CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A, Emeryville, Calfornia 94608
Telephone: 510-420-0700 Facsimile: 510-420-9170
www.CRAworld.com

October 1, 2009

Reference No. 120741

Mr. Jerry Wickham
Alameda County Department of Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Dear Mr. Wickham:

Re: Submittal – Additional Site Characterization Report
Gatzke / Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California 94602
Fuel Leak Case #RO0000516

On behalf of Ms. Naomi Gatzke, Conestoga-Rovers & Associates (CRA) is submitting this *Additional Site Characterization Report* for the subject site.

If you have any questions or comments regarding this document or the project, please contact Mark Jonas at (510) 420-3307.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Mark Jonas, P.G.

MJ/doh/6
Encl. *Work Plan*

c.c.: Mrs. Naomi Gatzke

ADDITIONAL SITE CHARACTERIZATION REPORT

GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA 94602

AGENCY CASE NO. RO0000516

Prepared by:
Conestoga-Rovers & Associates

5900 Hollis Street, Suite A
Emeryville, California
U.S.A. 94608

Office: 510-420-0700
Fax: 510-420-9170

web: http:\\www.CRAworld.com

OCTOBER 1, 2009
REF. NO. 120741 (7)
This report is printed on recycled paper.

TABLE OF CONTENTS

LIST OF FIGURES
(Following Text)

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

On behalf of Ms. Naomi Gatzke, Conestoga-Rovers & Associates (CRA) is submitting this *Additional Site Characterization Report* for the subject site. Work was performed under the December 23, 2008 *Work Plan, Gatzke/Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California*, conditionally approved by Alameda County Environmental Health Services (ACEH) in their April 29, 2009 letter (Appendix A). The project site manager for ACEH is Mr. Jerry Wickham.

The following tasks were performed:

- ***Vault:*** A boring was drilled within the buried concrete vault (location of former underground storage tanks), determining that the vault does not have a concrete bottom and the depth of the vault is approximately seven (7) feet.

- ***Sewer Easement:*** Municipal water, gas, sanitary, and storm lines around the site were identified and placed on attached figure.

- ***Soil Vapor Characterization:*** Soil vapor probe SG-10 was installed within the buried UST vault. All ten (10) soil vapor probes were sampled and soil vapor analyzed.

- ***Downgradient Water Quality:*** As identified by Underground Service Alert (USA) and a private utility locating service, a large subsurface sanitary sewer line did not allow adequate clearance to install monitoring well MW-7. Soil vapor probe SG-9 did not have detectable concentrations of chemicals of concern. Considering this information, Mr. Wickham (ACEH) approved not installing MW-7.

- ***Groundwater Monitoring:*** As requested by ACEH, groundwater monitoring was suspended.

Procedures and results are provided in the text of this report, supported with attached figures, tables, and appendices. Figures 1 and 2 are a vicinity map and site plan, respectively. Figure 3 present all the soil sampling results for total petroleum hydrocarbons as gasoline (TPHg) and benzene. Figure 4 present all grab groundwater results and the latest, April 2009, monitoring well results and groundwater contour. Figure 5 present previous and current soil sampling results. Table 1 has monitoring well construction details. Table 2 provides recent and historical groundwater level measurements, elevations, hydrochemical, and separate phase hydrocarbon (SPH) data. Table 3 is a compendium of soil analytical results. Table 4 presents soil vapor analytical data. Appendix A provides recent regulatory correspondence. Appendix B is

groundwater concentrations time-series trend analysis for groundwater sampled from monitoring wells. Appendix C is the standard operating procedure for vapor probe installation and sampling. Appendix D provides the log for boring B-6, inside the buried vault, and newly installed soil vapor probe SG-10. Appendix E is the approved permit. Appendix F is the analytical report for the August 2009 soil vapor sampling event. Appendix G is the soil vapor laboratory data sheets.

1.1 SITE INFORMATION

Site Address	1499 MacArthur Boulevard, Oakland
Site Use	Auto Service Business
Client and Contact	Mrs. Naomi Gatzke
Consultant and Contact Person	CRA, Mark Jonas, P.G.
Lead Agency and Contact Person	Alameda County Environmental Health Mr. Jerry Wickham, P.G.
Agency Case No.	RO0000516

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The site is located at 1499 MacArthur Boulevard in Oakland, California, currently operating as an automobile repair/service business. It is located in a commercial and residential area, bound by MacArthur Boulevard to the north, 14th Avenue to the east, and Interstate 580 to the south. Surrounding topography is relatively hilly and generally slopes to the south and southwest. Prior to 1990, the site apparently operated as a gasoline service station. Toward the west, south, and east elevated masonry walls exist. This site is at ground level with MacArthur Boulevard to the north. A buried concrete bottomless vault exists on-site, in the location where the former underground storage tanks (USTs) were removed.

2.2 GEOLOGY AND HYDROGEOLOGY

Geology: The site is located in the Coast Range Physiographic Province, characterized by northwest-southeast trending valleys and ridges. This region lies between the Pacific Ocean to the west and the Great Valley to the east. The oldest known bedrock in the Coast Range Province is marine sedimentary and volcanic rocks that form the Franciscan Assemblage. Geologic formations in the San Francisco Bay Region range in age from Jurassic to Recent Holocene.

The site is located to the west of the Oakland-Berkeley Hills on the East Bay Plain, which generally slopes gently to the west towards San Francisco Bay. The San Francisco Bay is located in a broad depression in the Franciscan bedrock resulting from an east-west expansion between the San Andreas and Hayward fault systems. Unconsolidated sediments in the East Bay Plain vary in thickness, with some areas up 1,000 ft thick. From oldest to youngest, the unconsolidated sediments are 1/ Santa Clara Formation, 2/ Alameda Formation, 3/ Temescal Formation, and 4/ artificial fill. The Early Pleistocene Santa Clara Formation consists of alluvial fan deposits inter-fingered with lake, swamp, river channel, and flood plain deposits, ranging from 300 to 600 ft thick. The Late Pleistocene Alameda Formation was deposited primarily in an estuarine environment and consists of alluvial fan deposits bound by mud deposits on the top and bottom of the formation. The Alameda Formation ranges from 26 to 245 ft thick and is subdivided into the Yerba Buena Mud, San Antonio, Merritt, and Young Bay Mud Members. The Early Holocene Temescal Formation is an alluvial fan deposit consisting primarily of silts and clays with some gravel layers. The Temescal Formation ranges from 1 to 50 ft thick, thinning toward the bay. Based on the Department of the Interior U.S. Geological Survey, *Geologic Map of the Hayward Fault Zone, 1995,* the site geology consists of undifferentiated Quaternary surficial deposits. Under the fill, the shallow unconsolidated sediments at the site are probably Temescal Formation.

Based on previous studies, soil material beneath the site consists of fill, clay, and clayey sand. The apparent fill consists of poorly graded sands, gravels, and clay materials, from 0 to 6 feet (ft) below ground surface (bgs). Underlying the fill material is clay approximately 4 to 8 ft in thickness. Below the clay is clayey sand, observed to the total explored depth of 20 ft bgs.

Hydrogeology: The site is located in the East Bay Plain Subbasin, Groundwater Basin No. 2-9.04 (Department of Water Resources 2003). The East Bay Plain Subbasin is a northwest trending alluvial basin, bounded on the north by San Pablo Bay, on the east by the contact with Franciscan basement rock, and on the south by the Nile Cone Groundwater Basin. The East Bay Plain Subbasin extends beneath the San Francisco Bay

to the west. The East Bay Plain Subbasin aquifer system consists of unconsolidated sediments of Quaternary age. These include the Santa Clara Formation, Alameda Formation, Temescal Formation, and artificial fill. The water-bearing formation at the site is currently undefined. In the project area most rainfall occurs between November and March. The average annual rainfall is approximately 23 inches.

Throughout most of the East Bay Plain in the region of the site, water level contours show that the general direction of groundwater flow is east to west, towards San Francisco Bay. Groundwater flow direction typically correlates to topography. Based on the regional topography and the results from years of groundwater monitoring, the groundwater beneath the site flows in a southwesterly direction, towards the San Francisco Bay. According to the California Regional Water Quality Control Board San Francisco Bay Region's Water Quality Control Plan (1995), this groundwater basin has been designated as existing beneficial use for municipal and domestic, industrial process, industrial service, and agricultural water supplies.

Previous to the fourth quarter 2000, the depth to groundwater had ranged from approximately 8.15 to 18.55 ft bgs and groundwater tended to mound in the vicinity of MW-2. Since the fourth quarter 2000 event, the depth to groundwater has ranged from approximately 4.88 to 14.05 ft bgs and the gradient is generally towards the southwest.

3.0 PREVIOUS ACTIVITIES AND INVESTIGATIONS

Following is a brief chronology for previous activities and environmental investigations:

October 1990 UST Removal Activities: Three USTs, including one (1) 500 gallon and two (2) 1,000 gallon gasoline fuel tanks, were removed from the site in October 1990 by K.T.W. & Associates (KTW). These USTs reportedly contained unleaded, premium, and regular gasoline. Product lines, fill risers, vent lines, and a fuel island were also apparently removed. As reported by KTW, "*Upon removal the structural integrity of the tanks were observed to be sound. The tanks were unwrapped, and were observed to contain no corrosion holes*." According to KTW, the product piping and fill pipe appeared sound, but the "*vent lines contained a large number of corrosion holes*." In addition, the overburden surrounding the tanks had "*very strong hydrocarbon odor*" and "*overburdened material contained discoloration*." The excavated overburdened, consisting of sand and aggregate, was reported removed. Hydrocarbons TPHg, along with benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in soil samples. According to KTW's October 17, 1990 letter report , a 100 gallon waste oil tank located on the west side of the

property near the fence line, was apparently not removed. But according to Mr. Hooshi Jhassemi, with Hooshi's Auto Service, the waste oil tank was removed.

1993 Subsurface Assessment and Monitoring Wells: In 1993, a subsurface assessment was reportedly conducted during which three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed at the site. Results of this assessment indicated that the soil and groundwater beneath the site were impacted by petroleum hydrocarbons that may have leaked from the former USTs. The report of this assessment and monitoring well installation was not available.

1996 Site Characterization: Century West Engineering Corporation (CWEC) performed site characterization activities in 1996, including twelve (12) geoprobe borings to collect soil and groundwater samples for analysis; installation of monitoring wells MW-4, MW-5, and MW-6; a soil vapor extraction (SVE) pilot test, and hydraulic slug tests. CWEC concluded that high concentrations of hydrocarbons exist in soil and groundwater. As a result of the pilot test, CWEC concluded that significant vacuum influence was observed and high vapor concentrations of volatile organic compounds (VOCs) were measured. As a result of the hydraulic slug tests, CWEC concluded that aquifer materials at locations MW-1 and MW-3 had approximate hydraulic conductivities (K) of 1.0×10^{-5} centimeters per second (cm/s) and 2.6×10^{-5} cm/s, respectively.

2000 to 2001 SVE Remediation: On September 19, 2000, Cambria installed a Soil Vapor Extraction (SVE) remediation system. Monitoring wells MW-1, MW-2, and MW-5 were connected to the system. On October 23, 2000, in-well air sparging was initiated in wells MW-2 and MW-5 to help remove any remaining SPH. The SVE system performed for eight months (September 2000 through April 2001) and was subsequently halted due to low hydrocarbon removal rates. A total of 16.5 pounds of hydrocarbons were removed during the SVE remedial activities.

2004 Closure Request and 2005-2008 Petition for Closure: On July 21, 2004 a *Closure Request* was submitted to ACEH. Additional clarification was provided in the October 6, 2004 *Clarification Regarding Closure Request.* Closure was denied by ACEH. On May 6, 2005 a *Petition for Closure* was submitted to the State Water Resources Control Board (State Board). After various discussions with the State Board and ACEH, the petition for closure was put on hold conditional on collecting additional data requested by ACEH in their May 11, 2006 letter. On July 20, 2006 a *Work Plan Additional Site Assessment* was submitted to ACEH, conditionally approved in a September 15, 2006 letter from ACEH. Additional characterization was performed in December 2006 and reported in the March 1, 2007 *Supplemental Site Characterization Report*. On June 20, 2007

CRA submitted a letter titled *Ready for Closure* to ACEH. This was based on a discussion with the State Board and ACEH that ACEH was to allow closure if soil gas risk is not significant, even with the understanding that petroleum hydrocarbons remain on-site. Even though soil gas results determined that vapor intrusion did not poise a significant risk, ACEH requested that the State Board not allow closure to proceed and that additional characterization was requested. On January 30, 2008, CRA submitted an *Abeyance Request Closure Petition.* The additional characterization was defined by ACEH in their September 2, 2008 letter.

- ***2006-2007 Supplemental Site Characterization:*** As requested by ACEH, with a scope of work presented in the conditionally approved July 20, 2006 a *Work Plan Additional Site Assessment*, additional site soil, groundwater, and soil vapor characterization was performed in December 2006 and January 2007. Results are documented in the March 1, 2007 *Supplemental Site Characterization Report.* Following are conclusions made in this report: 1/ Based on the 2006 soil sampling results, elevated concentrations apparently exists around 15 ft bgs, south and northwest of the excavation; 2/ Elevated concentration of TPHg and BTEX exist in groundwater; and 3/ None of the soil gas results exceed the residential and commercial/industrial environmental screening levels for vapor intrusion. The recommendation was, due to the finding of elevated concentrations of petroleum product in soil and groundwater at the site, to evaluate and select a remedial alternative in a proposed *Remedial Action Plan.* On October 25, 2007, CRA submitted a letter to ACEH titled "*Request Approval to Proceed with Remedial Action Plan.*" ACEH put this request on hold, pending additional characterization identified in their September 2, 2008 letter.

  2009 Additional Site Characterization: As a result of the May 1, 2007 *Supplemental Site Characterization Report*, ACEH requested additional characterization in a September 2, 2008 letter. As a result, a *Work Plan* was submitted to ACEH December 23, 2008. The *Work Plan* was conditionally approved in an April 29, 2009 letter from ACEH. The September 2009 *Additional Site Characterization Report*, presented herein, provides the additional characterization requested by ACEH.

  Groundwater Monitoring: Groundwater onsite has been monitored and sampled from January 1993 to the present. During the fourth quarter 2000, groundwater levels rose approximately 5 ft and have remained at these levels to date. However, groundwater levels are still within the well screen intervals of 5 to 20 ft. Since the fourth quarter of 2000, groundwater depths have fluctuated between 4.88 and 14.05 ft bgs. Seasonal groundwater depth fluctuations have been relatively flat with first and second quarter groundwater depths usually being slightly less than the third and fourth quarters. Recently, groundwater depth ranges from approximately 6 to 10 feet below ground

surface (bgs). Groundwater analytical results are presented in Table 2. Time-series analysis graphics for TPHg and benzene in groundwater are provided in Appendix B.

4.0 HYDROCARBON DISTRIBUTION

Following is a summary of hydrocarbon distribution in soil, groundwater, and soil vapor.

4.1 HYDROCARBON DISTRIBUTION IN SOIL

Fifty-four (54) soil samples have been collect at the site, principally analyzed for TPHg and BTEX. Figure 3 graphically presents the results for TPHg and benzene in soil. Table 3 provides soil sampling results. Samples collected below the former USTs, in October 1990, detected TPHg and BTEX, with the highest concentrations of TPHg and benzene at 450 mg/kg and 8.7, respectively. Organic lead was also found in one of the two samples analyzed, at a concentration of 0.15 mg/kg. The former USTs, removed in October 1990, were located in a bottomless concrete vault, with an approximate vault depth of 7 feet. Soil samples collected just outside of the vault, principally to the south, had elevated concentrations between 10 and 15 ft bgs. The highest concentration of TPHg in soil was sampled while installing MW-2, with 1,460 mg/kg TPHg at 10 ft bgs. While the highest concentration of benzene was found inside the vault, below the former UST, at 8.7 mg/kg, the next highest concentration of benzene was found just outside the vault in G-9 with 3.1 mg/kg benzene. Concentrations appear to generally decrease below approximately 15 ft bgs. Concentrations in soil also significantly decrease moving away from the former USTs and just beyond the vault. Samples collected on the east and north sides of the property, adjacent to 14th Avenue and MacArthur Boulevard respectively, are non-detect for hydrocarbons. Soil collected below product lines under the former dispenser island was non-detect for TPHg and 0.023 mg/kg for benzene. The concentrations identified above were all collected before 2000 to 2001 SVE remediation. The highest post-SVE remediation concentrations for TPHg and benzene are 560 mg/kg (B-5 at 15 ft bgs) and 0.54 mg/kg (B-2 at 15 ft bgs), respectively. In summary, hydrocarbons in soil appear to have been localized at the former USTs and just beyond the UST vault. Hydrocarbon soil concentrations also appear to decrease below approximately 15 ft bgs (but above 20 ft bgs), around 5 ft bgs and above, and after SVE remediation.

4.2 HYDROCARBON DISTRIBUTION IN GROUNDWATER

Groundwater has been characterized with six (6) monitoring wells, with the earliest groundwater monitoring event in 1993, and five (5) grab groundwater samples collected in 2006. Groundwater sampling results for TPHg, benzene, and MTBE are graphically presented in Figure 4 and also in Table 2. Elevated concentrations of hydrocarbons have been detected in the general area of the vault used for the USTs. The highest monitoring well concentrations for the April 2009 monitoring round, was 93,000 µg/L TPHg in MW-5, located northeast of the vault, and 450 µg/L benzene in MW-2, located just south of the vault. Sheen was identified in groundwater in both these monitoring wells. MTBE was generally non-detect for all sampling rounds. Appendix B presents time-series trend analysis for monitoring well results. In general, concentrations in groundwater decreased after SVE remediation, but appear persistent. Grab groundwater samples collected just beyond the vault, in December 2006, confirmed elevated concentration of hydrocarbons. These grab groundwater samples were collected from borings with depths of 20 ft bgs, except for B-3 with a depth of 16 ft bgs. The highest grab groundwater results for TPHg and benzene are 72,000 µg/L (B-5) and 1,100 µg/L (B-2), respectively. Groundwater concentrations moving away from the vault area, as represented by monitoring wells MW-3, MW-4, and MW-6, are generally non-detect for hydrocarbons. Monitoring well MW-4, located at the southwest corner of the raised portion of the site and at the most downgradient location, has been non-detect for hydrocarbons since January 2003 and generally non-detected prior to 2003. Based on groundwater samplings, elevated hydrocarbon concentrations of TPHg and BTEX appear to persist around the general area of the former USTs and vault. MTBE is not a chemical of concern for this site.

4.3 HYDROCARBON DISTRIBUTION IN SOIL VAPOR

Ten (10) soil vapor probes have been installed on-site. Eight (8) are located on the raised portion of the site and two (2) on the south side below the retaining wall. Eight (8) of the soil vapor probe were sampled in January 2007. Soil vapor probe SG-10 was installed August 13, 2009. All ten (10) soil vapor probes were sampled in August 2009. Figure 5 graphically presents soil vapor results for both sampling event. Table 4 provides a summary of soil vapor sampling results. The January 2007 sampling event only analyzed BTEX. All 2007 results were below the Regional Water Quality Control Board, San Francisco Bay Region's (Water Board), shallow soil gas screening levels for residential and commercial vapor intrusion risk (Water Board, 2007, Environmental Screening Levels, Table E). The August 2009 sampling event analyzed both TPHg and BTEX. Most BTEX concentrations were non-detected and detected concentrations were

well below the shallow soil gas screening levels. TPHg, in soil vapor, was detected in eight of the ten samples, with the highest concentration of 2,600 $\mu g/m^3$. These TPHg concentrations are still well below the shallow soil gas screening levels for residential and commercial land use. In summary, vapor intrusion is not a significant risk at this site.

5.0 2009 ENVIRONMENTAL INVESTIGATIONS

Following are procedures and results for the 2009 environmental investigation.

5.1 CONCRETE VAULT

As identified on the Figure 2 *Site Plan*, a subsurface concrete vault contained the three (3) former USTs within the site. After the USTs were removed in 1990, the vault was backfilled. After it was backfilled the area was surfaced with concrete. In time, the concrete subsided and a layer of asphalt brought it up to grade. The focus of the investigation was to determine if this vault had a bottom. On August 13, 2009, soil boring B-6 was drilled to a depth of 14.5 feet within the vault. Appendix D provides the boring log for B-6. It was determined that fill was present down to an approximate depth of 7 ft bgs and the buried vault did not have a hard (concrete) bottom.

5.2 SEWER EASEMENT

City of Oakland records were reviewed to determine subsurface utilities around the site. Figure 2 presents the approximate locations of these utilities. On the south side of the property, below the retaining wall, is an easement with a sanitary sewer at an estimated depth of 15 ft bgs. This depth is only approximate, based on visual observation after removing a manhole cover. The location of this sewer line prohibited installation of monitoring well MW-7, due to utility clearance requirements for drilling.

5.3 DOWNGRADIENT WATER QUALITY

The original *Work Plan* proposed installing a monitoring well near soil vapor probe SG-9. This monitoring well was to be identified as MW-7. As identified above, the location of a sanitary sewer line prohibited installation of MW-7, due to minimum clearance requirements for drilling in the location of a utility. After discussing the issue

with Mr. Wickham, with ACEH, it was determine that MW-7 would not be installed and the downgradient extent is adequately defined by non-detect soil vapor concentrations for TPHg and BTEX sampled in vapor probe SG-9. Results of the soil vapor samples are provided in Figure 5 and Table 4.

To the west of SG-9, samples from soil vapor probe SG-8 detected TPHg, benzene, and toluene in soil vapor. But, monitoring well MW-4, the most downgradient well on the raised portion of the property, consistently has groundwater with non-detect concentrations for TPHg and BTEX. Therefore, based on the MW-4 results, the downgradient extent is defined at the southwest corner on the raised portion of the property. But the results from soil vapor probe SG-8 may contradict this conclusion. But, based on the results from the downgradient monitoring well, any offsite hydrocarbons in groundwater is probably minimal. Downgradient from SG-8 is a relatively small sliver of open land, bounded with a chain link fence, and then the MacArthur (580) Freeway.

6.0 2009 SOIL VAPOR INVESTIGATION

This section of the report presents preparations and procedures for the installation of soil vapor probe SG-10, inside the buried vault used for the former USTs, and sampling soil vapor probes SG-1 through SG-10. Figure 5 and Table 4 provide the results for the August 2009 and January 2007 soil vapor sampling events. Installation of SG-10 and the August 2009 sampling event was performed in accordance with the December 23, 2008 *Work Plan*, as modified by the ACEH April 29, 2009 approval letter (Appendix A). General standard operating procedures are presented in Appendix C. Soil vapor probe SG-10 construction details are presented on the boring/construction log in Appendix D. Soil vapor sampling data sheets, for the August 2009 sampling event, are presented in Appendix G.

6.1 SUMMARY OF SOIL VAPOR INVESTIGATIONS

The objectives of the 2009 soil vapor investigation was defined in ACEH's September 2, 2008 letter (Appendix A) as vapor characterization inside the vault area and to "*… collect soil vapor samples from the existing probes during a period when soil moisture is low to confirm the previous results*." To meet these objectives, CRA installed soil vapor probe SG-10 August 13, 2009 inside the buried vault and sampled soil vapor probes SG-1 through SG-10 in August 25, 2009. In January 2007, soil vapor probes SG-1 through SG-9 (except SG-6) were sampled and analyzed. Procedures and results for installing

and sampling SG-1 through SG-9 are documented in Cambria's March 1, 2007 *Supplementation Site Characterization Report.*

6.2 SOIL VAPOR INSTALLATION AND SAMPLING PROCEDURES

Recently installed soil vapor probe SG-10 and sampled SG-1 through SG-10 are identified on Figure 5. Construction of the soil vapor probes generally follow the standard operating procedures presented in Appendix C, based on the Department of Toxic Substances Control's (DTSC) January 28, 2003 *Advisory-Active Soil Gas Investigation* (DTSC *Advisory*).

Installation and Sampling Dates: On August 13, 2009, CRA and Vapor Tech Services installed soil vapor probe SG-10. CRA sampled probes SG-1 through SG-10 August 25, 2009.

Personnel Present: Installation and sampling were completed by CRA Staff Geologist Bryan Fong and Glenn Reiss, with Vapor Tech Services, under the oversight of CRA Geologist Mark Jonas, California Professional Geologist No. 6392.

Permits: The Alameda County Public Works Agency (ACPWA) issued the subsurface drilling permit for the soil vapor probe. A copy of the permit is in Appendix E.

Drilling Company: Vapor Tech Services (C-57 License # 916085) of Berkeley, California installed the soil vapor probe using a hand auger.

Probe Materials: Soil vapor probe SG-10 was constructed following CRA's standard operating procedures (Appendix C) based on the January 28, 2003 DTSC's *Advisory-Active Soil Gas Investigation* guidelines. Vapor probe SG-10 was constructed using a ¼ inch Teflon sampling tube connected to a ¼ inch high density polyethylene screen. The boring was 5.5 ft bgs deep. The screen was set at 4.9 to 5 ft bgs. Monterey sand (#2/12) was placed around the screen from 4.5 to 5.5 ft bgs. Bentonite was placed from 0.3 to 4.5 ft bgs. The probe was capped with a grade-level well box. A soil vapor probe construction log is presented in Appendix D.

Probe Installation: Prior to probe installation, CRA marked out boring locations with white paint and notified underground service alert (USA) to have the underground utilities marked. CRA also completed a utility survey using a private company. CRA logged the soil cuttings in each boring, as presented in Appendix D. No soil samples were collected for analyses.

Soil Vapor Sampling: Soil vapor probes were sampled on August 25, 2009. Soil vapor sampling and leak testing were performed following the DTSC's January 28, 2003 *Advisory-Active Soil Gas Investigation* guidelines. Soil vapor sampling data sheets are presented in Appendix G. Purging and sampling were conducted at a rate of approximately 100 milliliters per minute (mL/min). Vapor samples were collected in one liter Summa canisters after removing approximately three purge volumes from the screen interval. Each sample was labeled, documented on a COC (Appendix F), and submitted to Air Toxics, Ltd. of Folsom, California for analysis. Soil vapor sampling forms are presented in Appendix G.

Soil Vapor Sample Analysis: Each soil vapor sample was analyzed according to the modified and approved *Work Plan* for TPHg (Modified Method TO-3), BTEX (Method TO-15), butane, isobutene, and propane (Modified TO-15, TICs), and oxygen, carbon dioxide, and methane (Modified Method ASTM D-1946). Laboratory data sheets are provided in Appendix F. Results are tabulated in Table 4 and presented in Figure 5.

6.3 SOIL VAPOR SAMPLING RESULTS

Soil vapor samples were collected from soil vapor probes SG-1 through SG-10 on August 25, 2009. Soil vapor sampling results are presented in Table 4 and on Figure 5. The analytical laboratory report and COCs are included in Appendix F. Following is a summary of analytical results. A discussion of the analytical results, with a comparison with the San Francisco Bay Regional Water Quality Control Board's (RWQCB) Environmental Screening Level (ESL) published in November 2007, are presented. The following Table 6-1 presents 2009 soil vapor results for TPHg and BTEX:

Table 6-1
2009 Soil Gas Results

Vapor Probe Sample ID	*TPHg (µg/m³)*	*Benzene (µg/m³)*	*Toluene (µg/m³)*	*Ethylbenzene (µg/m³)*	*m,p-Xylene (µg/m³)*	*o-Xylene (µg/m³)*
SG-1	940	ND<3.9	14	6.5	39	14
SG-2	1,500	ND<3.9	ND<4.6	ND<5.2	ND<5.2	ND<5.2
SG-3	ND<250	ND<3.9	ND<4.6	ND<5.4	ND<5.4	ND<5.4
SB-4	2,500	ND<3.9	ND<4.6	ND<5.4	ND<5.4	ND<5.4
SG-5	1,000	ND<4.1	ND<4.9	ND<5.6	ND<5.6	ND<5.6
SG-6	840	ND<3.7	ND<4.4	ND<5.0	ND<5.0	ND<5.0
SG-7	2,600	4.4	ND<4.6	ND<5.2	7.5	ND<5.2
SG-8	780	ND<3.9	7.8	ND<5.4	ND<5.4	ND<5.4
SG-9	ND<260	ND<4.1	ND<4.9	ND<5.6	ND<5.6	ND<5.6
SG-10	740	ND<3.1	41	ND<4.3	8.8	ND<4.3

Notes: µg/m³ = micrograms per cubic meters; ND<n = not detected (ND) above laboratory reporting limit,n

The following Table 6-2 compares the highest concentration with Regional Water Quality Control Board, San Francisco Bay Region (2007) Table E Environmental Screening Levels for vapor intrusion.

Table 6-2
Soil Gas Results for Benzene and Environmental Screening Levels

Analyte	*Frequency of Detection*	*Highest Conc. (µg/m3)*	*Shallow Soil Gas Screening Levels*	
			Residential Land Use (µg/m³)	*Commercial/Industrial Land Use (µg/m³)*
TPHg	8/10 (80%)	2,600	10,000	29,000
Benzene	1/10 (10%)	4.4	84	280
Toluene	3/10 (33%)	41	63,000	180,000
Ethylbenzene	1/10 (10%)	6.5	980	3,300
Xylenes	3/10 (33%)[1] 1/10 (10%)[2]	39	21,000	58,000

Notes: 1= m,p-Xylenes; 2 = o-Xylene; µg/m³ = micrograms per cubic meters

As identified by these results, none of the soil vapor results exceed the environmental screening levels for vapor intrusion.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Following are conclusions and recommendations

7.1 CONCLUSIONS

Following are conclusions from the site characterization study presented in this report:

- The buried vault used to contain the former USTs is bottomless, with a depth of approximately 7 feet.

- None of the soil vapor results exceed the residential and commercial/industrial environmental screening levels of vapor intrusion.

7.2 RECOMMENDATIONS

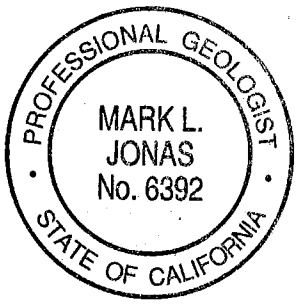
Following is our recommendation based on the findings presented in the Cambria March 1, 2007 *Supplemental Site Characterization Report* and the report presented herein:

- Due to the finding of elevated concentrations of petroleum product in soil and groundwater at the site, our recommendation is to evaluate and select a remedial alternative in a proposed *Remedial Action Plan*; or

- Allow the site to be closed based on no significant risk from vapor intrusion.

All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Bryan Fong



Mark Jonas, P.G.

Conestoga-Rovers & Associates, Inc. (CRA) prepared this document for use by our client and appropriate regulatory agencies. It is based partially on information available to CRA from outside sources and/or in the public domain, and partially on information supplied by CRA and its subcontractors. CRA makes no warranty or guarantee, expressed or implied, included or intended in this document, with respect to the accuracy of information obtained from these outside sources or the public domain, or any conclusions or recommendations based on information that was not independently verified by CRA. This document represents the best professional judgment of CRA. None of the work performed hereunder constitutes or shall be represented as a legal opinion of any kind or nature.

FIGURES

TABLES

APPENDIX A

AGENCY CORRESPONDENCE

APPENDIX B

GROUNDWATER CONCENTRATION TREND ANALYSIS

APPENDIX C

STANDARD OPERATING PROCEDURES

APPENDIX D

BORING/CONSTRUCTION LOGS 2009

APPENDIX E

PERMIT

APPENDIX F

ANALYTICAL LABORATORY REPORT

APPENDIX G

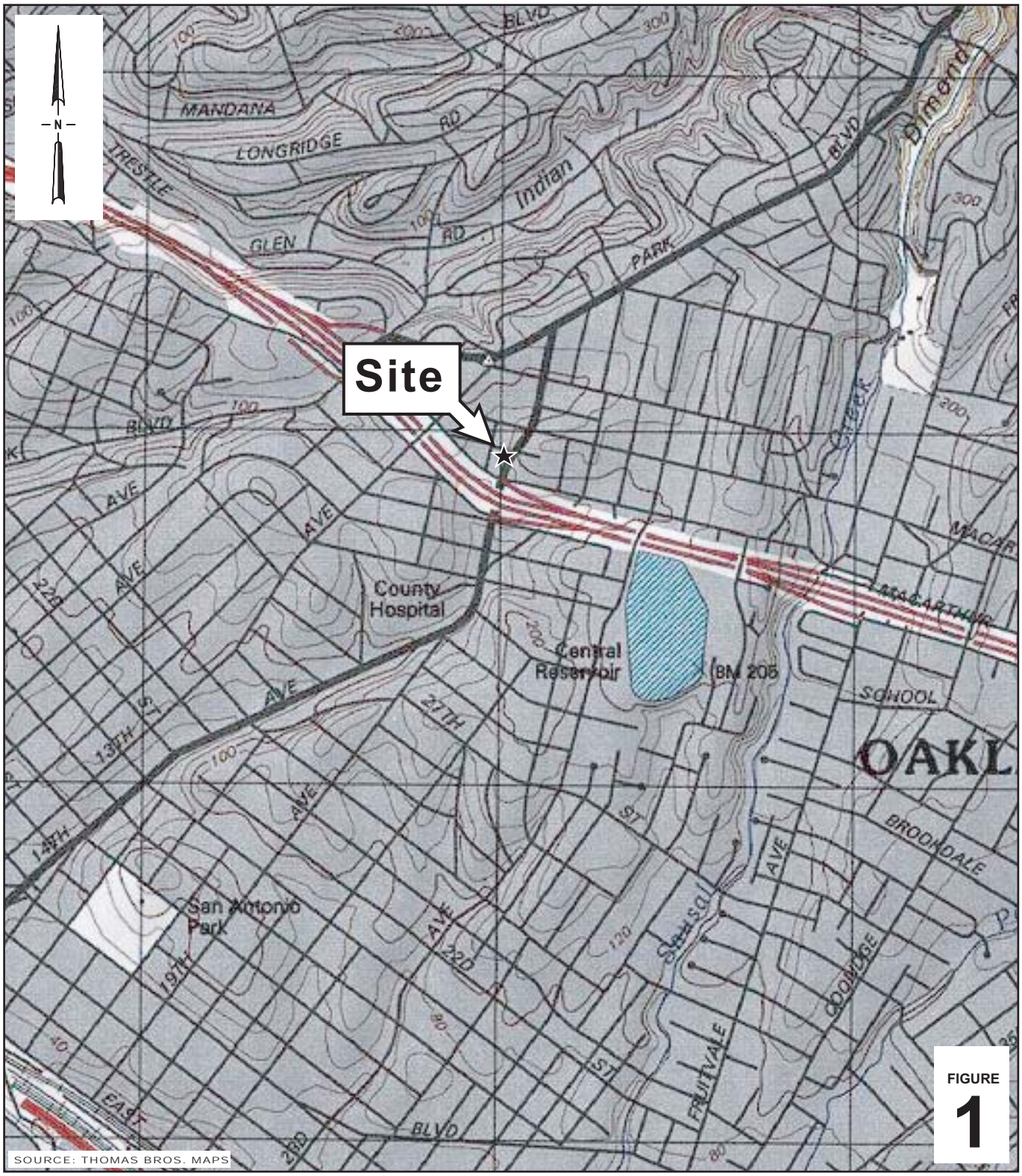
SOIL VAPOR SAMPLING DATA SHEETS

APPENDIX D

BORING/CONSTRUCTION LOGS
AUGUST 2009

FIGURES

07/08/04



H:\NELLA OIL\255 PARR\FIGURES\VICINITY-MAP.AI

FIGURE 1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Hooshi's Auto Service

1499 MacArthur Boulevard

Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

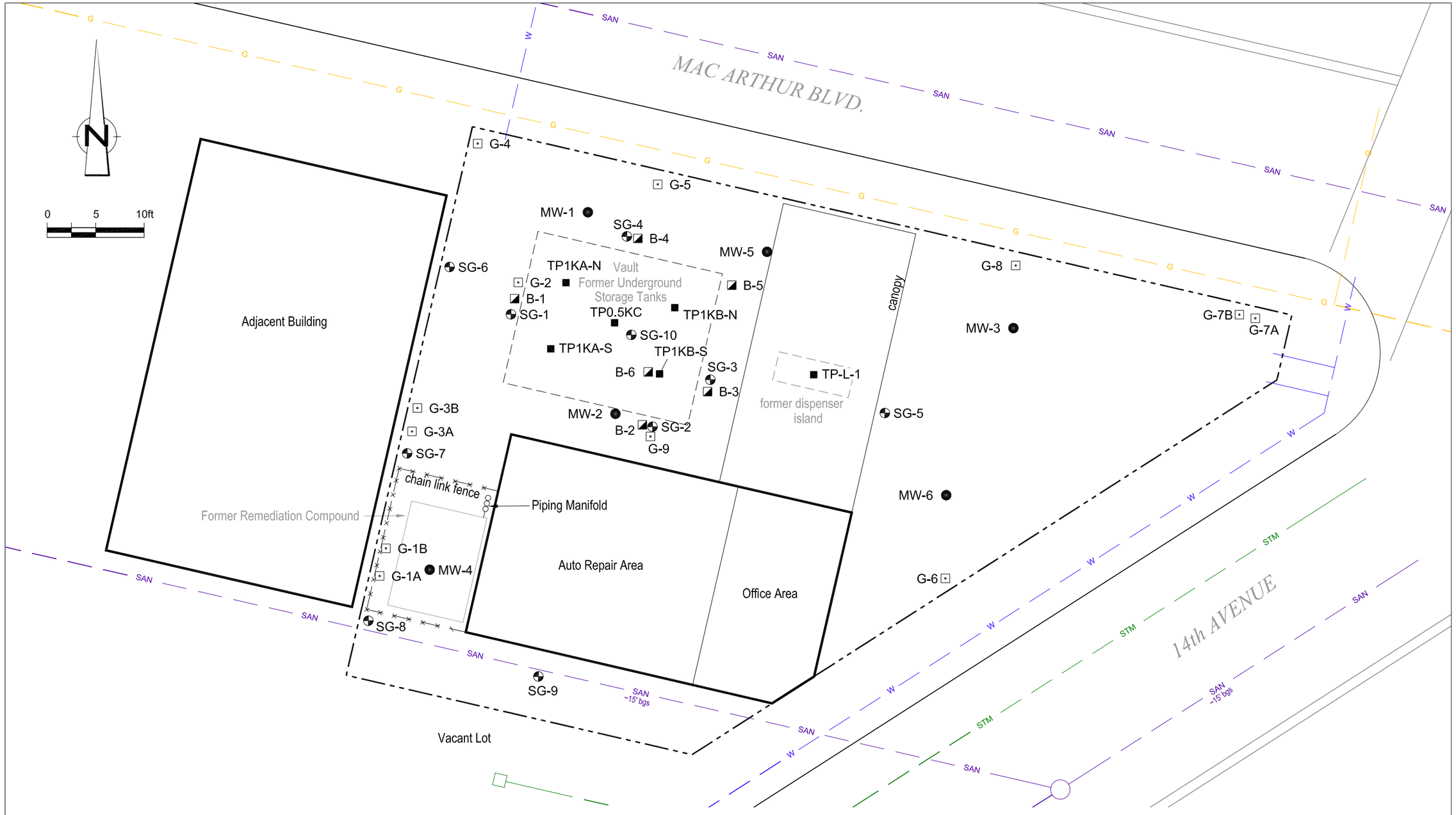
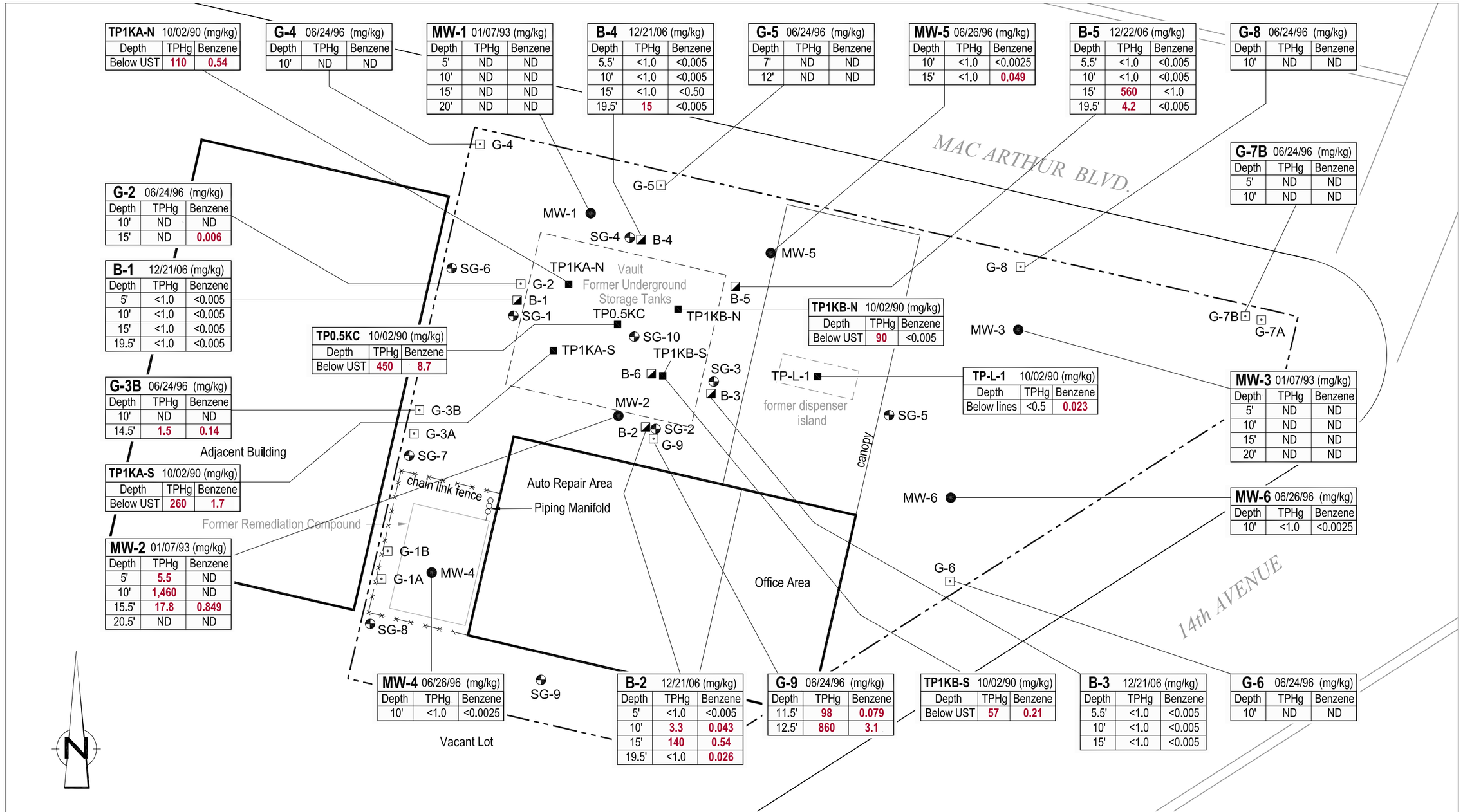


FIGURE 2

SITE PLAN
HOOSHI'S AUTO SERVICE
1499 MacARTHUR BOULEVARD
Oakland, California

I:\IR\6-chars\1207--\120741-Gatzke - Hooshi's, Oakland\120741-FIGURES\120741-EM002_SITEPLAN.DWG



TP1KA-N 10/02/90 (mg/kg)

Depth	TPHg	Benzene
Below UST	110	0.54

G-4 06/24/96 (mg/kg)

Depth	TPHg	Benzene
10'	ND	ND

MW-1 01/07/93 (mg/kg)

Depth	TPHg	Benzene
5'	ND	ND
10'	ND	ND
15'	ND	ND
20'	ND	ND

B-4 12/21/06 (mg/kg)

Depth	TPHg	Benzene
5.5'	<1.0	<0.005
10'	<1.0	<0.005
15'	<1.0	<0.50
19.5'	15	<0.005

G-5 06/24/96 (mg/kg)

Depth	TPHg	Benzene
7'	ND	ND
12'	ND	ND

MW-5 06/26/96 (mg/kg)

Depth	TPHg	Benzene
10'	<1.0	<0.0025
15'	<1.0	0.049

B-5 12/22/06 (mg/kg)

Depth	TPHg	Benzene
5.5'	<1.0	<0.005
10'	<1.0	<0.005
15'	560	<1.0
19.5'	4.2	<0.005

G-8 06/24/96 (mg/kg)

Depth	TPHg	Benzene
10'	ND	ND

G-7B 06/24/96 (mg/kg)

Depth	TPHg	Benzene
5'	ND	ND
10'	ND	ND

G-2 06/24/96 (mg/kg)

Depth	TPHg	Benzene
10'	ND	ND
15'	ND	0.006

B-1 12/21/06 (mg/kg)

Depth	TPHg	Benzene
5'	<1.0	<0.005
10'	<1.0	<0.005
15'	<1.0	<0.005
19.5'	<1.0	<0.005

TP0.5KC 10/02/90 (mg/kg)

Depth	TPHg	Benzene
Below UST	450	8.7

TP1KB-N 10/02/90 (mg/kg)

Depth	TPHg	Benzene
Below UST	90	<0.005

TP-L-1 10/02/90 (mg/kg)

Depth	TPHg	Benzene
Below lines	<0.5	0.023

MW-3 01/07/93 (mg/kg)

Depth	TPHg	Benzene
5'	ND	ND
10'	ND	ND
15'	ND	ND
20'	ND	ND

G-3B 06/24/96 (mg/kg)

Depth	TPHg	Benzene
10'	ND	ND
14.5'	1.5	0.14

TP1KA-S 10/02/90 (mg/kg)

Depth	TPHg	Benzene
Below UST	260	1.7

MW-2 01/07/93 (mg/kg)

Depth	TPHg	Benzene
5'	5.5	ND
10'	1,460	ND
15.5'	17.8	0.849
20.5'	ND	ND

MW-6 06/26/96 (mg/kg)

Depth	TPHg	Benzene
10'	<1.0	<0.0025

MW-4 06/26/96 (mg/kg)

Depth	TPHg	Benzene
10'	<1.0	<0.0025

B-2 12/21/06 (mg/kg)

Depth	TPHg	Benzene
5'	<1.0	<0.005
10'	3.3	0.043
15'	140	0.54
19.5'	<1.0	0.026

G-9 06/24/96 (mg/kg)

Depth	TPHg	Benzene
11.5'	98	0.079
12.5'	860	3.1

TP1KB-S 10/02/90 (mg/kg)

Depth	TPHg	Benzene
Below UST	57	0.21

B-3 12/21/06 (mg/kg)

Depth	TPHg	Benzene
5.5'	<1.0	<0.005
10'	<1.0	<0.005
15'	<1.0	<0.005

G-6 06/24/96 (mg/kg)

Depth	TPHg	Benzene
10'	ND	ND

EXPLANATION

- Monitoring well location
- Geoprobe boring location
- Geoprobe / Hand auger boring location
- Soil gas sampling location
- 1990 soil sample location
- <1.0 Not Detected (ND) above detection limit cited

FIGURE 3

SOIL SAMPLING RESULTS FOR TPHG AND BENZENE
HOOSHI'S AUTO SERVICE
1499 MacARTHUR BOULEVARD
Oakland, California

I:\IR\6-chars\1207--\120741-Gatzke - Hooshi's, Oakland\120741-FIGURES\120741-EM003.DWG

MW-1	04/15/09 (µg/L)		
Elev.	TPHg	Benzene	MTBE
172.58	110	<0.5	<5.0

B-4	12/21/06 (µg/L)		
TPHg	Benzene	MTBE	
7,600	110	<10	

B-5	12/22/06 (µg/L)		
TPHg	Benzene	MTBE	
72,000	850*	<100	

MW-5	04/15/09 (µg/L)		
Elev.	TPHg	Benzene	MTBE
172.84	93,000	56	<100

MW-3	04/15/09 (µg/L)		
Elev.	TPHg	Benzene	MTBE
172.83	NS	NS	NS

B-1	12/21/06 (µg/L)	
TPHg	Benzene	MTBE
13,000	37	<17

MW-2	04/15/09 (µg/L)		
Elev.	TPHg	Benzene	MTBE
172.92	17,000	450	<180

B-3	12/21/06 (µg/L)	
TPHg	Benzene	MTBE
300	1.9	<0.5

B-2	12/21/06 (µg/L)	
TPHg	Benzene	MTBE
40,000	1,100	<50

MW-6	04/15/09 (µg/L)		
Elev.	TPHg	Benzene	MTBE
172.45	NS	NS	NS

MW-4	04/15/09 (µg/L)		
Elev.	TPHg	Benzene	MTBE
170.51	NS	NS	NS

MAC ARTHUR BLVD.

14th AVENUE

0 5 10ft

Adjacent Building

Former Remediation Compound

Vault
Former Underground Storage Tanks

former dispenser island

canopy

chain link fence

Piping Manifold

Auto Repair Area

Office Area

Vacant Lot

G-4, G-5, G-8, G-7B, G-7A, G-3B, G-3A, G-1B, G-1A, G-6, G-9

MW-1, MW-2, MW-3, MW-4, MW-5, MW-6

B-1, B-2, B-3, B-4, B-5, B-6

SG-1, SG-2, SG-3, SG-4, SG-5, SG-6, SG-7, SG-8, SG-9, SG-10

TP1KA-N, TP1KA-S, TP1KB-N, TP1KB-S, TP0.5KC, TP-L-1

172.50, 172.00, 171.50, 171.00

0.096

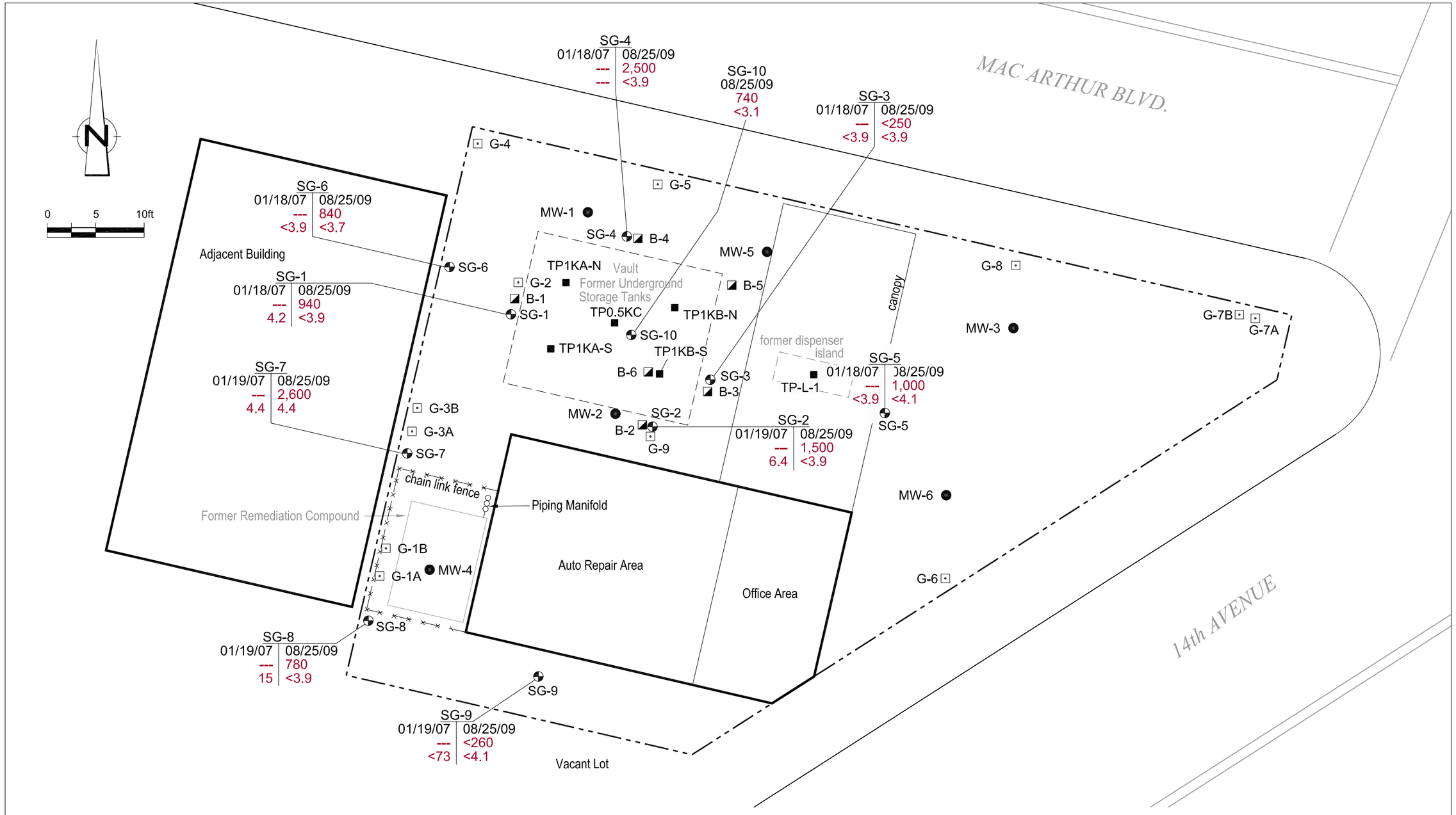
EXPLANATION

- Monitoring well location
- Geoprobe boring location
- Geoprobe / Hand auger boring location
- Soil gas sampling location
- 1990 soil sample location
- 171.00 — Groundwater elevation contour
- 0.096 — Groundwater flow direction and gradient
- NS — Not Sampled
- <0.5 — Not Detected (ND), above detection limit cited
- µg/L — Micrograms per Liter
- * — Benzene by EPA method 8260 B
- TPHg and Benzene by EPA method 8015 C / 8021 B
- MTBE by EPA method 8260 B

FIGURE 4

GROUNDWATER SAMPLING RESULTS
HOOSHI'S AUTO SERVICE
1499 MacARTHUR BOULEVARD
Oakland, California

I:\IR\6-chars\1207--\120741-Gatzke - Hooshi's, Oakland\120741-FIGURES\120741-EM004.DWG



EXPLANATION

- Monitoring well location
- Geoprobe boring location
- Geoprobe / Hand auger boring location
- Soil gas sampling location
- 1990 soil sample location

Sample ID	Sample designation
Date	Date(s) of sample
TPHg	Soil vapor data for TPHg and Benzene
Benzene	in micrograms per cubic meter (µg/m³)
---	Not Analyzed
<4.1	Not Detected (ND), above detection limit cited

FIGURE 5

SOIL VAPOR SAMPLING RESULTS FOR TPHG AND BENZENE
HOOSHI'S AUTO SERVICE
1499 MacARTHUR BOULEVARD
Oakland, California

I:\IR\6-chars\1207--\120741-Gatzke - Hooshi's, Oakland\120741-FIGURES\120741-EM005.DWG

TABLES

TABLE 1

MONITORING WELL CONSTRUCTION DETAILS
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	*Former ID*	*Date Installed*	*Borehole Diameter* (in)	*Depth of Borehole* (ft)	*Casing Diameter* (in)	*Screened Interval* (ft bgs)	*Filter Pack* (ft bgs)	*Bentonite Seal* (ft bgs)	*Cement* (ft bgs)	*TOC elevation* (ft above msl)
MW-1	B1	1/7/1993	NA	20*	2	NA	NA	NA	NA	180.83
MW-2	B2	1/7/1993	NA	20*	2	NA	NA	NA	NA	180.24
MW-3	B3	1/7/1993	NA	20*	2	NA	NA	NA	NA	179.55
MW-4	--	6/27/1996	NA	20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	180.12
MW-5	--	6/27/1996	NA	20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	180.09
MW-6	--	6/27/1996	NA	20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	179.63

Abbreviations / Notes

ft = feet
in = inches
ft bgs = feet below grade surface
ft above msl = feet above mean sea level
TOC = top of casing
NA = Not Available, Unknown
Elevations surveyed by Virgil Chavez Land Surveying.
* = Depth assume by downhole measurement.

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	Date	TOC Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft*)		(ft)	(ft msl**)	(ft)	←			(µg/L)		→	
2006 Grab Groundwater Analytical Data											
B-1*	12/21/2006	--	--	--	13,000	37 / 28	32 / ND<17	380 / 520	1,100 / 1,300	ND<17	a,i
B-2*	12/21/2006	--	--	--	40,000	1,100 / 1,100	1,300 / 1,300	990 / 840	6,400 / 5,900	ND<50	a,i
B-3*	12/21/2006	--	--	--	300	1.9 / 3.2	1.0 / 0.98	0.76 / 1.4	0.62 / 1.2	ND<0.5	a,i
B-4*	12/21/2006	--	--	--	7,600	110 / 87	32 / 22	470 / 520	520 / 450	ND<10	a,i
B-5*	12/22/2006	--	--	--	72,000	-- / 850	-- / 3,100	-- / 2,800	-- / 16,000	ND<100	a,b
Monitoring Well Groundwater Analytical Data											
MW-1	1/4/1993	--	--	--	539	130	12	22	13	--	
181.00	4/22/1993	--	--	--	1,130	75	8.0	38	11	--	
	12/27/1994	--	--	--	770	22	6.6	14	21	--	
	6/27/1996	14.11	166.89	--	3,300	260	34	59	170	80	
	12/10/1996	13.71	167.29	--	1,500	84	11	22	32	34	
	5/8/1998	13.85	167.15	--	3,200	300	12	62	36	ND<120	a
	8/17/1998	14.11	166.89	--	1,700	160	18	32	27	39	a
	11/4/1998	14.28	166.72	--	1,100	11	4.3	3.6	6.5	ND<50	a
	2/17/1999	13.41	167.59	--	320	200	47	72	75	57	a
	5/27/1999	14.16	166.84	--	2,500	81	12	29	41	ND<80	a
	8/19/1999	14.18	166.82	--	780	19	ND<0.5	5.7	4.5	28	a
180.83	11/23/1999	14.43	166.40	--	1,300	24	0.64	1.8	3.3	ND<100	a
	2/17/2000	13.85	166.98	--	1,300	60	9.1	22	19	22/16	a,b
	5/9/2000	14.01	166.82	--	2,700	55	13	19	25	34/29	a
	8/15/2000	14.24	166.59	--	--	--	--	--	--	--	
	12/1/2000	8.75	172.08	--	480	6.4	5.9	1.1	3.9	18 (21)	a
180.63	2/8/2001	8.49	172.14	--	64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.1/5.6	a,c
	4/9/2001	8.71	171.92	--	--	--	--	--	--	--	
	4/24/2001	7.90	172.73	--	77	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6/3.7	c
	8/6/2001	8.83	171.80	--	140	1.7	0.55	ND<0.5	0.63	5.8/4.0	a
	10/22/2001	8.91	171.72	--	120	0.92	ND<0.5	ND<0.5	0.59	11(10)	a
	2/1/2002	8.15	172.48	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	8.63	172.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	8.79	171.84	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/3/2002	8.90	171.73	--	110	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	f
	1/10/2003	7.93	172.70	--	ND<50	ND<0.5	0.74	ND<0.5	ND<0.5	ND<5.0	
	4/21/2003	8.17	172.46	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/9/2003	8.92	171.71	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/7/2003	9.13	171.50	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	8.20	172.43	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/2/2004	7.09	173.54	--	110	0.52	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	12/29/2004	6.15	174.48	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	7.15	173.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/6/2005	6.84	173.79	--	140	ND<0.5	0.55	ND<0.5	0.70	ND<5.0	c
	7/28/2005	7.36	173.27	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/14/2005	7.51	173.12	--	220	1.2	ND<0.5	0.56	0.75	ND<5.0	a
	1/30/2006	6.80	173.83	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/11/2006	6.60	174.03	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/14/2006	7.53	173.10	--	170	0.65	0.60	ND<0.5	ND<0.5	ND<5.0	a
	10/13/2006	7.47	173.16	--	200	0.93	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	1/12/2007	7.40	173.23	--	92	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c,i
	4/20/2007	7.14	173.49	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/30/2007	7.81	172.82	--	130	0.52	ND<0.5	ND<0.5	0.61	ND<10	a,c
	10/24/2007	8.15	172.48	--	150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c
	1/15/2008	7.79	172.84	--	86	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c
	4/17/2008	8.64	171.99	--	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c
	7/9/2008	9.09	171.54	--	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c
	10/28/2008	9.62	171.01	--	120	0.59	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	1/20/2009	8.39	172.24	--	81	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	*Date*	*TOC Depth to Groundwater*	*Groundwater Elevation*	*SPH Thickness*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
TOC (ft)*		*(ft)*	*(ft msl**)*	*(ft)*	←			*(µg/L)*		→	
	4/15/2009	**8.05**	**172.58**	**--**	**110**	**ND<0.5**	**1.5**	**ND<0.5**	**ND<0.5**	**ND<5.0**	**c**
MW-2	1/4/1993	--	--	--	149,000	21,700	25,000	ND	7,760	--	
180.45	4/22/1993	--	--	--	136,300	9,900	15,870	15,300	2,190	--	
	12/27/1994	--	--	--	94,000	11,000	18,000	2,700	16,000	--	
	6/27/1996	12.61	168.64	1.00	--	--	--	--	--	--	
	12/10/1996	11.10	169.55	0.25	--	--	--	--	--	--	
	5/8/1998	10.81	169.66	0.03	--	--	--	--	--	--	
	8/17/1998	12.16	168.31	0.02	--	--	--	--	--	--	
	11/4/1998	12.61	167.86	0.02	--	--	--	--	--	--	
	2/17/1999	9.82	170.66	0.04	--	--	--	--	--	--	
	5/27/1999	11.07	169.48	0.13	--	--	--	--	--	--	
	8/19/1999	12.79	167.68	0.02	--	--	--	--	--	--	
180.24	11/23/1999	12.14	168.20	0.12	--	--	--	--	--	--	
	2/17/2000	10.01	170.37	0.18	--	--	--	--	--	--	
	5/9/2000	10.88	169.38	0.03	--	--	--	--	--	--	
	8/15/2000	12.28	167.97	0.01	--	--	--	--	--	--	
	12/1/2000	8.03	172.21	Sheen Field	260,000	1,100	5,000	1,900	17,000	ND<100	a
	2/8/2001	7.86	172.38	Sheen Field	2,900	1.7	14	5.0	140	ND<5.0	c,d
	4/9/2001	7.95	172.29	Sheen Field	--	--	--	--	--	--	
	4/24/2001	6.90	173.34	Sheen Lab	56,000	360	980	1,000	4,700	ND<5.0	a,b
	8/6/2001	8.15	172.09	Sheen Field & Lab	54,000	680	1,900	1,500	7,800	ND<200/ND<10	a,b,j
	10/22/2001	8.22	172.02	Sheen Field & Lab	32,000	420	770	1,100	4,100	ND<250	a,b
	2/1/2002	8.07	172.17	--	26,000	310	490	920	1,600	ND<1,000	a
	4/19/2002	8.60	171.64	--	16,000	300	240	1,000	990	ND<100	a
	7/16/2002	8.21	172.03	--	5,700	120	18	340	15	ND<50	a
	10/3/2002	8.14	172.10	--	4,400	44	16	68	20	ND<25	a
	1/10/2003	6.98	173.26	Sheen Lab	16,000	300	320	580	830	ND<100	a,b
	4/21/2003	7.25	172.99	--	12,000	350	260	610	380	ND<50	a
	7/9/2003	7.99	172.25	--	3,300	51	7.4	47	2.8	ND<17	a
	10/7/2003	8.21	172.03	--	2,400	93	11	34	22	ND<50	a
	1/22/2004	7.24	173.00	--	5,900	240	130	350	200	ND<50	a
	4/2/2004	6.29	173.95	--	37,000	840	1,500	1,300	5,900	ND<500	a
	12/29/2004	5.37	174.87	--	9,300	240	230	330	880	ND<50	a
	1/27/2005	6.38	173.86	Sheen Field	37,000	1,200	1,400	1,300	5,200	<250	a
	4/6/2005	5.88	174.36	--	21,000	400	340	780	1,700	ND<100	a
	7/28/2005	6.61	173.63	--	35,000	690	1,200	1,200	5,200	ND<500	a
	10/14/2005	6.80	173.44	Sheen Field & Lab	14,000	380	120	780	1,200	ND<100	a, b
	1/30/2006	5.91	174.33	Sheen Field & Lab	22,000	310	140	1,300	2,800	ND<50	a,b,i
	4/11/2006	5.65	174.59	Sheen Field & Lab	18,000	280	170	780	1,400	ND<250	a,b,i
	7/14/2006	6.76	173.48	Sheen Field & Lab	49,000	340	140	1,600	4,800	ND<500	a,b
	10/13/2006	6.74	173.50	Sheen Field & Lab	21,000	490	73	600	1,100	ND<110	a,b,i
	1/12/2007	6.55	173.69	Sheen Field	16,000	320	170	600	2,100	ND<250	a,i
	4/20/2007	6.39	173.85	Sheen Field & Lab	15,000	340	160	420	1,700	ND<120	a,b
	7/30/2007	7.09	173.15	Sheen Field	17,000	430	170	740	2,100	ND<100	a
	10/24/2007	7.40	172.84	Sheen Field & Lab	14,000	370	40	240	490	ND<100 (8.3)	a,b
	1/15/2008	6.90	173.34	Sheen Field	13,000	440	180	510	1,700	ND<250	a,i
	4/17/2008	7.89	172.35	Sheen Field	29,000	410	200	830	2,700	ND<130	a
	7/9/2008	8.39	171.85	Sheen Field	21,000	370	170	760	2,200	ND<120	a
	10/28/2008	8.94	171.30	Sheen Field	24,000	550	140	810	1,600	ND<200	a
	1/20/2009	7.69	172.58	0.04	--	--	--	--	--	--	
	4/15/2009	**7.32**	**172.92**	Sheen Field	**17,000**	**450**	**120**	**540**	**1,400**	**ND<180**	**a**
MW-3	1/4/1993	--	--	--	1,610	772	14	11	ND	--	
179.94	4/22/1993	--	--	--	3,040	980	34	19	16	--	
	12/27/1994	--	--	--	2,600	180	9.0	7.2	13	--	
	6/27/1996	13.20	166.74	--	2,000	22	2.9	11	7.4	56	
	12/10/1996	13.13	166.81	--	970	ND<0.5	ND<0.5	ND<0.5	ND<0.5	24	

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	*Date*	*TOC Depth to Groundwater*	*Groundwater Elevation*	*SPH Thickness*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
TOC (ft)*		*(ft)*	*(ft msl**)*	*(ft)*	←			*(µg/L)*		→	
	5/8/1998	13.03	166.91	--	780	3.7	2.1	1.1	2.4	ND<32	a
MW-3 cont'd	8/17/1998	13.22	166.72	--	870	2.8	ND<0.5	ND<0.5	3.7	ND<5.0	b,c
	11/4/1998	13.31	166.63	--	770	1.6	4.4	2.0	6.9	ND<30	c
	2/17/1999	12.89	167.05	--	650	6.2	3.4	1.5	2.6	ND<5.0	b,c
	5/27/1999	12.32	167.62	--	570	1.5	1.2	0.72	1.1	ND<20	a
	8/19/1999	13.19	166.75	--	830	ND<0.5	1.9	ND<0.5	1.3	ND<20	c,d
179.55	11/23/1999	13.26	166.29	--	900	ND<0.5	1.8	0.56	1.4	ND<20	c,d
	2/17/2000	12.78	166.77	--	250	ND<0.5	1.5	ND<0.5	0.62	ND<5.0	d
	5/9/2000	12.92	166.63	--	690	ND<0.5	2.1	0.85	1.6	ND<5.0	a
	8/15/2000	13.19	166.36	--	610	ND<0.5	2.3	0.75	1.2	ND<5.0	c,d
	12/1/2000	7.50	172.05	--	120	ND<0.5	0.90	0.65	0.62	ND<5.0	c,d
	2/8/2001	7.20	172.35	--	87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c,d
	4/9/2001	7.33	172.22	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/6/2001	7.61	171.94	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/22/2001	7.58	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/1/2002	7.53	172.02	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5/8.5	
	4/19/2002	7.95	171.60	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.0/11	
	7/16/2002	7.68	171.87	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20/30	
	10/3/2002	7.78	171.77	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/10/2003	6.91	172.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	19/16	
	4/21/2003	7.21	172.34	--	--	--	--	--	--	--	
	7/9/2003	8.05	171.50	--	--	--	--	--	--	--	
	10/7/2003	8.19	171.36	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	7.13	172.42	--	--	--	--	--	--	--	
	4/2/2004	5.73	173.82	--	--	--	--	--	--	--	
	12/29/2004	4.88	174.67	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	5.80	173.75	--	--	--	--	--	--	--	
	4/6/2005	5.49	174.06	--	--	--	--	--	--	--	
	7/28/2005	6.02	173.53	--	--	--	--	--	--	--	
	10/14/2005	6.11	173.44	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/30/2006	5.45	174.10	--	--	--	--	--	--	--	
	4/11/2006	5.22	174.33	--	--	--	--	--	--	--	
	7/14/2006	6.15	173.40	--	--	--	--	--	--	--	
	10/13/2006	6.03	173.52	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/12/2007	5.98	173.57	--	--	--	--	--	--	--	
	4/20/2007	5.76	173.79	--	--	--	--	--	--	--	
	7/30/2007	6.44	173.11	--	--	--	--	--	--	--	
	10/24/2007	6.82	172.73	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/15/2008	6.45	173.10	--	--	--	--	--	--	--	
	4/17/2008	7.30	172.25	--	--	--	--	--	--	--	
	7/8/2008	7.79	171.76	--	--	--	--	--	--	--	
	10/28/2008	8.29	171.26	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	1/20/2009	7.05	172.50	--	--	--	--	--	--	--	--
	4/15/2009	**6.72**	**172.83**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
MW-4	6/27/1996	17.03	163.51	--	720	2	0.5	2.5	23	3.2	
180.54	12/10/1996	8.50	172.04	--	80	2.4	ND<0.5	ND<0.5	6.6	ND<2.0	
	5/8/1998	11.46	169.08	--	ND<50	0.60	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/17/1998	13.98	166.56	--	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	ND<5.0	
	11/4/1998	14.36	166.18	--	96	9.7	8.1	4.8	18	ND<5.0	a
	2/17/1999	8.39	172.15	--	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	ND<5.0	
	5/27/1999	12.80	167.74	--	ND<50	ND<0.5	1.0	ND<0.5	2.9	ND<5.0	
	8/19/1999	14.42	166.12	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
180.12	11/23/1999	14.63	165.49	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/17/2000	8.15	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/9/2000	12.81	167.31	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/15/2000	14.29	165.83	--	ND<50	2.1	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/1/2000	12.80	167.32	--	81	6.0	8.4	1.0	5.6	ND<5.0	a

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	*Date*	*TOC Depth to Groundwater*	*Groundwater Elevation*	*SPH Thickness*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
TOC (ft)*		*(ft)*	*(ft msl**)*	*(ft)*	←			*(µg/L)*		→	
	2/8/2001	12.57	167.55	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
MW-4 cont'd	4/9/2001	12.50	167.62	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/6/2001	14.00	166.12	--	59	1.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	10/22/2001	14.05	166.07	--	130	6.3	ND<0.5	0.88	ND<0.5	ND<5.0	a
	2/1/2002	13.47	166.65	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	13.55	166.57	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	14.05	166.07	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/3/2002	13.09	167.03	--	77	2.1	0.51	ND<0.5	ND<0.5	ND<5.0	a
	1/10/2003	12.04	168.08	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20/15	a
	4/21/2003	12.15	167.97	--	--	--	--	--	--	--	
	7/9/2003	12.90	167.22	--	--	--	--	--	--	--	
	10/7/2003	13.15	166.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	12.09	168.03	--	--	--	--	--	--	--	
	4/2/2004	8.97	171.15	--	--	--	--	--	--	--	
	12/29/2004	7.85	172.27	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	8.28	171.84	--	--	--	--	--	--	--	
	4/6/2005	8.07	172.05	--	--	--	--	--	--	--	
	7/28/2005	10.83	169.29	--	--	--	--	--	--	--	
	10/14/2005	11.49	168.63	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/30/2006	8.04	172.08	--	--	--	--	--	--	--	
	4/11/2006	8.03	172.09	--	--	--	--	--	--	--	
	7/14/2006	10.72	169.40	--	--	--	--	--	--	--	
	10/13/2006	11.25	168.87	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/12/2007	8.89	171.23	--	--	--	--	--	--	--	
	4/20/2007	9.22	170.90	--	--	--	--	--	--	--	
	7/30/2007	11.29	168.83	--	--	--	--	--	--	--	
	10/24/2007	10.08	170.04	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/15/2008	8.26	171.86	--	--	--	--	--	--	--	
	4/17/2008	10.84	169.28	--	--	--	--	--	--	--	
	7/9/2008	10.08	170.04	--	--	--	--	--	--	--	
	10/28/2008	11.90	168.22	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/20/2009	10.17	169.95	--	--	--	--	--	--	--	
	4/15/2009	**9.61**	**170.51**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
MW-5	6/27/1996	13.62	166.74	0.16	--	--	--	--	--	--	
180.23	12/10/1996	13.26	167.77	1.00	--	--	--	--	--	--	
	5/8/1998	13.15	167.11	0.04	--	--	--	--	--	--	
	8/17/1998	13.36	166.89	0.02	--	--	--	--	--	--	
	11/4/1998	13.52	166.73	0.02	--	--	--	--	--	--	
	2/17/1999	13.02	167.23	0.02	--	--	--	--	--	--	
	5/27/1999	13.80	166.71	0.35	--	--	--	--	--	--	
	8/19/1999	13.45	166.86	0.10	--	--	--	--	--	--	
180.09	11/23/1999	14.03	166.35	0.36	--	--	--	--	--	--	
	2/17/2000	13.28	167.02	0.26	--	--	--	--	--	--	
	5/9/2000	13.55	166.77	0.29	--	--	--	--	--	--	
	8/15/2000	13.58	166.54	0.04	--	--	--	--	--	--	
	12/1/2000	8.00	172.09	0.00	54,000	240	1,700	870	1,000	ND<300	c,d
180.04	2/8/2001	7.88	172.16	Sheen [Lab]	33,000	63	420	120	4,500	ND<50	a,b
	4/9/2001	7.97	172.07	0.00	--	--	--	--	--	--	
	4/24/2001	7.00	173.04	0.00	3,200	ND<1.0	11	7	260	ND<5.0	c,d
	8/6/2001	8.17	171.87	--	2,700	11	40	21	240	ND<5.0	a
	10/22/2001	8.15	171.89	Sheen [Lab]	20,000	200	1,200	330	2,900	ND<100	a,b
	2/1/2002	8.07	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	8.51	171.53	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	8.40	171.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	1.7	ND<5.0	
	10/3/2002	8.18	171.86	--	15,000	94	830	460	2,200	ND<500	a
	1/10/2003	6.95	173.09	--	290	ND<0.5	1.8	ND<0.5	17	ND<5.0	a
	4/21/2003	7.18	172.86	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	Date	TOC Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft*)		(ft)	(ft msl**)	(ft)	←			(µg/L)		→	
	7/9/2003	7.95	172.09	--	ND<50	ND<0.5	ND<0.5	ND<0.5	2.7	ND<5.0	
MW-5 cont'd	10/7/2003	8.22	171.82	--	9,800	120	340	180	2,000	ND<50	a
	1/22/2004	7.18	172.86	--	250	ND<0.5	0.82	ND<0.5	29	ND<5.0	d
	4/2/2004	6.23	173.81	--	4,300	6.3	18	59	750	ND<25	a
	12/29/2004	5.27	174.77	--	72	ND<0.5	0.78	ND<0.5	6.5	ND<5.0	d
	1/27/2005	6.25	173.79	--	3,300	<5.0	22	18	320	<50	a
	4/6/2005	5.90	174.14	Sheen Field	3,100	1.3	6.9	7.2	100	ND<10	c,d
	7/28/2005	6.50	173.54	--	18,000	53	230	130	2,100	ND<500	a
	10/14/2005	6.65	173.39	Sheen Field & Lab	23,000	140	370	240	2,100	ND<500	a, b
	1/30/2006	5.96	174.08	Sheen Field & Lab	2,500	1.0	8.7	ND<1.0	130	ND<10	b,c,d
	4/11/2006	5.63	174.41	Sheen Field	1,200	1.3	3.1	1.7	54	ND<5.0	a
	7/14/2006	6.65	173.39	Sheen Field & Lab	13,000	27	66	30	480	ND<50	a,b
	10/13/2006	6.60	173.44	Sheen Field & Lab	23,000	170	390	260	2,500	ND<250	a,b
	1/12/2007	6.50	173.54	Sheen Field & Lab	17,000	72	130	70	1,600	ND<250	a,b,i
	4/20/2007	6.22	173.82	Sheen Field & Lab	10,000	55	120	37	620	ND<50	a,b
	7/30/2007	6.95	173.09	Sheen Field	41,000	120	580	270	3,100	ND<250	a
	10/24/2007	7.27	172.77	Sheen Field & Lab	31,000	210	440	300	2,500	ND<200 (ND<5.0)	a,b,j
	1/15/2008	6.89	173.15	Sheen Field & Lab	14,000	87	120	39	1,400	ND<100	a,b
	4/17/2008	7.80	172.24	Sheen Field & Lab	21,000	35	150	71	1,100	ND<80	a,b
	7/9/2008	8.24	171.80	Sheen Field & Lab	30,000	130	600	290	4,000	ND<180	a,b
	10/28/2008	8.78	171.26	Sheen Field & Lab	36,000	270	780	530	4,600	ND<250	a,b
	1/20/2009	7.53	172.51	Sheen Field & Lab	38,000	220	530	270	4,400	ND<500 (ND<12)	a,b,j
	4/15/2009	**7.20**	**172.84**	**Sheen Field & Lab**	**93,000**	**56**	**220**	**140**	**1,400**	**ND<100**	**b,c,d**
MW-6	6/27/1996	18.55	161.48	--	ND	ND	ND	ND	ND	--	
180.03	12/10/1996	11.79	168.24	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.0	
	5/8/1998	11.62	168.41	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/17/1998	12.66	167.37	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/4/1998	13.56	166.47	--	68	3.8	3.7	2.8	11	ND<5.0	a
	2/17/1999	12.91	167.12	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/27/1999	13.03	167.00	--	ND<50	1.0	1.7	0.82	4.9	ND<5.0	
	8/19/1999	13.10	166.93	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
179.63	11/23/1999	13.58	166.05	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/17/2000	10.72	168.91	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/9/2000	11.71	167.92	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/15/2000	12.49	167.14	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/1/2000	8.64	170.99	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/8/2001	8.20	171.43	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/9/2001	8.53	171.10	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/6/2001	8.69	170.94	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/22/2001	8.75	170.88	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/1/2002	8.31	171.32	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	8.62	171.01	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	8.84	170.79	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/3/2002	8.71	170.92	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/10/2003	6.99	172.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	19 (16)	
	4/21/2003	7.15	172.48	--	--	--	--	--	--	--	
	7/9/2003	7.98	171.65	--	--	--	--	--	--	--	
	10/7/2003	8.28	171.35	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	7.15	172.48	--	--	--	--	--	--	--	
	4/2/2004	6.56	173.07	--	--	--	--	--	--	--	
	12/29/2004	5.63	174.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	6.66	172.97	--	--	--	--	--	--	--	
	4/6/2005	6.25	173.38	--	--	--	--	--	--	--	
	7/28/2005	6.71	172.92	--	--	--	--	--	--	--	
	10/14/2005	6.86	172.77	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/30/2006	6.35	173.28	--	--	--	--	--	--	--	
	4/11/2006	5.89	173.74	--	--	--	--	--	--	--	

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA
GATZKE / HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Well ID	*Date*	*TOC Depth to Groundwater*	*Groundwater Elevation*	*SPH Thickness*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*Notes*
TOC (ft)*		*(ft)*	*(ft msl**)*	*(ft)*	←			*(µg/L)*		→	
	7/14/2006	6.80	172.83	--	--	--	--	--	--	--	
MW-6 cont'd	10/13/2006	6.75	172.88	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/12/2007	6.61	173.02	--	--	--	--	--	--	--	
	4/20/2007	6.45	173.18	--	--	--	--	--	--	--	
	7/30/2007	6.98	172.65	--	--	--	--	--	--	--	
	10/24/2007	7.30	172.33	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/15/2008	6.93	172.70	--	--	--	--	--	--	--	
	4/17/2008	7.78	171.85	--	--	--	--	--	--	--	
	7/9/2008	8.22	171.41	--	--	--	--	--	--	--	
	10/28/2008	8.73	170.90	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/20/2009	7.55	172.08	--	--	--	--	--	--	--	
	4/15/2009	**7.18**	**172.45**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
Trip Blank	5/8/1998	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/4/1998	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/27/1999	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/23/1999	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/1/2000	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

Abbreviations and Methods:

TOC = Top of casing elevation
ft = Measured in feet
ft msl = elevation in feet mean sea level.
SPH = Separate phase hydrocarbons
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C
Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B
MTBE = Methyl tertiary butyl ether by EPA Method SW8021B or SW8260B in parenthesis.
µg/L = Micrograms per liter
-- = Not sampled, not analyzed, not applicable, or no SPH measured or observed.
ND<0.5 = Not Detected (ND) above Detection Limit.
x.x/y.y = Result of EPA Method SW8021B / Result of EPA Method SW8260B
TOC Depth to Groundwater = Groundwater depth measured in feet below TOC
Sheen = A sheen was observed on the water's surface.
Field = Observed in the field
Lab = Observed in analytical laboratory

Analytical Laboratory Notes:

a - Unmodified or weakly modified gasoline is significant.
b - Lighter than water immiscible sheen is present.
c - No recognizable pattern on laboratory chromatogram.
d - Heavier gasoline range compounds are significant (aged gasoline?).
f - One to a few isolated non-target peaks present on laboratory chromatogram.
i- Liquid sample contains greater than ~1 vol. % sediment
j - Sample diluted due to high organic content.

* = 2006 grab groundwater samples collected from 20 ft bgs.
** = Calculated groundwater elevation corrected for SPH by the relation: Groundwater Elevation = Well Elevation - Depth to Water + (0.8xSPH thickness (ft))
*** = Due to the air sparge system running during sampling, samples collected on 4/9/01 were anomalous. Well was resampled on 4/24/01 with the air sparge system off.

TABLE 3

SOIL ANALYTICAL DATA
HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*notes*
			←			*(mg/kg)*		→	
B-1-5	5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-1-10	10	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-1-15	15	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	**0.011**	ND<0.005	
B-1-19.5	19.5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-2-5	5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-2-10	10	12/21/06	**3.3**	**0.043**	ND<0.005	ND<0.005	ND<0.005	**0.01**	a
B-2-15	15	12/21/06	**140**	**0.54**	**0.74**	**0.83**	**6.1**	<0.20	a
B-2-19.5	19.5	12/21/06	ND<1.0	**0.026**	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-3-5.5	5.5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-3-10	10	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-3-15	15	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-4-5.5	5.5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-4-10	10	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-4-15	15	12/21/06	ND<1.0	ND<0.050	**0.060**	**1.2**	**2.7**	ND<0.050	
B-4-19.5	19.5	12/21/06	**15**	ND<0.005	ND<0.005	**0.0057**	**0.0097**	ND<0.005	b,m
B-5-5.5	5.5	12/22/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-5-10	10	12/22/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-5-15	15	12/22/06	**560**	ND<1.0	**3.2**	**9.6**	**69**	ND<1.0	a
B-5-19.5	19.5	12/22/06	**4.2**	ND<0.005	ND<0.005	**0.017**	**0.12**	ND<0.005	b,m
(MW-1) B1-5.0	5	01/07/93	ND	ND	ND	ND	ND	--	
10.0	10	01/07/93	ND	ND	ND	ND	ND	--	
15.0	15	01/07/93	ND	ND	ND	ND	ND	--	
20.0	20	01/07/93	ND	ND	ND	ND	ND	--	
(MW-2) B2-5.0	5	01/07/93	**5.5**	ND	ND	ND	ND	--	
10.0	10	01/07/93	**1,460**	ND	**6.44**	ND	**63.1**	--	
15.5	15.5	01/07/93	**17.8**	**0.849**	**0.125**	ND	**0.309**	--	
20.5	20.5	01/07/93	ND	ND	ND	ND	ND	--	
(MW-3) B3-5.0	5	01/07/93	ND	ND	ND	ND	ND	--	
10.0	10	01/07/93	ND	ND	ND	ND	ND	--	
15.0	15	01/07/93	ND	ND	ND	ND	ND	--	
20.0	20	01/07/93	ND	ND	ND	ND	ND	--	
MW-4-10	10	06/26/96	ND<1.0	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0025	--	
MW-5-10	10	06/26/96	ND<1.0	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0025	--	
MW-5-15	15	06/26/96	ND<1.0	**0.049**	**0.094**	**0.022**	**0.13**	--	
MW-6-10	10	06/26/96	ND<1.0	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0025	--	
G-2-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-2-15	15	06/24/96	ND	**0.006**	**0.009**	ND	**0.025**	--	
G-3B-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-3B-14.5	14.5	06/24/96	**1.5**	**0.14**	**0.012**	**0.052**	**0.18**	--	
G-4-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-5-7	7	06/24/96	ND	ND	ND	ND	ND	--	
G-5-12	12	06/24/96	ND	ND	ND	ND	ND	--	
G-6-10	10	06/24/96	ND	ND	ND	ND	ND	--	

TABLE 3

SOIL ANALYTICAL DATA
HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Sample ID	*Sample Depth (ft)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*notes*
			←			*(mg/kg)*		→	
G-7B-5	5	06/24/96	ND	ND	ND	ND	ND	--	
G-7B-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-8-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-9-11.5	11.5	06/24/96	**98**	**0.079**	**0.064**	**1.3**	**4.2**	--	
G-9-12.5	12.5	06/24/96	**860**	**3.1**	**11**	**14**	**97**	--	
TP1KA-N	see note	10/02/90	**110**	**0.54**	**2.4**	**1.6**	**9.5**	--	Below Reg. Gas UST Org. Lead = ND<0.08 mg/kg
TP1KA-S	see note	10/02/90	**260**	**1.7**	**15**	**5.4**	**35**	--	Below Reg. Gas UST Org. Lead = 0.15 mg/kg
TP0.5K-C	see note	10/02/90	**450**	**8.7**	**57**	**12**	**82**	--	Below Prem. Gas UST
TP1KB-N	see note	10/02/90	**90**	ND<0.005	ND<0.005	**0.61**	**1.3**	--	Below Unleaded Gas UST
TP1KB-S	see note	10/02/90	**57**	**0.21**	**0.18**	**0.35**	**1.4**	--	Below Unleaded Gas UST
TP-L-1	see note	10/02/90	ND<0.5	**0.023**	**0.022**	ND<0.005	**0.048**	--	Below Gas Dispenser

Notes:

TPHg = Total petroleum hydrocarbons as gasoline.

Benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8260 for 2006 soil samples.

ND<n = Not Detected (ND), above detection limit cited.

-- = Not analyzed.

a = Laboratory Note: Unmodified or weakly modified gasoline is significant.

b = Laboratory Note: Heavier gasoline range compounds are significant (aged gasoline?).

m = No recognizable pattern.

TABLE 4

SOIL VAPOR ANALYTICAL DATA
HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Sample ID	*Date Sampled*	*Depth (ft)*	*TPHg (ug/m^3)*	*Benzene (ug/m^3)*	*Toluene (ug/m^3)*	*Ethylbenzene (ug/m^3)*	*m,p-Xylene (ug/m^3)*	*o-Xylene (ug/m^3)*	*Butane (ppbv)*	*Isobutane (ppbv)*	*Propane (ppbv)*	*Oxygen (%)*	*Methane (%)*	*Carbon Dioxide (%)*
SG-1	1/18/2007	5	--	4.2	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	940	ND<3.9	14	6.5	39	14	ND	ND	ND	1.8	ND<0.00025	14
SG-2	1/19/2007	5	--	6.4	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	1,500	ND<3.9	ND<4.6	ND<5.2	ND<5.2	ND<5.2	ND	ND	ND	6.0	ND<0.00024	11
SG-3	1/18/2007	5	--	ND<3.9	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	ND<250	ND<3.9	ND<4.6	ND<5.4	ND<5.4	ND<5.4	ND	ND	ND	10	ND<0.00025	7.8
SG-4	1/18/2007	5	*Not sampled. Groundwater encountered in probe.*											
	8/25/2009	5	2,500	ND<3.9	ND<4.6	ND<5.4	ND<5.4	ND<5.4	ND	ND	ND	8.2	ND<0.00025	14
SG-5	1/18/2007	5	--	ND<3.9	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	1,000	ND<4.1	ND<4.9	ND<5.6	ND<5.6	ND<5.6	ND	ND	ND	1.4	0.0039	17
SG-6	1/18/2007	5	--	ND<3.9	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	840	ND<3.7	ND<4.4	ND<5.0	ND<5.0	ND<5.0	ND	ND	ND	14	ND<0.00023	6.2
SG-7	1/19/2007	5	--	4.4	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	2,600	4.4	ND<4.6	ND<5.2	7.5	ND<5.2	ND	ND	ND	18	0.00028	3.0
SG-8	1/19/2007	5	--	15	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	780	ND<3.9	7.8	ND<5.4	ND<5.4	ND<5.4	ND	ND	ND	10	0.0008	5.9
SG-9	1/19/2007	5	--	ND<73	--	--	--	--	--	--	--	--	--	--
	8/25/2009	5	ND<260	ND<4.1	ND<4.9	ND<5.6	ND<5.6	ND<5.6	ND	ND	ND	11	ND<0.00026	7.9
SG-10	8/25/2009	5	740	ND<3.1	41	ND<4.3	8.8	ND<4.3	ND	ND	ND	19	ND<0.00020	2.1
Duplicate Samples														
SG-1-Dup (field)	1/18/2007	5	--	3.9	--	--	--	--	--	--	--	--	--	--
SG-2-Dup (field)	1/19/2007	5	--	6.5	--	--	--	--	--	--	--	--	--	--
SG-2-Dup (lab.)	8/25/2009	5	--	--	--	--	--	--	--	--	--	6.0	ND<0.00024	10
SG-4-Dup (lab.)	1/19/2007	5	--	--	--	--	--	--	--	--	--	--	--	--
SG-4-Dup (lab.)	8/25/2009	5	2,600	ND<3.9	ND<4.6	ND<5.4	ND<5.4	ND<5.4	ND	ND	ND			
SG-7-Dup (field)	1/19/2007	5	--	ND<3.6	--	--	--	--	--	--	--	--	--	--
SG-5-Dup (field)	8/25/2009	5	8,800	--	--	--	--	--	--	--	--	--	--	--
SG-5-Dup (lab.)	8/25/2009	5	12,000	--	--	--	--	--	--	--	--	--	--	--
SG-5-Dup (lab.)	8/25/2009	5	17,000	--	--	--	--	--	--	--	--	--	--	--
SG-5-Dup (field)	8/25/2009	5	--	ND<4.1	10	ND<5.6	8.2	7.1	7.8	ND	ND	1.4	0.0040	17
SG-5-Dup (lab.)	8/25/2009	5	--	ND<4.1	ND<4.9	ND<5.6	ND<5.6	ND<5.6	ND	ND	ND	--	--	--

TABLE 4

SOIL VAPOR ANALYTICAL DATA
HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Sample ID	*Date Sampled*	*Depth (ft)*	*TPHg (ug/m^3)*	*Benzene (ug/m^3)*	*Toluene (ug/m^3)*	*Ethylbenzene (ug/m^3)*	*m,p-Xylene (ug/m^3)*	*o-Xylene (ug/m^3)*	*Butane (ppbv)*	*Isobutane (ppbv)*	*Propane (ppbv)*	*Oxygen (%)*	*Methane (%)*	*Carbon Dioxide (%)*

Abbreviations and Analyses:

ND<n = Not dectected (ND) above laboratory detection limit, n.

ug/m^3 = Microgram per cubic meter.

% = Percent

ppbv = Parts ber billion by volume

ft = Measured in feet

TPHg by EPA Method TO-3

Benzene, Toluene, Ethylbenzene, m,p-Xylenes, & o-Xylenes by modified EPA Method TO-15.

BTEX, Butane, Isobutane, Propane by EPA Method Modified TO-15/TICs

Oxygen, Methane, Carbon Dioxide by ASTM D-1946

APPENDIX A

AGENCY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

April 29, 2009

Ms. Naomi Gatzke
1545 Scenic View Drive
San Leandro, CA 94577

Mr. Hooshi Ghassemi
1499 MacArthur Blvd.
Oakland, CA 94602-1045

Subject: Fuel Leak Case No. RO0000516 and Geotracker Global ID T0600100714, Hooshi's Auto Service, 1499 MacArthur Blvd., Oakland, CA 94602

Dear Ms. Gatzke and Mr. Ghassemi:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the document entitled, "*Work Plan, Gatzke/Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California*," dated December 23, 2008. Due to an error in document tracking, review of this document was delayed. We apologize for the delay in reviewing and providing comments on the December 23, 2008 Work Plan. The Work Plan, which was prepared on your behalf by Conestoga-Rovers & Associates, proposes monitoring well and soil vapor probe installation and sampling.

The proposed scope of work is generally acceptable and may be implemented provided that the technical comments below are addressed and incorporated during the field investigation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. We request that you address the technical comments below, perform the proposed work, and send us the reports requested below.

TECHNICAL COMMENTS

1. **Soil Vapor Sampling Methods.** The soil vapor purging, sampling, and leak detection methods in Appendix C (Standard Field Procedures for Vapor Point Installation and Sampling) are somewhat generalized. We request that soil vapor samples be collected in accordance with guidance in the "*Advisory – Active Soil Gas Investigations*," (Department of Toxic Substances Control and California Regional Water Quality Control Board January 28, 2003).

2. **Soil Vapor Analytical Methods.** The proposed use of EPA Method TO-15 for soil vapor analyses is acceptable. The use of EPA Method 8260 for soil vapor analyses is also acceptable and may be more cost effective provided that a reporting limit of 85 micrograms per liter (µg/L) can be achieved for benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition to the proposed analyses, all soil vapor samples must be analyzed for O_2, CO_2, and

methane using ASTM D-1946. Please present the soil vapor sampling results in the Site Investigation Report requested below.

3. **Proposed Well MW-7.** Section 4.2 of the Work Plan refers to the general guidance for well installation in Appendix B but does not indicate whether soils will be logged, screened, or sampled during drilling. We request that soils be continuously sampled during drilling for logging and screening. Soil samples are to be collected for laboratory analysis from any zones where visible staining, odor, or elevated PID readings are observed. If no visible staining, odor, or elevated PID readings are observed, collection of soil samples is not required. The Work Plan indicates that a 15-foot well screen will be installed. Please note that although the existing wells are 20-feet deep at the site, the proposed location of MW-7 is approximately 10 feet lower than the remainder of the site. In order to sample the shallow groundwater zone apparently impacted at the site, we request that proposed well MW-7 have no greater than a 5-foot screen interval and be no deeper than 10 feet bgs Please present the results of well installation including the boring log and well completion information in the Site Investigation Report requested below.

4. **Groundwater Monitoring.** Quarterly groundwater monitoring is not required for this site and should be suspended. At the time that proposed well MW-7 is sampled, we request that you gauge water levels in all existing wells but sampling of the existing wells is not required. The groundwater sample from well MW-7 is to be analyzed for TPH as gasoline, BTEX, and MTBE. The analytical methods used for the First Quarter 2009 groundwater monitoring event are acceptable for analysis of the groundwater sample from MW-7. Please present the results from sampling of well MW-7 in the Site Investigation Report requested below.

5. **Table 2.** In any future reports where Table 2 is presented, please adjust the page format so that the notes appear on the same page as the analytical data they pertain to.

6. **Table 4.** Table 4 shows the soil vapor results in mg/m^3. The correct unit for these results is $\mu g/m^3$. Please correct the units in future reports where these results are presented.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Jerry Wickham), according to the following schedule:

- **September 9, 2009** – Site Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at 510-567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Mark Jonas, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

Jonas, Mark

From: Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]
Sent: Wednesday, August 05, 2009 1:44 PM
To: Jonas, Mark
Cc: Fong, Bryan
Subject: RE: Conflict Subsurface Utilities & MW-7 (proposed) - Gatzke 120741, RO0000516

Mark,

As discussed in our telephone discussion today, installation of well MW-7 does not appear to be warranted and may be omitted from the proposed field investigation for case RO0516.

Regards,

Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
510-567-6791
jerry.wickham@acgov.org

From: Jonas, Mark [mailto:mjonas@craworld.com]
Sent: Tuesday, August 04, 2009 10:43 AM
To: Wickham, Jerry, Env. Health
Cc: Fong, Bryan
Subject: Conflict Subsurface Utilities & MW-7 (proposed) - Gatzke 120741, RO0000516
Importance: High

Dear Jerry:
We're scheduled to install MW-7 (see Figure 7 attached Work Plan) and the other field work at Gatzke (RO0000516) August 13-14, 2009. Today (Tuesday, August 4th) we are on-site with our private utility surveyor. In the area where MW-7 is proposed are sanitary and storm sewer lines (behind the building). See attached picture. The area the gate accesses is the location of the sanitary and storm sewer lines. Therefore, we cannot put MW-7 is the location accessible by the gate. The area between the accessible area and the freeway is fenced and has no gate access. This leaves the sidewalk west (left) of the telephone pole as the only other area to place MW-7. This would require an encroachment permit, resulting in a multi-week delay due to City of Oakland processing time for the encroachment permit.

Questions:
1/ Should we proceed with moving the proposed drilling location for MW-7 to the sidewalk?
2/ Should we not install MW-7?

Please respond as soon as you can, so we can plan accordingly. Thank you for your consideration.

Sincerely,

Mark Jonas
Mark Jonas, P.G.
Conestoga-Rovers & Associates, Inc.
5900 Hollis Street, Suite A
Emeryville, California 94608
510/420-3307 direct
510/420-9170 fax

www.CRAworld.com

Jonas, Mark

From: Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]
Sent: Wednesday, September 09, 2009 1:39 PM
To: Jonas, Mark
Cc: Fong, Bryan
Subject: RE: Extension Request, Site Char. Rpt - Gatzke 120741, RO0000516

Mark:

Based upon your request, the schedule for report submittal on the above referenced site is extended to September 25, 2009.

Regards,

Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
510-567-6791
jerry.wickham@acgov.org

From: Jonas, Mark [mailto:mjonas@craworld.com]
Sent: Wednesday, September 09, 2009 12:22 PM
To: Wickham, Jerry, Env. Health
Cc: Fong, Bryan
Subject: Extension Request, Site Char. Rpt - Gatzke 120741, RO0000516

Dear Jerry:
For the Gatzke/Hooshi's site (RO0000516) all field work is complete, including soil vapor sampling, and all analytical results have been received. We are working on the Site Characterization Report and request an extension for submittal to September 25, 2009. We expect to submit it sooner, if possible.

Thanks for working through the various issues. The vault did not have a bottom.

Sincerely,
Mark Jonas

Mark Jonas, P.G.
Conestoga-Rovers & Associates, Inc.
5900 Hollis Street, Suite A
Emeryville, California 94608
510/420-3307 direct
510/420-9170 fax

www.CRAworld.com

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 2, 2008

Ms. Naomi Gatzke
1545 Scenic View Drive
San Leandro, CA 94577

Mr. Hooshi Ghassemi
1499 MacArthur Blvd.
Oakland, CA 94602-1045

Subject: Fuel Leak Case No. RO0000515 and Geotracker Global ID T0600100714, Hooshi's Auto Service, 1499 MacArthur Blvd., Oakland, CA 94602

Dear Ms. Gatzke and Mr. Ghassemi:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the document entitled, "*Supplemental Site Characterization Report, Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California*," dated March 1, 2007. The report, which was prepared on your behalf by Conestoga-Rovers & Associates, presents the results from soil, soil vapor, and groundwater sampling. Total petroleum hydrocarbons as gasoline (TPHg) were detected in grab groundwater samples from borings around the perimeter of the former tank pit at concentrations up 72,000 micrograms per liter. Benzene was detected in grab groundwater samples from borings around the perimeter of the former tank pit at concentrations up 1,000 micrograms per liter. Based on soil and groundwater analytical results from the 2006 sampling, the report recommended the preparation of a Remedial Action Plan.

Prior to preparation of a Remedial Action Plan, we request that you address the following technical comments and send us the reports described below.

TECHNICAL COMMENTS

1. **Concrete Vault.** Based upon our review of the case file, the three former underground storage tanks were within an underground concrete vault. The vault is shown on a photo of the exposed tanks but is not shown on site maps or described in the tank removal report (attached). During tank removal, five soil samples were reportedly collected beneath the tanks from the fill-natural materials interface; however, the depth of the samples below ground surface is not reported. It is also no reported as to whether the concrete vault had a bottom layer of concrete or whether the structure was left in place. Prior to proposing remediation in this area, we request that you confirm whether the concrete vault remains in place, whether the concrete vault has a bottom, and the depth of the bottom of the vault, if present. Please present plans to obtain this information in the Work Plan requested below.

2. **Downgradient Water Quality.** Although the hydraulic gradient has been seasonally variable, the predominant hydraulic gradient appears to be generally toward the south, which is consistent with the topography and regional groundwater flow direction. Monitoring well MW-4 is the only well that appears to be downgradient from the source area. During water level measurements on April 17, 2008, the groundwater elevation in well MW-4 was more than 3 feet lower than the groundwater elevation in source area well MW-2. This difference in water levels over the short distance between well MW-4 and the former UST tank pit indicates that the hydraulic connection between well MW-4 and the source area is poor. Therefore, well MW-4 may not be effective in monitoring downgradient water quality. In order to monitor potential off-site migration and the effectiveness of any proposed remediation, we request that you install one downgradient monitoring well in the area of soil vapor sampling point SG-9.

3. **Sewer Easement.** An area labeled "vacant lot" on site plans is located south of the site buildings and is lower in elevation than the remainder of the site. A retaining wall that is approximately 8 feet high is present between the "vacant lot" and the remainder of the site. The "vacant lot" is within the same assessor's parcel as the remainder of the site. A sewer easement exists on the "vacant lot" directly south of the retaining wall. We request that you present a map showing the type and depth of utilities within the sewer easement.

4. **Soil Vapor Sampling.** Soil vapor samples were previously collected in January 2007. Due to the potential for the concrete vault discussed in technical comment 1 to act as a subsurface barrier, we request that a soil vapor sample be collected from the area inside the concrete vault. We also request that you collect soil vapor samples from the existing probes during a period when soil moisture is low to confirm the previous results. Please present plans for soil vapor sampling in the Work Plan requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **October 17, 2008** – Work Plan
- **November 10, 2008** – Third Quarter 2008 Groundwater Monitoring Report
- **January 30, 2009** – Fourth Quarter 2008 Groundwater Monitoring Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachment: KTW & Associates, *Tank Closure Report,* October 17, 1990

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Mark Jonas, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A, Emeryville, California 94608
Telephone: 510-420-0700 Facsimile: 510-420-9170
www.CRAworld.com

October 25, 2007

Ms. Donna Drogos
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Request Approval to Proceed with Remedial Action Plan**
Gatzke / Hooshi's Auto Service
1499 MacArthur Boulevard, Oakland, California 94602
Fuel Leak Case #RO0000516
CRA Project #120741

Dear Ms. Drogos:

On behalf of Ms. Naomi Gatzke, Conestoga-Rovers & Associates, Inc. (CRA) is notifying Alameda County Environmental Health (ACEH) that we would like approval to proceed with preparation of a *Remedial Action Plan*, as recommended in Cambria's March 1, 2007 *Supplemental Site Characterization Report.* This supersedes our June 20, 2007 letter titled *Ready for Closure.* This change is a result of a conversation you had with Mr. Ben Heningburg (State Water Resource Control Board). By approving this request we are assuming that you consider addition remediation is necessary.

Please call me at 510/420-3307 if you have any questions regarding this correspondence or the project.

Sincerely,
Conestoga-Rovers & Associates, Inc.

Mark Jonas, P.G.
Senior Project Manager

cc: Ms. Naomi Gatzke, 1545 Scenicview Drive, San Leandro, CA 94577
Ben Heningburg, State Water Resources Control Board, P.O. Box 2231, Sacramento, California 95812

CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A, Emeryville, California 94608
Telephone: 510-420-0700 Facsimile: 510-420-9170
www.CRAworld.com

June 20, 2007

Ms. Donna Drogos
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Ready for Closure**
Gatzke / Hooshi's Auto Service
1499 MacArthur Boulevard, Oakland, California 94602
Fuel Leak Case #RO0000516
CRA Project #120741

Dear Ms. Drogos:

On March 1, 2007 we submitted a *Supplemental Site Characterization Report* for the Gatzke-Hooshi's site (Fuel Leak Case #RO0000516). Soil gas results were all well below residential and commercial Environmental Screening Levels (ESLs). Concentrations of petroleum hydrocarbons currently exist in soil and groundwater at the site. The 2004 *Closure Request* and 2005 *Petition for Closure* were submitted prior to my involvement with this project, but after some insight from Ben Heningburg (State Water Resources Control Board), apparently the only outstanding condition for closure is soil gas. As seen in the March 1, 2007 report, soil gas is not a significant risk. My recommendation in the March 1, 2007 report was to implement remediation due to remaining concentrations in soil and groundwater. This recommendation may have been in error. Based on historical discussions (per comm. Ben Heningburg with the previous site manager and ACEH), ACEH was to allow closure if soil gas risk is not significant, even with the understanding that petroleum hydrocarbon concentrations remain onsite.

Please reconsider this site for closure under our existing petition. Please get back to me as soon as possible on this issue. My direct telephone line is 510/420-3307.

Sincerely,
Conestoga-Rovers & Associates, Inc.

Mark Jonas, P.G.
Senior Project Manager

cc: Ms. Naomi Gatzke, 1545 Scenicview Drive, San Leandro, CA 94577
Ben Heningburg, State Water Resources Control Board, P.O. Box 2231, Sacramento, California 95812

I:\IR\Gatzke (Hooshi's) - Oakland\Correspondence\2007\Letter 6-20-07 (2) CRA to ACEH Closure- Gatzke-Hooshi's 120741.doc

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 15, 2006

Naomi Gatzke
1545 Scenic View Dr.
San Leandro, CA 94577

Dear Ms. Gatzke:

Subject: Fuel Leak Case No. RO0000516, Hooshi's Auto Service,
1499 MacArthur Blvd., Oakland, CA 94602

Alameda County Environmental Health (ACEH) staff has recently reviewed the "Work Plan Additional Site Assessment", dated July 20, 2006, prepared by Cambria Environmental Technology, Inc. The Workplan proposes soil, groundwater, and soil gas sampling. We request that you address the following technical comments, perform the proposed work, and send us the reports requested below.

TECHNICAL COMMENTS

1. Source Area Verification Soil Sampling - The Workplan proposes that soil samples be collected from 5, 10, and 15 ft bgs. Instead, soil samples shall be collected at changes of lithology, at the soil/groundwater interface, and at areas of obvious contamination. Please clarify your proposal for soil sampling in a letter addendum to the Workplan.

2. Soil Gas Sampling - Cambria Environmental Technology's standard field methods for direct push and shallow soil vapor point soil vapor sampling were provided. No site specific procedures were provided. Please provide site specific procedures to evaluate the vapor pathway at this site, such as the method, sample collection depth, etc., and include in the letter addendum to the Workplan.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

- **November 12, 2006 – Letter Addendum to Workplan**
- **45 days after Workplan Approval - Soil and Groundwater Investigation Report**

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist

cc: Mark Jonas, Cambria Environmental Technology, Inc., 5900 Hollis St., Suite A, Oakland, CA 94608
Kevin Graves, SWQCB, Underground Storage Tank Cleanup Unit, P.O. Box 2231, Sacramento, CA 95812
Sunil Ramdass, SWQCB, Division of Financial Assistance/Underground Storage Tank Cleanup Fund, 1001 I St., P.O. Box 944212, Sacramento, CA 94244
Donna Drogos
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

7

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

MAY 23 2006

May 11, 2006

FILE COPY

Naomi Gatzke
1545 Scenic View Dr.
San Leandro, CA 94577

Dear Ms. Gatzke:

Subject: Verification Sampling, Fuel Leak Case No. [redacted]6, Hooshi's Auto Service, 1499 MacArthur Blvd., Oakland, CA

Alameda County Environmental Health (ACEH) staff after discussions with the State Water Resources Control Board (SWRCB) regarding your "Petition for Closure" dated May 6, 2005, prepared by Cambria Environmental Technology, Inc., has identified additional investigation requirements. We request that you address the following technical comments, perform the proposed work, and send us the technical reports requested below.

TECHNICAL COMMENTS

1) **Source Area Verification Soil & Groundwater Sampling** – During the most recent groundwater monitoring event on January 30, 2006, 22,000 ug/l TPHG and 310 ug/l Benzene were detected in MW-2. Free product has historically been detected in MW-2 and MW-5. Additionally, 1,460 mg/kg TPHG was detected in soil at 10 ft. bgs when MW-2 was installed and 860 mg/kg TPHG and 3.1 mg/kg Benzene were detected at 10 ft. bgs in G-9. Verification sampling of the source area following remediation activities at this site was not performed. We request that you perform verification sampling of your source area to evaluate the effectiveness of your remedial measures and identify the residual pollution, if any, remaining in place at the subject site.

   We recommend that your sampling locations include the vicinity of the former underground storage tank excavation and the vicinity of MW-2 and MW-5. A minimum of 4 sampling locations is requested. Acceptable locations would be around the east, south, and north sides of the former underground storage tank excavation. Please collect and analyze grab groundwater samples from each of the borings for verification sampling (analysis of groundwater samples from monitoring wells is not requested). Soil and groundwater samples are to be analyzed for by EPA Method 8260 for TPHG, BTEX, and MTBE. Please submit an abbreviated workplan showing your sampling locations by the date specified below.

2) **Evaluation of the Vapor Pathway** – The potential risk posed by contamination via the vapor pathway has not been evaluated at this site. We request that you

collect and analyze soil gas samples to evaluate this pathway. We recommend that sampling locations include the vicinity of the underground storage tank excavation; adjacent to the automobile repair area and the canopy; vapor exposure to users of the adjacent property. Soil gas samples are to be analyzed for Benzene. Include your proposal for this work in the workplan requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

- **July 11, 2006 - Workplan**

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

If you have any questions, I may be reached at (510) 567-6746.

Sincerely,

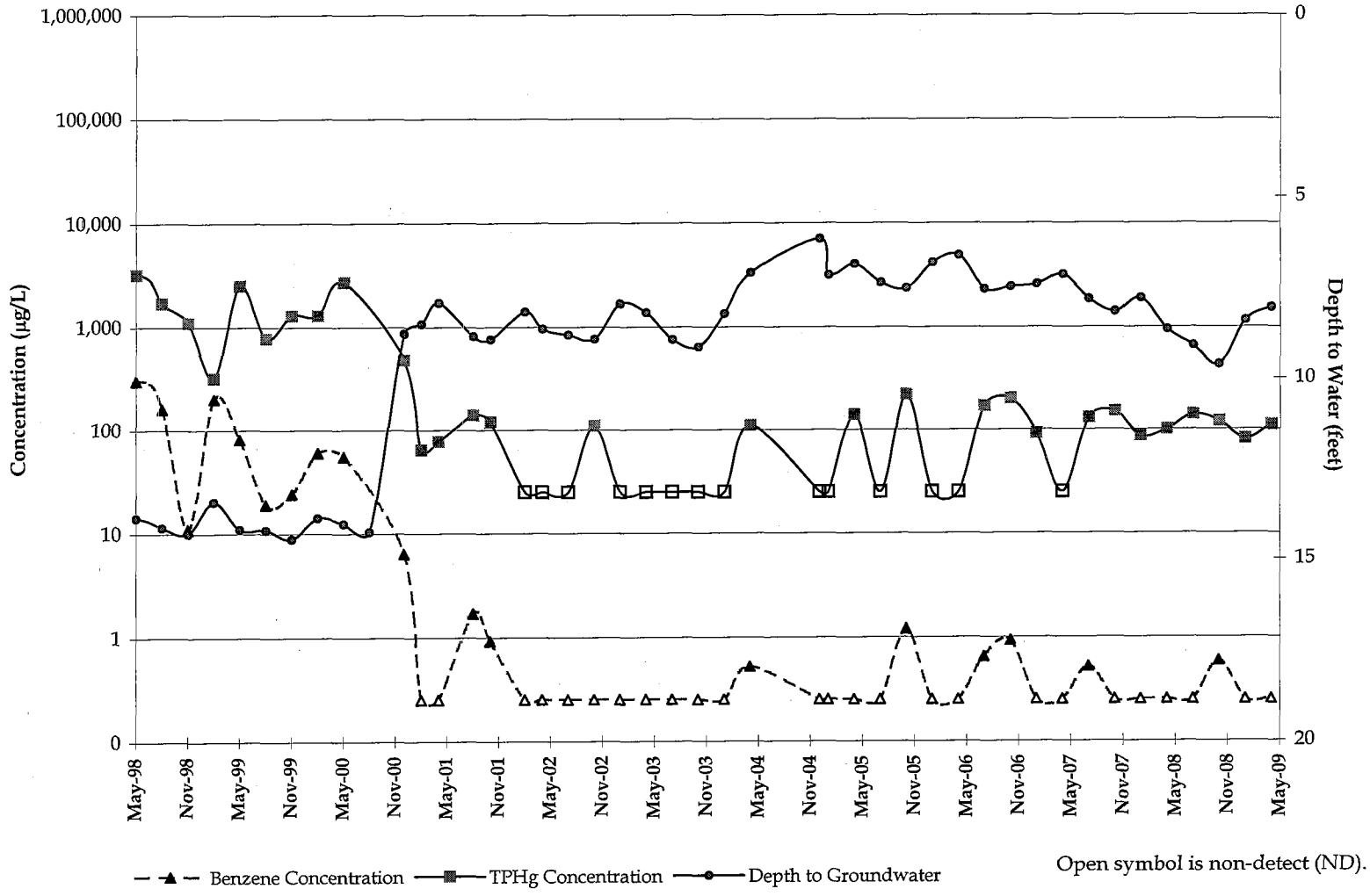
Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: Matthew Meyers, Cambria Environmental Technology, Inc., 1144-65th St., Suite B, Oakland, CA 94608
Kevin Graves, SWQCB, Underground Storage Tank Cleanup Unit, P.O. Box 2231, Sacramento, CA 95812
Donna Drogos
File

APPENDIX B

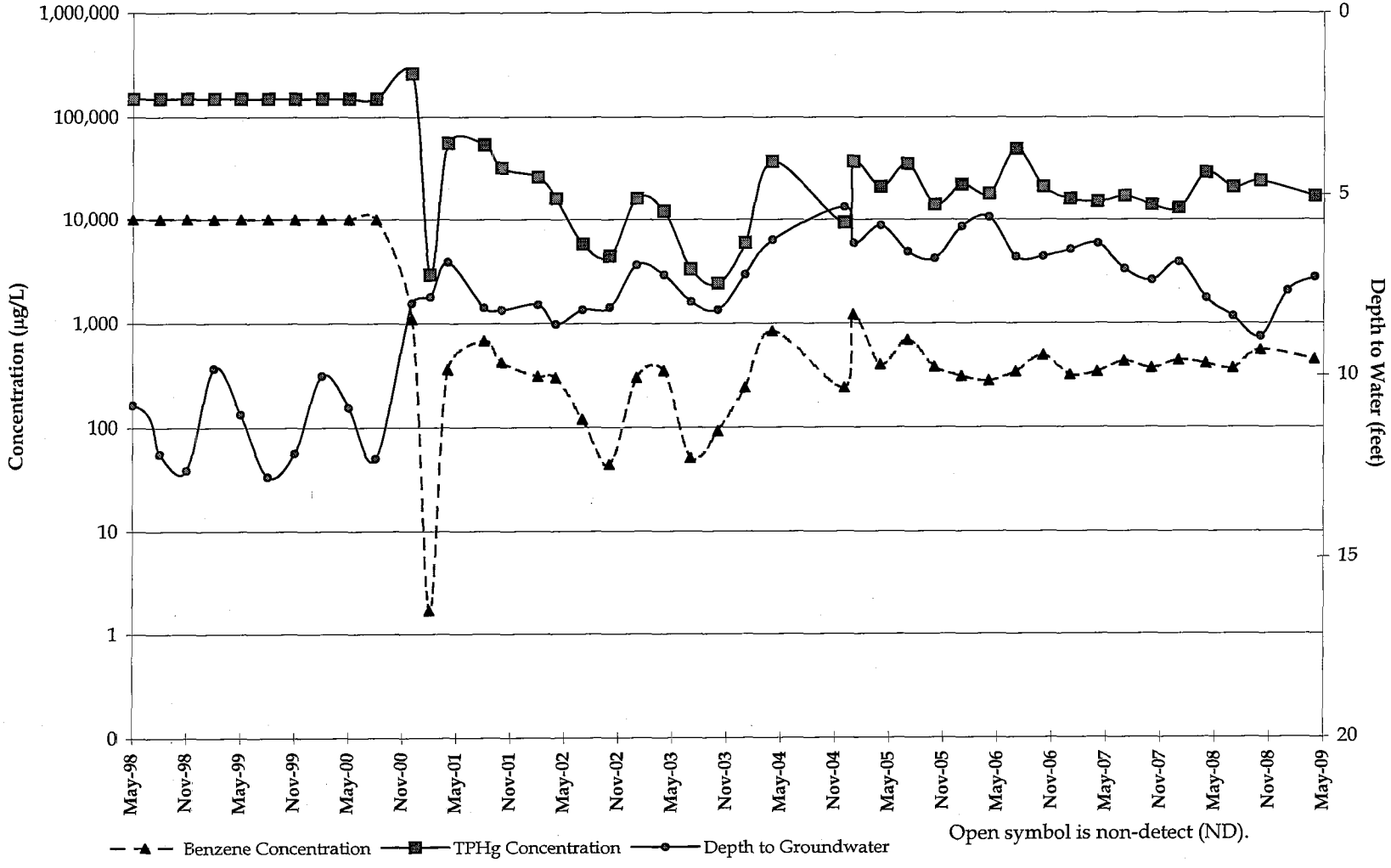
GROUNDWATER CONCENTRATION TREND ANALYSIS

Monitoring Well MW-1
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA

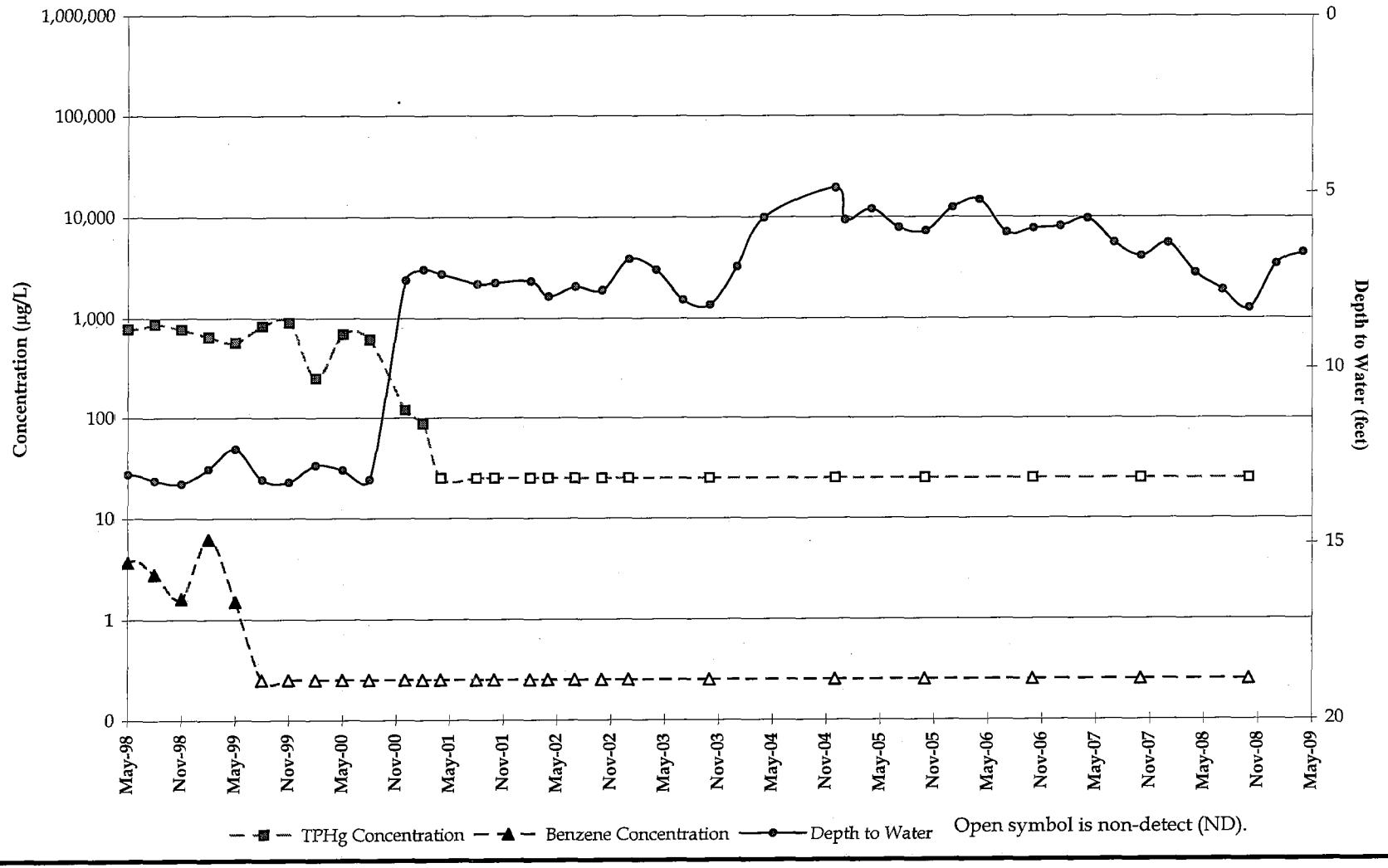


Open symbol is non-detect (ND).

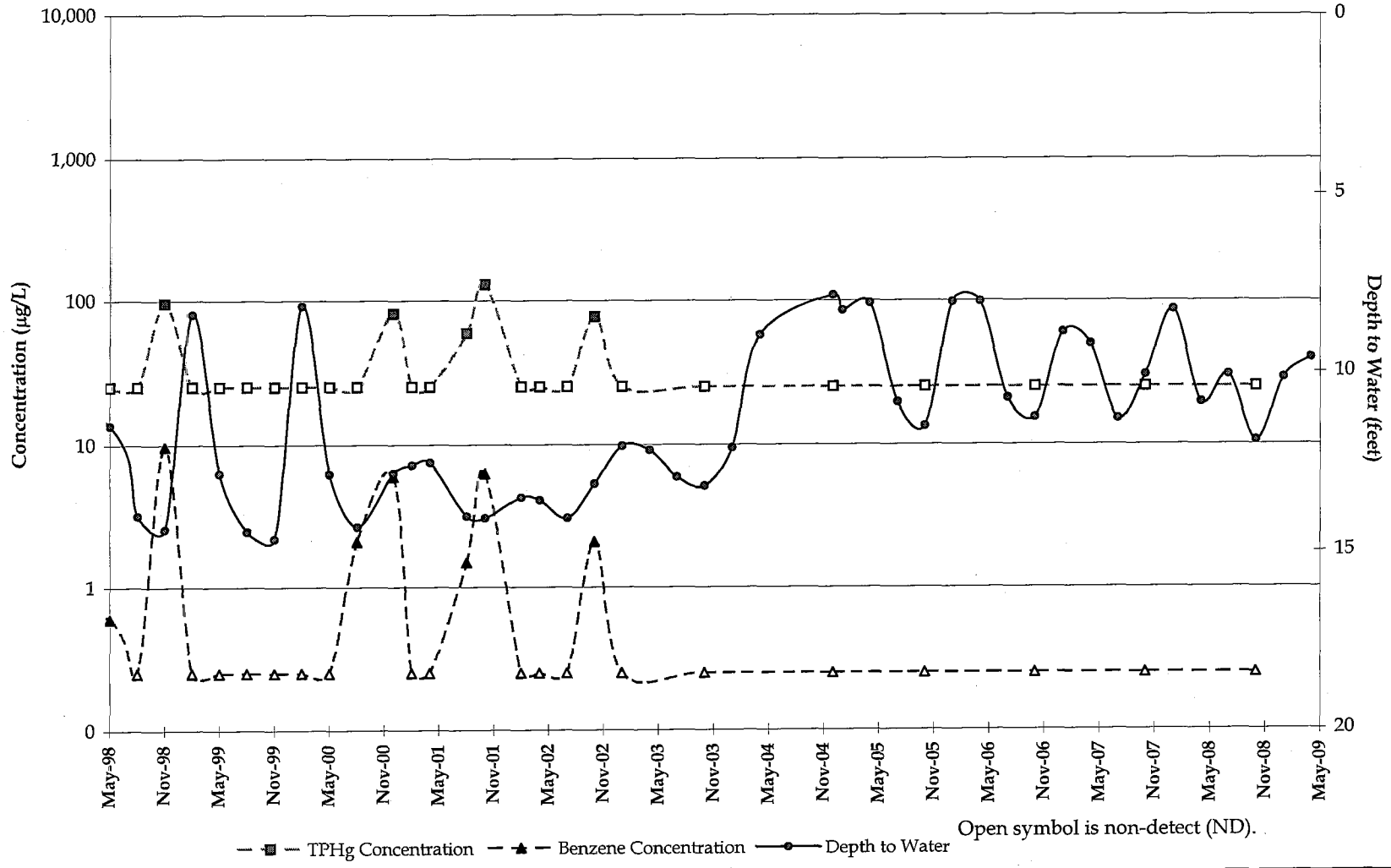
Monitoring Well MW-2
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



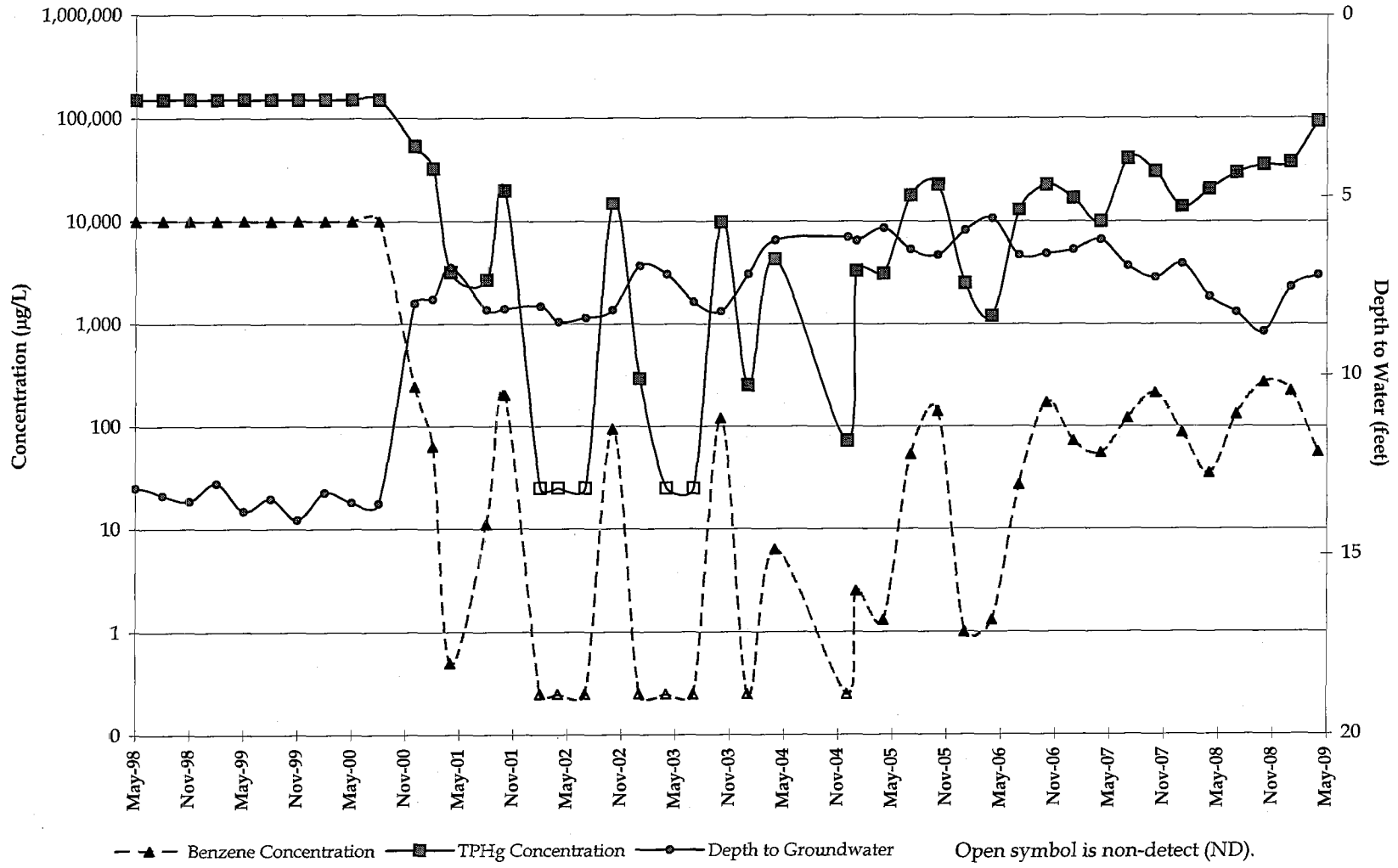
Monitoring Well MW-3
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



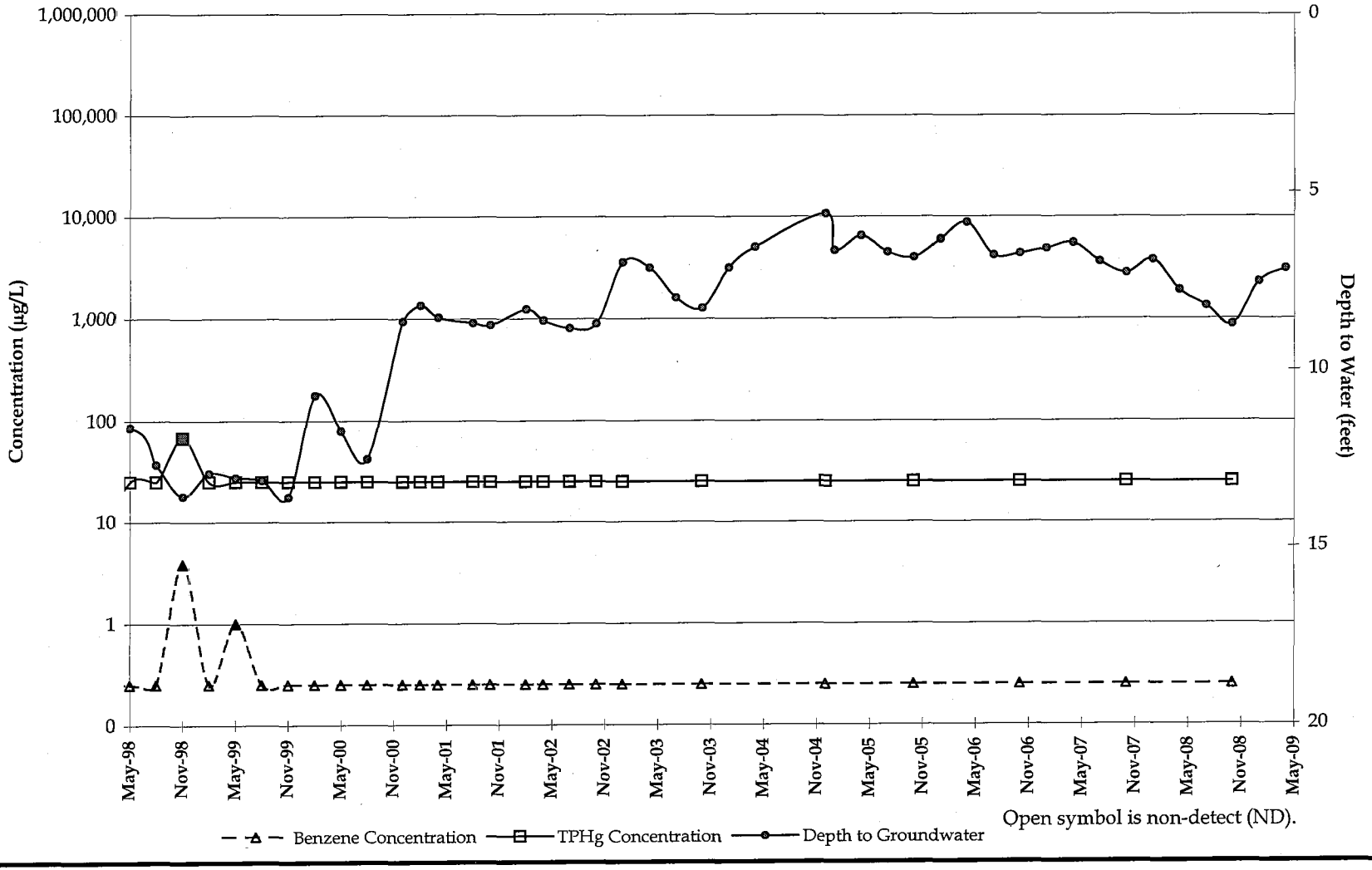
Monitoring Well MW-4
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



Monitoring Well MW-5
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



Monitoring Well MW-6
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



APPENDIX C

STANDARD OPERATING PROCEDURES

CRA

STANDARD FIELD PROCEDURES
VAPOR POINT INSTALLATION AND SAMPLING

This document describes Conestoga-Rovers & Associates' standard field methods for soil vapor sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

Shallow Soil Vapor Point Method for Soil Vapor Sampling

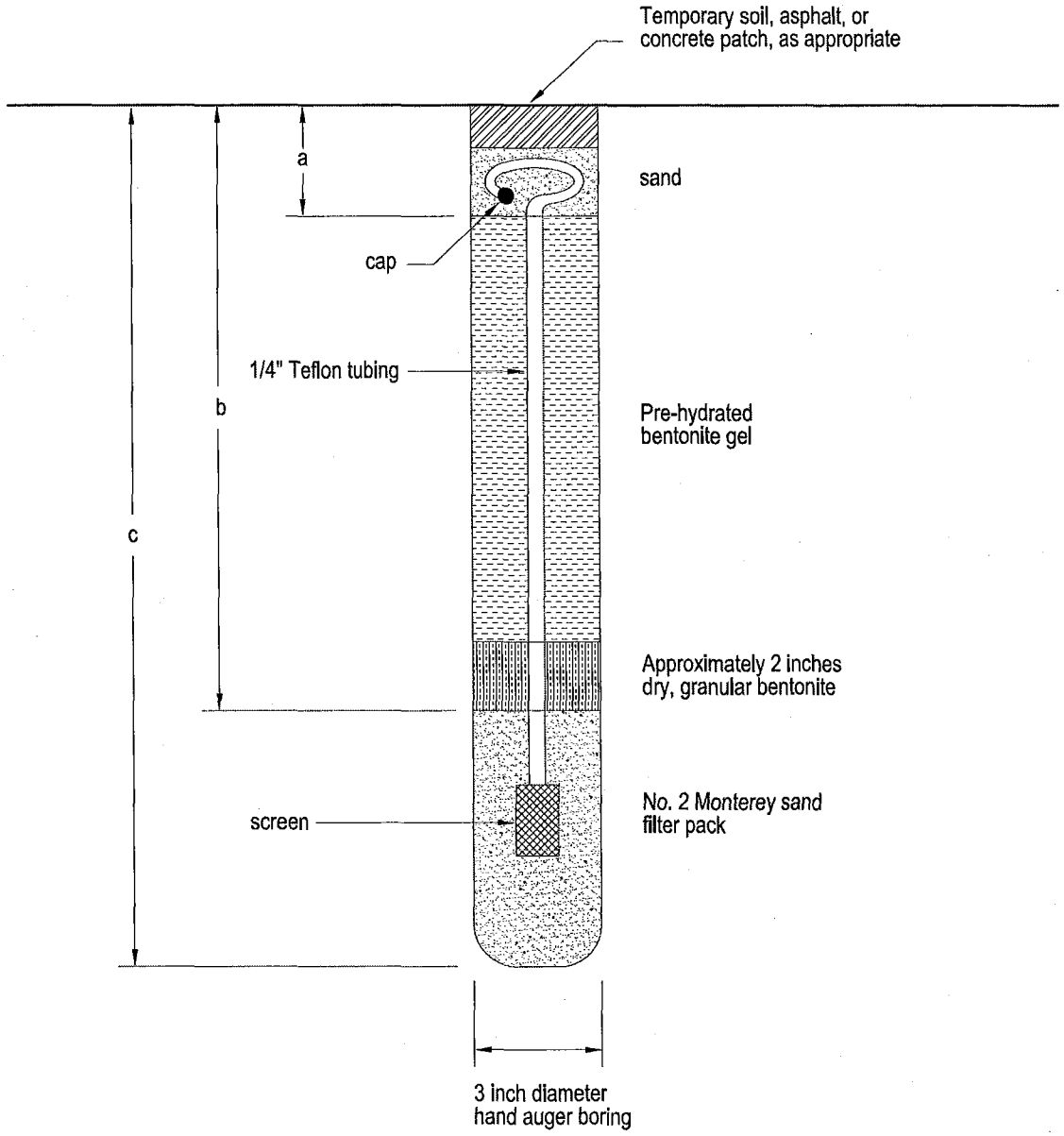
The shallow soil vapor point method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling point. Once the boring is hand augered to the final depth, a 6-inch slotted probe, capped on either end with brass or Swagelok fittings, is placed within 12-inches of number 2/16 filter sand (Figure A). Nylon tubing of ¼-inch outer-diameter of known length is attached to the probe. A 2-inch to 12-inch layer of unhydrated bentonite chips is placed on top of the filter pack. Next pre-hydrated granular bentonite is then poured into the hole to approximately and topped with another 2-inch layer of unhydrated bentonite chips or concrete, depending if the boring will hold one probe or multiple probes. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than one week after installation of the soil vapor points to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased. Figure B shows the soil vapor sampling apparatus. A measured volume of air will be purged from the tubing using a different Summa purge canister. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter. The soil vapor points will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.

Vapor Sample Storage, Handling, and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

Attachments: Figure A: Soil Vapor Point
Figure B: Soil Vapor Sampling Apparatus Diagram

09/25/02



Schematic Not to Scale

FIGURE

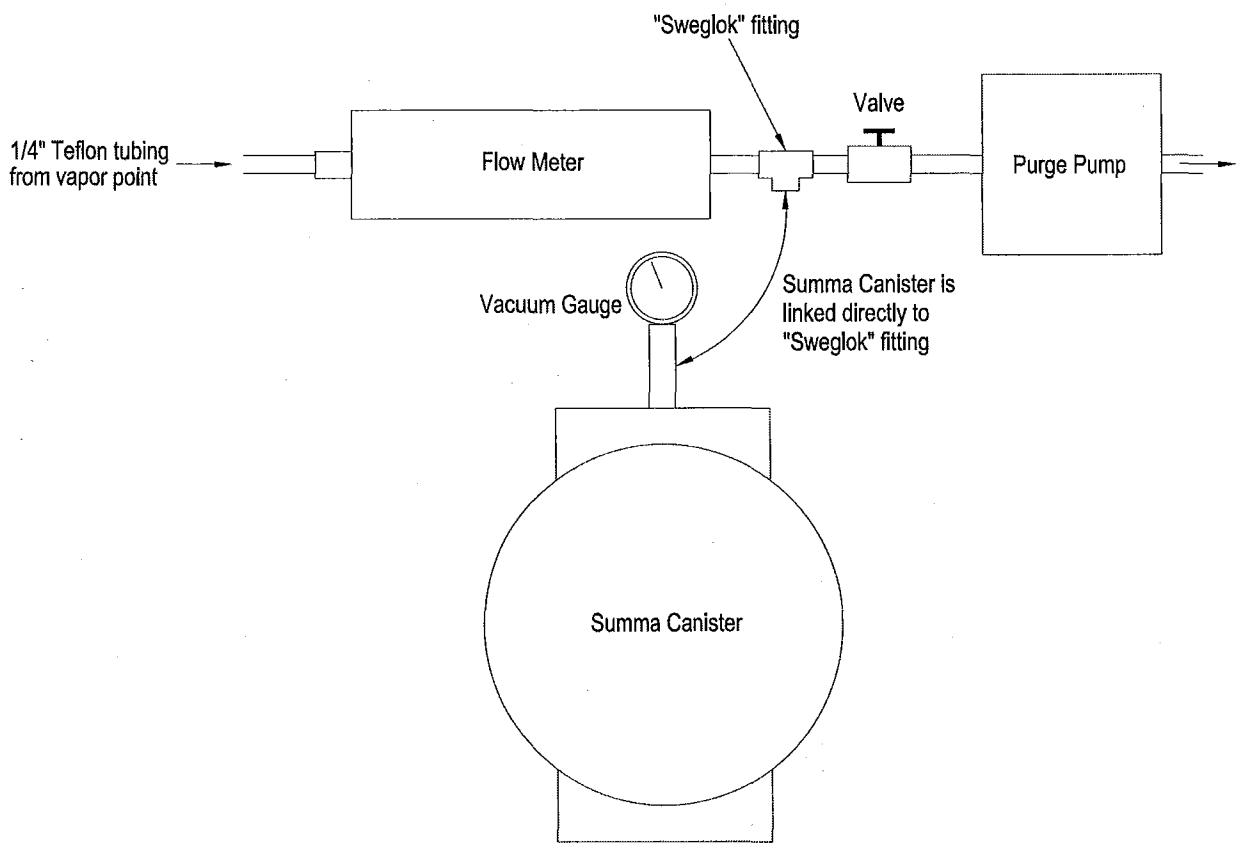
A

Soil Vapor Point

CONESTOGA-ROVERS & ASSOCIATES

S:\0-TEXACO\TEX-SITES\21127\FIGURES\VAPOR-POINT.DWG

09/25/02



S:\0-TEXACO\TEX-SITES\211273\FIGURES\VAPOR-DIAG.DWG

Schematic Not to Scale

FIGURE

B

CONESTOGA-ROVERS
& ASSOCIATES

Soil Vapor Sampling Apparatus Diagram

APPENDIX D

BORING/CONSTRUCTION LOGS, AUGUST 2009

CRA, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	B-6
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	13-Aug-09
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	13-Aug-09
PROJECT NUMBER	120741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vapor Tech Services C-57 Lic. #916085	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.5-inches	**SCREENED INTERVALS**	NA
LOGGED BY	B. Fong	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	M. Jonas, P.G.	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	In Vault and Location of Former USTs		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 4-inches thick	0.3	
							CONCRETE: 8-inches thick	1.0	
							FILL: Sandy SILT with Gravel: Moderate yellowish brown (10YR 5/4); moist; 55% silt, 35% fine to coarse grained sand, 10% gravel up to 1"; non-plastic; moderate estimated permeability.		
				5					
							Bottom of Vault @ 7'. No Concrete Bottom.	7.0	◄ Portland Type I/II
							Clayey Sandy SILT: Light olive gray (5Y 5/2); moist; 20% clay, 55% silt, 25% fine grained sand; low plasticity; low estimated permeability.		
				10	ML				
435								12.0	
					SW		**SAND with Silt:** Light olive gray (5Y 5/2); wet; 10% silt, 90% fine to coarse grained sand; non-plastic; high estimated permeability.		
								14.5	Bottom of Boring @ 14.5 fbg

WELL LOG (PID) I:\IRIG-CHARS\1207-\120741-1\112B0FE-1\HOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 9/24/09

CRA, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-10 (Vapor Probe)
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	13-Aug-09
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	13-Aug-09
PROJECT NUMBER	120741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vapor Tech Services C-57 Lic. #916085	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.5-inches	**SCREENED INTERVALS**	4.9 to 5 fbg
LOGGED BY	B. Fong	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	M. Jonas, P.G.	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Location of Former USTs		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 4-inches thick	0.3	
							CONCRETE: 8-inches thick	1.0	
				5			**FILL: Sandy SILT with Gravel:** Moderate yellowish brown (10YR 5/4); moist; 55% silt, 35% fine to coarse grained sand, 10% gravel up to 1"; non-plastic; moderate estimated permeability.	5.5	Hydrated Bentonite Chips 0.5' to 3.5' 1/4" teflon sample tubing Dry Grannular Bentonite 3.5' to 4.5' Monterey Sand #2/12 1/4" diam. screen, High Density Polyethylene Bottom of Boring @ 5.5 fbg

WELL LOG (PID) I:\IR6-CHARS\1207-\120741-1\112B0FE~1\HOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 9/24/09

APPENDIX E

PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 07/21/2009 By jamesy

Permit Numbers: W2009-0665 to W2009-0666
Permits Valid from 08/13/2009 to 08/13/2009

Application Id: 1248194105129 **City of Project Site:**Oakland
Site Location: 1499 MacArthur Bl, Oakland, CA
Project Start Date: 08/13/2009 **Completion Date:**08/13/2009
Assigned Inspector: Contact James Yoo at (510) 670-6633 or jamesy@acpwa.org

Applicant: Conestoga-Rovers & Associates - Bryan Fong **Phone:** 510-420-0700
5900 Hollis St, Ste. A, Emeryville, CA 94608
Property Owner: Naomi Gatzke **Phone:** 510-483-9015
1545 Scenic View Dr., San Leandro, CA 94577
Client: ** same as Property Owner **

	Total Due:	$794.00
Receipt Number: WR2009-0267	**Total Amount Paid:**	$794.00
Payer Name : Conestoga Rovers	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 2 Wells
Driller: Vapor Tech Services - Lic #: 916085 - Method: auger **Work Total: $794.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0665	07/21/2009	11/11/2009	MW7	8.00 in.	2.00 in.	4.00 ft	10.00 ft
W2009-0666	07/21/2009	11/11/2009	SG10	3.50 in.	0.50 in.	4.50 ft	5.50 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755

(Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

6. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

8. Minimum surface seal thickness is two inches of cement grout placed by tremie

9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

PROGRAMS AND SERVICES

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:
399 Elmhurst Street
Hayward, CA 94544
For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org
For Drilling Permit information and process contact James Yoo at
Phone: 510-670-6633
FAX: 510-782-1939
Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88 . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location: Agency with Jurisdiction Contact Number

Berkeley City of Berkeley Ph: 510-981-7460
Fax: 510-540-5672

Fremont, Newark, Union City Alameda County Water District Ph: 510-668-4460
Fax: 510-651-1760

Pleasanton, Dublin, Livermore, Sunol Zone 7 Water Agency Ph: 925-454-5000
Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources *has the responsibility and authority to* issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland, Alameda,Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley,** and **Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

Permits are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application *(30 Kb)** , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work.** Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Fees
Beginning April 11, 2005 , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells (*Horizontal hillside dewatering and dewatering for construction period only), shall cost $300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost $200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

Permit Fees are exempt to State & Federal Projects
Applicants shall submit a letter from the agency requesting the fee exemption.

Scheduling Work/Inspections:
Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **James Yoo at 510-670-6633** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

Request for Permit Extension:
Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

Cancel a Drilling Permit:
Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

Refunds/Service Charge:
A service charge of $25.00 dollars for the first check returned and $35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of $50.00 (fifty Dollars).

To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed $500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is $1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors. The forms to request for refunds under $500.00 (Five Hundred Dollars) are available at this office or any County Offices. If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

Enforcement
Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars ($500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such

violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

Enforcement actions will be determined by this office on a case-by-case basis
Drilling without a permit shall be the cost of the permit(s) and a fine of $500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies.

See our website (www.acgov.org/pwa/wells/index.shtml) for links to additional forms.

APPENDIX F

ANALYTICAL LABORATORY REPORT

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Mark Jonas

Collected by: (Print and Sign) Bryan Fong Bryan A Fong

Company CRA Email MJONAS@CRAworld.com

Address 5900 Hollis St, Suite A City Emeryville State CA Zip 94608

Phone 510-420-0700 Fax 510-420-9170

Project Info:
P.O. # _____
Project # 120741
Project Name Gotzkc

Turn Around Time:
☒ Normal
☐ Rush
_____ specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	SG-9	9312	8/25/09	14:53	TO-3 (TPHg), TO-15 (BTEX)	-30	-7.5		
02A	SG-10	25210		14:07	TO-15, TIC (Butane Isobutane propane)	-30	-7		
03A	SG-8	9475		14:56		-28.5	-6.5		
04A	SG-3	36374		10:57	ASTMD-1946 (O_2, CO_2, CH_4)	-29.5	-5		
05A	SG-5	34668		11:37		-30	-5.5		
06A	SG-5 DUP	1472		11:37		-29.5	-5		
07A	SG-7	12037		11:49		-30	-5.75		
08A	SG-4	34164		12:33		-30	-6		
09A	SG-6	36513		12:53		-30	-5.5		
10A	SG-1	35664		13:26		-30	-6.5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Bryan A Fong	8/26/09 10:00	Monica Gregson ATL	8/27/09 9:25
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only

Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
FedEx		NA	Good	Yes No (None)	0908603

Form 1293 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Mark Jonas

Collected by: (Print and Sign) Bryan Fong Bryan A Fong

Company CRA Email MJONAS@CRAworld.com

Address 5900 Hollis St, Suite A City Emeryville State CA Zip 94608

Phone 510-420-0700 Fax 510-420-9170

Project Info:
P.O. #
Project # 120741
Project Name Gofake

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
11A	SG-2	34571	8/25/09	13:40	TO-3 (TPH$_g$), TO-15 (BTEX)	-30	-6		
					TO-15, TIC (Butane, Isobutane, Propane)				
					ASTM D-1946 (O_2, CO_2, CH_4)				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Bryan A Fong	8/26/09 10:00	Monica Gregson ATL	8/26/09 925
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No (None)	0908603

Form 1293 rev.11

Air Toxics LTD.
Laboratory Services Since 1989

9/21/2009
Mr. Mark Jonas
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Gatzke
Project #: 120741
Workorder #: 0908603BR1

Dear Mr. Mark Jonas

The following report includes the data for the above referenced project for sample(s) received on 8/27/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori
Project Manager

WORK ORDER #: 0908603BR1

Work Order Summary

CLIENT:	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4023430
FAX:	510-420-9170	**PROJECT #**	120741 Gatzke
DATE RECEIVED:	08/27/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	09/03/2009		
DATE REISSUED:	09/21/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG-9	Modified TO-3	6.5 "Hg	15 psi
02A	SG-10	Modified TO-3	0.4 psi	15 psi
03A	SG-8	Modified TO-3	5.5 "Hg	15 psi
04A	SG-3	Modified TO-3	5.5 "Hg	15 psi
05A	SG-5	Modified TO-3	6.5 "Hg	15 psi
06A	SG-5 DUP	Modified TO-3	6.5 "Hg	15 psi
06B	SG-5 DUP	Modified TO-3	6.5 "Hg	15 psi
06C	SG-5 DUP	Modified TO-3	6.5 "Hg	15 psi
07A	SG-7	Modified TO-3	5.0 "Hg	15 psi
08A	SG-4	Modified TO-3	5.5 "Hg	15 psi
08AA	SG-4 Lab Duplicate	Modified TO-3	5.5 "Hg	15 psi
09A	SG-6	Modified TO-3	4.0 "Hg	15 psi
10A	SG-1	Modified TO-3	5.5 "Hg	15 psi
11A	SG-2	Modified TO-3	5.0 "Hg	15 psi
12A	Lab Blank	Modified TO-3	NA	NA
12B	Lab Blank	Modified TO-3	NA	NA
13A	LCS	Modified TO-3	NA	NA

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908603BR1

Work Order Summary

CLIENT:	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4023430
FAX:	510-420-9170	**PROJECT #**	120741 Gatzke
DATE RECEIVED:	08/27/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	09/03/2009		
DATE REISSUED:	09/21/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
13B	LCS	Modified TO-3	NA	NA

CERTIFIED BY: Linda D. Frumarn

DATE: 09/21/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-3
Conestoga-Rovers Associates (CRA)
Workorder# 0908603BR1

Eleven 1 Liter Summa Canister (100% Certified) samples were received on August 27, 2009. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-3*	*ATL Modifications*
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch </= 20 samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The duplicate analysis of sample SG-5 DUP did not pass precision acceptance criteria for TPH (Gasoline Range). The sample was analyzed a third time and still did not duplicate. All three analyses are reported.

PER CLIENT'S REQUEST THE WORKORDER WAS REISSUED ON SEPTEMBER 21, 2009 TO REPORT RESULTS IN UG/M3.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: SG-9

Lab ID#: 0908603BR1-01A

No Detections Were Found.

Client Sample ID: SG-10

Lab ID#: 0908603BR1-02A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.049	0.18	200	740

Client Sample ID: SG-8

Lab ID#: 0908603BR1-03A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.19	250	780

Client Sample ID: SG-3

Lab ID#: 0908603BR1-04A

No Detections Were Found.

Client Sample ID: SG-5

Lab ID#: 0908603BR1-05A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	0.24	260	1000

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	2.1	260	8800

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06B

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06B

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	4.1	260	17000

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06C

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.12	3.0	490	12000

Client Sample ID: SG-7

Lab ID#: 0908603BR1-07A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.060	0.65	250	2600

Client Sample ID: SG-4

Lab ID#: 0908603BR1-08A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.60	250	2500

Client Sample ID: SG-4 Lab Duplicate

Lab ID#: 0908603BR1-08AA

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.64	250	2600

Client Sample ID: SG-6

Lab ID#: 0908603BR1-09A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.058	0.20	240	840

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: SG-1

Lab ID#: 0908603BR1-10A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.23	250	940

Client Sample ID: SG-2

Lab ID#: 0908603BR1-11A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.060	0.36	250	1500

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-9

Lab ID#: 0908603BR1-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082906**	**Date of Collection: 8/25/09 2:53:00 PM**	
Dil. Factor:	**2.58**	**Date of Analysis: 8/29/09 11:42 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	Not Detected	260	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	95	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-10

Lab ID#: 0908603BR1-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082907**	**Date of Collection: 8/25/09 2:07:00 PM**	
Dil. Factor:	**1.97**	**Date of Analysis: 8/29/09 12:16 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.049	0.18	200	740

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-8

Lab ID#: 0908603BR1-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082908**	**Date of Collection: 8/25/09 2:56:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/29/09 12:54 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.19	250	780

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-3

Lab ID#: 0908603BR1-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082909**	**Date of Collection: 8/25/09 10:57:00 AM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/29/09 01:30 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	Not Detected	250	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	98	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5

Lab ID#: 0908603BR1-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082910**	**Date of Collection: 8/25/09 11:37:00 AM**	
Dil. Factor:	**2.58**	**Date of Analysis: 8/29/09 02:31 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	0.24	260	1000

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	97	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083103**	**Date of Collection:**	**8/25/09 11:37:00 AM**
Dil. Factor:	**2.58**	**Date of Analysis:**	**8/31/09 09:43 AM**

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	2.1	260	8800

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	97	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083105**	**Date of Collection:**	**8/25/09 11:37:00 AM**
Dil. Factor:	**2.58**	**Date of Analysis:**	**8/31/09 10:49 AM**

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.064	4.1	260	17000

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5 DUP

Lab ID#: 0908603BR1-06C

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083111**	**Date of Collection:**	**8/25/09 11:37:00 AM**
Dil. Factor:	**4.82**	**Date of Analysis:**	**8/31/09 02:19 PM**

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.12	3.0	490	12000

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	100	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-7

Lab ID#: 0908603BR1-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083104**	**Date of Collection:**	**8/25/09 11:49:00 AM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**8/31/09 10:16 AM**

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.060	0.65	250	2600

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-4

Lab ID#: 0908603BR1-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083106**	**Date of Collection: 8/25/09 12:33:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/31/09 11:21 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.60	250	2500

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	142	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-4 Lab Duplicate

Lab ID#: 0908603BR1-08AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083107**	**Date of Collection: 8/25/09 12:33:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/31/09 11:57 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.64	250	2600

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	106	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-6

Lab ID#: 0908603BR1-09A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083108**	**Date of Collection: 8/25/09 12:53:00 PM**	
Dil. Factor:	**2.33**	**Date of Analysis: 8/31/09 12:29 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.058	0.20	240	840

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	126	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-1

Lab ID#: 0908603BR1-10A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083109**	**Date of Collection: 8/25/09 1:26:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/31/09 01:14 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.062	0.23	250	940

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	121	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-2

Lab ID#: 0908603BR1-11A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d083110**	**Date of Collection: 8/25/09 1:40:00 PM**	
Dil. Factor:	**2.42**	**Date of Analysis: 8/31/09 01:47 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.060	0.36	250	1500

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	102	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908603BR1-12A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/29/09 09:08 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.025	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	95	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908603BR1-12B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d083102	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/31/09 09:01 AM	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.025	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	97	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908603BR1-13A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d082912**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/29/09 03:40 PM**	

Compound	**%Recovery**
TPH (Gasoline Range)	114

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Fluorobenzene (FID)	100	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908603BR1-13B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d083123	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/31/09 09:53 PM	

Compound	%Recovery
TPH (Gasoline Range)	116

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	105	75-150

Air Toxics LTD.
Laboratory Services Since 1989

9/10/2009

Mr. Mark Jonas
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Gatzke
Project #: 120741
Workorder #: 0908603A

Dear Mr. Mark Jonas

The following report includes the data for the above referenced project for sample(s) received on 8/27/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15/TICs are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori
Project Manager

WORK ORDER #: 0908603A

Work Order Summary

CLIENT:	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4023430
FAX:	510-420-9170	**PROJECT #**	120741 Gatzke
DATE RECEIVED:	08/27/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	09/10/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG-9	Modified TO-15/TICs	6.5 "Hg	15 psi
02A	SG-10	Modified TO-15/TICs	0.4 psi	15 psi
03A	SG-8	Modified TO-15/TICs	5.5 "Hg	15 psi
04A	SG-3	Modified TO-15/TICs	5.5 "Hg	15 psi
05A	SG-5	Modified TO-15/TICs	6.5 "Hg	15 psi
05AA	SG-5 Lab Duplicate	Modified TO-15/TICs	6.5 "Hg	15 psi
06A	SG-5 DUP	Modified TO-15/TICs	6.5 "Hg	15 psi
07A	SG-7	Modified TO-15/TICs	5.0 "Hg	15 psi
08A	SG-4	Modified TO-15/TICs	5.5 "Hg	15 psi
08AA	SG-4 Lab Duplicate	Modified TO-15/TICs	5.5 "Hg	15 psi
09A	SG-6	Modified TO-15/TICs	4.0 "Hg	15 psi
10A	SG-1	Modified TO-15/TICs	5.5 "Hg	15 psi
11A	SG-2	Modified TO-15/TICs	5.0 "Hg	15 psi
12A	Lab Blank	Modified TO-15/TICs	NA	NA
12B	Lab Blank	Modified TO-15/TICs	NA	NA
13A	CCV	Modified TO-15/TICs	NA	NA
13B	CCV	Modified TO-15/TICs	NA	NA

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908603A

Work Order Summary

CLIENT:	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4023430
FAX:	510-420-9170	**PROJECT #**	120741 Gatzke
DATE RECEIVED:	08/27/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	09/10/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
14A	LCS	Modified TO-15/TICs	NA	NA
14B	LCS	Modified TO-15/TICs	NA	NA

CERTIFIED BY: Linda D. Truman DATE: 09/10/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Conestoga-Rovers Associates (CRA)
Workorder# 0908603A

Eleven 1 Liter Summa Canister (100% Certified) samples were received on August 27, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
Daily CCV	</= 30% Difference	</= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-9

Lab ID#: 0908603A-01A

No Detections Were Found.

Client Sample ID: SG-10

Lab ID#: 0908603A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.98	11	3.7	41
m,p-Xylene	0.98	2.0	4.3	8.8

Client Sample ID: SG-8

Lab ID#: 0908603A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	2.1	4.6	7.8

Client Sample ID: SG-3

Lab ID#: 0908603A-04A

No Detections Were Found.

Client Sample ID: SG-5

Lab ID#: 0908603A-05A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	45%	7.8

Client Sample ID: SG-5 Lab Duplicate

Lab ID#: 0908603A-05AA

No Detections Were Found.

Client Sample ID: SG-5 DUP

Lab ID#: 0908603A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-5 DUP

Lab ID#: 0908603A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.3	2.7	4.9	10
m,p-Xylene	1.3	1.9	5.6	8.2
o-Xylene	1.3	1.6	5.6	7.1

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	42%	15

Client Sample ID: SG-7

Lab ID#: 0908603A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	1.4	3.9	4.4
m,p-Xylene	1.2	1.7	5.2	7.5

Client Sample ID: SG-4

Lab ID#: 0908603A-08A

No Detections Were Found.

Client Sample ID: SG-4 Lab Duplicate

Lab ID#: 0908603A-08AA

No Detections Were Found.

Client Sample ID: SG-6

Lab ID#: 0908603A-09A

No Detections Were Found.

Client Sample ID: SG-1

Lab ID#: 0908603A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl Benzene	1.2	1.5	5.4	6.5
Toluene	1.2	3.8	4.6	14

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-1

Lab ID#: 0908603A-10A

m,p-Xylene	1.2	9.0	5.4	39
o-Xylene	1.2	3.1	5.4	14

Client Sample ID: SG-2

Lab ID#: 0908603A-11A

No Detections Were Found.

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-9

Lab ID#: 0908603A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083012**	**Date of Collection:**	**8/25/09 2:53:00 PM**
Dil. Factor:	**2.58**	**Date of Analysis:**	**8/30/09 06:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.3	Not Detected	4.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-10

Lab ID#: 0908603A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083013**	**Date of Collection: 8/25/09 2:07:00 PM**	
Dil. Factor:	**1.97**	**Date of Analysis: 8/30/09 07:11 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.98	Not Detected	3.1	Not Detected
Ethyl Benzene	0.98	Not Detected	4.3	Not Detected
Toluene	0.98	11	3.7	41
m,p-Xylene	0.98	2.0	4.3	8.8
o-Xylene	0.98	Not Detected	4.3	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-8

Lab ID#: 0908603A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083014**	**Date of Collection: 8/25/09 2:56:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/30/09 08:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	2.1	4.6	7.8
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-3

Lab ID#: 0908603A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083015**	**Date of Collection: 8/25/09 10:57:00 AM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/30/09 09:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5

Lab ID#: 0908603A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083016**	**Date of Collection: 8/25/09 11:37:00 AM**	
Dil. Factor:	**2.58**	**Date of Analysis: 8/30/09 09:47 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.3	Not Detected	4.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	45%	7.8
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	128	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5 Lab Duplicate

Lab ID#: 0908603A-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083017**	**Date of Collection: 8/25/09 11:37:00 AM**	
Dil. Factor:	**2.58**	**Date of Analysis: 8/31/09 05:50 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.3	Not Detected	4.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5 DUP

Lab ID#: 0908603A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083018**	**Date of Collection: 8/25/09 11:37:00 AM**	
Dil. Factor:	**2.58**	**Date of Analysis: 8/31/09 06:38 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.3	Not Detected	4.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
Toluene	1.3	2.7	4.9	10
m,p-Xylene	1.3	1.9	5.6	8.2
o-Xylene	1.3	1.6	5.6	7.1

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	42%	15
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	128	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-7

Lab ID#: 0908603A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083019**	**Date of Collection: 8/25/09 11:49:00 AM**	
Dil. Factor:	**2.42**	**Date of Analysis: 8/31/09 07:17 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	1.4	3.9	4.4
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	1.7	5.2	7.5
o-Xylene	1.2	Not Detected	5.2	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-4

Lab ID#: 0908603A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090506**	**Date of Collection: 8/25/09 12:33:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 9/5/09 12:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-4 Lab Duplicate

Lab ID#: 0908603A-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090511**	**Date of Collection: 8/25/09 12:33:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 9/5/09 08:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-6

Lab ID#: 0908603A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090510**	**Date of Collection: 8/25/09 12:53:00 PM**	
Dil. Factor:	**2.33**	**Date of Analysis: 9/5/09 07:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-1

Lab ID#: 0908603A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090508**	**Date of Collection: 8/25/09 1:26:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 9/5/09 01:37 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	1.5	5.4	6.5
Toluene	1.2	3.8	4.6	14
m,p-Xylene	1.2	9.0	5.4	39
o-Xylene	1.2	3.1	5.4	14

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-2

Lab ID#: 0908603A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090509**	**Date of Collection: 8/25/09 1:40:00 PM**	
Dil. Factor:	**2.42**	**Date of Analysis: 9/5/09 04:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	95	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908603A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7083006	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/30/09 12:26 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908603A-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/09 10:33 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0908603A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083002**	Date of Collection: NA	
Dil. Factor:	**1.00**	Date of Analysis: 8/30/09 08:49 AM	

Compound	%Recovery
Benzene	101
Ethyl Benzene	103
Toluene	102
m,p-Xylene	104
o-Xylene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0908603A-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r090502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/09 08:55 AM**	

Compound	%Recovery
Benzene	101
Ethyl Benzene	103
Toluene	98
m,p-Xylene	103
o-Xylene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908603A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**7083003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/30/09 09:36 AM**	

Compound	%Recovery
Benzene	102
Ethyl Benzene	102
Toluene	106
m,p-Xylene	102
o-Xylene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908603A-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r090503	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 9/5/09 09:46 AM	

Compound	%Recovery
Benzene	102
Ethyl Benzene	100
Toluene	103
m,p-Xylene	100
o-Xylene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

Air TOXICS LTD.
Laboratory Services Since 1989

9/3/2009
Mr. Mark Jonas
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Gatzke
Project #: 120741
Workorder #: 0908603C

Dear Mr. Mark Jonas

The following report includes the data for the above referenced project for sample(s) received on 8/27/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori
Project Manager

Air Toxics Ltd.
Laboratory Services Since 1989

WORK ORDER #: 0908603C

Work Order Summary

CLIENT:	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Mark Jonas Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4023430
FAX:	510-420-9170	**PROJECT #**	120741 Gatzke
DATE RECEIVED:	08/27/2009	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	09/03/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG-9	Modified ASTM D-1946	6.5 "Hg	15 psi
02A	SG-10	Modified ASTM D-1946	0.4 psi	15 psi
03A	SG-8	Modified ASTM D-1946	5.5 "Hg	15 psi
04A	SG-3	Modified ASTM D-1946	5.5 "Hg	15 psi
05A	SG-5	Modified ASTM D-1946	6.5 "Hg	15 psi
06A	SG-5 DUP	Modified ASTM D-1946	6.5 "Hg	15 psi
07A	SG-7	Modified ASTM D-1946	5.0 "Hg	15 psi
08A	SG-4	Modified ASTM D-1946	5.5 "Hg	15 psi
09A	SG-6	Modified ASTM D-1946	4.0 "Hg	15 psi
10A	SG-1	Modified ASTM D-1946	5.5 "Hg	15 psi
11A	SG-2	Modified ASTM D-1946	5.0 "Hg	15 psi
11AA	SG-2 Lab Duplicate	Modified ASTM D-1946	5.0 "Hg	15 psi
12A	Lab Blank	Modified ASTM D-1946	NA	NA
13A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Linda D. Fruman DATE: 09/03/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1946
Conestoga-Rovers Associates (CRA)
Workorder# 0908603C

Eleven 1 Liter Summa Canister (100% Certified) samples were received on August 27, 2009. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*ASTM D-1946*	*ATL Modifications*
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Sample SG-7 did not pass the instrument leak check, indicating a possible leak in the sample container. As a result, the sample was loaded using a syringe rather than using a direct sample loop introduction technique. Results for Oxygen acquired using a syringe load may not be accurate since ambient air concentrations for this compound are high.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: SG-9

Lab ID#: 0908603C-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	11
Carbon Dioxide	0.026	7.9

Client Sample ID: SG-10

Lab ID#: 0908603C-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.20	19
Carbon Dioxide	0.020	2.1

Client Sample ID: SG-8

Lab ID#: 0908603C-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	10
Methane	0.00025	0.00080
Carbon Dioxide	0.025	5.9

Client Sample ID: SG-3

Lab ID#: 0908603C-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	10
Carbon Dioxide	0.025	7.8

Client Sample ID: SG-5

Lab ID#: 0908603C-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	1.4
Methane	0.00026	0.0039
Carbon Dioxide	0.026	17

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: SG-5 DUP

Lab ID#: 0908603C-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	1.4
Methane	0.00026	0.0040
Carbon Dioxide	0.026	17

Client Sample ID: SG-7

Lab ID#: 0908603C-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	18
Methane	0.00024	0.00028
Carbon Dioxide	0.024	3.0

Client Sample ID: SG-4

Lab ID#: 0908603C-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	8.2
Carbon Dioxide	0.025	14

Client Sample ID: SG-6

Lab ID#: 0908603C-09A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	14
Carbon Dioxide	0.023	6.2

Client Sample ID: SG-1

Lab ID#: 0908603C-10A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	1.8
Carbon Dioxide	0.025	14

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: SG-2

Lab ID#: 0908603C-11A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	6.0
Carbon Dioxide	0.024	11

Client Sample ID: SG-2 Lab Duplicate

Lab ID#: 0908603C-11AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	6.0
Carbon Dioxide	0.024	10

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-9

Lab ID#: 0908603C-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082804**	**Date of Collection:**	**8/25/09 2:53:00 PM**
Dil. Factor:	**2.58**	**Date of Analysis:**	**8/28/09 09:14 AM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	11
Methane	0.00026	Not Detected
Carbon Dioxide	0.026	7.9

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-10

Lab ID#: 0908603C-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082805**	**Date of Collection:**	**8/25/09 2:07:00 PM**
Dil. Factor:	**1.97**	**Date of Analysis:**	**8/28/09 09:46 AM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.20	19
Methane	0.00020	Not Detected
Carbon Dioxide	0.020	2.1

Container Type: 1 Liter Summa Canister (100% Certified)

Air TOXICS LTD.
Laboratory Services Since 1989

Client Sample ID: SG-8

Lab ID#: 0908603C-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082806**	**Date of Collection:**	**8/25/09 2:56:00 PM**
Dil. Factor:	**2.47**	**Date of Analysis:**	**8/28/09 10:08 AM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	10
Methane	0.00025	0.00080
Carbon Dioxide	0.025	5.9

Container Type: 1 Liter Summa Canister (100% Certified)

Air TOXICS LTD.
Laboratory Services Since 1989

Client Sample ID: SG-3

Lab ID#: 0908603C-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082807**	**Date of Collection: 8/25/09 10:57:00 AM**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/28/09 10:31 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	10
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	7.8

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5

Lab ID#: 0908603C-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082808**	**Date of Collection:**	**8/25/09 11:37:00 AM**
Dil. Factor:	**2.58**	**Date of Analysis:**	**8/28/09 10:57 AM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	1.4
Methane	0.00026	0.0039
Carbon Dioxide	0.026	17

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-5 DUP

Lab ID#: 0908603C-06A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082809**	**Date of Collection:**	**8/25/09 11:37:00 AM**
Dil. Factor:	**2.58**	**Date of Analysis:**	**8/28/09 11:20 AM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	1.4
Methane	0.00026	0.0040
Carbon Dioxide	0.026	17

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-7

Lab ID#: 0908603C-07A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082810**	**Date of Collection:**	**8/25/09 11:49:00 AM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**8/28/09 12:00 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	18
Methane	0.00024	0.00028
Carbon Dioxide	0.024	3.0

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-4

Lab ID#: 0908603C-08A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082811**	**Date of Collection:**	**8/25/09 12:33:00 PM**
Dil. Factor:	**2.47**	**Date of Analysis:**	**8/28/09 12:24 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	8.2
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	14

Container Type: 1 Liter Summa Canister (100% Certified)

Air TOXICS LTD.
Laboratory Services Since 1989

Client Sample ID: SG-6

Lab ID#: 0908603C-09A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082812**	**Date of Collection:**	**8/25/09 12:53:00 PM**
Dil. Factor:	**2.33**	**Date of Analysis:**	**8/28/09 01:22 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	14
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	6.2

Container Type: 1 Liter Summa Canister (100% Certified)

Air TOXICS LTD.
Laboratory Services Since 1989

Client Sample ID: SG-1

Lab ID#: 0908603C-10A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082813**	**Date of Collection:**	**8/25/09 1:26:00 PM**
Dil. Factor:	**2.47**	**Date of Analysis:**	**8/28/09 02:04 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	1.8
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	14

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-2

Lab ID#: 0908603C-11A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082814**	**Date of Collection:**	**8/25/09 1:40:00 PM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**8/28/09 02:39 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	6.0
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	11

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: SG-2 Lab Duplicate

Lab ID#: 0908603C-11AA

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082815**	**Date of Collection:**	**8/25/09 1:40:00 PM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**8/28/09 03:18 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	6.0
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	10

Container Type: 1 Liter Summa Canister (100% Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908603C-12A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082803**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/28/09 08:47 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908603C-13A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9082828**	**Date of Collection: NA**	
Dil. Factor:	***1.00***	**Date of Analysis: 8/28/09 09:00 PM**	

Compound	%Recovery
Oxygen	100
Methane	100
Carbon Dioxide	100

Container Type: NA - Not Applicable

APPENDIX G

SOIL VAPOR SAMPLING DATA SHEETS

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-1

Project Name: Gatzke
Project No: 120741
Site Address: 1499 MacArthur Blvd

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jones

Purge Volume

Calculated Purge Volume: 3in Hg.

Time	Flow Rate	Volume	Comments
13:18			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 35664

Summa Canister Size: 1 Liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
13:18	-30	13:26	-6.5	

Notes:

Soil Vapor Sampling Point ID: SG-2

Project Name: Gatzke
Project No: 120741
Site Address: 1499 MacArthur Blvd.

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jones

Purge Volume

Calculated Purge Volume: 3in Hg.

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 34571

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
13:33	-30	13:40	-6	

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-3

Project Name: Gaftke
Project No: 120741
Site Address: 1499 MacArthur Blvd

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jones.

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments
10:50			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 36374

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
10:50	-29.5	10:57	-5	7 min

Notes:

Soil Vapor Sampling Point ID: SG-5

Project Name: Gaftke
Project No: 120741
Site Address: 1499 MacArthur Blvd.

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jones

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 34668

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
11:20	-30	11:37	-5.5	

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-4

Project Name: Gatzke — **Date:** 8/25/09

Project No: 120741 — **Sampler:** Bryan Fong

Site Address: 1499 MacArthur Blvd. — **PM:** Mark Jonas

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments
12:20			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: ~~44520~~ 34164

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
12:24	-30	12:33	-6	

Notes:

Soil Vapor Sampling Point ID: SG-6

Project Name: Gatzke — **Date:** 8/25/09

Project No: 120741 — **Sampler:** Bryan Fong

Site Address: 1499 MacArthur Blvd — **PM:** Mark Jonas

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments
12:41			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 36513

Summa Canister Size: 1-liter. Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
12:43	-30	12:53	-5.5	

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-5 - Dup

Project Name: Gatelle
Project No: 120741
Site Address: 1499 MacArthur Blvd.

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jones

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 1472

Summa Canister Size: _____ Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
11:20	-29.5	11:37	-5	

Notes:

Soil Vapor Sampling Point ID: SG-7

Project Name: Gatelle
Project No: 120741
Site Address: 1499 MacArthur Blvd

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jones

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments
11:36			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 12037

Summa Canister Size: ~~1200~~ 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
11:40	-30	11:49	CH -5.75	

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-9

Project Name: Gatzke
Project No: 120741
Site Address: 1499 MacArthur Blvd.

Date: 8/25/09
Sampler: Bryan Fong
PM: Mark Jonas

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments
14:44			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 9312

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
14:45	-30	14:53	-7.5	

Notes:

Soil Vapor Sampling Point ID: _____

Project Name: _____
Project No: _____
Site Address: _____

Date: _____
Sampler: _____
PM: _____

Purge Volume

Calculated Purge Volume: _____

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: _____ Summa Canister ID: _____

Summa Canister Size: _____ Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-10

Project Name: Gatzke | **Date:** 8/25/09

Project No: 120741 | **Sampler:** Bryan Fong

Site Address: 1999 MacArthur Blvd | **PM:** Mark Jonas

Purge Volume

Calculated Purge Volume: 3 in Hg

Time	Flow Rate	Volume	Comments
13:58			

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 25210

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
14:00	-30	14:07	-7	

Notes:

Soil Vapor Sampling Point ID: SG-8

Project Name: Gatzke | **Date:** 8/25/09

Project No: 120741 | **Sampler:** Bryan Fong

Site Address: 1999 MacArthur Blvd. | **PM:** Mark Jonas

Purge Volume

Calculated Purge Volume: 3 in Hg.

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: _____ Summa Canister ID: 9475

Summa Canister Size: 1-liter Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
14:48	-28.5	14:56	-6.5	

Notes: