/25/99 | | |
| **Prep Batch #...:** 9160337 | | | |
| **Dilution Factor:** 4 | **Method.....:** SW846 8015 MOD | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Diesel) | ND | 200 | ug/L |
| **Unknown Hydrocarbon** | **2500** | **200** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 139 * | (66 - 136) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

The surrogate recovery in the sample is outside control limits due to confirmed matrix effect.

The unknown from n-C08 to n-C30 was quantitiated based on a diesel reference from n-C10 to n-C24.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-5

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-004 | **Work Order #...:** | CWK2R104 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/09/99 | **Analysis Date..:** | 06/25/99 | | |
| **Prep Batch #...:** | 9160337 | | | | |
| **Dilution Factor:** | 1 | **Method.....:** | SW846 8015 MOD | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Diesel) | ND | 50 | ug/L |
| **Unknown Hydrocarbon** | **800** | **50** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 120 | (66 - 136) |

**NOTE(S):**

The unknown from n-C08 to n-C40 was quantitated based on a diesel reference from n-C10 to n-C24.

Quanterra

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-7

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9F050163-005 | **Work Order #...:** | CWK2T104 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 06/03/99 | **Date Received..:** | 06/04/99 | | |
| **Prep Date.....:** | 06/09/99 | **Analysis Date..:** | 06/25/99 | | |
| **Prep Batch #...:** | 9160337 | | | | |
| **Dilution Factor:** | 600 | **Method.....:** | SW846 8015 MOD | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| TPH (as Diesel) | ND | 30000 | ug/L |
| **Unknown Hydrocarbon** | **1300000** | **30000** | **ug/L** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 0.0 SRD | (66 - 136) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

The unknown from n-C08 to n-C26 was quantitated based on a diesel reference from n-C10 to n-C24.

Quanterra

# QC DATA ASSOCIATION SUMMARY

**G9F050163**

Sample Preparation and Analysis Control Numbers

| SAMPLE# | MATRIX | ANALYTICAL METHOD | LEACH BATCH # | PREP BATCH # | MS RUN# |
|---|---|---|---|---|---|
| 001 | WATER | SW846 8015 MOD | | 9160337 | |
| 002 | WATER | SW846 8015 MOD | | 9160337 | |
| 003 | WATER | SW846 8015 MOD | | 9160337 | |
| 004 | WATER | SW846 8015 MOD | | 9160337 | |
| 005 | WATER | SW846 8015 MOD | | 9160337 | |

Quanterra

# METHOD BLANK REPORT

## GC Semivolatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CWN79101 **Matrix.....:** WATER
**MB Lot-Sample #:** G9F090000-337

**Prep Date.....:** 06/09/99
**Analysis Date..:** 06/24/99 **Prep Batch #...:** 9160337
**Dilution Factor:** 1

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| TPH (as Diesel) | ND | 50 | ug/L | SW846 8015 MOD |
| Unknown Hydrocarbon | ND | 50 | ug/L | SW846 8015 MOD |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 81 | (66 - 136) |

**NOTE(S):**

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

Quanterra

## LABORATORY CONTROL SAMPLE DATA REPORT

### GC Semivolatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CWN79102-LCS **Matrix.....:** WATER
**LCS Lot-Sample#:** G9F090000-337 CWN79103-LCSD
**Prep Date.....:** 06/09/99 **Analysis Date..:** 06/24/99
**Prep Batch #...:** 9160337
**Dilution Factor:** 1

| PARAMETER | SPIKE AMOUNT | MEASURED AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|
| **TPH (as Diesel)** | **300** | **217** | **ug/L** | **72** | | **SW846 8015 MOD** |
| | **300** | **237** | **ug/L** | **79** | **8.9** | **SW846 8015 MOD** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 89 | (66 - 136) |
| | 96 | (66 - 136) |

**NOTE(S):**

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

Bold print denotes control parameters

Quanterra

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Semivolatiles

**Client Lot #...:** G9F050163 **Work Order #...:** CWN79102-LCS **Matrix.....:** WATER
**LCS Lot-Sample#:** G9F090000-337 CWN79103-LCSD
**Prep Date.....:** 06/09/99 **Analysis Date..:** 06/24/99
**Prep Batch #...:** 9160337
**Dilution Factor:** 1

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **TPH (as Diesel)** | **72** | **(50 - 129)** | | | **SW846 8015 MOD** |
| | **79** | **(50 - 129)** | **8.9** | **(0-23)** | **SW846 8015 MOD** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| o-Terphenyl | 89 | (66 - 136) |
| | 96 | (66 - 136) |

**NOTE(S):**

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

Bold print denotes control parameters