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CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, SUITE 5301 • OAKLAND, CALIFORNIA 94612-2034

Public Works Agency
Environmental Services

FAX (510) 238-7286
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August 17, 2004

Mr. Amir Gholami
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, suite 250
Alameda, CA 94502-9335

Subject: **Semi-Annual Groundwater Monitoring Report – Municipal Service Center, 7101 Edgewater Drive, Oakland, CA 94621**

Dear Mr. Gholami:

Please find enclosed for your records a copy of the most recent Semi-Annual Groundwater Monitoring report dated July 14, 2004 for the Municipal Service Center Site located at 7101 Edgewater Drive, Oakland. The monitoring event was conducted by the City's consultants – Ninyo & Moore of Oakland. We are submitting this report as part of the County's environmental compliance requirement for the site.

If there are any questions, please contact me at (510) 238-7371 or e-mail me at oojukwu@oaklandnet.com.

Sincerely,

Odili N. Ojukwu, P.E.
Environmental Program Specialist

Copy:
Mark Gomez, City of Oakland, PWA/ESD (wo/enclosure)

GROUNDWATER MONITORING REPORT
SPRING SEMI-ANNUAL 2004
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA
ASSIGNMENT NO. GO3-N&M-10

PREPARED FOR:
City of Oakland, Public Works Agency
Environmental Services Division
250 Frank H. Ogawa Plaza, Suite 5301
Oakland, California

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
1956 Webster Street, Suite 400
Oakland, California 94612

July 14, 2004
Project No. 400834010

July 14, 2004
Project No. 400834010

Mr. Odili Ojukwu
City of Oakland, Public Works Department
Environmental Sciences Division
250 Frank Ogawa Plaza, Suite 5301
Oakland, California 94612

Subject: Spring Semi-Annual 2004 Groundwater Monitoring Report
Municipal Service Center
7101 Edgewater Drive
Oakland, California

Dear Mr. Ojukwu:

Ninyo & Moore is pleased to present this report summarizing groundwater monitoring activities at the Municipal Service Center (MSC), located in Oakland, California. These activities were performed in accordance with Assignment No. GO3-N&M-10. The purpose of our study was to establish the local hydraulic gradient, depth to groundwater, and the direction of groundwater flow, as well as to generate water quality information from which to assess the nature and severity of groundwater contamination at the site.

We appreciate this opportunity to be of service. If you have any questions regarding this report, please contact the undersigned.

Sincerely,
NINYO & MOORE

Kris M. Larson
Project Environmental Geologist

Jonathan D. Hoffman, R.G.
Senior Environmental Geologist

KML/JDH/jms

Distribution: (3) Addressee (2 bound, 1 unbound)

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1. INTRODUCTION AND SCOPE OF SERVICES

This report summarizes the results of the spring semi-annual 2004 groundwater monitoring activities conducted on April 23 and April 28, 2004, at the Municipal Service Center (MSC), located in Oakland, California (Figure 1). The work conducted by Ninyo & Moore was in accordance with Assignment No. GO3-N&M-10. Described below are the monitoring activities, monitoring results, contaminant distributions in groundwater, conclusions, recommendations, and anticipated fall semi-annual 2004 monitoring activities.

2. SITE BACKGROUND AND CORRECTIVE ACTION MEASURES

Eighteen 4-inch diameter and four 2-inch diameter test/observation wells, to depths ranging from 13 feet to 17 feet below ground surface (bgs), were installed on site in December 2001 and January 2002, according to the Uribe & Associates *Test/Observation Well Installation Report U&A Project No. 291-03* prepared in April 2002 (Uribe, 2002). Seven wells, including RW-A1, RW-A2, OB-A1, RW-B1, RW-B2, RW-B3 and RW-B4, were installed in the vicinity of Plumes A and B. Fifteen wells, including RW-C1, RW-C2, RW-C3, RW-C4, RW-C5, RW-C6, RW-C7, OB-C1, RW-D1, RW-D2, RW-D3, RW-D4, RW-D5, OB-D1 and OB-D2, were installed in the vicinity of plumes C and D. Every well except OB-A1 was surveyed subsequent to the installation event.

According to the Second Quarter 2003 Monitoring Report (Uribe, 2003) approximately 10,000 gallons of a combination of groundwater and free product were removed from wells RW-B3 and RW-B4 (Plume B) on site in September and October 2002 using a trailer mounted dual phase extraction (DPE) unit with a 10-HP vacuum pump. Additionally, approximately 10,000 gallons of liquid were removed from wells RW-C3, RW-C4, RW-C5, and RW-C7 (Plume C) through five daily extractions in a two-month period. The liquid was pumped into a 21,000 gallon above ground storage tank to allow oil/water separation and drained through three 2,000 pound granular activated carbon filters (in series). Subsequent to filtration, the wastewater was discharged into a local stormdrain. A National Pollutant Discharge Elimination System (NPDES) permit was issued prior to discharge.

Within the same time period, hydrogen peroxide, followed by water, was injected bi-weekly into wells OB-A1, RW-A1, RW-A2, TBW-3 and TBW-4 (Plume A), MW-16 and MW-17 (Plume B), and MW-5 in the active tank area, to promote in-situ bioremediation.

3. SPRING SEMI-ANNUAL 2004 MONITORING ACTIVITIES

3.1. Field Activities

On April 23, 2004, representatives from Ninyo & Moore measured depth to static groundwater and inspected for the presence of separate phase hydrocarbons (SPHs) in 42 on-site groundwater monitoring wells (MW) and tank pit backfill wells (TBW) based on the City of Oakland MSC Schedule and Protocol table provided in Appendix A. Two groundwater monitoring wells, MW-8 and MW-9, could not be located during the pre-work activities conducted by Ninyo & Moore personnel and a City of Oakland representative and, therefore, were not measured or sampled during this monitoring event. Static groundwater levels were measured using a Solinst water level probe and SPH was measured using a Heron interface probe. Both probes were decontaminated with a liquinox/water wash and a distilled water rinse prior to each use. A summary of the current and previous depth-to-groundwater measurements is presented in Table 1.

On April 28, 2004, Ninyo & Moore personnel collected groundwater samples from wells MW-1, MW-2, MW-5, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17. MW-6 was not sampled due to the presence of SPH. Prior to the collection of groundwater samples, using a "whale pump," which was decontaminated between wells, a minimum of three well casing volumes of water were purged from each of the twelve on-site wells prior to the collection of groundwater samples. The wells were allowed to recover to at least 80 percent of their original static groundwater levels prior to sampling. Dissolved oxygen, temperature, acidity, and conductivity were measured during well purging. Additionally, characteristics of the water (color, turbidity, odor, sheen) were noted on the field data sheets and are included in Appendix B.

Subsequent to purging, samples were collected using disposable PVC bottom-discharging bailers. The samples were transferred from the bailer to the appropriate sample containers, labeled, and placed in a cooler containing ice at 4 degrees Celsius under chain-of-custody protocol. The samples were secured in a cooler and transferred to Torrent Laboratories (Torrent), located in Milpitas, California. Purged and decontamination water generated during sampling activities were transferred into an on-site Baker Tank maintained by the City of Oakland.

3.2. Sample Analyses

The groundwater samples were analyzed for the following parameters:

- Total petroleum hydrocarbons as gasoline (TPH-g), diesel (TPH-d), motor oil (TPH-mo), and kerosene (TPH-k) by United States Environmental Protection Agency (USEPA) Method 8015B using a silica gel cleanup.
- Benzene, toluene, ethylbenzene, total xylenes (collectively known as BTEX) and methyl tert-butyl ether (MTBE) by USEPA Method 8260B.

Torrent, a California Department of Health Services-certified environmental laboratory (ELAP #1991), performed the analyses.

4. MONITORING RESULTS

4.1. Shallow Groundwater Topography

Depth to groundwater measurements were collected on April 23, 2004, using a Solinst water level meter (Table 1). Prior to groundwater measurement, the well caps were removed to relieve atmospheric pressure and promote equilibrium in the groundwater column within each well. Groundwater levels were allowed to equalize at lease 50 minutes prior to groundwater measurement. Groundwater elevations were determined using well survey data from the *Final Second Quarter 2003 Monitoring Report, City of Oakland Municipal Service Center (May 2003, Uribe & Associates)*. Groundwater elevations ranged from 7.66 feet mean sea level (msl) at TBW-3 to 0.96 msl at MW-17 (Figure 2). A lower groundwater elevation was

measured at adjacent monitoring well MW-16 (-0.26 msl); however, this elevation is considered anomalous and was not used for contouring. MW-16 and MW-17 are located adjacent to the bay with MW-17 more downgradient. TBW-4, adjacent to TBW-3, is located in a former underground storage tank (UST) pit which has most likely been backfilled with a non-native material, possible sand and/or gravel. Groundwater flow direction is toward the west-southwest in the northern section of the site at 0.025 feet/foot, and toward the southwest at 0.020 feet/foot in the southern portion of the site. Groundwater "mounding" was observed in the vicinity of TBW-3, which is potentially created by the higher permeability of the backfill in the area. The variation in the groundwater gradient may be due to difference in lithologic characteristics in the subsurface, preferential pathways (possibly due to backfilled utility trenches) or topographical characteristics on site. The groundwater flow direction evaluated during this groundwater monitoring event is, overall, similar to that reported in the Third Quarter 2002 groundwater sampling event conducted on site from September 12 through September 18, 2002 (Uribe, 2002).

4.2. Occurrence of Separate-Phase Hydrocarbons (SPH)

SPH was observed and thickness measured in on-site monitoring wells MW-6 (0.23 ft), TBW-5 (0.21 ft), RW-B3 (3.09 ft), RW-C2 (0.06 ft), RW-C4 (0.01 ft), RW-C6 (0.5 ft), RW-C7 (0.2 ft), OB-C1 (1.27 ft), RW-D2 (2.1 ft), RW-D3 (3.25 ft), and RW-D4 (2.09 ft). Measurable SPH was present in four on-site monitoring wells that was not present during the Second Quarter 2003 Monitoring Event: RW-B3, RW-C4, RW-C7, and OB-C1. Visible product, or a strong odor, was noted in these wells, with the exception of OB-C1, in April 2003.

4.3. Contaminant Distribution in Groundwater

The analytical data from this groundwater monitoring event is provided in Table 1 in addition to laboratory analytical results as reported in previous monitoring events. The laboratory analytical data reports are included in Appendix C. Historical data for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Leaking

Underground Fuel Tank (LUFT) metals and other metals are provided in Tables 2, 3, 4, and 5, respectively.

4.3.1. Benzene

Benzene was reported in groundwater samples collected from 7 of the 13 monitoring wells sampled. The maximum benzene concentration reported from groundwater samples collected this monitoring event was 150 micrograms per liter (µg/L) in MW-16. Historically, free product has been detected in MW-16 and therefore, has not been sampled. According to the Second Quarter 2003 Monitoring Report (Uribe, 2003), the acceptable risk thresholds for both the San Francisco Airport Ecological Protection Zone Tier I Standard and the City of Oakland Tier I Carcinogenic Risk-Based Standard Level (RBSL) for inhalation of outdoor air vapors in a residential setting are 71 µg/L and 5,600 µg/L, respectively. The benzene concentration in well MW-16 exceeds the first of these limits. This concentration also exceeds the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for Surface Water Bodies in a Marine Environment for benzene of 71 µg/L (RWQCB, 2003). The concentration of benzene, as discussed above, does not pose an inhalation risk to human health.

Benzene was also reported in groundwater samples collected from wells MW-1 (20 µg/L), MW-5 (34 µg/L), MW-7 (1.6 µg/L), MW-10 (14 µg/L), MW-11 (18 µg/L), and MW-14 (1.4 µg/L). These concentrations are generally consistent with historic concentrations for these wells and are below the aforementioned standards.

4.3.2. Toluene

Toluene was not reported above the laboratory reporting limits in the groundwater samples collected from 13 monitoring wells sampled. Toluene was reported in groundwater in samples collected from MW-1 and MW-11 during the last groundwater monitoring event conducted in April 2003.

4.3.3. Ethylbenzene

Ethylbenzene was reported in groundwater samples collected in 5 of the 13 wells sampled. The maximum ethylbenzene concentration reported this quarter was 560 µg/L in the groundwater sample collected from MW-5. This concentration is below the concentration reported during the Second Quarter 2003 groundwater monitoring event of 870 µg/L, and below the San Francisco Airport Ecological Protection Zone Tier I Standard (29,000 µg/L) but does exceed the RWQCB ESLs for Surface Water Bodies in a Marine Environment (30 µg/L) (RWQCB, 2003). No City of Oakland Tier I Carcinogenic Risk RBSL exists for outdoor air vapors in a residential setting for ethylbenzene. The second highest reported concentration for ethylbenzene was from a sample collected from MW-16 at 46 µg/L, which also exceeds RWQCB ESLs for Surface Water Bodies in a Marine Environment.

Ethylbenzene was also reported in samples collected from monitoring wells MW-10 (6.9 µg/L), MW-11 (6.5 µg/L), and MW-17 (2.4 µg/L). These concentrations are generally consistent with historic concentrations for these wells and are below the RWQCB ESLs for Surface Water Bodies in a Marine Environment.

4.3.4. Total Xylenes

Total xylenes were reported in groundwater samples collected from 5 of the 13 monitoring wells sampled. The maximum total xylenes concentration reported this monitoring event was 44 µg/L in the groundwater sample collected from MW-5. This concentration is below the concentration reported during the Second Quarter 2003 groundwater monitoring event of 59.4 µg/L but still exceeds the RWQCB ESLs for Surface Water Bodies in a Marine Environment for total xylenes (13 µg/L). No City of Oakland Tier I Carcinogenic Risk RBSL exists for outdoor air vapors in a residential setting for total xylenes.

Total xylenes were also reported in samples collected from wells MW-1 (2.3 µg/L), MW-2 (1.3 µg/L), MW-10 (5.2 µg/L), and MW-11 (4.5 µg/L). These concentrations are

generally consistent with historic concentrations for these wells and are below RWQCB ESLs for Surface Water Bodies in a Marine Environment for total xylenes.

4.3.5. MTBE

MTBE was reported in groundwater samples collected from 4 of the 13 monitoring wells sampled. The maximum MTBE concentration reported this groundwater monitoring event was 47 µg/L in the groundwater sample collected from MW-5. This concentration is below the concentration reported during the Second Quarter 2003 groundwater monitoring event of 150 µg/L. This concentration is less than the RWQCB ESLs for Surface Water Bodies in a Marine Environment for MTBE (180 µg/L). No City of Oakland Tier I carcinogenic Risk RBSL exists for outdoor air vapors in a residential setting for MTBE.

MTBE was also reported in samples collected from MW-10 (3.5 µg/L), MW-11 (4.0 µg/L), and MW-15 (2.8 µg/L). These concentrations are generally consistent with historic concentrations for these wells and were below RWQCB ESLs for Surface Water Bodies in a Marine Environment for MTBE.

4.3.6. TPH-g

TPH-g was reported in groundwater samples collected from 6 of the 13 wells sampled. The maximum TPH-g concentration reported this groundwater monitoring event was 4,780 µg/L in the groundwater sample collected from MW-5. This concentration is below the concentration reported during the Second Quarter 2003 groundwater monitoring event of 6,000 µg/L; however, it is above the San Francisco Airport Ecological Protection Zone Tier I Standard Acceptable Threshold of 3,700 µg/L for TPH-g (Uribe, 2003), and the RWQCB ESLs for Surface Water Bodies in a Marine Environment for TPH-g, which is also 3,700 µg/L.

TPH-g was also detected in wells MW-1 (154 µg/L), MW-10 (114 µg/L), MW-11 (360 µg/L), MW-14 (241 mg/L), and MW-16 (2,000 µg/L). Well MW-16 was not sampled during the previous groundwater monitoring event due to free product. These concentra-

tions are generally consistent with historic concentrations for these wells and with the exception of the concentration of TPH-g detected in the groundwater sample collected from MW-5, are below the San Francisco Airport Ecological Protection Zone Tier I Standard Acceptable Threshold for TPH-g and the RWQCB ESLs for Surface Water Bodies in a Marine Environment for TPH-g.

4.3.7. TPH-d

TPH-d was not reported above the laboratory reporting limits in the 13 monitoring wells sampled. Historically, TPH-d has been detected in the majority of groundwater monitoring wells sampled during sampling events, but has been decreasing over the last several sampling events.

4.3.8. TPH-mo

TPH-mo was reported in groundwater samples collected from 4 of the 13 wells sampled. The maximum TPH-mo concentrations reported in groundwater samples collected this groundwater monitoring event were 1,030 µg/L from MW-16, 1,020 µg/L from MW-12, and 799 µg/L from MW-13. These concentrations are above the San Francisco Airport Ecological Protection Zone Tier I Standard Acceptable Threshold for TPH-mo of 640 µg/L (Uribe, 2003) and the RWQCB ESLs for Surface Water Bodies in a Marine Environment for residual fuels, which is also 640 µg/L. No previous data exists for groundwater samples collected from monitoring well MW-16 because of the presence of SPH, however the concentration of TPH-mo reported from the samples collected from MW-12 and MW-13 exceed that reported in the last two groundwater monitoring events.

TPH-mo was also reported in the groundwater samples collected from MW-15 at 567 µg/L. The concentrations listed above are generally consistent with historic concentrations for these wells.

4.3.9. TPH-k

TPH-k was not reported above the laboratory reporting limits in the groundwater samples collected from the 13 monitoring wells sampled. Historically, TPH-k has been detected in several groundwater monitoring wells sampled during sampling events.

4.4. Laboratory Analysis

The groundwater samples were submitted for analysis to Torrent. Samples were analyzed for TPH-g and TPH-d, using method EPA 8015 (modified). Samples were analyzed for BTEX, MTBE using method EPA 8260B. A summary of the past and present laboratory results for the groundwater samples is presented in Table 1. Copies of laboratory results and chain-of-custody documents are included in Appendix C.

5. LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

A laboratory Quality Assurance and Quality Control (QA/QC) review was performed on the laboratory analytical data to evaluate the quality and usability of the analytical results. The following sections summarize the QA/QC review

5.1. Method Holding Times

Extraction and analyses performed on the collected samples was reviewed by Ninyo & Moore personnel and were found to be within the appropriate holding times.

5.2. Blanks

One trip blank (TB-1) was prepared by Ninyo & Moore personnel and transported along with groundwater samples and were analyzed for TPH-g using EPA Method 8015B and BTEX using EPA Method 8260B. Additionally, laboratory method blank results were reviewed for detection of target analytes. No target analytes were detected in TB-1 or in method blanks, indicating that samples transportation and laboratory procedures were not a source of contamination.

5.3. Laboratory Control Samples

Laboratory Control Samples (LCS) and Laboratory Control Samples Duplicate (LCSD) were conducted by Torrent for TPH-g, TPH-d, TPH-k, TPH-mo, and BTEX. All samples were within the percentage recovery range of 75% to 125% required by the laboratory.

5.4. Surrogates

Surrogates, including pentacosane and trifluorotoluene for TPH-g, TPH-d, TPH-k and TPH-mo, and 4-bromofluorobenzene, dibromofluoromethane and toluene-d8 for BTEX were used for laboratory QA/QC analysis. All surrogates were within the laboratory recovery limits of 75% to 125%.

5.5. False-Positive Petroleum Hydrocarbon Identification

No qualifiers were reported in the laboratory analytical reports.

6. CONCLUSIONS AND RECOMMENDATIONS

- Groundwater elevations ranged from 7.66 feet msl at TBW-3, to 0.96 msl at MW-17. Groundwater flow direction is toward the west-southwest in the northern section of the site at 0.025 feet/foot, and toward the southwest at 0.020 feet/foot in the southern portion of the site. Groundwater "mounding" was observed in the vicinity of TBW-3, which is potentially created by the higher permeability backfill in the former UST area.

- SPH was observed and thickness measured in 11 on-site monitoring wells ranging in thickness of 0.01 to 3.25 feet in wells MW-6, TBW-5, RW-B3, RW-C2, RW-C4, RW-C6, RW-C7, OB-C1, RW-D2, RW-D3, and RW-D4.

- The maximum benzene concentration reported this groundwater monitoring event was 150 µg/L in the groundwater sample collected from MW-16. This concentration exceeds the San Francisco Airport Ecological Protection Zone Tier I Standard, the RWQCB ESLs for Surface Water Bodies in a Marine Environment for benzene (71 µg/L). Concentrations ranging from 1.4 µg/L to 34 µg/L were reported in samples collected from six other monitoring wells.

- The benzene detected in groundwater sample collected from MW-16 (150µg/L) is well below the City of Oakland Tier I Carcinogenic RBSL for inhalation of outdoor air vapors in a residential setting (5,600 µg/L). At this concentration, the benzene is not an inhalation risk to human health.

- The maximum MTBE concentration detected this quarter was 47 µg/L in MW-5. This concentration is less than the RWQCB ESL for Surface Water Bodies in a Marine Environment for MTBE (180 µg/L). Concentrations ranging from 2.8 µg/L to 4.0 µg/L were reported in three other monitoring wells.

- The maximum TPH-g concentration reported this groundwater monitoring event was 4,780 µg/L in MW-5. This concentration is above the San Francisco Airport Ecological Protection Zone Tier I Standard Acceptable Threshold and the RWQCB ESLs for Surface Water Bodies in a Marine Environment for TPH-g (both 3,700 µg/L). Concentrations ranging from 114 µg/L to 2,000 µg/L were reported in five other groundwater monitoring wells.

- TPH-mo was reported in groundwater samples collected from 4 of the 13 wells sampled. The maximum TPH-mo concentrations reported this quarter were 1,030 µg/L in MW-16, 1,020 µg/L in MW-12, and 799 µg/L in MW-13. These concentrations are above the San Francisco Airport Ecological Protection Zone Tier I Standard Acceptable Threshold for TPH-mo and the RWQCB ESLs for Surface Water Bodies in a Marine Environment for residual fuels of 640 µg/L. TPH-mo was also reported in the sample collected from MW-15 at 567 µg/L.

- TPH-d and TPH-k were not reported above their respective laboratory reporting limits for this groundwater monitoring event.

Based on the results of the Spring Semi-Annual 2004 groundwater monitoring event, Ninyo & Moore recommends the following:

- Groundwater monitoring should continue on site due to the elevated concentration of TPH-g, TPH-d, BTEX and MTBE reported during this spring semi-annual groundwater monitoring event,

- Groundwater monitoring wells not located (MW-8 and MW-9) during this sampling event should be located for future groundwater monitoring events;

- Absorbent socks should be utilized in wells containing SPH to assist in removing the free product from the wells. The socks should be inserted into each well at the groundwater/SPH interface. The wells should be checked bi-weekly to evaluate the efficiency of the absorbent socks. When the absorbent ability of the socks has reached capacity, the socks should be replaced.

- Conduct a conduit study to evaluate potential contaminant flow pathways for SPH and dissolved phase hydrocarbons (DPH) toward the San Leandro Bay. If the results of the conduit study indicate a preferential pathway to the bay, collect sediment samples at the bay shoreline to assess potential contamination migrating from the site toward the shoreline.

- Following the conduit study and sediment sampling, evaluate the need for an ecological risk assessment (EA). The EA would consist of biological characterization, chemical characterization and an exposure pathways assessment. The objectives of the EA would be to identify potential species of concern and significant habitats that may exist at the site or in areas impacted by the site, and any actual or potentially complete exposure pathways.

7. LIMITATIONS

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No other warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

Our conclusions, recommendations and opinions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

8. SELECTED REFERENCES

RWQCB, 2003, Screening for Environmental Concerned Sites with Contaminated Soil and Groundwater (Interm Final): July.

Uribe & Associates, 2003, (Uribe), Final Report, Second Quarter 2003 Monitoring Report, City of Oakland Municipal Service Center: dated: May.

Uribe, 2002, Final Report, Third Quarter 2003 Monitoring Report, City of Oakland Municipal Service Center: dated: October.

Uribe, 2002, Test/Observation Well Installation Report U & A Project 291-03: dated April 2.

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-1														
10/4/089	10.20	—	—	8020		—	—	—	540	65	26	14	22	—
10/4/89	10.20	—	—	8240		—	—	—	—	120	46	43	78	—
4/27/93	10.20	—	—	8020		—	—	—	<1,000	<1.0	<1.0	<1.0	<1.0	—
4/19/95	10.20	—	—	8020		—	—	—	3,200	880	15	23	21	—
7/27/95	10.20	4.62	5.58	8020		—	—	—	980	130	3.6	1.4	5.6	—
11/20/95	10.20	6.08	4.12	8020		—	—	—	400	99	2.8	1.1	4.6	—
2/21/96	10.20	4.62	5.58	8020		—	—	—	1,700	340	8.4	5.3	16	—
5/13/96	10.20	4.33	5.87	8020		—	—	—	7,300	2,000	30	42	38	—
8/27/96	10.20	5.25	4.95	8020		—	—	—	380	61	2.4	<0.5	4.2	—
2/23/98	10.20	1.75	8.45	8020		<50	<500	<50	820	160	4.9	3	9.7	—
8/19/98	10.20	4.78	5.42	8020	SGC	1,200	—	—	780	69	4.1	0.84	8.5	<5.0
11/11/98	10.20	5.64	4.56	—		—	—	—	—	—	—	—	—	—
2/23/99	10.20	3.41	6.79	8020	SGC	1,200	1,600	<50	1,100	190	5	3	12	<5.0
5/27/99	10.20	3.96	6.24	—		—	—	—	—	—	—	—	—	—
8/24/99	10.20	4.92	5.28	8020	SGC	640	1,900	<50	370	37	0.9	<0.5	1.9	<5.0
11/22/99	10.20	5.46	4.74	—		—								
1/18/00	10.05	5.41	4.64	—		—	—	—	—	—	—	—	—	—
1/19/00	—	—	—	8020	SGC	50	<200	<50	660	43	2.3	1.1	6	<5.0
5/11/00	10.05	4.63	5.42	—		—	—	—	—	—	—	—	—	—
8/24/00	10.05	5.07	4.98	—		—	—	—	—	—	—	—	—	—
8/25/00	—	—	—	8020	SGC	340	<250	290	480	53	1.4	<0.5	2.9	<5.0
11/28/00	10.05	5.60	4.45	—		—	—	—	—	—	—	—	—	—
2/27/01	10.05	3.95	6.10	8020	Filtered+SGC	270	<250	<61	1,500	110	6.3	<1.5	9.9	<15
5/17/01	10.05	4.00	6.05	—		—	—	—	—	—	—	—	—	—
8/16/01	10.05	4.17	5.88		Filtered+SGC	280	<B200	<100	4,000	640	9.7	5.7	13	<5.0
12/15/01	10.05	5.52	4.53	—		—	—	—	—	—	—	—	—	—
4/9/02	10.05	3.78	6.27	8021	SGC	1,100	1,000	—	2,000	320	5.38	3.08	6.24	<5
6/21/02	10.05	4.92	5.13	—		—	—	—	—	—	—	—	—	—
9/13/02	10.05	5.52	4.53	8021	SGC	88 b,c	<300	88	260	9.6	<0.5	<0.5	1.0	<2
4/22/03	10.05	4.41	5.64	8021B	SGC	570 L Y	<300	660	1,900 Z	400.0	9.6	5.4	8.1	<2.0
4/28/04	**10.05**	**3.95**	**6.10**	**8260B**	**SGC**	**<100**	**<400**	**<100**	**154**	**20**	**<1.0**	**<1.0**	**2.3**	**<1.0**
MW-2														
10/4/89	10.47	—	—	8020		—	—	—	<30	<0.3	<0.3	<0.3	<0.3	—
10/4/89	10.47	—	—	8240		—	—	—	—	2	<2.0	<2.0	<2.0	—
4/27/93	10.47	—	—	8020		—	—	—	<1,000	<1.0	<1.0	<1.0	<1.0	—
4/19/95	10.47	—	—	8020		—	—	—	<50	1.8	<0.5	<0.5	<0.5	—
7/27/95	10.47	6.22	4.25	8020		—	—	—	<50	2.3	<0.5	<0.5	<0.5	—
11/20/95	10.47	7.49	2.98	8020		—	—	—	<50	2.2	<0.5	<0.5	<0.5	—
2/12/96	10.47	6.68	3.79	8020		—	—	—	<50	1.7	<0.5	<0.5	0.5	—
5/13/96	10.47	6.32	4.15	8020		—	—	—	—	2	<0.5	<0.5	<0.5	—
8/27/96	10.47	6.84	3.63	8020		—	—	—	—	2.4	<0.5	<0.5	<0.5	—
2/24/98	10.47	5.44	5.03	8020		<50	<500	<50	—	1.6	<0.5	<0.5	<0.5	—
8/19/98	10.47	6.56	3.91	8020	SGC	330	—	—	<50	4.1	3.4	0.8	2.6	<5.0
11/11/98	10.47	7.37	3.10	—		—	—	—	—	—	—	—	—	—
2/23/99	10.47	8.68	1.79	8020	SGC	200	900	<50	<50	3.5	0.6	0.6	1.2	<5.0
5/27/99	10.47	5.20	5.27	—		—	—	—	—	—	—	—	—	—
8/24/99	10.47	6.75	3.72	8020	SGC	140	700	<50	<50	2.6	<0.5	<0.5	<0.5	<5.0
11/22/99	10.47	7.58	2.89	—		—	—	—	—	—	—	—	—	—
1/18/00	10.47	7.41	3.06	8020	SGC	60 a	660	<50	<50	2.1	<0.5	<0.5	<0.5	<5.0
5/11/00	10.47	6.43	4.04	—		—	—	—	—	—	—	—	—	—
8/24/00	10.47	8.91	1.56	8020	SGC	170	440	130	<50	2.4	<0.5	<0.5	<0.5	<5.0

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MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
11/28/00	10.47	7.35	3.12	---		---	---	---	---	---	---	---	---	---
2/27/01	10.47	6.70	3.77	8020	Filtered+SGC	<59	<240	<59	<50	3.6	<0.5	<0.5	<0.5	<5
5/17/01	10.47	6.90	3.57	---		---	---	---	---	---	---	---	---	---
8/16/01	10.47	6.95	3.52		Filtered+SGC	<50	B200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/15/01	10.47	7.21	3.26	---		---	---	---	---	---	---	---	---	---
4/5/02	10.47	6.02	4.45	8021	SGC	200	400	---	<50	2.9	<0.5	<0.5	<0.5	<5
6/21/02	10.47	8.07	2.40	---		---	---	---	---	---	---	---	---	---
9/17/02	10.47	7.12	3.35	8021	SGC	<50	<300	<50	<50	2.1	<0.5	<0.5	<0.5	<2
4/23/03	10.47	6.36	4.11	8021B	SGC	<50	<300	<50	<50	1.6	<.50	<.50	<.50	<2.0
4/28/04	**10.47**	**5.99**	**4.48**	**8260B**	**SGC**	**<100**	**<400**	**<100**	**<100**	**<0.5**	**<1.0**	**<1.0**	**1.3**	**<1.0**
MW-3														
10/4/89	---	---	---	8020		---	---	---	<30	<0.3	<0.3	<0.3	<0.3	---
10/4/89	---	---	---	8240		---	---	---	---	<2.0	<2.0	<2.0	<2.0	---
2/23/98	---	---	---	---		<50	<500	<50	---	---	---	---	---	---
11/11/98	---	5.83	---	---		---	---	---	---	---	---	---	---	---
2/23/99	---	---	---	---	Submerged	---	---	---	---	---	---	---	---	---
5/27/99	---	1.68	---	---		---	---	---	---	---	---	---	---	---
8/24/99	---	4.76	---	---		---	---	---	---	---	---	---	---	---
11/22/99	---	6.46	---	---		---	---	---	---	---	---	---	---	---
11/22/99	---	---	---	---	Destroyed	---	---	---	---	---	---	---	---	---
MW-4														
10/4/89	7.89	---	---	8020		---	---	---	<30	<0.3	<0.3	<0.3	<0.3	---
10/4/89	7.89	---	---	8240		---	---	---	---	<2.0	<2.0	<2.0	<2.0	---
11/11/98	7.89	6.25	1.64	---		---	---	---	---	---	---	---	---	---
2/23/99	7.89	3.10	4.79	---		---	---	---	---	---	---	---	---	---
5/27/99	7.89	4.03	3.86	---		---	---	---	---	---	---	---	---	---
8/24/99	7.89	5.07	2.82	---		---	---	---	---	---	---	---	---	---
11/22/99	7.89	6.32	1.57	---		---	---	---	---	---	---	---	---	---
11/22/99	---	---	---	---	Destroyed	---	---	---	---	---	---	---	---	---
MW-5														
12/13/91	11.15	---	---	8020		1,900	---	---	13,000	1,500	190	970	2,500	---
12/13/91	---	---	---	8020	Dup	---	---	---	16,000	1,400	180	870	2,500	---
12/13/91	11.15	---	---	8240		---	---	---	---	1,800	<250	1,000	3,800	---
12/13/91	---	---	---	8240	Dup	---	---	---	---	1,600	<250	980	3,500	---
4/27/93	11.15	---	---	8240		12,000	---	---	35,000	2,100	<1.0	1,800	2,700	---
4/19/95	11.15	---	---	8240		880	4,700	---	14,000	490	51	610	1,200	---
7/27/95	11.15	6.29	4.86	8240		590	5,000	---	22,000	1,300	54	1,500	2,400	---
11/20/95	11.15	6.98	4.17	8020		<50	<50	<50	8,900	430	31	610	880	---
2/21/96	11.15	5.97	5.18	8020		480	<50	<50	1,000	540	65	700	970	---
5/13/96	11.15	6.25	4.90	8020		<50	<50	<50	5,900	430	26	580	760	---
5/13/96	---	---	---	8020	Dup	<50	<50	<50	7,300	360	22	49	640	---
8/27/96	11.15	6.40	4.75	8020		2,000	<51	<51	6,600	430	27	600	650	---
8/27/96	---	---	---	8020	Dup	6,600	<51	<51	6,300	410	25	580	620	---
2/23/98	11.15	4.22	6.93	8020		<50	<500	<50	740	19	1.4	41	34	---
8/19/98	11.15	6.14	5.01	8020		1,400	<250	1700	5,800	500	25	730	300	5,900
8/19/98	11.15	6.14	5.01	8260	SGC	---	---	---	---	---	---	---	---	6,700
11/11/98	11.15	6.51	4.64	---		---	---	---	---	---	---	---	---	---
2/23/99	11.15	3.59	7.56	8020	SGC	2,000	700	<50	6,700	300	26	800	690	1,600
5/27/99	11.15	5.71	5.44	---		---	---	---	---	---	---	---	---	---
8/24/99	11.15	6.02	5.13	8020	SGC	220	2,000	<50	2,100 e	190 e	5.5	340 e	78	380 e

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Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
11/22/99	11.15	6.16	4.99	---		---	---	---	---	---	---	---	---	---
1/18/00	11.15	6.60	4.55	---		---	---	---	---	---	---	---	---	---
1/19/00	---	---	---	8020	SGC	100	320	<50	3,000	66 e	6.3	400 e	90	300 E (1,300)
5/11/00	11.15	5.62	5.53	---		---	---	---	---	---	---	---	---	---
8/24/00	11.15	6.32	4.83	8020	SGC	4,800	560	6,600	12,000	220	21	430	91	1,200 (1,400)
11/28/00	11.15	6.47	4.68	---		---	---	---	---	---	---	---	---	---
2/27/01	11.15	4.40	6.75	8020	Filtered+SGC	230	<250	<61	6,300	150	7	350	55	830
5/17/01	11.15	5.77	5.38	8020	Filtered+SGC	190	<200	<50	7,500	140	7	580	101	170
8/16/01	11.15	4.87	6.28		Filtered+SGC	320	B500	<100	2,300	46	<5	110	24	850
12/15/01	11.15	5.50	5.65	---		---	---	---	---	---	---	---	---	---
4/9/02	11.15	5.15	6.00	8021	SGC	480	260	---	8,000	110	5.95	650	53.9	166
6/21/02	11.15	6.01	5.14	8021	SGC	200 a,b,c	<300	190	4,600	130	33	380	56	440
9/12/02	11.15	6.40	4.75	8021	SGC	620 b,c	<300	650	4,000 J	120	<0.5	260	16	580
4/22/03	11.15	4.69	6.46	8021B	SGC	1600 L Y	<300	1800	6000	91	<1.0	870	59.4	150 C
4/28/04	11.15	5.70	5.45	8260B	SGC	<650	<400	<810	4780	34	<1.0	560	44	47
MW-6														
12/13/91	10.98	---	---	8020		520	---	---	780	110	2.7	<2.5	5.5	---
12/13/91	10.98	---	---	8240		---	---	---	---	95	5	<5	<5	---
4/27/93	10.98	---	---	8020		<1,000	---	---	<1,000	430	4	5	10	---
4/19/95	10.98	---	---	8020		6,700	---	---	5,700	40	<0.8	3.9	29	---
4/19/95	---	---	---	8020	Dup	3,700	---	---	3,000	310	3.1	2.7	100	---
7/27/95	10.98	7.09	3.89	8020		3,900	---	---	6,100	430	15	200	600	---
7/27/95	---	---	---	8020	Dup	2,600	---	---	6,300	420	15	200	600	---
11/20/95	10.98	7.89	3.09	8020		850	---	---	6,800	160	4.6	8	240	---
11/20/95	---	---	---	8020	Dup	---	---	---	3,600	130	11	4.4	200	---
2/21/96	10.98	7.40	3.58	8020	Filtered+SGC	1,700	---	---	2,800	230	2.8	3.8	44	---
2/21/96	---	---	---	8020	Dup	2,500	---	---	2,200	280	3	4	4.6	---
5/13/96	10.98	7.10	3.88	8020		480	<50	<50	3,100	430	12	5.2	67	---
8/27/96	10.98	7.42	3.56	8020		3,100	---	---	4,200	300	9.3	110	110	---
8/19/98	10.98	---	---	---	SPH: 0.125 ft.	---	---	---	---	---	---	---	---	---
11/11/98	10.98	7.09	3.93	---	SPH: 0.05 ft.	---	---	---	---	---	---	---	---	---
2/23/99	10.98	7.31	3.67	---	SPH: N M	---	---	---	---	---	---	---	---	---
5/27/99	10.98	6.91	4.25	---	SPH: 0.20 ft.	---	---	---	---	---	---	---	---	---
8/24/99	10.98	7.46	3.72	---	SPH: 0.03 ft.	---	---	---	---	---	---	---	---	---
11/22/99	10.98	7.96	3.15	---	SPH: 0.16 ft.	---	---	---	---	---	---	---	---	---
1/18/00	10.98	8.08	3.05	---	SPH: 0.19 ft.	---	---	---	---	---	---	---	---	---
5/11/00	10.98	7.52	4.47	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
8/24/00	10.98	7.50	3.53	---	SPH: 0.06 ft.	---	---	---	---	---	---	---	---	---
11/28/00	10.98	6.39	4.62	---	SPH: 0.04 ft.	---	---	---	---	---	---	---	---	---
2/26/01	10.98	7.80	3.50	8020	SPH: 0.40 ft., f	820	<240	<60	6,100	181	<5	14.2	<5	<50
2/26/01	---	---	---	8260B		---	---	---	---	270	3	9	3	(19)
5/17/01	10.98	7.57	3.66	---	SPH: 0.32 ft.	---	---	---	---	---	---	---	---	---
8/16/01	10.98	7.75	3.49		SPH: 0.32 ft., f	740	B200	<100	4,200	360	4.6	13	12	14
12/15/01	10.98	7.58	3.40	---	SPH: 0.07 ft.	---	---	---	---	---	---	---	---	---
4/3/02	10.98	6.92	4.06	---	SPH: 0.11 ft.	---	---	---	---	---	---	---	---	---
6/21/02	10.98	7.05	3.93	---	SPH: 0.19 ft.	---	---	---	---	---	---	---	---	---
9/12/02	10.98	7.22	4.02	---	SPH: 0.33 ft.	---	---	---	---	---	---	---	---	---

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Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
4/22/03	10.98	4.71	6.27	---	SPH: 0.16 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.98**	**5.09**	**5.89**		**SPH: 0.23 ft.**	---	---	---	---	---	---	---	---	---
MW-7														
12/13/91	11.51	---	---	8020		<50	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
12/13/91	11.51	---	---	8240		---	---	---	---	<5	<5	<5	<5	---
4/27/93	11.51	---	---	8240		<1,000	---	---	<1,000	<1.0	<1.0	<1.0	<1.0	---
4/19/95	11.51	---	---	8240		<50	<1,000	---	<50	<2.0	<2.0	<2.0	<2.0	---
7/27/95	11.51	6.87	4.64	8240		<50	<1,000	---	<50	<2.0	<2.0	<2.0	<2.0	---
11/20/95	11.51	8.48	3.03	8020		<50	---	---	<50	<0.5	<0.5	<0.5	1.5	---
2/21/96	11.51	6.29	5.22	8020		<50	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
5/13/96	11.51	6.95	4.56	8020		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
8/27/96	11.51	6.80	4.71	8020		---	---	---	---	<0.5	<0.5	<0.5	<0.5	---
8/19/98	11.51	6.88	4.63	---		---	---	---	---	---	---	---	---	---
11/11/98	11.51	7.40	4.11	---		---	---	---	---	---	---	---	---	---
2/23/99	11.51	5.57	5.94	8020		<50	<200	<50	80	<0.5	<0.5	<0.5	1	<5.0
5/27/99	11.51	6.56	4.95	---		---	---	---	---	---	---	---	---	---
8/24/99	11.51	6.29	5.22	8020	SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	5
11/22/99	11.51	6.80	4.71	---		---	---	---	---	---	---	---	---	---
1/18/00	11.51	7.31	4.20	---		---	---	---	---	---	---	---	---	---
1/19/00	11.51	---	---	8020	SGC	<50	<200	<50	54	1.5	1.5	2.4	3.8	<5.0
5/11/00	11.51	6.41	5.10	---		---	---	---	---	---	---	---	---	---
8/24/00	11.51	7.11	4.40	8020		<50	<250	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	11.51	7.30	4.21	---		---	---	---	---	---	---	---	---	---
2/27/01	11.51	5.75	5.76	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
5/17/01	11.51	6.65	4.86	---		---	---	---	---	---	---	---	---	---
8/16/01	11.51	5.97	5.54		Filtered+SGC	<50	B600	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/15/01	11.51	6.43	5.08	---		---	---	---	---	---	---	---	---	---
4/8/02	11.51	6.17	5.34	8021	SGC	80	<200	---	<50	<0.5	0.5	0.6	<0.5	<5
6/21/02	11.51	6.75	4.76	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	3.3
9/12/02	11.51	7.05	4.46	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	2.6
4/22/03	11.51	6.24	5.27	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	4 C
4/28/04	**11.51**	**6.61**	**4.90**	**8260B**	**SGC**	**<100**	**<400**	**<100**	**<100**	**1.6**	**<1.0**	**<1.0**	**<1.0**	**<1.0**
MW-8														
11/20/96	12.22	---	---	8020		880	---	---	<50	0.66	<0.5	<0.5	<0.5	---
11/20/97	12.22	9.59	2.63	8020		200	---	---	<50	<0.5	<0.5	<0.5	<0.5	2
2/24/98	12.22	8.42	3.80	8020		<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	---
6/8/98	12.22	9.57	2.65	8020		1,200	1,000	<50	<50	<0.5	<0.5	<0.5	<0.5	---
8/19/98	12.22	9.49	2.73	8020	SGC	<50	<250	<50	<50	1.6	3.4	1	2.8	<5.0
11/11/98	12.22	9.64	2.58	8020	SGC	<50	<200	<50	<50	0.9	0.8	0.6	2.3	<5.0
2/23/99	12.22	11.53	0.69	8020		700	1,500	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/27/99	12.22	9.65	2.57	8020		<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/24/99	12.22	9.62	2.60	8020	SGC	70	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/22/99	12.22	9.64	2.58	8020	SGC	57	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
1/18/00	12.22	8.31	3.91	8020	SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	12.22	9.69	2.53	8020	SGC	<50	<200	<50	<50	<0.5	1.3	<0.5	2.1	<5.0
8/24/00	12.22	9.40	2.82	---		---	---	---	---	---	---	---	---	---

Ninyo & Moore

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
8/25/00	---	---	---	8020	SGC	85	<250	<50	<50					
11/28/00	12.22	9.40	2.83	8020	SGC	<50	910	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/27/01	12.22	9.50	2.72	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	12.22	9.71	2.51	---		---	—	—	---	---	---	—	—	---
5/18/01	---	---	---	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	12.22	9.80	2.42		Filtered+SGC	<50	<200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/15/01	12.22	9.28	2.94	8021	SGC	390	1,300	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
4/8/02	12.22	9.55	2.67	8021	SGC	440	800	—	<50	<0.5	<0.5	<0.5	<0.5	<5
6/21/02	12.22	9.71	2.51	---		---	—	—	---	---	---	—	—	---
9/18/02	12.22	9.86	2.36	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/22/03	12.22	9.54	2.68	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	---	---	—	—		---	---	---	—	—	---	---	---	—
MW-9														
11/20/96	10.77	---	---	8020		1,900	—	---	240	21	0.81	1.8	2.2	---
11/20/97	10.77	7.91	2.86	8020		---	—	---	300	20	<0.5	<0.5	1.8	<1.0
2/24/98	10.77	6.11	4.66	8020		<50	<500	<50	2,200	540	5.6	1.6	4.9	---
6/8/98	10.77	7.14	3.63	8020		1,800	890	<50	840	450	6.1	3.3	5.3	---
8/19/98	10.77	7.88	2.89	8020	SGC	190	<250	160	740	370	8.6	0.99	7.3	<5.0
11/11/98	10.77	8.23	2.54	8020	SGC	<50	230	<50	700	130	4.3	<0.5	3.9	<5.0
2/23/99	10.77	6.65	4.12	8020		1,100	3,700	<50	1,100	620	9.7	1.5	7.7	<5.0
5/27/99	10.77	7.70	3.07	8020	SGC	70	300	<50	950	470	11	1.5	9.2	<5.0
8/24/99	10.77	8.12	2.65	8020	SGC	890	1,700	<50	290	45	2.8	<0.5	3	<5.0
11/22/99	10.77	8.33	2.44	8020	SGC	1,000	6,000	<50	170	12	1.8	<0.5	2	<5.0
1/18/00	10.77	8.63	2.14	8020	SGC	200 a	2,300	<50	160	5.7	1.9	0.6	4.2	<5.0
5/11/00	10.77	7.70	3.07	8020	SGC	180 a	980	<100	1,050	280	7.0	<2.5	5.9	<25
8/24/00	10.77	8.31	2.46	---		—	—	—	---	—	---	—	—	---
8/25/00	---	---	---	8020	SGC	580	2,200	170	180	23	2.4	<0.5	2.7	<5.0
11/28/00	10.77	8.45	2.32	8020	SGC	200	1,600	<50	130	1.9	<0.5	<0.5	<0.5	<5.0
11/28/00	10.77	8.45	2.32	—	Filtered+SGC	<50	<200	<50	—	—	---	---	---	—
2/26/01	10.77	6.40	4.37	8020	Filtered+SGC	120	<200	<50	142	33	1.8	<0.5	<0.5	<5.0
5/17/01	10.77	9.88	0.89	---		—	—	---	---	---	—	—	—	---
5/18/01	---	---	---	8020	Filtered+SGC	<50	<200	<50	74	4.6	<0.5	<0.5	<0.5	<5.0
8/16/01	10.77	8.05	2.72		Filtered+SGC	<50	<200	<100	70	0.62	<0.5	<0.5	<0.5	<5
12/16/01	10.77	7.75	3.02	8021	SGC	1,400	4,100	<50	210	15	1.6	<0.5	2.2	<5
4/5/02	10.77	7.50	3.27	8021	SGC	870	1,000	---	1,498	367	11	2.1	7.8	<5
6/20/02	10.77	8.27	2.50	8021	SGC	<50	<300	<50	430	180	5.7	2.4	4.15	<2
9/18/02	10.77	8.25	2.52	8021	SGC	63 b,c	<300	60	250	49	5.8	<0.5	3.1	<2
4/22/03	10.77	7.25	3.52	8021B	SGC	<50	<300	<50	69	4.1 C	<0.5	<0.5	0.9	<2
4/28/04	---	---	—	—		---	---	—	—	---	---	---	—	—
MW-10														
11/20/96	10.59	---	---	8020		940	---	---	<50	49	0.59	0.54	1.2	—
11/20/97	10.59	7.70	2.89	8020		---	---	—	<50	<0.5	<0.5	<0.5	<0.5	---
2/24/98	10.59	4.39	6.20	8020		<50	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	---
6/8/98	10.59	6.94	3.65	8020		500	<500	<50	<50	7.3	<0.5	<0.5	<0.5	---
8/19/98	10.59	6.99	3.60	8020	SGC	240	520	110	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/11/98	10.59	7.57	3.02	8020	SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
2/23/99	10.59	5.51	5.08	8020		170	1,200	<50	<50	1.3	<0.5	<0.5	<0.5	<5.0
5/27/99	10.59	6.72	3.87	8020	SGC	<50	<200	<50	350	170	1.5	0.5	2.3	<5.0
8/24/99	10.59	7.27	3.32	8020	SGC	140	300	<50	380	160 e	<0.5	<0.5	2.6	<5.0
11/22/99	10.59	7.71	2.88	8020	SGC	570	3,400	<50	110	5.1	<0.5	<0.5	0.72	<5.0
1/18/00	10.59	7.77	2.82	---		---	—	—	—	---	---	---	---	---
1/19/00	---	---	---	8020	SGC	120 a,b	1,200	<50	100	<0.5	<0.5	0.8	<0.5	<5.0
5/11/00	10.59	7.00	3.59	8020	SGC	110 a	990	<50	145	1.62	0.5	0.5	0.9	<5.0
8/24/00	10.59	7.31	3.28	---		---	---	—	—	—	—	---	—	---
8/25/00	---	---	---	8020	SGC	430	1,300	110	<50	1.0	<0.5	<0.5	<0.5	<5.0
11/28/00	10.59	7.90	2.69	8020	SGC	220	1,500	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/27/01	10.59	5.80	4.79	8020	Filtered+SGC	85	<230	<57	<50	1.3	<0.5	<0.5	<0.5	<5.0
5/17/01	10.59	6.27	4.32	---		---	---	---	—	—	—	---	---	---
5/18/01	---	---	---	8020	Filtered+SGC	<50	<200	<50	<50	0.7	<0.5	<0.5	<0.5	<5.0
8/16/01	10.59	8.75	1.84		Filtered+SGC	<50	<200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/16/01	10.59	6.97	3.62	8021	SGC	410	2,100	<50	<50	2.4	<0.5	<0.5	<0.5	<5
4/8/02	10.59	6.51	4.08	8021	SGC	220	300	---	<50	1.1	<0.5	<0.5	<0.5	<5
6/20/02	10.59	8.10	2.49	8021	SGC	1,100 a,c	6,200	<50	120	34	<0.5	<0.5	<0.5	<2
9/17/02	10.59	7.66	2.93	8021	SGC	150 a,c	880	<50	130 a,c,j	32	<0.5	2.3	<0.5	<2
4/22/03	10.59	6.81	3.78	8021B	SGC	<50	<300	<50	51	1.0 C	<.50	1.2	<.50	<2
4/28/04	**10.59**	**6.70**	**3.89**	**8260B**	**SGC**	**<100**	**<400**	**<100**	**114**	**14**	**<1.0**	**6.9**	**5.2**	**3.5**
MW-11														
1/18/00	11.60	7.08	4.52	---		---	---	---	—	—	—	---	---	—
1/19/00	---	---	---	8020	SGC	<50	500	<50	220	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	11.60	5.95	5.65	8020	SGC	<50	430	<50	600	23	2.1	18	15	<5.0
8/24/00	11.60	6.58	5.02	8020		<50	<250	<50	110	5.9	<0.5	0.73	0.64	<5.0
11/28/00	11.60	6.91	4.69	8020	SGC	<50	<200	<50	180	4	<0.5	1.9	<0.5	<5.0
2/27/01	11.60	5.65	5.95	8020	Filtered+SGC	86	<240	<60	720	29	5.2	38	36	<5.0
5/17/01	11.60	6.85	4.75	8020	Filtered+SGC	<50	<200	<50	720	36	3.4	15	18	9.7
8/16/01	11.60	6.01	5.59		Filtered+SGC	<50	B500	<100	110	4.8	<0.5	1.4	<0.5	<5
12/15/01	11.60	6.26	5.34	8021	SGC	200	300	<50	170	1.7	0.6	2.4	1.8	<2
4/5/02	11.60	5.47	6.13	8021	SGC	160	<200	—	330	8.9	2.0	6.9	8.7	<5
6/21/02	11.60	6.17	5.43	8021	SGC	<50	<300	<50	280	16	1.8	8.7	9.6	3.6
9/12/02	11.60	6.60	5.00	8021	SGC	<50	<300	<50	93	<0.5	<0.5	1.1	<0.5	2.1
4/24/03	11.60	5.71	5.89	8021B	SGC	<50	<300	<50	320	21	2.1	12	6.13	8.9
4/28/04	**11.60**	**5.92**	**5.68**	**8260B**	**SGC**	**<100**	**<400**	**<100**	**360**	**18**	**<1.0**	**6.5**	**4.5**	**4**
MW-12														
1/18/00	10.43	8.11	2.32	---		---	---	—	—	—	—	---	---	—
1/19/00	---	---	---	8020	SGC	1,800 a	11,000	<50	200	<0.5	3.4	1.5	8.4	<5.0
5/11/00	10.43	6.78	3.65	8020	SGC	2,400 a	4,900	<100	370	<0.5	<0.5	<0.5	0.9	<5.0
8/24/00	10.43	7.56	2.87	---		—	---	---	---	—	—	—	---	---
8/25/00	---	---	---	8020	SGC	3,500	5,000	3,700	170	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	10.43	8.13	2.30	8020	SGC	2,100	14,000	<50	290	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	10.43	8.13	2.30	—	Filtered+SGC	50	<200	<50	---	---	---	—	—	---
2/27/01	10.43	6.00	4.43	8020	Filtered+SGC	320	<250	66	110	1.4	<0.5	<0.5	<0.5	<5.0
5/17/01	10.43	7.01	3.42	8020	Filtered+SGC	<50	<200	<50	220	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	10.43	8.47	1.96	8020	Filtered+SGC	200	B300	<100	160	<0.5	<0.5	<0.5	<0.5	<5

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OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
4/8/02	10.43	6.65	3.78	8021	SGC	500	500	—	180	<0.5	<0.5	0.7	<1.5	<5
6/21/02	10.43	7.10	3.33	8021	SGC	1,100 a,b,c	3,000 h	640	180	<0.5	<0.5	0.63	1.62	<2
9/17/02	10.43	7.75	2.68	8021	SGC	220 a,b,c	360	190	130	<0.5	<0.5	<0.5	<0.5	<2
4/22/03	10.43	6.60	3.83	8021B	SGC	140 L Y	<300	120	150	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	**10.43**	**6.60**	**3.83**	**8260B**	**SGC**	**<550**	**1,020**	**<100**	**<100**	**<0.5**	**<1.0**	**<1.0**	**<1.0**	**<1.0**
MW-13														
1/18/00	11.34	9.63	1.71	8020	SGC	8,800 a	120,000	<50	<50	<0.5	0.8	<0.5	<0.5	<5.0
5/11/00	11.34	10.12	1.22	8020	SGC	11,000 a	110,000	<500	70	1.6	5.4	1.2	7.6	<5.0
8/24/00	11.34	10.22	1.12	---		---	---	---	---	---	---	---	---	---
8/25/00	—	—	---	8020	SGC	3,100	13,000	1,200	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	11.34	10.50	0.84	8020	SGC	2,400	36,000	<1300	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	11.34	10.50	0.84	---	Filtered+SGC	280	1,100	<50	---	---	---	---	---	---
2/26/01	11.34	9.60	1.74	8020	Filtered+SGC	100	<260	<64	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	11.34	10.10	1.24	---		---	---	---	—	—	—	---	---	---
5/18/01	---	---	---	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	11.34	10.50	0.84		Filtered+SGC	<50	B300	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/16/01	11.34	9.43	1.91	8021	SGC	1,900	18,000	<250	<50	<0.5	<0.5	<0.5	<0.5	<5
4/8/02	11.34	10.24	1.10	8021	SGC	440	900	—	<50	<0.5	<0.5	<0.5	<0.5	<5
6/20/02	11.34	10.75	0.59	8021	SGC	270 a,c	1,500 h	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
9/18/02	11.34	10.60	0.74	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/22/03	11.34	10.46	0.88	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0
4/28/04	**11.31**	**10.22**	**1.09**	**8260B**	**SGC**	**<100**	**799**	**<100**	**<100**	**<0.5**	**<1.0**	**<1.0**	**<1.0**	**<1.0**
MW-14														
1/18/00	10.05	7.37	2.68	8020	SGC	1,700 a	22,000	<50	120	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	10.05	6.73	3.32	8020	SGC	360 a	4,300	<100	120	<0.5	<0.5	<0.5	0.5	<5.0
8/24/00	10.05	7.30	2.75	---		---	—	—	—	—	---	—	---	—
8/25/00	---	---	---	8020	SGC	1,000	3,100	460	90	6.3	<0.5	<0.5	<0.5	<5.0
11/28/00	10.05	7.40	2.65	8020	SGC	380	6,400	<250	140	7.4	<0.5	<0.5	<0.5	<5.0
11/28/00	10.05	7.40	2.65	---	Filtered+SGC	<50	<200	<50	—	—	—	---	---	---
2/26/01	10.05	6.20	3.85	8020	Filtered+SGC	150	<230	<58	73	2.3	<0.5	<0.5	<0.5	<5.0
5/17/01	10.05	7.74	2.31	—		—	---	---	---	---	---	—	—	---
5/18/01	—	—	—	8020	Filtered+SGC	120	<200	<50	100	11	<0.5	<0.5	<0.5	<5.0
8/16/01	10.05	7.85	2.20		Filtered+SGC	<50	<200	<100	60	<0.5	<0.5	<0.5	<0.5	<5
12/16/01	10.05	6.60	3.45	8021	SGC	1,110	3,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
4/9/02	10.05	6.58	3.47	8021	SGC	870	1,100	—	250	<0.5	<0.5	<0.5	<0.5	<5
6/20/02	10.05	7.52	2.53	8021	SGC	<50	310 h	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
9/18/02	10.05	7.55	2.50	8021	SGC	<50	<300	<50	<50	1.3	<0.5	0.80	<0.5	<2
4/22/03	10.05	6.71	3.34	8021B	SGC	<50	<300	<50	61	4.2	<0.5	1.0	<0.5	12.0
4/28/04	**10.05**	**6.81**	**3.24**	**8260B**	**SGC**	**<230**	**<400**	**<100**	**241**	**1.4**	**<1.0**	**<1.0**	**<1.0**	**<1.0**
MW-15														
1/18/00	12.36	10.56	1.80	8020	SGC	12,000 a	89,000	<50	110	3.8	2.1	1	4.6	<5.0
5/11/00	12.36	10.03	2.33	8020	SGC	120 a	590	<50	90	0.9	0.9	<0.5	3.3	<5.0
8/24/00	12.36	10.22	2.14	---		—	—	---	---	---	—	—	—	---
8/25/00	---	---	---	8020	SGC	1,900	8,600	1,000	<50	1.9	<0.5	<0.5	1.5	<5.0
11/28/00	12.36	10.30	2.06	8020	SGC	2,500	36,000	<1300	80	1.7	<0.5	<0.5	1.6	<5.0

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
11/28/00	12.36	10.30	2.06	---	Filtered+SGC	73	<200	<50	---	---	---	---	---	---
2/26/01	12.36	9.30	3.06	8020	Filtered+SGC	190	<240	<60	55	0.6	<0.5	<0.5	0.5	<5.0
5/17/01	12.36	10.09	2.27	---		---	---	---	---	---	---	---	---	---
5/18/01	---	---	---	8020	Filtered+SGC	210	<230	<57	66	1.5	<0.5	<0.5	2.1	<5.0
8/16/01	12.36	10.20	2.16		Filtered+SGC	<50	B500	<100	<50	<0.5	<0.5	<0.5	2.4	<5
12/16/01	12.36	9.80	2.56	8021	SGC	3,800	15,000	<250	<50	<0.5	<0.5	<0.5	2	<5
4/5/02	12.36	9.58	2.78	8021	SGC	1,000	1,400	---	<50	<0.5	<0.5	<0.5	2.3	<5
6/20/02	12.36	10.24	2.12	8021	SGC	670 a,c	2,700 h	95 c,i	<50	0.83	<0.5	<0.5	2.20	<2
9/18/02	12.36	9.89	2.47	8021	SGC	70 a,c	<300	<50	<50	<0.5	<0.5	1.5	1.71	<2
4/22/03	12.36	9.55	2.81	8021B	SGC	<50	<300	<50	<50	1 C	<.50	1.4	1.9	<2
4/28/04	**12.36**	**9.68**	**2.68**	**8260B**	**SGC**	**<250**	**567**	**<100**	**<100**	**<0.5**	**<1.0**	**<1.0**	**<1.0**	**2.8**
MW-16														
1/18/00	13.57	10.22	3.43	--	SPH: 0.1 ft.	---	---	---	---	---	---	---	---	---
5/11/00	13.57	13.31	0.27	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
8/24/00	13.57	8.91	4.66	---	SPH: N M	---	---	---	---	---	---	---	---	---
11/28/00	13.57	13.05	0.86	---	SPH: 0.42 ft.	---	---	---	---	---	---	---	---	---
2/26/01	13.57	13.10	0.79	---	SPH: 0.40 ft.	---	---	---	---	---	---	---	---	---
5/17/01	13.57	12.62G	---	---	SPH: N M	---	---	---	---	---	---	---	---	---
8/16/01	13.57	11.94G	---	---	SPH: N M	---	---	---	---	---	---	---	---	---
12/15/01	13.57	N M	---	---	SPH: N M	---	---	---	---	---	---	---	---	---
4/3/02	13.57	12.88	0.69	---		---	---	---	---	---	---	---	---	---
6/21/02	12.22	N M	---	---	SPH: N M	---	---	---	---	---	---	---	---	---
4/22/03					Well cap stuck									
4/28/04	**12.22**	**12.48**	**-0.26**	**8260B**	**SGC**	**<230**	**1030**	**<260**	**2000**	**150**	**<1.0**	**46**	**<1.0**	**<1.0**
MW-17														
1/18/00	9.86	5.35	4.51	8020	SGC	850 a	21,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	9.86	9.85	0.01	8020	SGC	150 a	2,900	<100	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/24/00	9.86	8.59	1.27	---		---	---	---	---	---	---	---	---	---
8/25/00	---	---	---	8020	SGC	190	610	71	<50	0.58	<0.5	<0.5	<0.5	<5.0
11/28/00	9.86	9.25	0.61	8020	SGC	<250	2,400	<250	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	9.86	9.25	0.61	---	Filtered+SGC	<50	<200	<50	---	---	---	---	---	---
2/26/01	9.86	9.40	0.46	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	9.86	8.32	1.54	---		---	---	---	---	---	---	---	---	---
5/18/01	---	---	---	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	9.86	10.35	-0.49		Filtered+SGC	<50	B400	<100	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/16/01	9.86	8.01	1.85	8021	SGC	940	1,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
4/9/02	9.86	9.76	0.10	8021	SGC	590	880	---	60	<0.5	<0.5	1.6	<0.5	<5.0
6/21/02	9.86	9.79	0.07	8021	SGC	99 a,c	650 h	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
9/18/02	9.86	8.25	1.61	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/23/03	9.86	9.75	0.11	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	**9.86**	**8.90**	**0.96**	**8260B**	**SGC**	**<100**	**<400**	**<100**	**<100**	**<0.5**	**<1.0**	**2.4**	**<1.0**	**<1.0**
MW-18														
4/24/03		6.49		8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	2.4	<0.5	<2
4/28/04					**Developed to monitor a utility trench, not sampled**									

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TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
TBW-1														
2/23/99	—	6.25	—	—	SPH: 0.10 ft.	—	—	—	—	—	—	—	—	—
5/27/99	—	5.29	—	—	SPH: 0.01 ft	—	—	—	—	—	—	—	—	—
8/24/99	—	6.99	—	—	SPH: 0.18 ft.	—	—	—	—	—	—	—	—	—
11/22/99	—	—	—	—	Inaccessible	—	—	—	—	—	—	—	—	—
1/18/00	—	—	—	—	Inaccessible	—	—	—	—	—	—	—	—	—
5/11/00	—	6.90	—	—	SPH: 0.10 ft.	—	—	—	—	—	—	—	—	—
8/24/00	—	7.12	—	—	SPH: N M	—	—	—	—	—	—	—	—	—
11/28/00	—	7.75	—	—	SPH: 0.36 ft.	—	—	—	—	—	—	—	—	—
2/27/01	—	9.06	—	—	SPH: 0.51 ft.	—	—	—	—	—	—	—	—	—
5/17/01	—	6.98	—	—	SPH: 0.28 ft.	—	—	—	—	—	—	—	—	—
8/16/01	—	6.62	—	—	SPH: 0.66 ft., f	1,100	B700	<100	17,000	2,100	75	730	850	<1
12/15/01	—	6.86	—	—	SPH 0.35 ft.	—	—	—	—	—	—	—	—	—
4/3/02	—	6.14	—	—	SPH: None	—	—	—	—	—	—	—	—	—
9/12/02	—	7.52	—	—	SPH: None	—	—	—	—	—	—	—	—	—
4/22/03	—	6.41	—	—	SPH: None	—	—	—	—	—	—	—	—	—
4/28/04	—	6.33	—	—	SPH: None	—	—	—	—	—	—	—	—	—
TBW-2														
6/21/02	—	8.28	—	—		—	—	—	—	—	—	—	—	—
4/22/03	—	6.70	—	—	SPH globules	—	—	—	—	—	—	—	—	—
4/28/04	—	6.61	—	—	SPH: None	—	—	—	—	—	—	—	—	—
TBW-3														
8/19/98	—	2.67	—	8020	SGC	810,000	—	—	920	3.2	<0.5	<0.5	0.77	<10
8/19/98	—	2.67	—	8260		—	—	—	—	—	—	—	—	<5.0
2/23/98	—	1.25	—	8020		3,800	3,000	<50	110	1.6	<0.5	<0.5	<0.5	<5.0
5/27/99	—	—	—	—	DTW: N M	—	—	—	—	—	—	—	—	—
8/24/99	—	3.25	—	—	SPH globules	—	—	—	—	—	—	—	—	—
11/22/99	—	3.68	—	—		—	—	—	—	—	—	—	—	—
1/18/00	9.92	3.73	6.19	—	SPH globules	—	—	—	—	—	—	—	—	—
5/11/00	9.92	2.07	7.85	—		—	—	—	—	—	—	—	—	—
8/24/00	9.92	2.82	7.10	—	SPH: sheen	44,000	13,000	34,000	570	4.7	<0.5	<0.5	<0.5	<5.0
11/28/00	—	—	—	—		—	—	—	—	—	—	—	—	—
2/27/01	9.92	1.29	8.63	8020	Filtered+SGC	560	<230	<57	120	1.5	<0.5	<0.5	<0.5	<5.0
5/17/01	9.92	2.47	7.45	—		—	—	—	—	—	—	—	—	—
8/16/01	9.92	1.81	8.11		Filtered+SGC	1,500	B400	<100	180	<0.5	<0.5	<0.5	<0.5	<1
12/15/01	—	2.52	—	—	SPH: 0.02 ft.	—	—	—	—	—	—	—	—	—
4/3/02	—	1.50	—	—	SPH: None	—	—	—	—	—	—	—	—	—
6/21/02	9.92	2.37	7.55	—	SPH: None	—	—	—	—	—	—	—	—	—
9/12/02	9.92	3.48	6.44	—	SPH: None	—	—	—	—	—	—	—	—	—
4/22/03	9.92	1.45	8.47	—	Sheen	—	—	—	—	—	—	—	—	—
4/28/04	**9.92**	2.26	**7.66**	—	SPH: None	—	—	—	—	—	—	—	—	—
TBW-4														
2/27/01	—	1.35	—	8020	Filtered+SGC	410	<230	<57	250	1.9	<0.5	<0.5	<0.5	<5.0
5/17/01	—	2.52	—	—		—	—	—	—	—	—	—	—	—
8/16/01	—	1.88	—	—	Filtered+SGC	2,600	B700	<100	390	<0.5	<0.5	<0.5	<0.5	<5

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Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
6/21/02	---	2.32	---	---		---	---	---	---	---	---	---	---	---
4/22/03	---	1.41	---	---	Sheen	---	---	---	---	---	---	---	---	---
4/28/04	---	**2.21**	---	---		---	---	---	---	---	---	---	---	---
TBW-5														
2/23/99	---	9.72	---	---	SPH: 1.45 ft.	---	---	---	---	---	---	---	---	---
5/27/99	---	7.03	---	---	SPH: 1.13 ft.	---	---	---	---	---	---	---	---	---
8/24/99	---	6.52	---	---	SPH: 1.33 ft.	---	---	---	---	---	---	---	---	---
11/22/99	---	8.31	---	---	SPH: 1.29 ft.	---	---	---	---	---	---	---	---	---
1/18/00	10.22	6.20	4.74	---	SPH: 0.90 ft.	---	---	---	---	---	---	---	---	---
5/11/00	10.22	9.41	1.05	---	SPH: 0.30 ft.	---	---	---	---	---	---	---	---	---
8/24/00	10.22	9.62	0.81	---	SPH: 0.26 ft.	---	---	---	---	---	---	---	---	---
11/28/00	10.22	10.25	0.34	---	SPH: 0.46 ft.	---	---	---	---	---	---	---	---	---
2/27/01	10.22	9.06	1.45	---	SPH: 0.36 ft.	---	---	---	---	---	---	---	---	---
5/17/01	10.22	8.75	1.47	---	SPH: 0.67 ft.	---	---	---	---	---	---	---	---	---
8/16/01	10.22	8.32	2.51	8020	SPH: 0.76 ft., f	550	B400	<100	30,000	2,900	100	1,500	5,100	<1
12/15/01	10.22	9.09	1.13	---	SPH: 0.36 ft.	---	---	---	---	---	---	---	---	---
4/3/02	Well has active remediation unit/recovery													
6/21/02	10.22	7.87	2.35	---	SPH: 0.03 ft.	---	---	---	---	---	---	---	---	---
9/12/01	10.22	7.26	2.97	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/22/03	10.22	6.22	4.00	---	SPH: 0.06 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.22**	**6.26**	**3.96**	---	**SPH: 0.21 ft.**	---	---	---	---	---	---	---	---	---
TBW-6														
2/23/99	---	2.09	---	8020		160	600	<50	60	<0.5	<0.5	<0.5	<0.5	<5.0
5/27/99	---	3.31	---	---		---	---	---	---	---	---	---	---	---
8/24/99	---	7.29	---	8020	SGC	180	400	<50	130	<0.5	<0.5	<0.5	<0.5	<5.0
11/22/99	---	4.37	---	---		---	---	---	---	---	---	---	---	---
1/18/00	9.49	3.83	5.66	---		---	---	---	---	---	---	---	---	---
1/19/00	---	---	---	8020	SGC	55 C	<200	<50	170	0.6	<0.5	<0.5	<0.5	<5.0
5/11/00	9.49	2.51	6.98	---		---	---	---	---	---	---	---	---	---
8/24/00	9.49	4.34	5.15	---		---	---	---	---	---	---	---	---	---
8/25/00	---	---	---	8020	SGC	320	<250	200	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	9.49	4.74	4.75	---		---	---	---	---	---	---	---	---	---
2/27/01	9.49	2.30	7.19	8020	Filtered+SGC	<57	<230	<57	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	9.49	3.35	6.14	---		---	---	---	---	---	---	---	---	---
8/16/01	9.49	3.85	5.64		Filtered+SGC	<50	<200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/15/01	9.49	3.96	5.53	---		---	---	---	---	---	---	---	---	---
4/3/02	9.49	2.51	6.98	---		---	---	---	---	---	---	---	---	---
6/21/02	9.49	3.58	5.91	---		---	---	---	---	---	---	---	---	---
9/12/02	9.49	6.07	4.56	---	SPH: 1.42 ft.	---	---	---	---	---	---	---	---	---
4/23/03	9.49	2.42	7.07	---		---	---	---	---	---	---	---	---	---
4/28/04	**9.49**	**3.21**	**6.28**	---		---	---	---	---	---	---	---	---	---
RW-A1														
4/22/03		1.81				---	---	---	---	---	---	---	---	---
4/28/04	**10.09**	**2.52**	**7.57**	---		---	---	---	---	---	---	---	---	---

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MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
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Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-A2														
4/22/03		1.22			Sheen	---	---	---	---	---	---	---	---	---
4/28/04	**9.67**	**2.01**	**7.66**	**---**		---	---	---	---	---	---	---	---	---
OB-A1														
4/22/03		2.24			SPH: .01 ft.	---	---	---	---	---	---	---	---	---
4/28/04		**3.01**		**---**	**SPH: None**	---	---	---	---	---	---	---	---	---
RW-B1														
4/22/03		7.26			Sheen	---	---	---	---	---	---	---	---	---
4/28/04	**11.22**	**7.20**	**4.02**	**---**		---	---	---	---	---	---	---	---	---
RW-B2														
4/22/03		7.29			Sheen, Odor	---	---	---	---	---	---	---	---	---
4/28/04	**11.23**	**7.20**	**4.03**	**---**		---	---	---	---	---	---	---	---	---
RW-B3														
4/22/03		9.90			visible Product	---	---	---	---	---	---	---	---	---
4/28/04	**11.14**	**13.20**	**-2.06**	**---**	**SPH: 3.09**	---	---	---	---	---	---	---	---	---
RW-B4														
4/22/03		10.55			SPH: .55 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**11.29**	**10.22**	**1.07**	**---**	**SPH: None**	---	---	---	---	---	---	---	---	---
RW-C1														
4/24/03		8.34				---	---	---	---	---	---	---	---	---
4/28/04	**10.44**	**8.00**	**2.44**	**---**		---	---	---	---	---	---	---	---	---
RW-C2														
4/24/03		6.22			SPH: .03 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.58**	**6.19**	**4.39**	**---**	**SPH: 0.06 ft**	---	---	---	---	---	---	---	---	---
RW-C3														
4/24/03		6.36				---	---	---	---	---	---	---	---	---
4/28/04	**10.71**	**6.25**	**4.46**	**---**		---	---	---	---	---	---	---	---	---
RW-C4														
4/22/03		7.15			Strong odor	---	---	---	---	---	---	---	---	---
4/28/04	**11.32**	**6.95**	**4.37**	**---**	**SPH: 0.01 ft**	---	---	---	---	---	---	---	---	---
RW-C5														
4/22/03		6.46				---	---	---	---	---	---	---	---	---
4/28/04	**10.79**	**6.39**	**4.40**	**---**		---	---	---	---	---	---	---	---	---
RW-C6														
4/22/03		6.05			SPH: 0.07 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.31**	**6.30**	**4.01**	**---**	**SPH: 0.05 ft.**	---	---	---	---	---	---	---	---	---

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-C7														
4/22/03		6.51			visible Product	---	---	---	---	---	---	---	---	---
4/28/04	**10.12**	**6.60**	**3.52**		**SPH: 0.02 ft.**	---	---	---	---	---	---	---	---	---
OB-C1														
4/22/03		6.26				---	---	---	---	---	---	---	---	---
4/28/04	**10.39**	**7.39**	**3.00**		**SPH: 1.27 ft.**	---	---	---	---	---	---	---	---	---
RW-D1														
4/22/03		6.97				---	---	---	---	---	---	---	---	---
4/28/04	**10.18**	**5.62**	**4.56**	---		---	---	---	---	---	---	---	---	---
RW-D2														
4/22/03		7.15			SPH 1.25 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.33**	**7.45**	**2.88**		**SPH: 0.1 ft.**	---	---	---	---	---	---	---	---	---
RW-D3														
4/22/03		6.89			SPH: 1.58 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.07**	**8.18**	**1.89**		**SPH: 3.25 ft.**	---	---	---	---	---	---	---	---	---
RW-D4														
4/22/03		8.11			SPH: 1.98 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**10.22**	**7.99**	**2.23**		**SPH: 2.09 ft.**	---	---	---	---	---	---	---	---	---
RW-D5														
4/22/03		6.04			SPH: 0.07 ft.	---	---	---	---	---	---	---	---	---
4/28/04	**9.99**	**5.96**	**4.03**		**SPH: None**	---	---	---	---	---	---	---	---	---
OB-D1														
4/22/03		5.41			Strong Odor	---	---	---	---	---	---	---	---	---
4/28/04	**9.46**	**5.31**	**4.15**		**Strong Odor**	---	---	---	---	---	---	---	---	---
OB-D2														
4/22/03		5.14				---	---	---	---	---	---	---	---	---
4/28/04	**9.95**	**5.25**	**4.70**	---		---	---	---	---	---	---	---	---	---
RW-1														
4/22/03		6.43				---	---	---	---	---	---	---	---	---
4/28/04		**5.73**		---		---	---	---	---	---	---	---	---	---
Trip Blank														
8/19/98	---	---	---	8020		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/22/99	---	---	---	8020		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA PETROLEUM HYDROCARBONS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D./Date	TOC Elevation (in feet)	Depth To Groundwater (in feet)	Groundwater Elevation (in feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
11/28/00	—	—	—	8020		—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/27/01	—	—	—	8020	Filtered+SGC	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	—	—	—	8020	SGC	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/16/01	—	—	—	8021		—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
4/5/02	—	—	—	8021	Trip Blank 1	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5
4/5/02	—	—	—	8021	Trip Blank 2	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5
6/21/02	—	—	—	8021	Trip Blank 1	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5
9/12/02	—	—	—	8021	Trip Blank 1	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<2
9/13/02	—	—	—	8021	Trip Blank 2	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<2
4/23/03	—	—	—	8021B	Trip Blank 1	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	—	—	—	8260B	Trip Blank 1	—	—	—	<100	<0.5	<1.0	<1.0	<1.0	<1.0

Notes

All concentrations in micrograms per liter (µg/l)

Groundwater elevations corrected for the presence of free product according to the calculation: GW Elevation = TOC - DTW + (0.8 x SPH thickness)

--- = not measured/analyzed

BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020, or 8240/8260.

DTW = Depth to water

DUP = Duplicate sample

elev. = Elevation

Filtered = Groundwater samples were filtered through a 0.45 micron glass membrane filter

GW = Groundwater

ID = Identification

MTBE = Methyl tertiary butyl ether by EPA Method 8020 or 8260. Confirmation 8260 results shown in parantheses.

NM = Not measured

SPH = Separate-phase hydrocarbons; measured thickness

SGC = Silica gel cleanup based on Method 3630B prior to TPH-d, TPH-k, or TPH-mo analysis, following CRWQCB February 16, 1999 memorandum

TBW = Tank backfill well

TOC = Top of casing

TPHd = Total petroleum hydrocarbons quantitated as diesel - analyzed by EPA Method 8015B

TPHg = Total petroleum hydrocarbons quantitated as gasoline - analyzed by EPA Method 8015B

TPHk = Total petroleum hydrocarbons quantitated as kerosene - analyzed by EPA Method 8015B

TPHmo = Total petroleum hydrocarbons quantitated as motor oil - analyzed by EPA Method 8015B

a = The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the diesel range actually resemble heavier fuels at the front end of the motor oil pattern

b= The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the diesel range actually resemble lighter fuels; the response looks like lower carbon chain compounds close to the gasoline range

c= The analytical laboratory reviewed the data and noted that the sample exhibits a fuel pattern which does not resemble the standard

e= Results are estimated due to concentrations exceeding the calibration range

f= Filtration with 0.45 micron glass membrane filter and silica gel treatment

g= Depth to product, depth to water could not be determined

h= The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the motor oil range are actually from the front end of the kerosene oil pattern.

i= The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the motor oil range are actually from the back end of the kerosene oil pattern.

j= The analytical laboratory reviewed the data and noted that the sample exhibited an unknown peak or peaks.

J= Value qualified as "estimated"

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

B= Results flagged with "B" indicate motor oil was detected in the method blank

Z= Sample exhibits unknown single peak or peaks

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA VOCs
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D. Date	Benzene (µg/l)	n-Butyl-benzene (µg/l)	sec-Butyl-benzene (µg/l)	tert-Butyl benzene (µg/l)	Chloro-ethane (µg/l)	Chloro-form (µg/l)	Methyl Chloride (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	1,2-DCP (µg/l)	Ethyl-benzene (µg/l)	Isopropyl-benzene (µg/l)	p-Isopropyl-toluene (µg/l)	MTBE (µg/l)	Napthalene (µg/l)	n-Propyl-benzene (µg/l)	Toluene (µg/l)	1,2,4-TMB (µg/l)	1,3,5-TMB (µg/l)	Xylenes (µg/l)
MW-5																				
2/27/01	180	9	4	ND	3	ND	ND	7	ND	3	260	23	6	1,100	43	68	7	1	11	53
MW-6																				
2/27/01	270	11	3	ND	<1	ND	ND	7	ND	<1	9	6.0	1.0	19.0	62	21	3	1	<1	3
8/20/01	E280	14	<1	<1	<1	3	2	<1	<1	<1	11	4.0	<1	14.0	E82	14	4	<1	<1	9
TBW-1																				
8/20/01	E530	30	<1	54	<1	4	10	<1	2	<1	E540	36	54	<1	E300	E120	79	E430	<1	E790
TBW-3																				
8/20/01	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	6	<1	<1	<1	5	<1	<1	<1	<1	3
TBW-5																				
8/20/01	E620	<1	<1	E160	<1	3	<1	<1	<1	<1	E730	40	E160	<1	E450	E140	E110	<1	<1	E3100

Notes
All concentrations in micrograms per liter (µg/l)
E = estimated concentration
µg/l = micrograms per liter
MTBE = methyl tertiary-butyl ether
VOCs = Volatile organic compounds by EPA Method 8260. Sample not subject to SCG or filtration prior to analysis.
1,2-DCA = 1,2-dichloroethane
1,2-DCP = 1,2-dichloropropane
1,2,4-TMB = 1,2,4-trimethylbenzene
1,3,5-TMB = 1,3,5-trimethylbenzene

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL DATA SVOCs
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D. Date	Napthalene (µg/l)	Pyrene (µg/l)	Other SVOCs (µg/l)
MW-6			
2/27/01	19	ND	ND
8/20/01	52	<5	39
MW-9			
11/28/00	ND	ND	ND
MW-13			
11/28/00	ND	10	ND
MW-17			
11/28/00	ND	ND	ND
TBW-1			
8/20/01	140	8	387
TBW-3			
8/20/01	<5	<5	5
TBW-5			
8/20/01	220	<5	73

Notes
All concentrations in micrograms per liter (µg/l)
SVOCs = Semi-volatile organic compounds by EPA Method 8270
Samples not subject to SCG or filtration prior to analysis.

TABLE 4
SUMMARY OF GROUNDWATER ANALYTICAL DATA LUFT METALS
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

Well I.D. Date	Cadmium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Nickel (mg/l)	Zinc (mg/l)	Notes
MW-2						
8/19/98	---	---	<100	---	---	a
MW-6						
2/28/01	<0.001	0.035	0.23	0.046	0.19	non-filtered
8/16/01	<0.001	0.020	0.12	0.032	0.11	
TBW-1						
8/16/01	<0.001	0.017	0.042	0.034	0.10	0.1
TBW-3						
8/16/01	<0.001	0.008	0.01	0.019	<0.02	
TBW-5						
8/16/01	<0.001	<0.005	0.01	0.008	0.03	

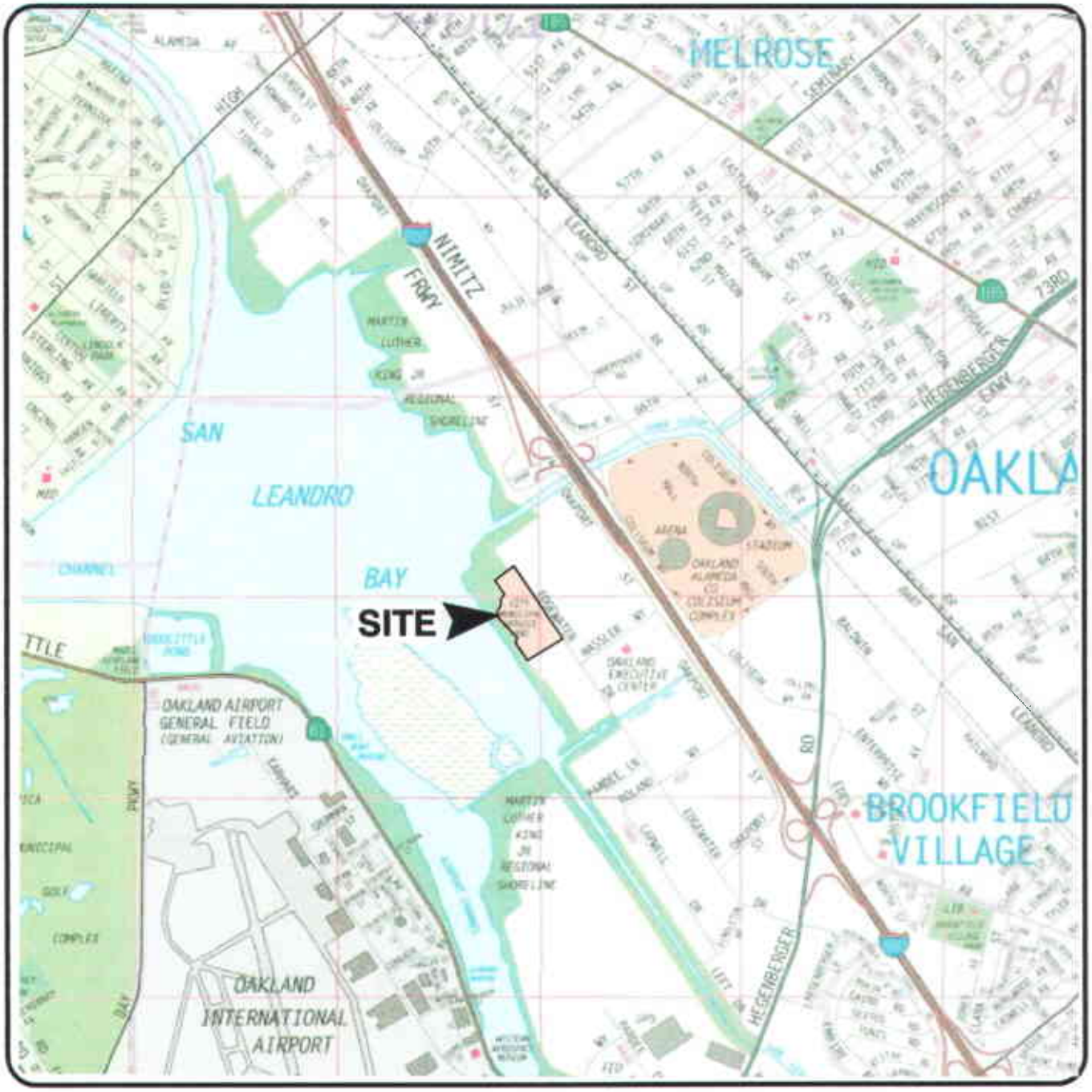
Notes

LUFT metals by EPA Method 6010. Samples filtered in lab prior to analysis, unless noted otherwise.

mg/l = milligrams per liter

— = not measured/analyzed

a = Analyzed for organic lead



REFERENCE: 2002 THOMAS GUIDE FOR ALAMEDA AND CONTRA COSTA COUNTIES, STREET GUIDE AND DIRECTORY.

NORTH

0 2400 4800

APPROXIMATE SCALE IN FEET

400834-A1.DWG

Ninyo & Moore

SITE LOCATION MAP

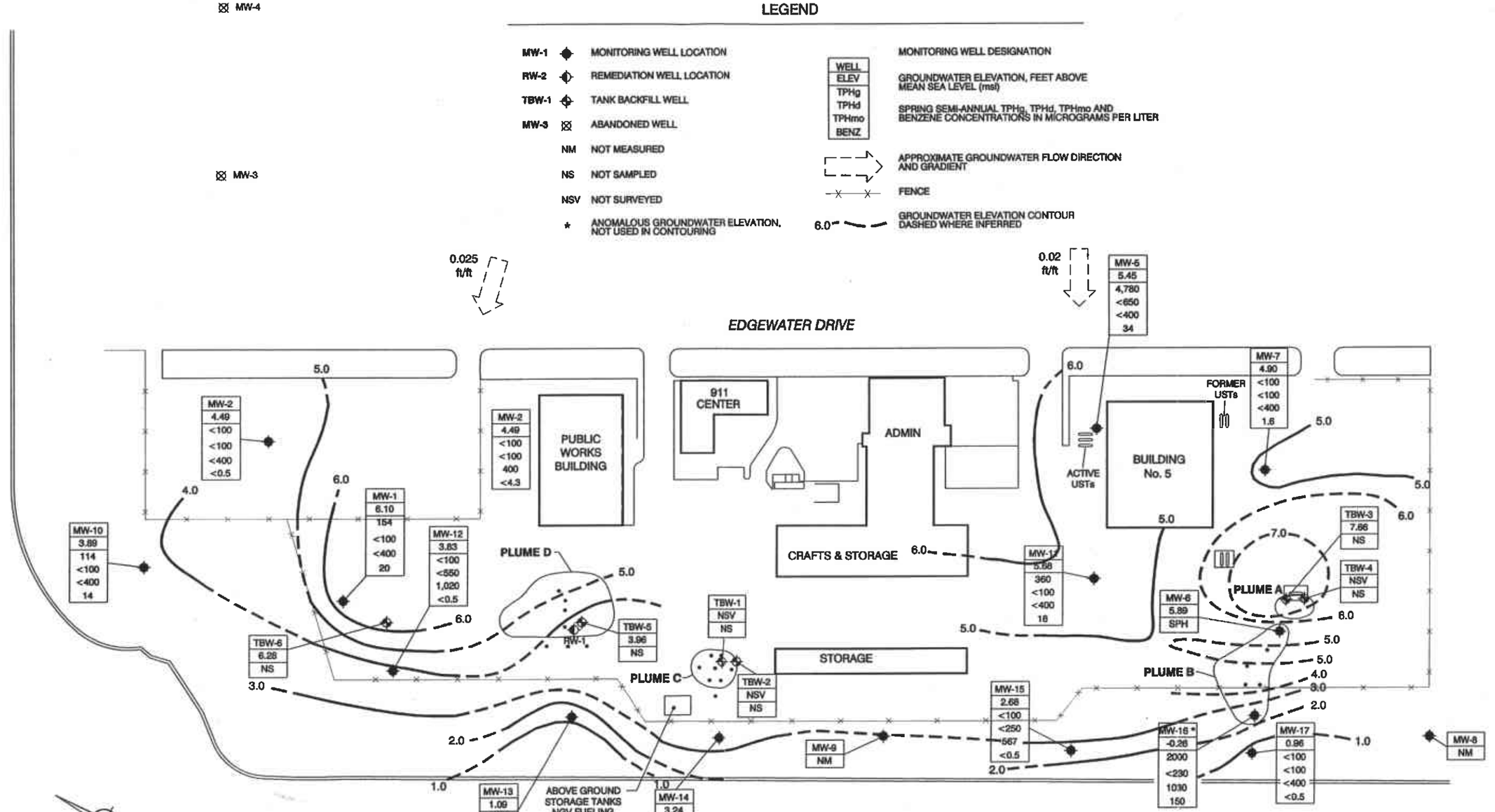
MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	FIGURE
400834010	7/2004	1

LEGEND

MW-1	MONITORING WELL LOCATION
RW-2	REMEDIATION WELL LOCATION
TBW-1	TANK BACKFILL WELL
MW-3	ABANDONED WELL
NM	NOT MEASURED
NS	NOT SAMPLED
NSV	NOT SURVEYED
*	ANOMALOUS GROUNDWATER ELEVATION, NOT USED IN CONTOURING

WELL	MONITORING WELL DESIGNATION
ELEV	GROUNDWATER ELEVATION, FEET ABOVE MEAN SEA LEVEL (msl)
TPHg TPHd TPHmo BENZ	SPRING SEMI-ANNUAL TPHg, TPHd, TPHmo AND BENZENE CONCENTRATIONS IN MICROGRAMS PER LITER
	APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT
	FENCE
6.0	GROUNDWATER ELEVATION CONTOUR DASHED WHERE INFERRED



REFERENCE: URIBE & ASSOCIATES, APRIL 2003, 2nd QUARTER 2003 MONITORING REPORT.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

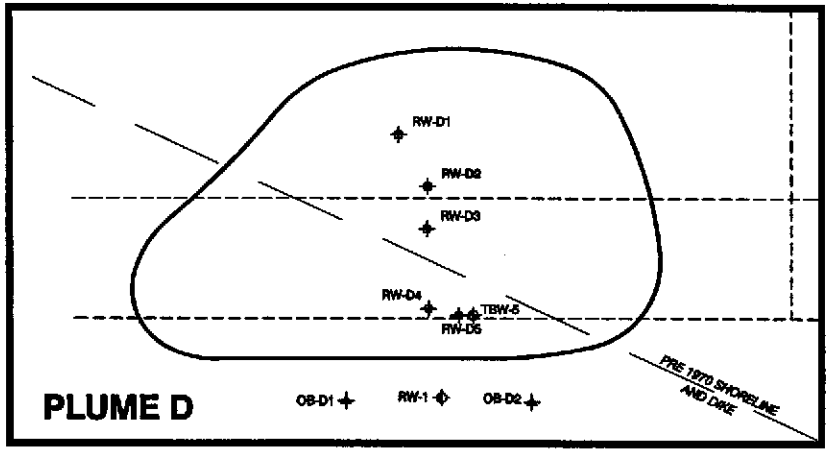
400834-B2.DWG

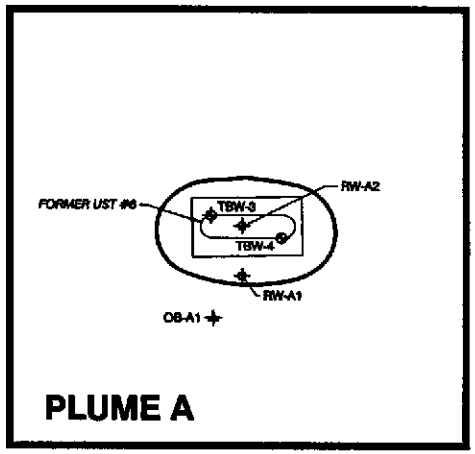
Ninyo & Moore

SITE PLAN

MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	FIGURE
400834010	7/2004	2

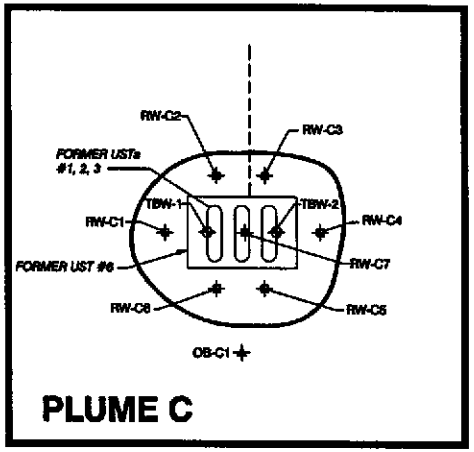


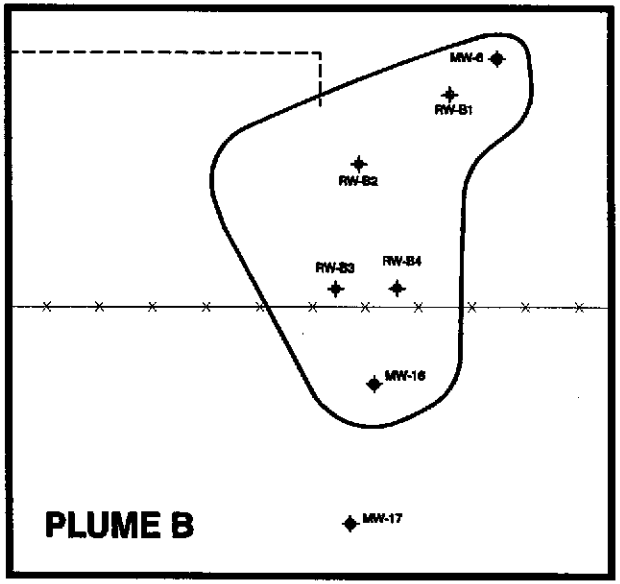


EXPLANATION

- RW-A1 — TEST/OBSERVATION WELL LOCATION
- OB-A1 — OBSERVATION WELL LOCATION
- MW-A1 — MONITORING WELL LOCATION
- RW-1 — REMEDIATION WELL LOCATION
- TBW-1 — TANK BACKFILL WELL
- FENCE
- FORMER UNDERGROUND PIPING
- AREA OF FREE PRODUCT ON GROUNDWATER

REFERENCE: URIBE & ASSOCIATES, APRIL 2004, 1st QUARTER 2004 MONITORING REPORT.





0 60 120

APPROXIMATE SCALE IN FEET

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

DETAIL PLUME MAP

MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	FIGURE
400834010	7/2004	3

400834-A3.DWG

APPENDIX A

CITY OF OAKLAND MSC SCHEDULE AND PROTOCOL

Table A: Revised Well Sampling Schedule and Protocol

City of Oakland Municipal Service Center

Well ID	Monitoring Schedule		Parameters to Be Monitored							
	March	September	Elevation	Floating Product Thickness	PH	Dissolved Oxygen	Temperature	Specific Conductivity	TPH-gas BTEX & MTBE	TPH d/k/mo
MW-1	X	X	X	X	X	X	X	X	X	X
MW-2	X	gauge only	X	X	X	X	X	X	X	X
MW-3	Closed/ Destroyed									
MW-4	Closed/ Destroyed									
MW-5	X	X	X	X	X	X	X	X	X	X
MW-6	X	X	X	X	X	X	X	X	X	X
MW-7	X	gauge only	X	X	X	X	X	X	X	X
MW-8	X	X	X	X	X	X	X	X	X	X
MW-9	X	X	X	X	X	X	X	X	X	X
MW-10	X	X	X	X	X	X	X	X	X	X
MW-11	X	gauge only	X	X	X	X	X	X	X	X
MW-12	X	X	X	X	X	X	X	X	X	X
MW-13	X	X	X	X	X	X	X	X	X	X
MW-14	X	X	X	X	X	X	X	X	X	X
MW-15	X	X	X	X	X	X	X	X	X	X
MW-16	X	X	X	X	X	X	X	X	X	X
MW-17	X	X	X	X	X	X	X	X	X	X
MW-18	gauge only	gauge only	X	X						
TBW-1	gauge only	gauge only	X	X						
TBW-2	gauge only	gauge only	X	X						
TBW-3	gauge only	gauge only	X	X						
TBW-4	gauge only	gauge only	X	X						
TBW-5	gauge only	gauge only	X	X						
TBW-6	gauge only	gauge only	X	X						
RW-1	gauge only	gauge only	X	X						
RW-A1	gauge only	gauge only	X	X						
RW-A2	gauge only	gauge only	X	X						
OB-A1	gauge only	gauge only	X	X						
RW-B1	gauge only	gauge only	X	X						
RW-B2	gauge only	gauge only	X	X						
RW-B3	gauge only	gauge only	X	X						
RW-B4	gauge only	gauge only	X	X						
RW-C1	gauge only	gauge only	X	X						
RW-C2	gauge only	gauge only	X	X						
RW-C3	gauge only	gauge only	X	X						
RW-C4	gauge only	gauge only	X	X						
RW-C5	gauge only	gauge only	X	X						
RW-C6	gauge only	gauge only	X	X						
RW-C7	gauge only	gauge only	X	X						
OB-C1	gauge only	gauge only	X	X						
RW-D1	gauge only	gauge only	X	X						
RW-D2	gauge only	gauge only	X	X						
RW-D3	gauge only	gauge only	X	X						
RW-D4	gauge only	gauge only	X	X						
RW-D5	gauge only	gauge only	X	X						
OB-D1	gauge only	gauge only	X	X						
OB-D2	gauge only	gauge only	X	X						

Notes:

gauge only = measure groundwater elevation and floating product thickness only

TPH d/k/mo = total petroleum hydrocarbons as diesel, kerosene, and motor oil after silica gel cleanup

APPENDIX B

GROUNDWATER SAMPLING FIELD DATA SHEETS

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/29/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY

Monitoring Well ID: MW-1 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 15.48 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 3.95 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 11.53 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.8448 x 3 = ≈5.5 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F) °C	pH	COND. (µS/cm)	DO	COMMENTS (color, turbidity, odor, sheen, etc.):
10:06	0		20.7	6.85	1.51	59.0	light brown slightly cloudy water, no sheen
10:10	1.4		19.8	6.63	18.08	58.2	brown, very cloudy; water no sheen slight to
10:13	2.8		19.6	6.79	11.51	58.3	" "
10:16	4.2		20.3	6.54	15.35	45.5	" "
10:18	5.5		22	6.72	~~19.27~~	34.2	" "

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 10:25

Sample ID: MW-1

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY

Monitoring Well ID: MW-2 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 15.43 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 5.99 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 9.44 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.5104 x 3 = ≈ 4.5 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°C)	pH	COND. (µS/cm)	DO COMMENTS (color, turbidity, odor, sheen, etc.):
9:24	0		19.5	5.82	199.9	126.4 DO Clear, slight odor no sheen
9:28	1		18.6	6.01	199.9	55.3 Clear, no sheen slight odor
9:31	2		18.6	6.36	199.9	59.3 Clear, no sheen, slight odor
9:32	3		17.8	6.65	199.9	47.5 "
	4.5		18.3	6.50	199.9	58.1 "

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 9:45

Sample ID: MW-2

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY

Monitoring Well ID: MW-5 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 14.18 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 5.7 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 8.48 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.3568 x 3 = ≈ 4 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. C (°F)	pH	COND. (µS/cm)	D.O	COMMENTS (color, turbidity, odor, sheen, etc.):
12:13	0		19.7	6.15	199.9	55.7	Clear, slight odor no sheen
12:16	1		19.3	7.83	3.8	56	"
12:17	2		18.9	7.22	2.22	55.3	gray cloudy Odor No sheen
12:18	3		18.9	7.30	1,792	56.2	"
12:19	4		18.7	7.15	1,707	58.3	"

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 12:25

Sample ID: MW-5

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28 Sampler: *DMS*

Project No.: *400834010* Weather:

Monitoring Well ID: MW-7 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 14.08 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 6.61 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 7.47 x (2" = 0.16, 4" = 0.65, 6" = 1.47) gal/ft = 1.1952 x 3 = ≈ 3.6 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	DO	COMMENTS (color, turbidity, odor, sheen, etc.):
11:53	0		21.5	6.92	[illegible] 4.88	55.5	LIGHT BROWNISH/YELLOW CLOUDY NO ODOR
11:54	0.9		19.2	6.74	3.79	56.5	"
11:55	1.8		19.0	6.71	3.90	53.9	"
11:56	2.7		19.6	6.61	3.81	42.1	"
11:58	3.6		19.7	6.70	3.84	60.0	"

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time:

Sample ID: MW-7

Replicate ID (if appl.): *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY, WINDY

Monitoring Well ID: MW-10 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 14.24 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 6.70 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 7.54 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.2064 x 3 = ≈ 3.6 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	D.O.	COMMENTS (color, turbidity, odor, sheen, etc.):
2:55	0		19.7	7.52	4.58	6.7	DARK GREY, TURBID, MILD ODOR
2:56	0.9		17.9	7.52	3.86	59.9	
2:57	1.8		17.6	7.32	4.0	61.6	SLIGHTLY TURBID, CLOUDY, MILD ODOR
2:57	2.7		17.3	7.44	4.24	64.7	SLIGHTLY CLOUDY MILD ODOR
2:58	3.6		17.4	7.40	4.33	69.5	"
							NO SHEEN

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 3:05

Sample ID: MW-10

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY

Monitoring Well ID: MW-11 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 19.07 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 5.92 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 13.15 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 2.104 x 3 = ≈ 6.3 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. C (°F)	pH	COND. (µS/cm)	D.O	COMMENTS (color, turbidity, odor, sheen, etc.):
11:22	0		19.1	6.58	9.93	28.3	CLEAR, SLIGHT ODOR, NO SHEEN
11:24	1.5		18.3	6.61	8.76	57.1	SLIGHT CLOUDY/TURBID, SLI. ODOR, NO SHEEN
11:25	3.0		18.1	7.24	8.94	59.5	" "
11:27	4.5		18.5	6.6	8.72	56.9	SLIGHTLY CLOUDY, SLI. ODOR NO SHEEN
11:29	6.3		18.5	6.6	8.93	58.9	" " "

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 11:35

Sample ID: MW-11

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY

Monitoring Well ID: MW-12 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 14.28 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 6.60 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 7.68 x (2" = 0.16, 4" = 0.65, 6" = 1.47) gal/ft = 1.2288 x 3 = ≈ 3.7 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	DO	COMMENTS (color, turbidity, odor, sheen, etc.):
10:41	0		18.9	7.14	6.32	54.1	Gray, turbid NO SHEEN no odor
10:42	0.9		17.3	7.38	5.89	53.5	cloudy no odor no sheen
10:44	1.8		16.2	7.44	6.05	55.7	cloudy, no odor, no sheen
10:46	2.7		17.9	7.43	6.48	54.5	"
10	3.7		17.8	7.45	6.21	55.1	"

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 10:50

Sample ID: MW-12

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY / WINDY

Monitoring Well ID: MW-13 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 19.35 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 10.22 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 9.13 x (2" = 0.16, 4" = 0.65, 6" = 1.47) gal/ft = 1.4608 x 3 = ≈ 4.4 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	D.O	COMMENTS (color, turbidity, odor, sheen, etc.):
3:18	0		19.8	8.22	6.56	64.4	BROWNISH TURBID NO ODOR NO SHEEN
3:19	1		18.9	7.28	6.43	68.2	" "
3:20	2		19.0	7.28	6.88	50.1	" "
3:23	3		18.3	7.11	7.78	60.9	" "
3:25	4.4		18.6	7.31	8.06	46.7	" "

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 3:31

Sample ID: MW-13

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY & WINDY

Monitoring Well ID: MW-14 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 14.35 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 6.81 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 7.54 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.2064 x 3 = ≈ 3.6 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	COMMENTS (color, turbidity, odor, sheen, etc.):
3:50	0		20.1	7.48	10.57	55.5 GRAY MOD. ODOR NO SHEEN
3:52	0.9		18.5	7.53	10.26	60.8 "
3:52	1.8		18.3	7.48	10.75	68.7
3:52	2.7		18.1	7.52	10.89	67.3 LIGHT GRAY " "
3:53	3.6		18.1	7.50	10.86	66.4 SLIGHTLY CLOUDY "

D.O CLOUDY

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: MW-14

Sample ID: 3:59

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/04 Sampler: *DMS*

Project No.: *400834010* Weather: SUNNY & WINDY

Monitoring Well ID: MW-15 Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 19.91 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 9.68 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 10.23 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.6368 x 3 = ≈5 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	O.D.	COMMENTS (color, turbidity, odor, sheen, etc.):
4:16	0		19.3	6.74	8.91	65.8	CLEAR NO ODOR NO SHEEN
4:18	1.2		18.5	[illegible]	11.57	71.6	CLEAR MODERATE ODOR, NO SHEEN
4:19	2.4		18.2	7.18	11.01	67.4	" "
4:19	3.6		18.0	7.15	10.68	70.2	" "
4:20	5		18.3	7.13	10.41	72.2	" "

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 4:26

Sample ID: MW-15

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: _____ Sampler: *DMS*

Project No.: *400834010* Weather: _____

Monitoring Well ID: *MW-16* Vapor Monitoring Results (ppmv): *BZ=* *WH=*

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): *15.02* Floating Immiscible Layer Observed?: _____

Depth to Water (ft-TOC): *12.48* Floating Immiscible Layer Thickness (feet): _____

Water Column Height (feet): *2.54* x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = *0.4064* x 3 = *1.22* Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: _____ Calibration (date/time): _____

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. (°F)	pH	COND. (µS/cm)	DO	COMMENTS (color, turbidity, odor, sheen, etc.):
	0		19.7	8.24	13.47	54.1	DARK VERY TURBID VERY ODOR
	0.3		19.7	8.11	13.83	68.2	
	0.9		17.6	7.75	14.58	65.5	
	1.2		17.1	7.58	14.54	~~48.1~~ 51.3	

Total Volume Purged (gallon): _____ Time Finished Purging: _____

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: *5:50*

Sample ID: *MW-16*

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

Ninyo & Moore — GROUNDWATER SAMPLING FIELD DATA SHEET

Project Name: *2004 First Quarter Groundwater Monitoring*

Site: *Municipal Service Center* Date: 4/28/ Sampler: *DMS*

Project No.: *400834010* Weather: WINDY & SUNNY

Monitoring Well ID: MW-17 Vapor Monitoring Results (ppmv): BZ= WH=

Casing Diameter: ☒ 2" ☐ 4" ☐ 6" ☐ Other Casing Material: ☑ SCH 40-PVC ☐ Other: S. Steel

Total Depth (ft-TOC): 17.40 Floating Immiscible Layer Observed?:

Depth to Water (ft-TOC): 8.90 Floating Immiscible Layer Thickness (feet):

Water Column Height (feet): 8.5 x (2" = 0.16, 4"=0.65, 6" = 1.47) gal/ft = 1.36 x 3 = x 4.1 Min. Purge Volume (gallons)

Water Level Measurement Equip.: *Solinst Water Level Indicator* Cleaned: *yes*

Purging Method/Equipment: *Disp. PVC Weighted Bailer/ 2" Whale Pump* Cleaned: *yes*

Pump Lines/Bailer Ropes-New or Cleaned?: *New/Cleaned*

Temp./pH Meter: Calibration (date/time):

Conductivity Meter: *pH, Conductivity, Temperature Meter* Calibration (date/time): *Factory calibrated*

Comments: *Serial No. 137757 (Env. Instruments)*

pH STND.	FIELD pH	FIELD TEMP. (°F)
4.0		
7.0		

TIME	Purge Vol.(Gal)	Totalizer Reading (Gal)	TEMP. °C (°F)	pH	COND. (µS/cm)	D.O	COMMENTS (color, turbidity, odor, sheen, etc.):
4:44	0		18.8	6.72	— ETC	65.3	GREY NO ODOR NO SHEEN
4:44	1		17.8	6.93	12.71	71.2	" "
4:45	2		17.5	7.36	10.82	71.1	CLEAR, SLIGHT ODOR NO SHEEN
4:46	3		17.5	7.36	—	61.5	" "
4:47	4.1		17.6	7.38	—	67.9	" "

Total Volume Purged (gallon): Time Finished Purging:

Sampling Method/Equipment: *Disposable PVC Bailer*

Bailer Rope-New or Cleaned?: *New*

Sample Time: 4:55

Sample ID: MW-17

Replicate ID (if appl.) *None*

Laboratory: *Torrent Laboratory*
483 Sinclair Frontage Road
Milpitas, CA 95035

Comments: *Lab: 408.263.5258*
Fax: 408.263.8293

PARAMETER	USEPA METHOD	CONTAINERS/VOLUME/ TYPE (Voa/Glass/Plastic)	PRES.
TPH-g	*8015M*	*2 x 40mL VOA*	*4 °C, HCl*
TPH-d	*8015M*	*1 x 1L Amber Glass*	*4 °C*
BTEX	*8021*	*2 x 40mL VOA*	*4 °C, HCl*

APPENDIX C

LABORATORY RESULTS AND CHAIN-OF-CUSTODY DOCUMENTATION

TORRENT LABORATORY, INC.

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www.torrentlab.com

May 27, 2004

Jon Hoffman
Ninyo & Moore
1956 Webster Street, Suite 400
Oakland, CA 94612

TEL: 510-633-5640
FAX 510-633-5647

RE:

Order No.: 0404116

Dear Jon Hoffman:

Torrent Laboratory, Inc. received 14 samples on 4/29/2004 for the analyses presented in the following report.

Revision: 1 Case Narrative added to this report.

All data for associated QC met EPA or Laboratory specification except where noted in the case narative.

Torrent laboratory Inc. is certified by the State of California, ELAP #1991. If you have any question regarding these tests results, please feel free to contact Environmental Coordinator, Ms. Anu Patel at (408)263-5258;ext: 204.

Sincerely,

Laboratory Director

05/28/04
Date

TORRENT LABORATORY, INC.

483 Sinclair Frontage Rd. • Milpitas, CA 95035 • Ph: (408) 263-5258 • Fax: (408) 263-8293

www.torrentlab.com

Torrent Laboratory, Inc. **Date:** *27-May-04*

CLIENT: Ninyo & Moore
Project:
Lab Order: 0404116

CASE NARRATIVE

Revision:1 Benzene reporting limit lowered as per client's request.

TORRENT LABORATORY, INC.

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Certified Analytical Report of
Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-16
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 5:50:00 PM

Lab Sample ID: 0404116-001A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/6/2004	0.23	1	0.230	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	10.5	1.05	2.00	mg/L
TPH (Kerosene)	SW8015B	5/6/2004	0.26	1	0.260	ND	mg/L
TPH (Oil)	SW8015B	5/6/2004	0.4	1	0.400	1.03	mg/L
Surr: Pentacosane	SW8015B	5/6/2004	0	1	40-150	105	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	10.5	65-135	95.0	%REC

Note: Silica gel clean up employed; reporting limits of diesel and kerosene increased due to presence of unknown hydrocarbons.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

TORRENT LABORATORY, INC.

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Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-16
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 5:50:00 PM

Lab Sample ID: 0404116-001A
Date Prepared: 5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/11/2004	0.5	10.5	5.2	150	µg/L
Ethylbenzene	SW8260B	5/11/2004	1	10.5	10	46	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/11/2004	1	10.5	10	ND	µg/L
Toluene	SW8260B	5/11/2004	1	10.5	10	ND	µg/L
Xylenes, Total	SW8260B	5/11/2004	1	10.5	10	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/11/2004	0	10.5	75-125	82.1	%REC
Surr: Dibromofluoromethane	SW8260B	5/11/2004	0	10.5	75-125	106	%REC
Surr: Toluene-d8	SW8260B	5/11/2004	0	10.5	75-125	96.2	%REC

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-17
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 4:55:00 PM

Lab Sample ID: 0404116-002A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/10/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/6/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/6/2004	0	1	40-150	91.0	%REC
Surr: Trifluorotoluene	SW8015B	5/10/2004	0	1	65-135	95.3	%REC

Note: Silica gel clean up employed.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-17
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 4:55:00 PM

Lab Sample ID: 0404116-002A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	0.90	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	2.4	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	87.6	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	99.9	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	105	%REC

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: EB-1
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 6:15:00 PM

Lab Sample ID: 0404116-003A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/10/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/6/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/6/2004	0	1	40-150	93.0	%REC
Surr: Trifluorotoluene	SW8015B	5/10/2004	0	1	65-135	96.6	%REC

Note: Silica gel clean up employed.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: EB-1
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 6:15:00 PM

Lab Sample ID: 0404116-003A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	ND	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	88.4	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	97.9	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	104	%REC

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: TB-1
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 6:20:00 PM

Lab Sample ID: 0404116-004A
Date Prepared: 5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline)	SW8015B	5/10/2004	0.1	1	0.100	ND	mg/L
Surr: Trifluorotoluene	SW8015B	5/10/2004	0	1	65-135	88.2	%REC

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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: TB-1
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 6:20:00 PM

Lab Sample ID: 0404116-004A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	ND	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	84.9	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	94.9	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	99.7	%REC

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-1
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 10:25:00 AM

Lab Sample ID: 0404116-005A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/10/2004	0.1	1	0.100	0.154	mg/L
TPH (Kerosene)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/6/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/6/2004	0	1	40-150	78.0	%REC
Surr: Trifluorotoluene	SW8015B	5/10/2004	0	1	65-135	102	%REC

Note: Silica gel clean up employed.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-1
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 10:25:00 AM

Lab Sample ID: 0404116-005A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	20	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	2.3	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	87.4	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	98.8	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	103	%REC

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-2
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 9:45:00 AM

Lab Sample ID: 0404116-006A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/6/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/6/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/6/2004	0	1	40-150	94.0	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	84.7	%REC

Note: Silica gel clean up employed.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of
Purgeable Volatile Organics

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-2
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 9:45:00 AM

Lab Sample ID: 0404116-006A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	0.87	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	1.3	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	85.8	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	103	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	97.6	%REC

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-5
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 12:25:00 PM

Lab Sample ID: 0404116-007A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/6/2004	0.65	1	0.650	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	10.5	1.05	4.78	mg/L
TPH (Kerosene)	SW8015B	5/6/2004	0.81	1	0.810	ND	mg/L
TPH (Oil)	SW8015B	5/6/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/6/2004	0	1	40-150	96.0	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	10.5	65-135	90.2	%REC

Note: Silica gel clean up employed; reporting limits of diesel and kerosene increased due to presence of unknown hydrocarbons.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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www.torrentlab.com

Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-5
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 12:25:00 PM

Lab Sample ID: 0404116-007A
Date Prepared: 5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/11/2004	0.5	21	10	34	µg/L
Ethylbenzene	SW8260B	5/11/2004	1	21	21	560	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/11/2004	1	21	21	47	µg/L
Toluene	SW8260B	5/11/2004	1	21	21	ND	µg/L
Xylenes, Total	SW8260B	5/11/2004	1	21	21	44	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/11/2004	0	21	75-125	84.6	%REC
Surr: Dibromofluoromethane	SW8260B	5/11/2004	0	21	75-125	105	%REC
Surr: Toluene-d8	SW8260B	5/11/2004	0	21	75-125	92.7	%REC

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-7
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 12:00:00 PM

Lab Sample ID: 0404116-008A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	91.0	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	84.9	%REC

Note: Silica gel clean up employed.

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

TORRENT LABORATORY, INC.

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Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-7
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 12:00:00 PM

Lab Sample ID: 0404116-008A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	1.6	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	88.2	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	98.4	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	103	%REC

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-10
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 3:05:00 PM

Lab Sample ID: 0404116-009A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	0.114	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	121	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	92.9	%REC

Note: Silica gel clean up employed.

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Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-10
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 3:05:00 PM

Lab Sample ID: 0404116-009A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	14	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	6.9	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	3.5	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	5.2	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	87.4	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	94.6	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	99.6	%REC

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-11
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 11:35:00 AM

Lab Sample ID: 0404116-010A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	0.360	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	86.0	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	92.1	%REC

Note: Silica gel clean up employed.

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Report prepared for: Jon Hoffman
Ninyo & Moore

Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-11
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 11:35:00 AM

Lab Sample ID: 0404116-010A
Date Prepared: 5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/11/2004	0.5	1	0.50	18	µg/L
Ethylbenzene	SW8260B	5/11/2004	1	1	1.0	6.5	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/11/2004	1	1	1.0	4.0	µg/L
Toluene	SW8260B	5/11/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/11/2004	1	1	1.0	4.5	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/11/2004	0	1	75-125	80.5	%REC
Surr: Dibromofluoromethane	SW8260B	5/11/2004	0	1	75-125	104	%REC
Surr: Toluene-d8	SW8260B	5/11/2004	0	1	75-125	97.4	%REC

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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-12
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 10:50:00 AM

Lab Sample ID: 0404116-011A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.55	1	0.550	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	1.02	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	104	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	91.5	%REC

Note: Silica gel clean up employed; reporting limit of diesel increased due to presence of unknown hydrocarbons.

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Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-12
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 10:50:00 AM

Lab Sample ID: 0404116-011A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	0.56	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	89.7	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	107	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	102	%REC

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Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-13
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 3:31:00 PM

Lab Sample ID: 0404116-012A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	0.799	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	93.0	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	79.4	%REC

Note: Silica gel clean up employed.

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Date Reported: 5/27/2004

Client Sample ID: MW-13
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 3:31:00 PM

Lab Sample ID: 0404116-012A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/8/2004	0.5	1	0.50	ND	µg/L
Ethylbenzene	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/8/2004	0	1	75-125	87.0	%REC
Surr: Dibromofluoromethane	SW8260B	5/8/2004	0	1	75-125	101	%REC
Surr: Toluene-d8	SW8260B	5/8/2004	0	1	75-125	101	%REC

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Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-14
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 3:59:00 PM

Lab Sample ID: 0404116-013A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.23	1	0.230	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	0.241	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	ND	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	85.0	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	76.3	%REC

Note: Silica gel clean up employed; reporting limit of diesel increased due to presence of unknown hydrocarbons.

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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-14
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 3:59:00 PM

Lab Sample ID: 0404116-013A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/8/2004	0.5	1	0.50	1.4	µg/L
Ethylbenzene	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Toluene	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/8/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/8/2004	0	1	75-125	85.4	%REC
Surr: Dibromofluoromethane	SW8260B	5/8/2004	0	1	75-125	96.5	%REC
Surr: Toluene-d8	SW8260B	5/8/2004	0	1	75-125	99.4	%REC

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Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-15
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 4:26:00 PM

Lab Sample ID: 0404116-014A
Date Prepared: 5/5/2004-5/10/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Diesel)	SW8015B	5/7/2004	0.25	1	0.250	ND	mg/L
TPH (Gasoline)	SW8015B	5/11/2004	0.1	1	0.100	ND	mg/L
TPH (Kerosene)	SW8015B	5/7/2004	0.1	1	0.100	ND	mg/L
TPH (Oil)	SW8015B	5/7/2004	0.4	1	0.400	0.567	mg/L
Surr: Pentacosane	SW8015B	5/7/2004	0	1	40-150	105	%REC
Surr: Trifluorotoluene	SW8015B	5/11/2004	0	1	65-135	81.3	%REC

Note: Silica gel clean up employed; reporting limit of diesel increased due to presence of unknown hydrocarbons.

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Report prepared for: Jon Hoffman
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Date Received: 4/29/2004
Date Reported: 5/27/2004

Client Sample ID: MW-15
Sample Location: MSC-Oakland
Sample Matrix: GROUNDWATER
Date/Time Sampled 4/28/2004 4:26:00 PM

Lab Sample ID: 0404116-014A
Date Prepared: 5/7/2004

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	5/7/2004	0.5	1	0.50	ND	µg/L
Ethylbenzene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Methyl tert-butyl ether (MTBE)	SW8260B	5/7/2004	1	1	1.0	2.8	µg/L
Toluene	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Xylenes, Total	SW8260B	5/7/2004	1	1	1.0	ND	µg/L
Surr: 4-Bromofluorobenzene	SW8260B	5/7/2004	0	1	75-125	86.0	%REC
Surr: Dibromofluoromethane	SW8260B	5/7/2004	0	1	75-125	107	%REC
Surr: Toluene-d8	SW8260B	5/7/2004	0	1	75-125	102	%REC

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Definitions, legends and Notes

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

CLIENT: Ninyo & Moore
Work Order: 0404116
Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	BLANK-4	SampType:	MBLK	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/10/2004	Run ID:	VOCGCMS1_040510A
Client ID:	ZZZZZ	Batch ID:	R3448	TestNo:	SW8260B			Analysis Date:	5/11/2004	SeqNo:	49381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
Toluene	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 4-Bromofluorobenzene	14.21	0	17.86	0	79.6	75	125	0	0		
Surr: Dibromofluoromethane	18.04	0	17.86	0	101	75	125	0	0		
Surr: Toluene-d8	17.36	0	17.86	0	97.2	75	125	0	0		

Sample ID	BLANK-1D	SampType:	MBLK	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/7/2004	Run ID:	VOCGCMS1_040507A
Client ID:	ZZZZZ	Batch ID:	R3449	TestNo:	SW8260B			Analysis Date:	5/7/2004	SeqNo:	49396

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Ethylbenzene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
Toluene	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 4-Bromofluorobenzene	15.83	0	17.86	0	88.6	75	125	0	0		
Surr: Dibromofluoromethane	17.34	0	17.86	0	97.1	75	125	0	0		
Surr: Toluene-d8	18.46	0	17.86	0	103	75	125	0	0		

Sample ID	LCS-1,VOC 17.86	SampType:	LCS	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/10/2004	Run ID:	VOCGCMS1_040510A
Client ID:	ZZZZZ	Batch ID:	R3448	TestNo:	SW8260B			Analysis Date:	5/11/2004	SeqNo:	49382

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.21	1.0	17.86	0	113	75	125	0	0		
Toluene	17.4	1.0	17.86	0	97.4	75	125	0	0		
Surr: 4-Bromofluorobenzene	13.99	0	17.86	0	78.3	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Ninyo & Moore
Work Order: 0404116
Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	LCS-1,VOC 17.86	SampType:	LCS	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/10/2004	Run ID:	VOCGCMS1_040510A
Client ID:	ZZZZZ	Batch ID:	R3448	TestNo:	SW8260B			Analysis Date:	5/11/2004	SeqNo:	49382

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	18.38	0	17.86	0	103	75	125	0	0		
Surr: Toluene-d8	16.6	0	17.86	0	93	75	125	0	0		

Sample ID	LCS-1, 17.86 ppb	SampType:	LCS	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/7/2004	Run ID:	VOCGCMS1_040507A
Client ID:	ZZZZZ	Batch ID:	R3449	TestNo:	SW8260B			Analysis Date:	5/7/2004	SeqNo:	49397

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.59	0.50	17.86	0	110	75	125	0	0		
Toluene	17.81	1.0	17.86	0	99.7	75	125	0	0		
Surr: 4-Bromofluorobenzene	14.56	0	17.86	0	81.5	75	125	0	0		
Surr: Dibromofluoromethane	16.52	0	17.86	0	92.5	75	125	0	0		
Surr: Toluene-d8	17.25	0	17.86	0	96.6	75	125	0	0		

Sample ID	LCSD-1 VOC 17.86	SampType:	LCSD	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/10/2004	Run ID:	VOCGCMS1_040510A
Client ID:	ZZZZZ	Batch ID:	R3448	TestNo:	SW8260B			Analysis Date:	5/11/2004	SeqNo:	49383

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.41	1.0	17.86	0	109	75	125	20.21	4.05	30	
Toluene	17.14	1.0	17.86	0	96	75	125	17.4	1.49	30	
Surr: 4-Bromofluorobenzene	13.96	0	17.86	0	78.2	75	125	0	0	0	
Surr: Dibromofluoromethane	17.09	0	17.86	0	95.7	75	125	0	0	0	
Surr: Toluene-d8	16.6	0	17.86	0	92.9	75	125	0	0	0	

Sample ID	LCSD-1, 17.86 ppb	SampType:	LCSD	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/7/2004	Run ID:	VOCGCMS1_040507A
Client ID:	ZZZZZ	Batch ID:	R3449	TestNo:	SW8260B			Analysis Date:	5/7/2004	SeqNo:	49398

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.23	0.50	17.86	0	108	75	125	19.59	1.88	30	
Toluene	17.48	1.0	17.86	0	97.9	75	125	17.81	1.85	30	
Surr: 4-Bromofluorobenzene	14.24	0	17.86	0	79.7	75	125	0	0	0	
Surr: Dibromofluoromethane	15.72	0	17.86	0	88	75	125	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Ninyo & Moore
Work Order: 0404116
Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	LCSD-1, 17.86 ppb	SampType:	LCSD	TestCode:	8260_W	Units:	µg/L	Prep Date:	5/7/2004	Run ID:	VOCGCMS1_040507A
Client ID:	ZZZZZ	Batch ID:	R3449	TestNo:	SW8260B			Analysis Date:	5/7/2004	SeqNo:	49398

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	16.66	0	17.86	0	93.3	75	125	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Ninyo & Moore
Work Order: 0404116
Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: TPH_D/MO/K_W_8015B

Sample ID WD040505A-MB	SampType: MBLK	TestCode: TPH_D/MO/K	Units: mg/L	Prep Date: 5/5/2004	Run ID: SVOCGC1_040505B
Client ID: ZZZZZ	Batch ID: R3439	TestNo: SW8015B		Analysis Date: 5/6/2004	SeqNo: 49212

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)	ND	0.100									
TPH (Kerosene)	ND	0.100									
TPH (Oil)	ND	0.400									
Surr: Pentacosane	0.084	0	0.1	0	84	40	150	0	0		

Sample ID WD040507A-LCS S	SampType: LCS	TestCode: TPH_D/MO/K	Units: mg/L	Prep Date: 5/7/2004	Run ID: SVOCGC1_040505B
Client ID: ZZZZZ	Batch ID: R3439	TestNo: SW8015B		Analysis Date: 5/8/2004	SeqNo: 49213

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)	0.445	0.100	1	0	44.5	40	150	0	0		
Surr: Pentacosane	0.076	0	0.1	0	76	40	150	0	0		

Sample ID WD040507A-LCSDS	SampType: LCSD	TestCode: TPH_D/MO/K	Units: mg/L	Prep Date: 5/7/2004	Run ID: SVOCGC1_040505B
Client ID: ZZZZZ	Batch ID: R3439	TestNo: SW8015B		Analysis Date: 5/7/2004	SeqNo: 49214

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel)	0.639	0.100	1	0	63.9	40	150	0.445	35.8	36	
Surr: Pentacosane	0.083	0	0.1	0	83	40	150	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Ninyo & Moore
Work Order: 0404116
Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: TPH_GAS_W_8015B

Sample ID	BLANK-1	SampType:	MBLK	TestCode:	TPH_GAS_W	Units:	mg/L	Prep Date:	5/10/2004	Run ID:	VOCGC1_040510B
Client ID:	ZZZZZ	Batch ID:	R3454	TestNo:	SW8015B			Analysis Date:	5/10/2004	SeqNo:	49433

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	ND	0.100									
Surr: Trifluorotoluene	0.1223	0	0.119	0	103	65	135	0	0		

Sample ID	LCS-1 GAS	SampType:	LCS	TestCode:	TPH_GAS_W	Units:	mg/L	Prep Date:	5/10/2004	Run ID:	VOCGC1_040510B
Client ID:	ZZZZZ	Batch ID:	R3454	TestNo:	SW8015B			Analysis Date:	5/10/2004	SeqNo:	49434

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	0.2712	0.100	0.2381	0	114	65	135	0	0		
Surr: Trifluorotoluene	0.116	0	0.119	0	97.5	65	135	0	0		

Sample ID	LCSD-1 GAS	SampType:	LCSD	TestCode:	TPH_GAS_W	Units:	mg/L	Prep Date:	5/10/2004	Run ID:	VOCGC1_040510B
Client ID:	ZZZZZ	Batch ID:	R3454	TestNo:	SW8015B			Analysis Date:	5/10/2004	SeqNo:	49435

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	0.2853	0.100	0.2381	0	120	65	135	0.2712	5.07	30	
Surr: Trifluorotoluene	0.129	0	0.119	0	108	65	135	0	0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

TORRENT LABORATORY, INC.

CHAIN OF CUSTODY

483 Sinclair Frontage Rd. Milpitas, CA 95035 Phone: 408.263.5258 FAX: 408.263.8293
Visit us at www.torrentlab.com email: analysis@torrentlab.com

Lab's W.O. # 0404116

Company Name: Ninyo & Moore	Location of Sampling: MSC - Oakland
Address: 1956 Webster, Ste 400	Purpose: Quarterly Sampling
City: Oakland State: CA Zip Code: 94612	Special Instructions / Comments: Run silica gel cleanup prior to ~~for~~ all extractable TPH analysis
Telephone: 510.633-5640 FAX #: 510.633-5647	
Report To: JON HOFFMAN Sampler: Dawn Ritzman	P.O. #: 603-1144-10 E-mail: jhoffman dritzman jkushins@ninyoandmoore.com

Turnaround Time: ☐ 10 Working Days ☑ 7 Working Days ☐ 5 Working Days ☐ 3 Working Days ☐ 2 Working Days ☐ 24 Hours ☐ 2-8 Hours

☐ Storm Water ☐ Waste Water ☑ Ground Water ☐ Soil ☐ Other

Torrent's Sample I.D.	Date/Time Sampled	Sample Type	#of Cont.	Cont. Type	TPHd 8015M Diesel w/ Ker	TPHg 8015M	BTEX 8021 MTBE	Client's Sample I.D.
1. 0404116-005A	4.28.04 / 10:25	Ground H2O	4	VOA(3) AMBER	X	X	X	MW-1
2. " -006A	/ 9:45				X	X	X	MW-2
3. " -007A	/ 12:25				X	X	X	MW-5
4. " -008A	/ 12:00				X	X	X	MW-~~16~~17
5. " -009A	/ 3:05				X	X	X	MW-10
6. " -010A	/ 11:35				X	X	X	MW-11
7. " -011A	/ 10:50				X	X	X	MW-12
8. " -012A	/ 3:31				X	X	X	MW-13
9. " -013A	/ 3:59				X	X	X	MW-14
10. " -014A	/ 4:26				X	X	X	MW-15

1	Relinquished By: Scott B Tillman	Date: 4/29/04	Time: 14:50	Received By: GBO JHN	Date: 29 Apr 04	Time: 1500
2	Relinquished By:	Date:	Time: 1630	Received By:	Date:	Time:

Were Samples Received in Good Condition? ☐ YES ☐ NO Samples on Ice? ☐ YES ☐ NO Method of Shipment _____ Sample seals intact? ☐ YES ☐ NO

Note: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Page 2 of 2

PINK - Client
YELLOW - Torrent's Accounting
WHITE - Torrent Lab

TORRENT LABORATORY, INC.

CHAIN OF CUSTODY

483 Sinclair Frontage Rd. Milpitas, CA 95035 Lab's W.O. # 0404116
Phone: 408.263.5258 FAX: 408.263.8293
Visit us at www.torrentlab.com email: analysis@torrentlab.com

Company Name: Ninyo & Moore	Location of Sampling: MSC- Oakland
Address: 1956 Webster Street, Ste 400	Purpose: Quarterly Sampling
City: Oakland State: CA Zip Code: 94612	Special Instructions / Comments: Run Silica Gel Cleanup ~~for~~ prior to all ~~first~~ extractable TPH analysis
Telephone: 510.633-5640 FAX #: 510.633-5647	
Report To: JON HOFFMAN Sampler: Dawn Ritzman	P.O. #: 603-Non-10 E-mail: jhoffman@ninyoandmoore.com, jkushing@ninyoandmoore.com, dritzman@ninyoandmoore.com

Turnaround Time: ☐ 10 Working Days ☐ 3 Working Days ☐ 2-8 Hours ☑ 7 Working Days ☐ 2 Working Days ☐ 5 Working Days ☐ 24 Hours

☐ Storm Water ☐ Waste Water ☑ Ground Water ☐ Soil ☐ Other

Torrent's Sample I.D.	Date/Time Sampled	Sample Type	#of Cont.	Cont. Type	TPHd 8015M diesel w/o silica gel	TPHg 8015M	BTEX 8021 + MTBE	Client's Sample I.D.
1. 0404116-001A	4.28.04/5:50	Water	4	VOA (3) AMBER	X	X	X	MW-16
2. " -002A	" /4:55	↓	↓	↓	X	X	X	MW-17
3. " -003A	" /6:15	↓	↓	↓	X	X	X	~~MW~~ EB-1
4. " -004A	" /6:20	↓	3	VOA		X	X	TB-1
5.								
6.								
7.								
8.								
9.								
10.								

Analyses Requested

1	Relinquished By: Scott B Kelly	Date: 4/29/04	Time: 14:50	Received By: 680 John	Date: 1450	Time: 29 Apr 04
2	Relinquished By:	Date:	Time: 1630	Received By: NMalet	Date: 4.2	Time:

Were Samples Received in Good Condition? ☐ YES ☐ NO Samples on Ice? ☐ YES ☐ NO Method of Shipment _____ Sample seals intact? ☐ YES ☐ NO

Note: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

PINK - Client
YELLOW - Torrent's Accounting
WHITE - Torrent Lab