

**North State Environmental**  
Laboratory Services • Waste Management • Consulting

Utility trenches along MacArthur Blvd can act as preferential pathway for migration of contaminants from the site.

00 SEP 12 AM 9:38  
NORTH STATE ENVIRONMENTAL  
LABORATORY SERVICES

August 29, 2000

Ms. Eva Chu  
Alameda County Health Care Services Agency  
Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

RE: Second Quarter 1999 Groundwater Sampling Activities and Underground Utility Site Survey Activities - Scooter's Auto Repair, 3600 MacArthur Boulevard, Oakland, California

Dear Ms. Chu:

This report summarizes the activities, findings, and conclusions of the Second Quarter 1999 groundwater monitoring and sampling activities performed by SEMCO Environmental Contractors (SEMCO) at Scooter's Auto Repair facility located at 3600 MacArthur Boulevard in Oakland, California. In March 2000, Ms. Wannetta Hall contracted North State Environmental (NSE) to prepare the 2<sup>nd</sup> Quarter 1999 activity report. As per the verbal request (April 26, 1999) of the Alameda County Health Care Services Agency (ACHCSA), we have included a summary of the activities, findings, and conclusions of the underground utility site survey conducted at the subject property. The site location is shown in Figure 1. Figure 2 is a site plan. The groundwater monitoring activities were requested by the ACHCSA in a letter dated December 16, 1998. A copy of this letter is in Appendix A.

**BACKGROUND**

The site is on the southeastern corner of the intersection of MacArthur Boulevard and Magee Avenue in Oakland, California. It lies approximately 0.2 mile northeast of Interstate 580 and 0.5 mile northwest of High Street. The site elevation is approximately 200 feet above mean sea level (NGVD, 1929). It is approximately 0.23 acre in area and currently owned by the Estate of Mr. Henry Hall (Alameda County Assessor's Parcel Number 30-1903-15-1). The property is currently used as an automobile repair facility. Mr. Hall operated the site as a service station from approximately 1973 to 1988. Prior to this, the site was a Phillips 66 service station. Underground storage tanks used to store gasoline, diesel, and waste oil existed on site until March 1994. The site is zoned for commercial use. The surrounding parcels are zoned for commercial (northwest and southwest) and residential (northeast and southeast) use.

The subject property lies in the East Bay Plain groundwater basin. Groundwater in this basin is designated beneficial for municipal, industrial, and agricultural uses according to the Water Quality Control Plan prepared by the California Regional Water Quality Control Board (CRWQCB; 1995).

During preliminary site assessment activities in October and November 1998, SEMCO installed three groundwater monitoring wells at the site (MW-1 to MW-3; Figure 2). The wells were subsequently surveyed, monitored, and sampled. Additional details are provided in SEMCO's December 1998 Site Characterization Report.

On April 6, 1999, SEMCO conducted First Quarter 1999 groundwater sampling activities at the subject property. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-G), TPH as diesel (TPH-D), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary-butyl ether measured in the groundwater samples collected in MW-1 through MW-3 were below the respective laboratory reporting limits except in MW-1 (4.4 mg/l TPH-G, 0.32 mg/l benzene, 0.033 mg/l toluene, and 0.240 mg/l ethylbenzene and total xylenes). Tables 1 and 2 summarize the First Quarter 1999 fluid-level monitoring data and groundwater sample analytical results, respectively.

## **SECOND QUARTER 1999 GROUNDWATER MONITORING**

On October 1, 1999, SEMCO measured and recorded the depth to groundwater (DTW) and the presence of free product in Monitoring Wells MW-1 through MW-3 with an electronic water level indicator smeared with product and water indicator pastes. SEMCO purged approximately 7 gallons of groundwater from MW-1 and MW-2 and approximately 3 gallons of groundwater from MW-3 with a diaphragm pump and 0.5-inch-diameter, factory-sealed purge tubing. The pH, temperature, and specific conductivity of the purged groundwater (3 casing volumes) in each well was periodically measured ex-situ prior to sampling. SEMCO then collected groundwater samples from each well using a factory-sealed, disposable, polyethylene bailer. Table 1 includes the October 1999 fluid-level monitoring data collected from these wells. A copy of the well monitoring and purge/sampling data sheets is in Appendix A.

The samples were labeled, placed in an iced cooler, and transported to the state certified North State Environmental for analysis of TPH-G (EPA Methods 5030/Modified 8015), TPH-D (EPA Methods 3510/Modified 8015), BTEX (EPA Methods 5030/8020), and MTBE (EPA Methods 5030/8020). Table 2 includes the laboratory results of these analyses. The laboratory report and chain of custody record is in Appendix B.

## **UNDERGROUND UTILITY SITE SURVEY**

Due to the presence of hydrocarbon-affected groundwater in MW-1 and the close proximity of MW-1 to the southwest property line (MacArthur Boulevard), the ACHCSA requested an underground utility survey to evaluate the potential for off-site migration of hydrocarbon-affected

groundwater in the down gradient direction (south-southwest; November 1998) of the subject property. A discussion of the more pertinent underground utilities located in the vicinity of the property is presented below. Figure 3 shows the approximate location of such underground utilities.

On June 17, 1999, SEMCO received underground electrical (street lighting), fire alarm, and sanitary and storm sewer maps from the City of Oakland Public Works Department (COPWD) for the property and surrounding area (approximately 1-block radius). During Second Quarter 1999 groundwater monitoring activities, SEMCO performed a site vicinity reconnaissance to confirm the approximate locations of the underground utilities of concern.

The electrical map shows the presence of a 2-inch-diameter galvanized steel underground line located beneath the southwest side of the sidewalk @ MacArthur Boulevard, southeast of the subject property. The underground line extends approximately 40 feet in the north-northwest direction from its service vault to its associated street light located approximately 9 feet south-southeast of the southeast property line (approximately 59 feet south-southeast of MW-1). Similar underground lines are located northwest and southeast of the subject property (Figure 3). The depth of these lines is undetermined.

A 10-inch-diameter, underground storm sewer conduit is located approximately 15 feet southwest of the southwest property line and parallels MacArthur Boulevard. The storm drain inlet is located approximately 40 feet northwest of the west corner of the property. Also, an 8-inch-diameter, underground, sanitary sewer conduit is located beneath the centerline of MacArthur Boulevard, approximately 40 feet southwest of the southwest property line. Based on information obtained from the COPWD and the pipe flow line elevations presented on the sewer map, the approximate depth of these sewer lines is between 6.5 and 7.5 feet below grade (fbg). City sewer line excavations are generally backfilled with a sand/cement slurry surrounding the conduit piping and overlain by compacted utility sand bedding, baserock, and asphaltic concrete. The location of the underground sanitary sewer (lateral) line connecting to the property is undetermined at this time.

Based on SEMCO's October 1999 site reconnaissance and utility distribution maps provided by the East Bay Municipal Utilities District (EBMUD), Distribution Systems Engineering Department, the nearest underground water utility main is located approximately 25 feet southwest of the southwest property line, paralleling MacArthur Boulevard. According to an EBMUD representative, the 10-inch-diameter, cast iron water main lies approximately 3 to 4 feet below existing street grade. A lateral line (northeastward direction) connects to a water service vault/ meter box located at the southwest edge of the sidewalk adjacent to the southwest property line. The vault is located approximately 20 feet south of MW-1 with service depth at approximately 18 inches below grade. A private service line then continues northeastward to the site building at this same approximate depth. Also, a 4-inch-diameter, underground, cast iron water line extends along Magee Avenue connecting to the MacArthur main. Two additional underground laterals connect via this main to the northwest side of the property at approximately 25 and 60 feet, respectively, from the southwest property line. These lateral lines extending onto the property may have been historically re-routed or abandoned due the proximity of the former UST cavity at the northeast side of the subject property. The

storm  
drain

sewer line

approximate depth of these lines are similar to the respective lines noted above.

Also during Second Quarter monitoring activities, as per the request of the ACHCSA, SEMCO mapped the **offsite land usage in the south and southwest directions** (approximate down gradient direction) of the subject property (southwest side of MacArthur Boulevard). According to the City of Oakland Planning Department, this property is zoned for **special retail and commercial usage** (Zoning Code C31). In addition, all property located greater than approximately 150 to 250 feet in **the northeast and southeast directions of the subject property** are zoned for **medium-density residential usage** (Zoning Code R51). Figure 4 shows the off-site land usage in the down gradient direction of the subject property.

On November 1, 1999, SEMCO requested associated underground utility maps from the Oakland PG&E Planning and Engineering Department. On January 8, 2000, PG&E mapped the electric and gas utilities of the subject property and surrounding vicinity. Based on the PG&E electric map, our October 1999 site reconnaissance, and information provided by a PG&E representative, a 12,000 Volt, underground primary line is located beneath the sidewalk approximately 3 feet southwest of the southwest property line, paralleling MacArthur Boulevard. Its location is confirmed by the presence of a 3-foot-wide, re-paved, underground trench that extends (via the sidewalk) beyond both the northwest and southeast property lines. PG&E (electrical) surface markings were frequently noted along the overlying pavement. According to the current property tenant who was present during the underground utility repair/construction activities, the **total depth of this utility trench was approximately 5 fbg.** However, a PG&E representative was unable to provide information confirming the associated utility depth and/or trench backfill material. Private service is provided via overhead electrical lines crossing Magee Avenue.

The PG&E gas utility map shows that a 1.25-inch-diameter, semi high pressure, underground gas main is located approximately 10 feet southwest of the southwest subject property line, paralleling MacArthur Boulevard. According to the map, no underground service laterals connect to the property. An additional underground gas main extends parallel through MacArthur Boulevard and is located approximately 50 feet from the southwest property line. A lateral line connecting the two aforementioned gas mains is located immediately northwest of the northwest property corner. The depth of the gas main and lateral lines is undetermined.

On January 31, 2000, SEMCO returned to the site to measure the depth to groundwater in each well to establish current site groundwater gradient conditions. SEMCO removed the locking well plug from the top of each well casing to de-pressurize the well system (if needed) and allow the water level to equilibrate. Within approximately 45 minutes, SEMCO measured (3 consecutive events) and recorded the DTW and the presence of free product in each well with an electronic water level indicator smeared with product and water indicator pastes. No groundwater samples were collected at this time. A copy of the associated fluid-level monitoring data sheet is in Appendix A. The fluid-level monitoring data for this event is included in Table 1.

## WASTE DISPOSAL

SEMCO temporarily stored the equipment wash and well purge water (approximately 25 gallons) onsite in a 55-gallon storage drum. On October 6, 1999, Clearwater Environmental Management transported the drummed wastewater to the Alviso Independent Oil disposal facility in Alviso, California. A copy of the waste manifest is in Appendix C.

## FINDINGS

- The depth to groundwater (DTW) measured in MW-1 and MW-2 in October 1999 was 3.51 and 3.29 feet below the top of well casing (TOC), respectively. The DTW measured in MW-3 was 8.42 feet below TOC. Free product was not detected in any of the wells during the initial water level monitoring activities. No surface sheen or free product was observed in the bailer or groundwater samples in each well.
- As shown in Table 1 and the appended Fluid-Level Monitoring Sheet, the relative groundwater elevations corresponding to the DTW measured in MW-1 through MW-3 during the October 1999 monitoring activities are 197.87, 198.58, and 193.69 feet above mean sea level, respectively. (Also, the relative elevation of the TOC of each well is shown.) Based on the significant difference in relative groundwater elevation between MW-3 (Elevation TOC = 202.11) and those of MW-1 and MW-2 (Elevation TOC = 201.38 and 201.87, respectively), it appears that the localized groundwater in the vicinity of MW-3 was again unstable during the October 1999 monitoring event. As result, the groundwater gradient relative to the three monitoring wells was not determined.
- The DTW measured in MW-1 through MW-3 in January 2000 was 1.88, 1.61, and 1.12 feet below TOC. Free product was not observed in any of the monitoring wells. Poned surface water was observed at the southwest and southeast sides of MW-3. The groundwater gradient direction established for this event was towards N88°W at 0.025 foot/foot.
- The groundwater sample collected in MW-1 contained 2.6 mg/l TPH-G, 0.290 mg/l benzene, 0.020 mg/l toluene, 0.190 mg/l ethylbenzene, and 0.046 mg/l total xylenes. The MTBE concentration measured in this sample was below the laboratory reporting limit (0.0005 mg/l for MTBE). The groundwater sample reportedly contained 0.19 mg/l TPH-D. As noted and confirmed by the laboratory, the TPH-D detection does not match the typical diesel pattern shown on the associated chromatogram (predominant diesel carbon range: C10 to C20) but reflect low level hydrocarbon concentrations overlapping from the neighboring gasoline carbon range (C4 to C12).

- The TPH-G, BTEX, and MTBE concentrations reported in the groundwater samples collected in MW-2 and MW-3 were below the laboratory reporting limit (0.050 mg/l for TPH-G and  $\leq 0.001$  mg/l for BTEX and MTBE). However, the respective groundwater samples contained 0.11 (MW-2) and 0.08 mg/l (MW-3) TPH-D (not matching typical diesel pattern).
- The dissolved-phase benzene concentration measured in MW-1 does not exceed the California  $10^{-4}$  commercial Risk-Based Screening Levels listed in Designation E 1739-95 published by the American Society for Testing and Materials.
- City of Oakland underground, storm and sanitary sewer conduit systems are located in the assumed down gradient direction within approximately 40 feet southwest of the subject property line. The utility lines parallel MacArthur Boulevard and lie at an approximate depth of 6.5 to 7.5 feet below associated grade elevation. The location of the sanitary sewer lateral line connecting to the property is undetermined.
- According to water utility maps provided by EBMUD, three underground water lines connect to the subject property. One lateral line connects from (and perpendicular to) the MacArthur main to the southwest side of the property at approximately 20 feet south of MW-1. Two additional lines connect from the Magee Avenue main to the northwest side of the property at approximately 25 and 60 feet from the southwest property line. Private service depth is reportedly 18 inches below grade.
- A PG&E underground trench containing a 12,000 Volt primary electric line is located beneath the sidewalk approximately 3 feet southwest of the southwest subject property line. The trench line extends beyond the northwest and southeast property lines, paralleling MacArthur Boulevard. The assumed depth of this utility trench was observed to be approximately 5 fbg. Electricity is provided to the property via overhead service lines. A semi high-pressure gas main is located approximately 10 feet southwest of the southwest property line. The gas main extends both southeast beyond the southeast property line and in the northwest direction connecting to a lateral line at the northwest corner of the property. No information was provided regarding gas utility laterals connecting to the property. The depth of the gas main is undetermined.
- Properties located south and southwest of the subject property (southwest side of MacArthur Boulevard) are zoned for special retail and commercial usage (Zoning Code C31). Properties extending approximately 250 beyond the southwest subject property line are zoned for medium-density residential usage (Zoning Code R51).

## CONCLUSIONS

- Compared to the April 1999 groundwater monitoring and sampling event, the dissolved-phase TPH-G and BTEX concentrations in MW-1 have decreased, however, the benzene concentration continues to exceed the municipal supply numerical water quality objective (0.001 mg/l) listed in the Water Quality Control Plan prepared by the San Francisco Bay Region of the CRWQCB. The dissolved-phase TPH-G, BTEX, and MTBE concentrations measured in MW-2 and MW-3 were similar to the findings in the previous monitoring event.
- Although TPH-D was last reported in MW-1 only (November 1998), the concentrations of TPH-D measured in the groundwater samples collected in MW-1 through MW-3 during the October 1999 event reflect only low level hydrocarbon concentrations, and as noted in the appended laboratory report, do not match the typical diesel pattern shown on the associated chromatogram (predominant diesel carbon range: C10 to C20) but reflect low level hydrocarbon concentrations overlapping from the neighboring gasoline carbon range (C4 to C12).
- Based on historical groundwater levels measured in MW-3 and the rather high water table level measured in January 2000, the groundwater gradient and direction calculated from data collected from the most recent monitoring event (January 2000) may not be representative of the current conditions at the site. However, in comparison to the November 1998 site groundwater gradient conditions (S19°W @ 0.027 foot/foot), groundwater flow direction shifted approximately 69° further to the west with a slightly shallower gradient of 0.025 foot/foot.

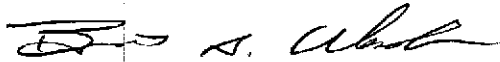
Third and Fourth Quarters 1999 and 1<sup>st</sup> Quarter 2000 groundwater monitoring events were not conducted at the site due to negotiations in contract and project management during this time. On June 30, 2000, NSE conducted 2<sup>nd</sup> Quarter 2000 groundwater monitoring activities at the subject property. A report summarizing the findings, conclusions, and recommendations of these activities will be submitted to the ACHCSA in September 2000.

## LIMITATIONS AND CERTIFICATION

This report has been prepared in accordance with generally accepted environmental practices exercised by professional geologists, scientists, and engineers. No warranty, either expressed or implied, is made as to the professional advice presented herein. The findings and conclusions contained in this report are based upon information contained in previous reports of soil assessment activities performed at the subject property and based upon site conditions as they existed at the time of the investigation, and are subject to change.


The conclusions presented in this report are professional opinions based solely upon visual observations of the subject property and vicinity, and interpretation of available information as described in this report. The scope of services conducted in execution of this investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document and any of its information presented herein is at the sole risk of said user.

### *North State Environmental*

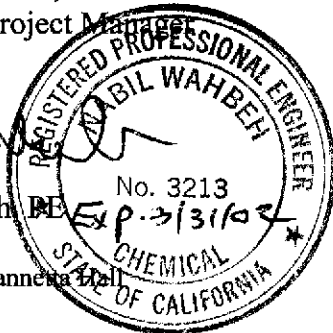


Brent A. Wheeler, E.I.T.  
Consultant/ Project Manager

650-266-4570



Nabil Wahbeh, E.I.T.

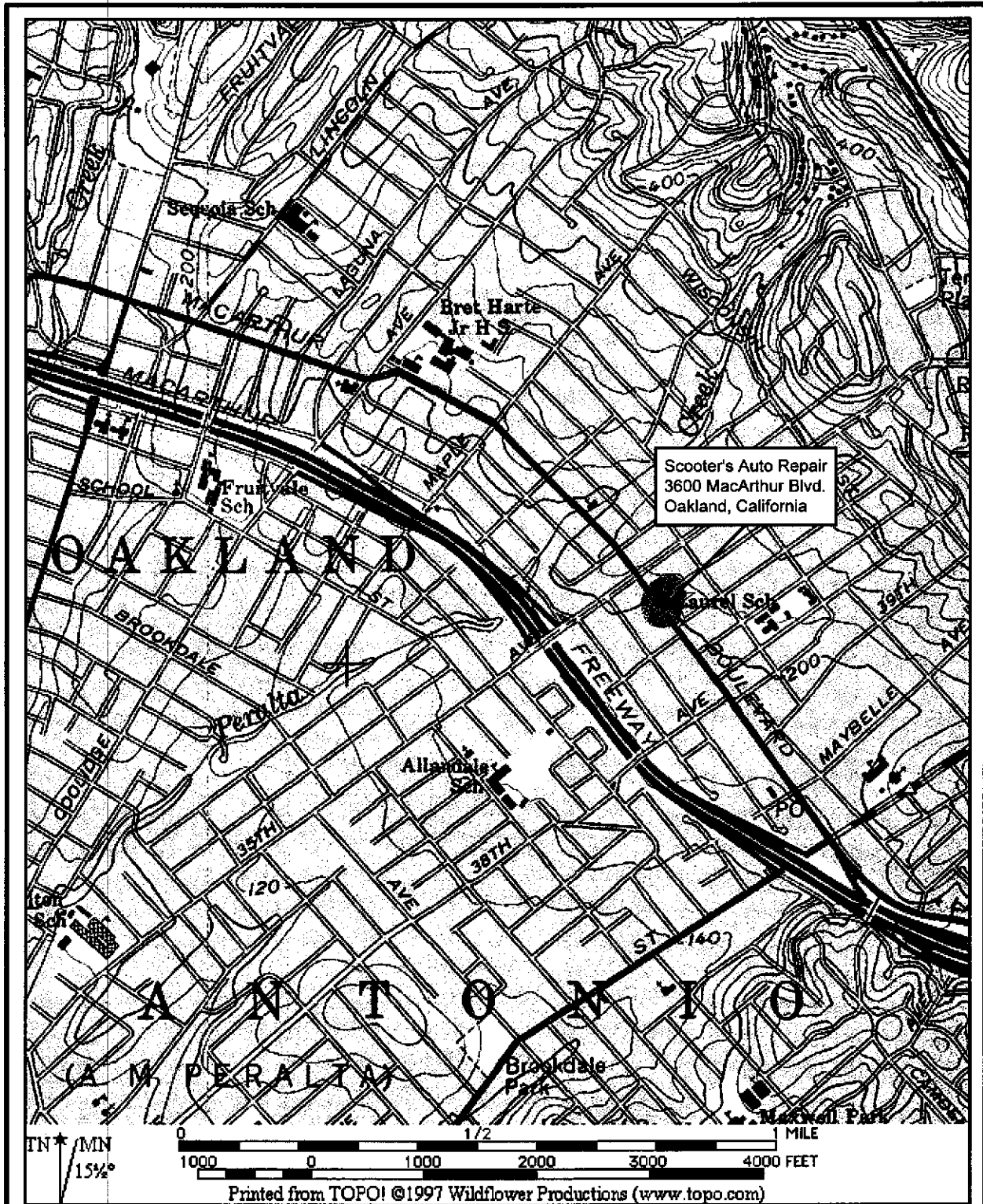


cc: Ms. Wanneng Dell



## REFERENCES

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- California Department of Conservation, Division of Mines and Geology, 1991. Geologic Map of the San Francisco-San Jose Quadrangle by Wagner, D.L., Bortugno, E.J., and McJunkin, R.D.
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- Pacific Gas & Electric Company, Gas and Electric Facilities Maps, January 2000.
- SEMCO, 1998; Site Characterization Report, Scooter's Auto Repair, 3600 MacArthur Boulevard, Oakland, California. Project 97-0187.1, December 1998.
- SEMCO, 1999; Report of First Quarter 1999 Groundwater Sampling Activities, Scooter's Auto Repair, 3600 MacArthur Boulevard, Oakland, California. Project 99-0101.1, June 1999.

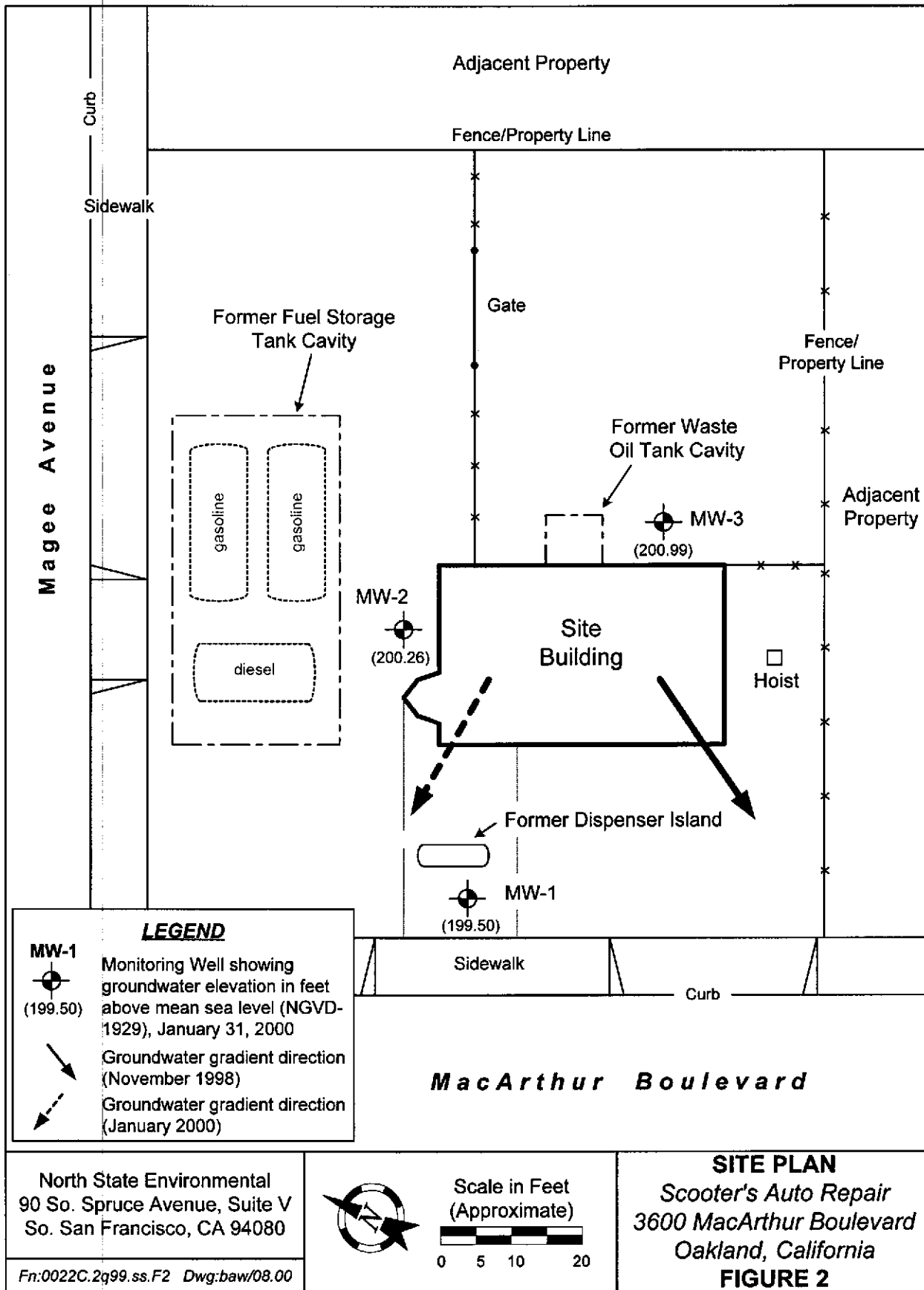


North State Environmental  
 90 So. spruce Avenue, Ste. V  
 So. San Francisco, CA 94063


★ **SITE LOCATION**


**SITE VICINITY MAP**  
 Scooter's Auto Repair  
 3600 MacArthur Boulevard  
 Oakland, California  
**FIGURE 1**


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**LEGEND**

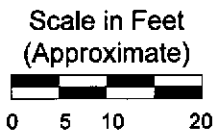
**MW-1**  
  
 Monitoring Well showing groundwater elevation in feet above mean sea level (NGVD-1929), January 31, 2000 (199.50)

  
 Groundwater gradient direction (November 1998)

  
 Groundwater gradient direction (January 2000)

North State Environmental  
 90 So. Spruce Avenue, Suite V  
 So. San Francisco, CA 94080

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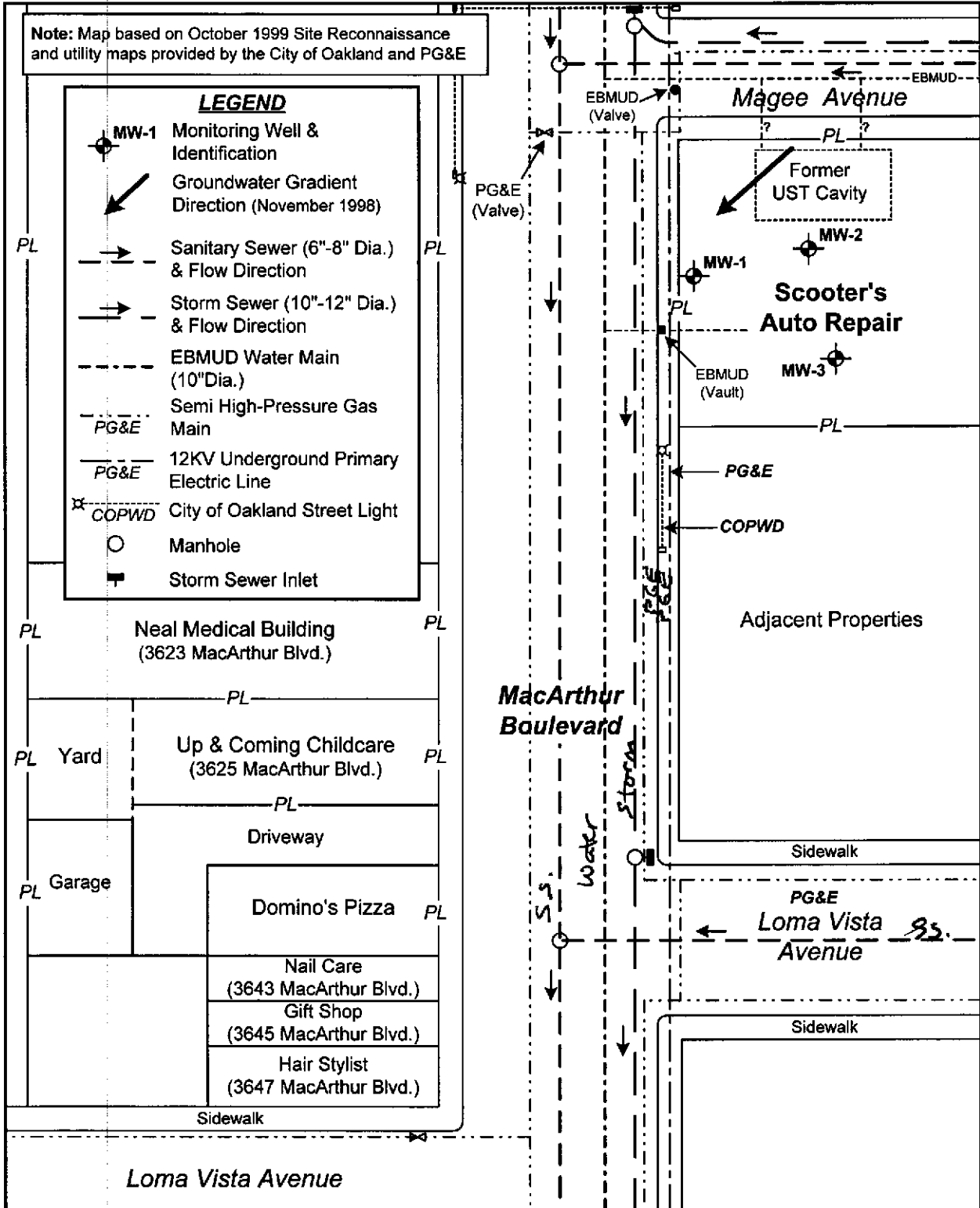


**SITE PLAN**  
 Scooter's Auto Repair  
 3600 MacArthur Boulevard  
 Oakland, California  
**FIGURE 2**

Note: Map based on October 1999 Site Reconnaissance and utility maps provided by the City of Oakland and PG&E

**LEGEND**

- MW-1 Monitoring Well & Identification
- Groundwater Gradient Direction (November 1998)
- Sanitary Sewer (6"-8" Dia.) & Flow Direction
- Storm Sewer (10"-12" Dia.) & Flow Direction
- EBMUD Water Main (10"Dia.)
- Semi High-Pressure Gas Main
- PG&E 12KV Underground Primary Electric Line
- COPWD City of Oakland Street Light
- Manhole
- Storm Sewer Inlet



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90 So. Spruce Avenue, Ste. V  
So. San Francisco, CA 94080



Scale in Feet  
(Approximate)



0 25 50

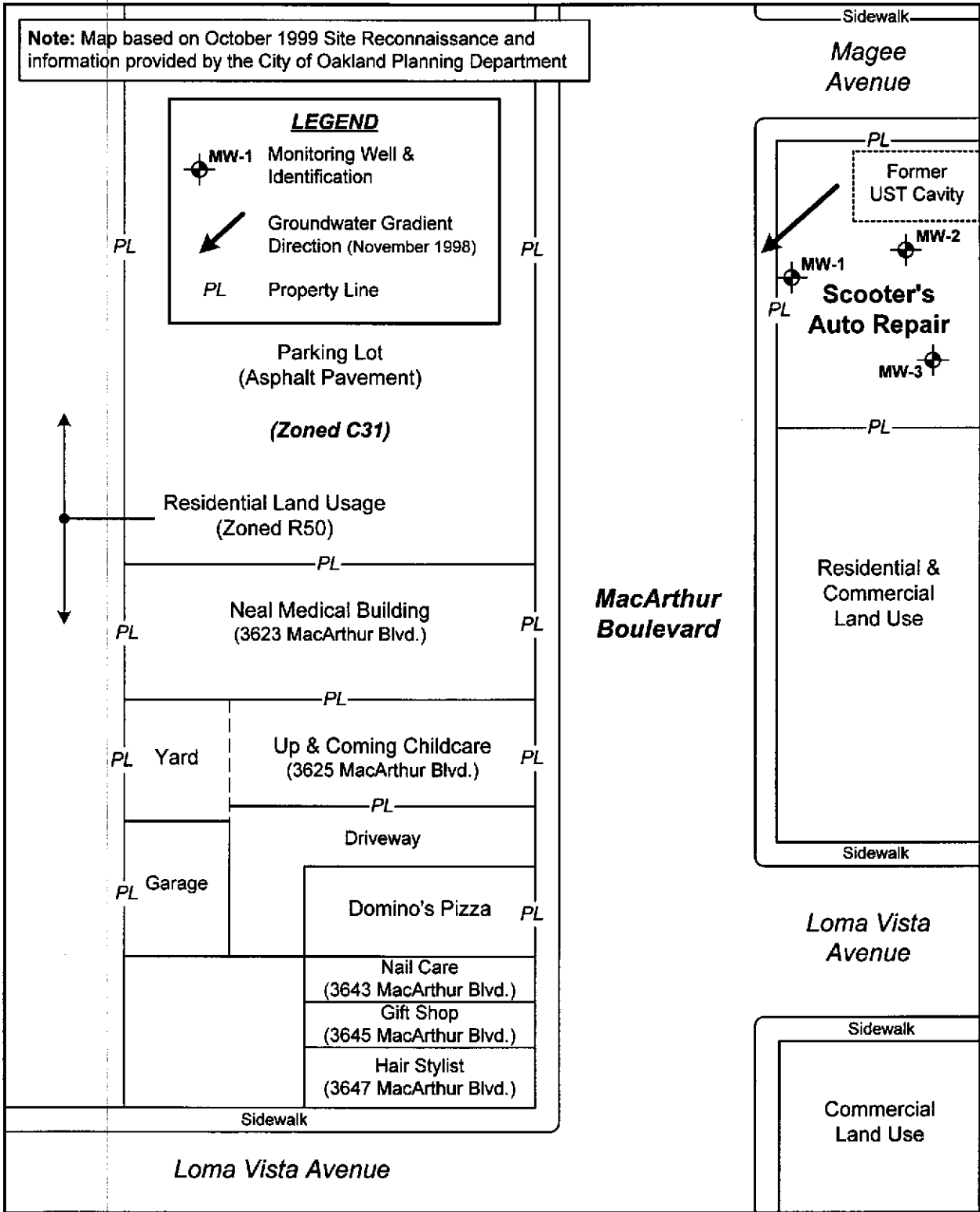
**Underground Utility Map**  
Scooter's Auto Repair  
3600 MacArthur Boulevard  
Oakland, California  
**Figure 3**

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**Note:** Map based on October 1999 Site Reconnaissance and information provided by the City of Oakland Planning Department

**LEGEND**

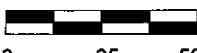
-  MW-1 Monitoring Well & Identification
-  Groundwater Gradient Direction (November 1998)
- PL Property Line



North State Environmental  
 90 So. Spruce Avenue, Ste. V  
 So. San Francisco, CA 94080



Scale in Feet  
 (Approximate)



0 25 50

**Off-Site Land Usage Map**  
 Scooter's Auto Repair  
 3600 MacArthur Boulevard  
 Oakland, California  
**Figure 4**

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**Table 1**  
**Fluid-Level Monitoring Data**  
 **Scooter's Auto Repair**

3600 MacArthur Boulevard, Oakland, California

Well	Date Measured	Depth To Water (feet below TOC)	Piezometer Thickness (feet)	Relative Elevation of TOC (feet)	Relative Groundwater Elevation (feet)
MW-1	11-12-98	3.24	0	201.38	198.14
	4-6-99	1.76	0		199.62
	10-1-99	3.51	0		197.87
	1-31-00	1.88	0		199.50
MW-2	11-12-98	2.85	0	201.87	199.02
	4-6-99	1.43	0		200.44
	10-1-99	3.29	0		198.58
	1-31-00	1.61	0		200.26
MW-3	11-12-98	3.43	0	202.11	198.68
	4-6-99	2.91	0		199.20
	10-1-99	8.42	0		193.69
	1-31-00	1.12	0		200.99

**LEGEND:**

Top of well casing elevation referenced to City of Oakland Bench Mark located on the top of the southern curb return on the southeast corner of the intersection of MacArthur Boulevard and Magee Avenue. Elevations measured in feet above mean sea level and based on NGVD-1929 (City of Oakland datum + 3.00 feet).

**Table 2**  
**Laboratory Results of Groundwater Sample Analyses**  
 Scooter's Auto Repair  
 3600 MacArthur Boulevard, Oakland, California

WELL	DATE	TPH-G (mg/L)	TPH-D (mg/L)	TPH-MO (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	MTBE (mg/L)	HVOCs (mg/L)	CRAD (mg/L)
MW-1	11-12-98	6.2	0.54	ND	0.420	0.047	ND	0.210	ND	--	ND
	4-9-99	4.4	ND	--	0.320	0.033	0.240	0.240	ND*	--	--
	10-1-99	2.6	0.19	--	0.290	0.020	0.190	0.046	ND*	--	--
MW-2	11-12-98	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	4-9-99	ND	ND	--	ND	ND	ND	ND	ND	--	--
	10-1-99	ND	0.11	--	ND	ND	ND	ND	ND	--	--
MW-3	11-12-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND**
	4-9-99	ND	ND	--	ND	ND	ND	ND	ND	--	--
	10-1-99	ND	0.08	--	ND	ND	ND	ND	ND	--	--
CRWQCB MSWQO		none	none	none	0.001	0.15	0.7	1.75	0.014***	varies	0.05
Lab Reporting Limit		0.05	0.05	0.5	0.0005	0.0005	0.0005	0.001	0.0005	≤0.010	0.05

**LEGEND:**

TPH-G = total petroleum hydrocarbons as gasoline (EPA Methods 5030/Modified 8015)

TPH-D and TPH-MO = total petroleum hydrocarbons as diesel and motor oil, respectively (EPA Methods 3510/Modified 8015)

B, T, E, X = benzene, toluene, ethylbenzene, and total xylenes (EPA Methods 5030/ 8020)

MTBE = methyl tert-butyl ether (EPA Methods 5030/8020)

HVOCs =halogenated volatile organic compounds (EPA Method 8010)

mg/L = milligrams per liter (parts per million)

ND = concentration less than the laboratory reporting limit

-- = sample not analyzed for this constituent

\* = confirmed by EPA Method 8260

\*\* = cadmium, chromium, nickel, and zinc concentrations in this sample were also below the laboratory reporting limit

CRWQCB MSWQO = California Regional Water Quality Control Board municipal supply water quality objective

\*\*\* = public health goal proposed by the California Office of Environmental Health Hazard Assessment ( the California Department of Health Services has proposed establishing a secondary maximum contaminant level of 0.005 mg/l for MTBE)

**APPENDIX A**

**REGULATORY CORRESPONDENCE AND  
WELL MONITORING AND SAMPLING DATA SHEETS**



ALAMEDA COUNTY  
HEALTH CARE SERVICESAGENCY  
DAVID J. KEARS, Agency Director

TO: Deho

## ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6677  
(510) 567-6700  
(510) 337-9336 (FAX)

StID 1289

December 16, 1998

Ms. Wanetta Hall  
Scooter Wilson's Auto Repair  
3600 MacArthur Blvd  
Oakland, CA 94619**RE: Work Plan Approval for 3800 MacArthur Blvd, Oakland, CA**

Dear Ms. Hall:

I have completed review of HK2, Inc.'s December 1998 *Site Characterization Report* prepared for the above referenced site. The report summarized activities related to the installation of three groundwater monitoring wells and the advancement of two exploratory soil borings. Petroleum hydrocarbons were noted in groundwater from well MW-1.

At this time you should continue with quarterly groundwater monitoring/sampling of the wells. Groundwater should be analyzed for TPHg, TPHd, and BTEX. The next sampling event should be in January or February 1999. After two additional sampling events, evaluation of groundwater data collected will determine if further action is required at the site. Quarterly monitoring reports are due 60 days upon completion of field activities.

If you have any questions, I can be reached at (510) 567-8762.

eva chu  
Hazardous Materials Specialist



# HK2 WELL PURGING/SAMPLING DATA FORM

Project No.: 99-0101 Date: 10/1/99 Page 1 of 2  
 Site Address: 3600 MACARTHUR BLVD., OAKLAND, CA  
 Technician(s): BALW. Agency Rep: EVA CHU

Casing/Borehole Diameter (inches)	2/8	4/8	4/10	6/10	6/12
Casing/Borehole Volumes (gallons/foot)	0.2/0.9	0.7/1.2	0.7/1.6	1.5/2.2	1.5/3.1

**WELL #** MW-1

a. Total Well Depth 14.06 ft.  
 b. Depth to Water 3.51 ft.  
 c. Water Height (a - b) 10.55 ft.  
 d. Well Casing Diameter 2 in.  
 e. Casing or Borehole Constant from above table 0.2  
 f. (3) Casing or Borehole Volumes (c x e x 3) 6.33 gal.  
 g. 80 Percent Recharge Level [b + (0.2 x c)] 5.62 ft.

**PURGE EVENT #1:**  
 a. Start Time 11:35  
 b. Finish Time 11:50  
 c. Volume Purged 7.5 gal.  
**RECHARGE #1:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**PURGE EVENT #2:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #2:**  
 a. Depth to Water 4.32 ft.  
 b. Time Measured 11:52

**PURGE EVENT #3:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #3:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**WELL FLUID PARAMETERS:**

	(Casing or Borehole Volumes)						
t=0	<sup>1</sup>	<sup>14</sup>	<sup>2</sup>	<sup>24</sup>	<sup>3</sup>	<sup>3</sup>	<sup>3</sup>
a. pH	7.49	(2.1)	(3.2)	(4.2)	(5.3)	(6.3)	
b. Temp.	71.5	72.2	72.4	72.5	72.6	72.7	
c. Cond.	6.42	4.16	3.96	3.76	3.72	3.61	
d. DO							

**SUMMARY DATA:**  
 Total Gallons Purged 7.5  
 Purging Device Used DIAPHRAGM PUMP  
 Sampling Device Used BADLER  
 Time Sample Collected 12:10  
 Sample Appearance SLIGHT TURBIDITY  
SLIGHT OOR, NO S&B

**WELL #** MW-2

a. Total Well Depth 14.02 ft.  
 b. Depth to Water 3.27 ft.  
 c. Water Height (a - b) 10.75 ft.  
 d. Well Casing Diameter 2 in.  
 e. Casing or Borehole Constant from above table 0.2  
 f. (3) Casing or Borehole Volumes (c x e x 3) 6.4 gal.  
 g. 80 Percent Recharge Level [b + (0.2 x c)] 7.06 ft.

**PURGE EVENT #1:**  
 a. Start Time 10:40  
 b. Finish Time 10:50  
 c. Volume Purged 7 gal.  
**RECHARGE #1:**  
 a. Depth to Water 4.05 ft.  
 b. Time Measured 10:53

**PURGE EVENT #2:**  
 a. Start Time 11:35  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #2:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**PURGE EVENT #3:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #3:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**WELL FLUID PARAMETERS:**

	(Casing or Borehole Volumes)						
t=0	<sup>1</sup>	<sup>14</sup>	<sup>2</sup>	<sup>24</sup>	<sup>3</sup>	<sup>3</sup>	<sup>3</sup>
a. pH	7.71	(2.2)	(3.2)	(4.4)	(5.5)	6.6	
b. Temp.	70.7	70.5	70.2	70.1	69.9	69.9	
c. Cond.	8.05	2.97	2.96	2.96	2.95	3.04	
d. DO							

**SUMMARY DATA:**  
 Total Gallons Purged 7  
 Purging Device Used DIAPHRAGM PUMP  
 Sampling Device Used BADLER  
 Time Sample Collected 11:50  
 Sample Appearance CLEAR, NO APPARENT  
SILTS - CONTAMINATION

Number of Drums stored onsite 1 Total Gallons Stored ~ 75 Gallons  
 Location of Drums \_\_\_\_\_  
 Borehole volume based on annular sand pack porosity of 30 percent.

# HK2 WELL PURGING/SAMPLING DATA FORM

Project No.: 99-0101 Date: 10/1/99 Page 2 of 2  
 Site Address: 3600 MACARTHUR BLVD., OAKLAND, CA.  
 Technician(s): BAW Agency Rep: EVA CHU

Casing/Borehole Diameter (inches)	2/8	4/8	4/10	6/10	6/12
Casing/Borehole Volumes (gallons/foot)	0.2/0.9	0.7/1.2	0.7/1.6	1.5/2.2	1.5/3.1

**WELL #** MW-3

a. Total Well Depth 13.87 ft.  
 b. Depth to Water (9:45) 9.34 ft.  
 c. Water Height (a - b) 5.53 ft.  
 d. Well Casing Diameter 2 in.  
 e. Casing or Borehole Constant from above table 0.2  
 f. (3) Casing or Borehole Volumes (c x e x 3) 3.3 gal.  
 g. 80 Percent Recharge Level [b + (0.2 x c)] 9.45 ft.

**PURGE EVENT #1:**  
 a. Start Time 10:00  
 b. Finish Time 10:15  
 c. Volume Purged 4 gal.  
**RECHARGE #1:**  
 a. Depth to Water 13.08 ft.  
 b. Time Measured 10:15

**PURGE EVENT #2:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #2:**  
 a. Depth to Water 17.34 ft.  
 b. Time Measured 11:15

**PURGE EVENT #3:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #3:**  
 a. Depth to Water 11.71 ft. 11:15  
 b. Time Measured 12:25 1:30

**WELL FLUID PARAMETERS:**

	(Casing or Borehole Volumes)					
	t=0	1	14	2	24	3
a. pH	7.00	7.36	7.41	7.40	7.46	7.52
b. Temp.	62.6	63.0	63.3	63.6	63.9	64.0
c. Cond.	10.79	9.88	9.55	9.76	9.79	9.80
d. DO						

**SUMMARY DATA:**

Total Gallons Purged 3.3  
 Purging Device Used DIAPHRAGM PUMP  
 Sampling Device Used BAILER  
 Time Sample Collected 1:35  
 Sample Appearance SLIGHTLY TURBID  
NO APPARENT SIGNS OF CONTAMINATION

**WELL #** \_\_\_\_\_

a. Total Well Depth \_\_\_\_\_ ft.  
 b. Depth to Water \_\_\_\_\_ ft.  
 c. Water Height (a - b) \_\_\_\_\_ ft.  
 d. Well Casing Diameter \_\_\_\_\_ in.  
 e. Casing or Borehole Constant from above table \_\_\_\_\_  
 f. (3) Casing or Borehole Volumes (c x e x 3) \_\_\_\_\_ gal.  
 g. 80 Percent Recharge Level [b + (0.2 x c)] \_\_\_\_\_ ft.

**PURGE EVENT #1:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #1:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**PURGE EVENT #2:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #2:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**PURGE EVENT #3:**  
 a. Start Time \_\_\_\_\_  
 b. Finish Time \_\_\_\_\_  
 c. Volume Purged \_\_\_\_\_ gal.  
**RECHARGE #3:**  
 a. Depth to Water \_\_\_\_\_ ft.  
 b. Time Measured \_\_\_\_\_

**WELL FLUID PARAMETERS:**

	(Casing or Borehole Volumes)					
	t=0	1	14	2	24	3
a. pH	_____	_____	_____	_____	_____	_____
b. Temp.	_____	_____	_____	_____	_____	_____
c. Cond.	_____	_____	_____	_____	_____	_____
d. DO	_____	_____	_____	_____	_____	_____

**SUMMARY DATA:**

Total Gallons Purged \_\_\_\_\_  
 Purging Device Used \_\_\_\_\_  
 Sampling Device Used \_\_\_\_\_  
 Time Sample Collected \_\_\_\_\_  
 Sample Appearance \_\_\_\_\_

Number of Drums stored onsite 1 Total Gallons Stored ~25 Gallons  
 Location of Drums \_\_\_\_\_  
 Borehole volume based on annular sand pack porosity of 30 percent.

**APPENDIX B**

**LABORATORY REPORT AND  
CHAIN OF CUSTODY RECORD**



# North State Environmental Laboratory

CA ELAP# 1753

90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

## C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 99-1570  
 Client: Semco  
 Project: 99-0101/3600 Macarthur Blvd, Oakland CA  
 Scooter's Auto Repair  
 Date Reported: 10/21/1999

Gasoline, BTEX and MTBE by Methods 8015M and 8020  
 Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-1570-01 Client ID: MW1-W				10/01/199	WATER
Gasoline	8015M	2600	ug/L		10/12/1999
Benzene	8020	290	ug/L		
Ethylbenzene	8020	190	ug/L		
MTBE	8020	*ND			
Toluene	8020	20	ug/L		
Xylenes	8020	46	ug/L		
Diesel	8015M	**0.19	mg/L		10/14/1999
Sample: 99-1570-02 Client ID: MW2-W				10/01/199	WATER
Gasoline	8015M	ND			10/12/1999
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	**0.11	mg/L		10/14/1999
Sample: 99-1570-03 Client ID: MW3-W				10/01/199	WATER
Gasoline	8015M	ND			10/12/1999
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			

\*Confirmed by GC/MS \*\*Does not match Diesel pattern



# North State Environmental Laboratory

CA ELAP# 1753

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## C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 99-1570  
Client: Semco  
Project: 99-0101/3600 Macarthur Blvd, Oakland CA  
Scooter's Auto Repair  
Date Reported: 10/21/1999

Gasoline, BTEX and MTBE by Methods 8015M and 8020  
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-1570-03	Client ID: MW3-W			10/01/199	WATER
Xylenes	8020	ND			
Diesel	8015M	**0.08	mg/L		10/14/1999



C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 99-1570  
Client: Semco  
Project: 99-0101/3600 Macarthur Blvd, Oakland CA  
Scooter's Auto Repair  
Date Reported: 10/21/1999

Gasoline, BTEX and MTBE by Methods 8015M and 8020  
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline	8015M	50	ug/L	ND	88	3
Benzene	8020	0.5	ug/L	ND	90	10
Ethylbenzene	8020	0.5	ug/L	ND	89	19
Toluene	8020	0.5	ug/L	ND	92	10
Xylenes	8020	1.0	ug/L	ND	99	8
MTBE	8020	0.5	ug/L	ND	87	12
Diesel	8015M	0.05	mg/L	ND	85	3

ELAP Certificate NO:1753

Reviewed and Approved

John A. Murphy Laboratory Director





# North State Environmental Analytical Laboratory

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080

Phone: (650) 266-4563 Fax: (650) 266-4560

99-1570

Chain of Custody / Request for Analysis

Lab Job No.: \_\_\_\_\_ Page 1 of 1

Client: <b>SEMCO</b>	Report to: <b>BRENT WHEELER</b>	Phone: <b>415.474.4941</b>	Turnaround Time <b>5 DAY</b>
Mailing Address: <b>C/O EAMS 2760 SACRAMENTO ST. #6 SAN FRANCISCO, CA 94115</b>	Billing to: <b>SEMCO MODESTO, CA</b>	Fax: <b>415.474.4958</b>	
		PO# / Billing Reference: <b>99-0101</b>	Date: <b>10/1/99</b>
			Sampler: <b>B. WHEELER</b>

Project / Site Address: **WANJETTA HALL  
SCOOTERS AUTO REPAIR  
3600 MACARTHUR BLVD, OAKLAND, CA**

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	TPH-D (500/8015M)	TPH-D (3510/8015M)	MTBE (500/8015M)	Comments / Hazards
MW1-W	WATER	3-40ml VIALS	HCP/4°C	10/1/99 12:10	X		X	
MW1-W		LITER BOTTLE	4°C	12:10		X		
MW2-W		3-40ml VIALS	HCP/4°C	11:00	X		X	
MW2-W		LITER BOTTLE	4°C	11:00		X		
MW3-W		3-40ml VIALS	HCP/4°C	1:35	X		X	
MW3-W		LITER BOTTLE	4°C	1:35		X		

### ADDITIONAL INSTRUCTIONS:

- ① PASS ALL TPH-D SAMPLES THROUGH GLASS-FIBER FILTER PRIOR TO EXTRACTION
- ② CONFIRM ALL MTBE CONCENTRATIONS > ND WITH EPA 8260.

Relinquished by: <b>[Signature]</b>	Date: <b>10/1/99</b>	Time: <b>3:45p</b>	Received by: <b>[Signature]</b>	Lab Comments
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No.

2. Page 1 of 1

3. Document Number

NH- No 46549

4. Generator's Name and Mailing Address

SCOOTERS AUTO  
3600 MAR ARTHUR BL  
OAKLAND, CA 94619

Generator's Phone (510) 482-7302

5. Transporter Company Name

CLEARWATER ENVIRONMENTAL

6.

US EPA ID Number

CAR000007013

7. Transporter Phone

(510) 797-8511

8. Designated Facility Name and Site Address

ALVISO INDEPENDENT OIL  
5002 ARCHER STREET  
ALVISO, CA 95002

9.

US EPA ID Number

CAL000161743

10. Facility's Phone

(510) 797-8511

11. Waste Shipping Name and Description

DUMP WATER

12. Containers

No.

Type

13. Total Quantity

14. Unit W/Vol

a. Non-Hazardous waste, liquid

001

TT

25

G

15. Special Handling Instructions and Additional Information

Wear PPE  
Emergency Contact  
(510) 797-8511  
Attn: Kirk Hayward

Handling Codes for Wastes Listed Above

11a.

11b.

BOL 17010

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

SCOOTER

Scott Wilcox

Month Day Year  
10 6 99

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Joseph Riley

Joseph Riley

Month Day Year  
10 6 99

18. Discrepancy Indication Space

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 18.

Printed/Typed Name

Signature

Raul Adair

Raul Adair

Month Day Year  
10 6 99