Ninyo & Moore
Geotechnical and Environmental

SITE ASSESSMENT WORKPLAN
HOLLAND OIL PROPERTY
16301 EAST 14TH STREET
SAN LEANDRO, CALIFORNIA 94580

PREPARED FOR:
Hayward Area Recreation and Park District
1099 E Street
Hayward, California 94541

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

August 20, 2008
Project No. 401314002

August 20, 2008
Project No. 401314002

Mr. Lawrence R. Lepore
Park Superintendent
Hayward Area Recreation and Park District
1099 E Street
Hayward, California 94541

Subject: Site Assessment Workplan for the Holland Oil Property
16301 East 14th Street
San Leandro, California 94580

Dear Mr. Lepore:

On behalf of the Hayward Area Recreation and Parks District (HARD), Ninyo & Moore has prepared this Site Assessment Workplan for the Holland Oil Property located at 16301 East 14th Street, San Leandro, California (site).

Historic work at the site has been completed by the property owner under the direction of the Alameda County Department of Environmental Health. The activities described in this workplan complement and update those completed.

We appreciate the opportunity to be of service to HARD on this project.

Sincerely,
NINYO & MOORE

Professional Geologist
Exp 8/31/08
Kristopher M. Larson
No. 8059
State of California

Cem R. Atabek
Staff Environmental Engineer

Kris M. Larson, P.G.
Project Environmental Geologist

CRA/KML/dhi

Attachment: Site Assessment Workplan

Distribution: (1) Addressee
(1) Mr. Jerry Wickham, P.G.,
Hazardous Materials Specialist, Alameda County Environmental Health,
1131 Harbor Bay Parkway, Suite 250, Alameda, California 94502
(1) Markus Niebanck
580 Second Street, Suite 260, Oakland, California 94607

TABLE OF CONTENTS

Page

Figures

Appendices

1. INTRODUCTION

On Behalf of Hayward Area Recreation Department (HARD), Ninyo & Moore has prepared this Site Assessment Workplan (workplan) for the former Holland Oil property located at 16301 East 14th Street in unincorporated Alameda County near San Leandro, California (Figure 1). The workplan has been prepared in accordance with the directive from the Alameda County Environmental Health Services (ACEH), dated May 8, 2008, which provided technical comments on the Ninyo & Moore Phase II Environmental Site Assessment (ESA) dated January 2008, and requested additional site assessment. A copy of the ACEH letter is included in Appendix A.

1.1. Purpose

The purpose of the workplan is to propose field activities intended to provide additional data needed to evaluate the magnitude, lateral and vertical extent, and stability of contaminants of concern beneath the site. Soil, groundwater, and soil vapor samples will be collected during the site assessment, and analyzed for compounds related to hazardous materials historically stored and used on site.

2. BACKGROUND

The site is located at 16301 East 14th Street, in San Leandro, California. The site was formerly utilized as a bulk fuel storage and distribution facility. HARD intends to complete the assessment of subsurface contamination, perform remediation as necessary, and redevelop the land for public use.

The site was utilized as a bulk fuel storage and distribution facility from the 1960's to the mid 1980's. There were eight USTs located on site, three of which contained gasoline, two contained diesel, two contained kerosene, and one contained stoddard solvent. The USTs were removed in 1998 and the excavated overburden soil was placed back in the UST excavation. A warehouse located in the southwestern corner of the site was reportedly historically used for vehicle storage and maintenance. The warehouse is currently used for vehicle storage.

A series of environmental evaluations of site soil and groundwater have been conducted since 1990. This testing evaluated the presence of a broad array of potential use-related chemicals; the results of testing revealed elevated concentrations of specific constituents of concern at several locations on the site. Gasoline, diesel, and kerosene-range petroleum hydrocarbons were detected, primarily in areas where former underground storage tanks (USTs) T1 through T8 were located (Figure 2).

3. SITE SETTING

3.1. Geographic Setting

The site is a triangular-shaped property located in San Leandro, California. The site is bordered to the south by a baseball field, to the west by Edendale School, and by property previously utilized as a used car dealership to the northeast.

3.2. Environmental Setting

The site is relatively flat, with a gradual downward slope towards the west. The Oakland-Alameda area is situated on a broad, alluvial plain that slopes gently west from the Oakland-Berkeley hills to the San Francisco Bay. The alluvial plain is comprised of alluvial sediments derived from erosion of the hills to the east. The site region is located at the eastern margin of the alluvial plain and is underlain by fine-grained alluvial and tidal-bay sediments. The surface layer of fill observed throughout the site may be underlain by soft bay mud of geologically recent age and sand similar to the fill. Depth to groundwater throughout the site was observed to range from approximately 8 to 8.5 feet below ground surface (bgs).

4. SCOPE OF WORK

The site assessment will consist of soil borings for soil, groundwater, and soil vapor sampling; and the installation of groundwater monitoring wells for groundwater sampling. Our proposed pre-field preparations and field activities discussed in the sections below.

4.1. Pre-field Preparations

4.1.1. Permitting and Access Letters

Ninyo & Moore will obtain Drilling Permits, as appropriate, from Alameda County Public Works Agency (ACPWA) and Encroachment Permits from the City of San Leandro prior to commencing field activities. Additionally, Ninyo & Moore will obtain a letter from the San Lorenzo Unified School District granting access to Edendale School, the adjacent property to the east of the site.

4.1.2. Site Specific Health and Safety Plan (SSHSP)

Prior to field work, a SSHSP will be prepared and will be implemented during field activities. The SSHSP will discuss the potential hazards associated with the site and project activities and the measures to be taken to protect site workers from the potential hazards. A tailgate health and safety meeting will be conducted with site personnel prior to field work each day to discuss the SSHSP. All on-site personnel will sign the SSHSP at the end of each tailgate meeting to acknowledge their understanding of the information contained within the SSHSP.

4.2. Utility Clearance

The proposed borings locations will be marked with white paint and Underground Services Alert (USA) will be contacted in order to obtain a utility clearance ticket. USA will contact local utility companies to locate underground utilities in the proposed work areas**.** If appropriate, site personnel will be contacted to provide additional information regarding underground utilities around proposed drilling locations. As-built utility drawings showing the locations of aboveground and underground utilities will be also reviewed, if available**.** A private utility locating company will be contracted to confirm the USA markings and identify potential underground utilities that may have been missed by USA. Where underground utilities or structures are present beneath proposed work areas, the drilling locations will be moved to unobstructed areas. If necessary, each sampling location will be carefully hand augured for the first 5 feet bgs to avoid damage to subsurface utilities.

4.3. Soil Vapor Sampling

Ninyo & Moore will advance 6 borings for the purpose of soil vapor sampling using direct push drilling and sampling methods. Borings SV-1 through SV-6 will be advanced in the southeastern portion of the site in the area formerly occupied by a used car lot (Figure 2). The vapor samples will be collected in accordance with the Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (LA RWQCB) *Advisory – Active Soil Gas Investigations* guidance document dated January 28, 2003 (DTSC, 2003).

The purpose of this proposed sampling is to evaluate subsurface vapor characteristics outside the area of former bulk plant operation. It is presumed that the areas of the former bulk plant with petroleum hydrocarbons in shallow soil and groundwater contain related vapors; testing for confirmation in these areas is at this time unnecessary.

Details of our proposed soil vapor sampling methods are presented below:

Field Work Schedule: Soil vapor sampling will be conducted when vadose zone soils are appropriately dry. No soil vapor sampling activities will be implemented within 5 days after a significant rainfall (e.g., ½ inch or greater) or during irrigation. ACEH will be notified of the vapor sampling schedule in advance.

Sample Vapor Boring Method: Soil vapor samples will be collected using a direct push drill rig. Drilling rods equipped with an expendable point and a post-run tubing (PRT) adapter will advanced from the ground surface to the targeted depth and then retracted approximately 6 inches to expose the probe tip sampling zone. The appropriate length of Teflon© tubing (typically ¼ inch outside diameter) will connected to a fitting, inserted down the inside of the drill rods, and reverse threaded into the PRT adapter. The end of the tubing will capped using a temporary stainless steel cap until the tubing can be connected to a stainless steel sampling manifold.

Targeted Sampling Depth: We will target the zone from approximately 5 to 5.5 feet bgs to collect soil vapor samples.

Installation of Bentonite Seals: Two seals constructed with hydrated bentonite will be installed to prevent ambient air from entering the boring. One seal will be installed around the base of the drill rod between the drill rod and the ground surface. The purpose of this seal is to prevent ambient air from entering and traveling down the outside of the drill rod. The other seal will be installed around the tubing at the top of the drill rod. The purpose of this seal is to prevent ambient air from entering the inside of the drill rod. After hydrated bentonite seals are installed, at least 30 minutes will elapse prior to sampling to allow the seal to properly set. This time will also allow restoration of subsurface equilibrium.

Vapor Sampling Equipment and Manifold: The downhole tubing will be connected to a stainless steel manifold; consisting of stainless steel tubing, a filter, a flow controller, gauges, valves, and Swagelock® fittings. A diagram identifying the components of the subsurface sampling system is provided in Appendix C. Vapor samples will be collected using 1 liter Summa® vacuum canisters. Pre-sample purging will be performed using a 6 liter Summa® vacuum canister. The manifolds, filters, gauges, and flow controllers and Summa® canisters will be supplied by a State-certified laboratory. A new manifold will be used for each soil vapor boring and manifolds will not be reused for multiple borings. As subsurface vapor is extracted from the borehole using the Summa® canisters, the soil vapor will first pass through the filter followed by the flow controller and then through the gauges and into the appropriate Summa® canister (purge or sample). Additional gauges will be connected to the manifold to measure downhole vacuum and to provide quality assurance in the event of a gauge failure. The flow controller will be pre-set by the laboratory to allow approximately 150 to 200 milliliters per minute (mL/min) of air flow, but not more than 200 mL/min per DTSC guidelines. The exact flow rate (between 150 and 200 mL) will be known prior to vapor sampling field activities.

Manifold Leak Test: Before the manifold is connected to the downhole tubing, a stainless steel cap will be fitted on the downhole side of the manifold (typically the filter), and a leak test will performed by opening the purge Summa® canister. At the onset of the leak test the initial vacuum and time will be recorded on the soil vapor sampling field data sheet. The leak test will continue for approximately 10 minutes. If the vacuum pressure remains constant for the duration of the leak test, the test will be considered successful, the manifold will be connected to the downhole tubing, and purging and sampling will commence. If the vacuum pressure changes, the leak test will be discontinued, the manifold fittings will be double checked and tightened, and the leak test will be repeated from the beginning until the vacuum pressure remains constant. An extra manifold will be on site in case one of the laboratory supplied manifolds is faulty.

Leak Detection: A leak detection compound will used to evaluate whether leaks are present in the sampling equipment which could cause the dilution of analytical samples with ambient air. After a successful manifold leak test, the manifold will be connected to the downhole tubing. Isopropyl alcohol with an active ingredient of 2-propynol will be used as the leak detection compound. After the manifold is connected to the Teflon® tubing, an isopropyl alcohol soaked gauze will be applied to the outside of the tubing and manifold in at least three places. No isopropyl alcohol will come in direct contact with the manifold but the gauze will be secured to the manifold so that the isopropyl alcohol is very close to the manifold fittings throughout the duration of sampling. One gauze will be applied at the base of the drill rod to test the bentonite seal. One gauze will be applied around the tubing near the top of the drill rod to test the other bentonite seal. At least one gauze will be applied around the outside of the sampling manifold to test the various fittings of the manifold and sample Summa® canister. 2-propynol will be included in the list of analyzed compounds and the results will be included in the laboratory analytical report and presented on the analytical table.

Purge Volume Calculation: The combined volume of tubing and probe tip will be calculated prior to field activities. The volume will calculated in milliliters (mL) and converted to inches of mercury (in. Hg) based on the size of Summa canister used for purging.

Purging: Prior to sample collection, purging of the ambient air will be performed in order to collect samples representative of the subsurface soil vapor. Three tubing volumes (including the probe tip volume) of air will be purged using the 6 liter Summa© canister prior to sampling. The purge volume will be monitored by volume, not time. The purge begin time, initial purge canister vacuum, end time, and final vacuum will be recorded on the soil vapor sampling field forms.

Decontamination: In order to minimize the potential for cross-contamination, downhole drill tooling will be thoroughly decontaminated prior to the first boring and after each boring. The vapor sampler(s) will use a new pair of nitrile gloves for each sample collection.

Sample Analysis: Collected samples will be submitted to a State-certified laboratory for analysis of volatile organic compounds (VOCs) and gasoline-range petroleum hydrocarbons (TPHg) by EPA Method TO-15.

4.4. Shallow Soil Borings, Soil Sampling and Analysis

Two borings (B-9 and B-10) will be advanced in the southeast portion of the site (Figure 2) to assess the extent of hydrocarbons detected in shallow soil during the prior sampling event. The borings will be advanced using direct push drilling methods to a depth of 15 feet bgs. Samples will be collected from the borings at depths of 2, 5, and 10 feet bgs. Soil cores will be inspected for visual signs of impacts and screened for volatile organic vapors using a photo-ionization detector (PID). A lithologic description of the soils observed will be described on detailed boring logs in general conformance with the Unified Soil Classification System (USCS).

Soil samples will be collected by cutting sections of the acetate liners of the drill rods at the desired depths. The end of the section of acetate liner will be sealed with Teflon tape and plastic end caps.

The sample containers will be labeled with the project name, location, boring number, sample depth, sampling date/time, and sampler's initials. Each sample container will be placed into an individual zip-lock type bag and stored in an insulated cooler containing ice for transport to the analytical laboratory. Chain-of-custody documentation will be completed and will accompany the soil samples to the analytical laboratory.

Soil samples obtained during on-site field activities will be analyzed by a State certified analytical laboratory. Select soil samples will be analyzed for TPHg and concentrations of diesel-range (TPH-d) petroleum hydrocarbons using EPA Method 8015, and for VOCs using EPA Method 8260. Samples analyzed for TPHg and VOC compounds will be collected using Encore sample containers.

4.5. Discreet Groundwater Sampling and Analysis

The purpose of discreet groundwater sample borings is to evaluate the vertical extent of petroleum hydrocarbon impacts to groundwater. Four borings (DB-1A, DB-1B, DB-2 & DB-3) will be advanced on site using direct push drilling methods in the western portion of the site (Figure 2). The purpose of the first proposed boring is to obtain lithology data which will be used to evaluate the targeted groundwater sampling depth. Discreet groundwater samples will be collected from the other three borings using a drilling method that seals off the upper water bearing zone(s) and allows for collection of representative discreet groundwater samples.

The first of the four borings (DB-1A) will be advanced to 40 feet bgs to obtain lithology data and to identify potential deep water bearing zones. The boring will be advanced using a direct push dual-tube system which will leave an outer casing in the boring to prevent the boring from collapsing while the inner drill rod is used to continuously core the soil. Soil

cores will be inspected for visual signs of impacts and screened for volatile organic vapors using a PID. Soil samples will not be collected for analysis. A lithologic description of the soils observed will be described on a boring log in general conformance with the USCS.

After lithology is examined from the centrally located proposed boring DB-1A, the other three borings will be advanced for discrete grab groundwater sampling using the hydro-punch© method. Boring DB-1B will be advanced within 5 feet of boring DB-1A. We will attempt to collect hydropunch© groundwater samples from the zone between approximately 36 and 40 feet bgs, pending the results of proposed boring DB-1A. If the soil from 36 to 40 feet bgs is observed to have a low estimated permeability, we will target a water bearing zone at a similar depth if such a zone is observed in the soil core obtained from boring DB-1A. The remaining discreet groundwater sample borings (DB-2 and DB-3) will target the same zone targeted in boring DB-1B. The groundwater samples will be collected by advancing a direct push drill rod with an expendable tip to the desired depth and retracting the drill rod approximately 4 feet. This will expose a PVC screened casing to the desired sampling zone while sealing off the shallow water bearing zone(s).

The depth to groundwater will be measured prior to sampling using a decontaminated water level meter and then groundwater samples will be collected using a new, disposable bailer or a peristaltic pump with new tubing. Groundwater samples will be analyzed for TPH-g and TPH-d by EPA Method 8015, and for VOCs by EPA Method 8260. Samples for analysis of VOCs and TPH-g will be collected first. While collecting samples for VOCs and TPH-g analysis, the pump will be run at low speed or the water will be poured gently from the bailer into the sample containers in an effort to minimize disturbance of groundwater. The samples will be collected in the appropriate laboratory supplied sample containers, labeled, inserted into protective sleeves, and stored on ice under chain-of-custody for delivery to the analytical laboratory.

4.6. Groundwater Monitoring Well Installation

Four borings (MW-9 through MW-12) will be advanced to 20 feet bgs using an 8-inch-diameter hollow stem auger for the installation of groundwater monitoring wells. Monitoring well MW-9 will be located in the center of the former used car lot in the southeastern portion of the site, and MW-10 through MW-12 will be located northwest of the site on the Edendale School property (Figure 2). Before drilling boring MW-9 with the hollow stem auger, a direct push boring will be advanced at boring location MW-9 for the collection of soil samples from depths of 2, 5, and 10 feet bgs. The soil samples will be collected and analyzed using the same methods described in Section 2.5 above. The soil cores will be inspected for visual signs of impacts and screened for volatile organic vapors using a PID meter. Samples will not be collected from the other borings.

The wells will be constructed with 2-inch diameter schedule 40 PVC well casing with 0.01 inch screened casing extending from approximately 5 to 20 feet. A threaded PVC end cap will be placed at the bottom of the screen. The remainder of the well casing will be composed of blank schedule 40 PVC and capped with a locking well cap. Well construction will be completed by pouring # 2/12 Monterey Sand into the well annulus from the bottom of the well to approximately 1 foot above the screened PVC, adding one foot of bentonite chips above the sand, and finishing the well with Portland cement grout (neat cement) to approximately 0.5 feet bgs. A representative from the Alameda County Public Works Agency (ACPWA) will be contacted to oversee grouting procedures of the wells on site. Traffic rated monitoring well boxes will be installed within the top 6 inches of the subsurface. A Well Completion Report will be prepared and submitted to the Department of Water Resources (DWR) subsequent to well installation.

4.7. Groundwater Monitoring Well Development

The proposed monitoring wells (MW-9 through MW-12) will be developed at least 72 hours subsequent to installation. The wells will be surged using a surge block and then groundwater will be purged using a submersible or peristaltic pump and/or a disposable bailers. The

wells will be surged with a surge block within the screened portion of the well to remove sediment in the sand pack, after which the wells will be bailed to remove sediment accumulation in the well bottom. Subsequent to the surging and bailing, the wells will be purged to further remove sediments in the well using a submersible pump. Purging will continue until groundwater parameters (pH, temperature, and electrical conductivity) stabilize or approximately 10 casing volumes of groundwater have been purged.

4.8. Well Survey

The location and elevation of the top of well casing for each new and existing well will be surveyed to an assigned site datum by licensed professional land surveyor. The well box elevation for each well will also be surveyed.

4.9. Groundwater Monitoring Well Sampling and Analysis

Approximately 48 hours subsequent to well development, static groundwater levels will be measured and groundwater samples will be collected. First, the depth to static groundwater from top of casing will be measured with a decontaminated water level meter accurate to 0.01 feet. The groundwater elevation data will be used to evaluate apparent groundwater flow direction and gradient. Next, groundwater samples will be collected from each well using a new, disposable bailer or peristaltic pump with new tubing. Prior to sample collection, three casing volumes of groundwater will be purged. Groundwater parameters (pH, temperature, and electrical conductivity) will be recorded during purging activities. Groundwater monitoring well samples will be analyzed for TPH-g and TPH-d by EPA Method 8015, and VOCs by EPA Method 8260. Samples for analysis of VOCs and TPH-g will be collected first. While collecting samples for VOCs and TPH-g analysis, the pump will be run at low speed or the water will be poured gently from the bailer into the sample containers in an effort to minimize disturbance of groundwater which could increase the volatilization of constituents of concern. The groundwater will be collected in the appropriate sample containers and will be labeled with the project name, location, boring number, sample depth, sampling date/time, and sampler's initials. The sample containers will be placed into a cooler

containing ice for transport to a California certified laboratory for chemical analysis. Chain-of-custody documentation will be completed and will accompany the groundwater samples to the laboratory.

4.10. Decontamination Procedures

All down-hole equipment will be decontaminated between borings using a steam cleaner to minimize the chance of cross contamination. Nitrile gloves, disposable bailers and pump tubing will also be changed between sampling locations to minimize the chance of cross contamination. If a steam cleaner is not available, decontaminated will be conducted using a triple rinse method consisting of a rinse with distilled water, followed by a rinse with an appropriate detergent solution, followed by a final rinse with distilled water.

4.11. Investigation-Derived Waste

Soil cuttings from all borings will be transferred to a stockpile on a plastic liner of at least 10-mil thickness. The stockpile will be bermed to prevent water from leaching out of the soil and onto surrounding surface. The stockpile will be covered with a similar plastic liner at the end of the day and weighed down. Soil from areas of the site known to contain hydrocarbon compounds will be segregated from soil anticipated to be free of impact.

Purged groundwater and decontamination rinsate will be stored in reconditioned 55-gallon steel drums. The drums will be removed from the site using a certified waste removal company after receipt of analytical laboratory results.

4.12. Report Preparation

A report will be prepared following completion of the described activities. The report will include a description of soil, groundwater, and soil vapor sampling and results, complete with tables and figures, a groundwater gradient map, and appendices presenting boring logs, well construction diagrams, and certified analytical reports.

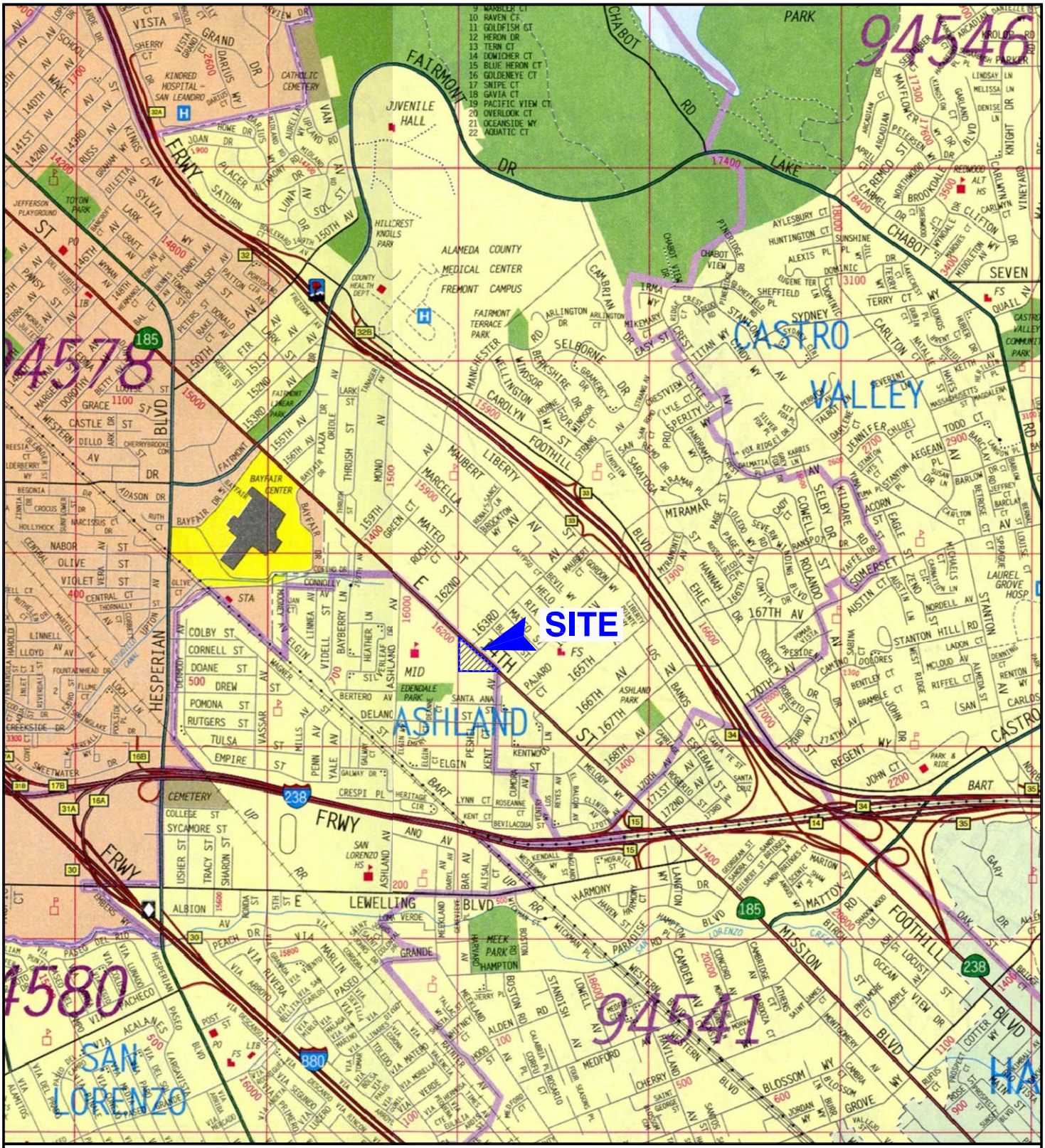
5. REFERENCES

Alameda County Health Care Services Agency, 2008, Letter RE: Fuel Leak Case No. RO000212, Holland Oil, 16301 East 14th Street, San Leandro, California, dated May 8.

Hayward Area Recreation and Park District, 2008, Letter RE: Request for Proposal - Holland Property, dated June 24.

Department of Toxic Substances Control & Los Angeles Regional Water Quality Control Board, 2003, *Advisory – Active Soil Gas Investigations*, dated January 28.

Ninyo & Moore, 2008, Phase II Environmental Site Assessment, 16301 East 14th Street, San Leandro, California, dated January 25.



REFERENCE: 2005 THOMAS GUIDE FOR ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES, STREET GUIDE AND DIRECTORY.

APPROXIMATE SCALE IN FEET

0 1900 3800

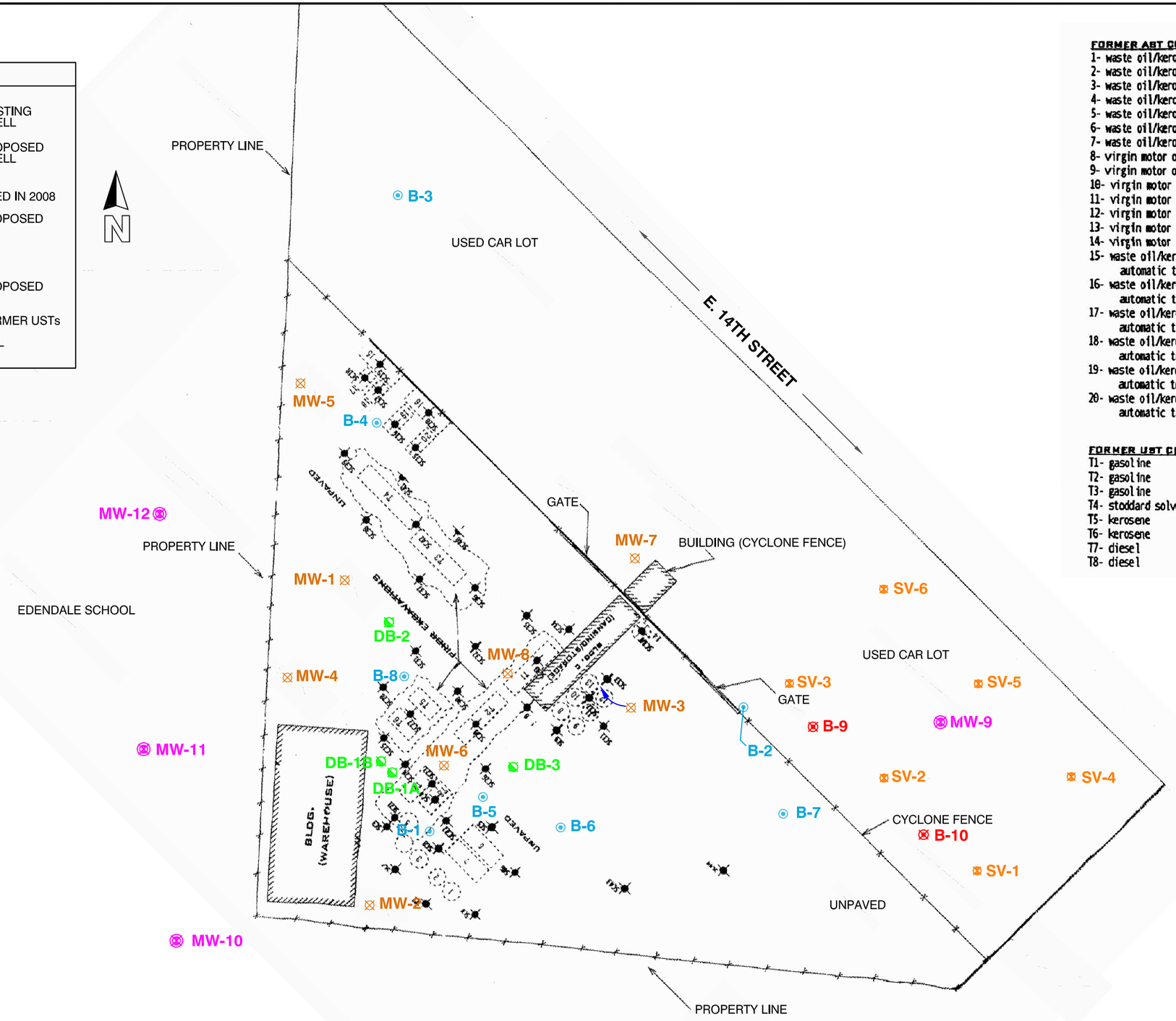
N

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	SITE LOCATION MAP	FIGURE
PROJECT NO.	DATE	HOLLAND OIL FACILITY 16301 EAST 14th STREET SAN LEANDRO, CALIFORNIA	1
401314002	8/08		

LEGEND

MW-7	APPROXIMATE LOCATION OF EXISTING GROUNDWATER MONITORING WELL
MW-8	APPROXIMATE LOCATION OF PROPOSED GROUNDWATER MONITORING WELL
B-3	APPROXIMATE LOCATION OF EXPLORATORY BORING ADVANCED IN 2008
B-9	APPROXIMATE LOCATION OF PROPOSED SHALLOW SOIL BORING
DB-1	APPROXIMATE LOCATION OF PROPOSED DEEP SOIL BORING
SV-1	APPROXIMATE LOCATION OF PROPOSED SOIL VAPOR SAMPLE BORING
TI	APPROXIMATE LOCATION OF FORMER USTs
SC-1	APPROXIMATE LOCATION OF SOIL CONFIRMATION SAMPLE



APPROXIMATE SCALE IN FEET

0 50 100

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

FORMER AST CONTENTS

1- waste oil/kerosene
2- waste oil/kerosene
3- waste oil/kerosene
4- waste oil/kerosene
5- waste oil/kerosene
6- waste oil/kerosene
7- waste oil/kerosene
8- virgin motor oil/automatic trans. fluid/pale stock
9- virgin motor oil/automatic trans. fluid/pale stock
10- virgin motor oil/automatic trans. fluid/pale stock
11- virgin motor oil/automatic trans. fluid/pale stock
12- virgin motor oil/automatic trans. fluid/pale stock
13- virgin motor oil/automatic trans. fluid/pale stock
14- virgin motor oil/automatic trans. fluid/pale stock
15- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
16- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
17- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
18- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
19- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
20- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene

FORMER UST CONTENTS

T1- gasoline
T2- gasoline
T3- gasoline
T4- stoddard solvent
T5- kerosene
T6- kerosene
T7- diesel
T8- diesel

Ninyo & Moore		**BORING LOCATION MAP**	FIGURE
PROJECT NO.	DATE	HOLLAND OIL FACILITY 16301 EAST 14th STREET SAN LEANDRO, CALIFORNIA	**2**
401314002	8/08		

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) 337-9335

May 8, 2008

Ms. Ann Marie Holland Tiers
Estate of Jack Holland
1498 Hamrick Lane
Hayward, CA 94544

Ms. Barbara Holland
P.O. Box 5
Kentfield, CA 94914

Subject: Fuel Leak Case No. RO0000212 and Geotracker Global ID T0600100709, Holland Oil, 16301 East 14th Street, San Leandro, CA

Dear Ms. Tiers and Ms. Holland:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the subject site including the document entitled, "*Phase II Environmental Site Assessment, 16301 East 14th Street, San Leandro, California*," dated January 25, 2008. The Phase II report was prepared on behalf of the Hayward Area Recreation District by Ninyo & Moore. Ninyo & Moore conducted soil and groundwater sampling at the site in support of a redevelopment assessment. The scope of work conducted for the redevelopment assessment completes a portion of the phased investigation previously proposed by Clearwater Group in work plans and work plan addenda dated March 3, 2003, May 5, 2006, December 5, 2006, and February 2, 2007. However, several tasks that were proposed in the above referenced work plans and work plan addenda have not been completed. The technical comments below discuss several issues that were not addressed by the soil and groundwater sampling results presented in the "*Phase II Environmental Site Assessment, 16301 East 14th Street, San Leandro, California*," dated January 25, 2008. We request that you prepare a Response to Comments and Work Plan that addresses the technical comments below.

REQUEST FOR INFORMATION

The ACEH case file for this site can be viewed online at the following website: http://ehgis.acgov.org/dehpublic/dehpublic.jsp. Please review the list of reports in the case file. We request that you submit a copy of any other reports available to you that are not listed in the case file and that document investigation activities or other environmental work related to this site, including any Phase I or Phase II investigation reports completed as part of a potential property transfer.

TECHNICAL COMMENTS

1. **Assessment of Off-site Groundwater Contamination.** A transect of direct push borings was previously proposed near the western property boundary to assess the extent of soil contamination near the western boundary and to assess potential groundwater contamination moving off-site. We request that you review existing site data along with results from the 2007 Phase II Environmental Assessment and propose additional investigation as necessary to complete characterization of the off-site groundwater contamination. Please present your plans in the Response to Comments and Work Plan requested below.

2. **Vertical Delineation.** The "Workplan Addendum," dated June 5, 2006 proposed vertical delineation using three soil borings extended to a depth of 40 feet bgs. Soil conductivity logging and depth discrete groundwater sampling was proposed for the three borings. Please also review the technical comment regarding vertical delineation in our correspondence dated October 28, 2005 (attached). We request that you include plans to complete delineation of the vertical extent of contamination in the Response to Comments and Work Plan requested below.

3. **PAHs and PCBs in Soil.** Polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs) have been detected in wastes and/or soil at the site. Although groundwater samples were analyzed for PAHs during the Phase II Environmental Site Assessment conducted in July and August 2007, no PAH analyses appear to have been conducted for soils. No PCB analyses appear to have been performed for soil and or groundwater during the Phase II Environmental Site Assessment. We request that you present plans in the Response to Comments and Work Plan requested below to characterize the extent of PAHs and PCBs in soil.

4. **Drums on Site.** A number of 55-gallon drums with unknown contents were observed between the warehouse and perimeter fencing. Please provide documentation to confirm that all drums and their contents have been removed and appropriately disposed off-site.

5. **Surface Soil Contamination in Area of B-2 and B-7.** Elevated concentrations of total petroleum hydrocarbons as diesel and kerosene were detected in soil samples collected from depths of 2 feet bgs in soil borings B-2 and B-7, which are located in the eastern portion of the site. The horizontal extent of contamination in this area has not been determined. In the Response to Comments and Work Plan requested below, please include plans to define the extent of contamination in this area.

6. **Potential Vapor Intrusion.** The potential for vapor intrusion to indoor air for potential future receptors has not been evaluated for the site. Please describe in the Response to Comments and Work Plan requested below, how potential vapor intrusion for future receptors will be evaluated.

7. **Groundwater Monitoring.** Quarterly groundwater monitoring is to be implemented for the site. Please include plans for quarterly groundwater sampling in the Response to Comments and Work Plan requested below.

TECHNICAL REPORT REQUEST

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

- **July 28, 2008** – Response to Comments and Work Plan

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: ACEH Correspondence dated October 28, 2005

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Larry Lepore, Hayward Area Recreation Department, 1099 E street, Hayward 94541

Sonia Urzua, Alameda County Community Development Agency, 224 West Winton Avenue, Hayward, CA 94544

Edward Martins, Law Offices of Edward Martins, 1164 A Street, Hayward, CA 94541

Hal Reiland, Reiland and Reiland, P.O. Box 5490, Pleasanton, CA 94566

Kris Larson, Ninyo & Moore, 1956 Webster Street, Suite 400, Oakland, CA 94612

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

APPENDIX B

ANALYTICAL DATA TABLES FROM PREVIOUS SITE ASSESSMENTS

Table 1 - Soil Sample Analytical Results for Diesel, Gasoline, and Kerosene

	Analyte		
	DRO	GRO	Kerosene
Sample ID	**Analytical Results (mg/kg)**		
B-1-S-2.0	67	4	15
B-1-S-5.0	3.2	1.1	3.3
B-1-S-6.5	11000	67	5900
B-2-S-2.0	15000	37	4600
B-2-S-5.0	7000	<1.0	2000
B-2-S-6.5	1.2	<1.0	<1.0
B-3-S-2.0	18	<1.0	<2.0
B-4-S-2.0	8.4	<1.0	1.9
B-4-S-5.0	2	<1.0	1.2
B-4-S-8.0	5100	410	5600
B-5-S-2.0	1.5	<1.0	<1.0
B-7-S-2.0	1900	13	380
B-8-S-2.0	2.1	<1.0	1.2
B-8-S-8.0	23	14	14
MW-6-S-2.0	1200	1.7	760
MW-6-S-5.0	1500	34	850
MW-6-S-6.5	2000	54	1300
MW-7-S-2.0	770	<1.0	74
MW-7-S-5.0	34	<1.0	<5.0
MW-7-S-7.5	16	<1.0	<2.0
MW-8-S-2.0	110	5700	140
MW-8-S-5.0	14000	5200	16000
MW-8-S-6.5	1700	3800	1600

Notes:
< indicates values below the detection limit
Samples analyzed using EPA Method 8015B

Table 2 - Groundwater Sample Analytical Results for Polycyclic Aromatic Hydrocarbons (PAHs)

	Sample ID							
	MW-1-GW	MW-2-GW	MW-3-GW	MW-4-GW	MW-5-GW	MW-6-GW	MW-7-GW	MW-8-GW
Analytes	**Analytical Results (µg/l)**							
Acenaphthene	**0.52**	<0.2	<0.2	<0.2	<0.2	**0.37**	<0.2	<0.2
Acenaphthylene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Anthracene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)anthracene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(b)fluoranthene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(g,h,i)perylene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(k)fluoranthene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chrysene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dibenz(a,h)anthracene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fluoranthene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fluorene	**0.63**	<0.2	<0.2	<0.2	<0.2	**1.1**	<0.2	**0.29**
Indeno(1,2,3-cd)pyrene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**40**
Phenanthrene	<0.2	<0.2	<0.2	<0.2	<0.2	**1.1**	<0.2	**0.32**
Pyrene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
< = below laboratory detection limits
bold indicates value above the detection limit
Samples analyzed using EPA Method 8270C-Sim
µg/l = micro grams per liter

Table 3 - Groundwater Sample Analytical Results for Diesel, Gasoline, and Kerosene			
	Analyte		
	DRO	GRO	Kerosene
Sample ID	**Analytical Results (mg/l)**		
MW-1-GW	1.1	1.7	0.8
MW-2-GW	0.21	0.093	0.094
MW-3-GW	0.062	<.05	<.05
MW-4-GW	0.71	0.67	0.4
MW-5-GW	0.38	0.17	0.17
MW-6-GW	1.5	0.78	0.91
MW-7-GW	0.51	<.05	0.091
MW-8-GW	0.79	2.1	0.5
B-9-GW	<.05	<.05	<.05
B-10-GW	<.05	<.05	<.05
B-11-GW	0.74	<.05	0.27

Notes:
mg/l = milligrams per liter
< indicates values below the detection limit
Samples analyzed using EPA Method 8015B

Table 4 - Groundwater Sample Analytical Results for Volatile Organic Compounds											
	Sample ID										
	MW-1-GW	MW-2-GW	MW-3-GW	MW-4-GW	MW-5-GW	MW-6-GW	MW-7-GW	MW-8-GW	B-9-GW	B-10-GW	B-11-GW
Analytes	**Analytical Results (µg/l)**										
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**82**	<0.5	<0.5	<0.5
1,2-Dibromo-3-chloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	**0.51**	<0.5	**0.58**	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**30**	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	**3.1**	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	**0.51**	<0.5	<0.5	**0.51**	<0.5	**9.1**	<0.5	<0.5	<0.5	<0.5	<0.5
2,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	<0.5	<0.5	<0.5	<0.5	<0.5	**1.6**	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Isopropyltoluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**3.5**	<0.5	<0.5	<0.5
Benzene	**3**	<0.5	<0.5	**3.7**	<0.5	**11**	<0.5	**110**	<0.5	<0.5	<0.5
Bromobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	**0.84**	<0.5	<0.5	**1.7**	<0.5	**2.1**	**0.94**	**3.8**	<0.5	<0.5	<0.5
Chloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.67**	<0.5	<0.5
cis-1,2-Dichloroethene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 4 - Groundwater Sample Analytical Results for Volatile Organic Compounds

	Sample ID										
	MW-1-GW	MW-2-GW	MW-3-GW	MW-4-GW	MW-5-GW	MW-6-GW	MW-7-GW	MW-8-GW	B-9-GW	B-10-GW	B-11-GW
Analytes	**Analytical Results (µg/l)**										
Ethylbenzene	**1.3**	<0.5	<0.5	<0.5	<0.5	**0.71**	<0.5	**76**	<0.5	<0.5	<0.5
Hexachlorobutadiene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	**51**	**0.68**	<0.5	**20**	**1.8**	**20**	<0.5	**12**	<0.5	<0.5	<0.5
m,p-Xylene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**190**	<1.0	<1.0	<1.0
Methylene chloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MTBE	<0.5	<0.5	<0.5	**13**	**6.9**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**38**	<0.5	<0.5	<0.5
n-Butylbenzene	**27**	<0.5	<0.5	**7.9**	<0.5	**5.4**	<0.5	**7.2**	<0.5	<0.5	<0.5
n-Propylbenzene	**130**	**0.6**	<0.5	**42**	**2.3**	**32**	<0.5	**30**	<0.5	<0.5	<0.5
o-Xylene	<0.5	<0.5	<0.5	<0.5	<0.5	**2.4**	<0.5	**25**	<0.5	<0.5	<0.5
sec-Butylbenzene	**25**	**0.52**	<0.5	**12**	**0.94**	**7**	<0.5	**2.5**	<0.5	<0.5	<0.5
Styrene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	**1.9**	<0.5	<0.5	**1.2**	**0.51**	**0.57**	<0.5	**0.59**	<0.5	<0.5	<0.5
Tetrachloroethene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5	<0.5	**0.64**	<0.5	**6.8**	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
µg/l = micrograms per liter
bold indicates value above the detection limit
< indicates values below detection limits
Samples analyzed using EPA Method 8260B

TABLE 1: TPHg/BTEX/MTBE, TPHd/TPHk/TPHss, TOG, Heavy Metals, PCBs in Soil (mg/kg unless otherwise noted)

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Ni/Pb/Zn	PCB's (µg/kg)
SC1-2'	1.5	ND	ND	0.010	0.011	0.024	190	ND[1]	ND[1]	97	ND/38/30/33/80	ND
SC1-5'	ND	ND	ND	ND	ND	ND	29	ND[1]	ND[1]	41	ND/33/4.6/36/40	NA
SC1-12'	1.9	ND	ND	ND	ND	0.016	61	ND[1]	ND[1]	140	ND/36/5.6/34/35	NA
SC2-2'	12	ND	ND	ND	0.057	0.99	79	ND[1]	ND[1]	880	ND/41/19/40/50	ND
SC2-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND/28/4.5/33/32	NA
SC2-10'	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND/43/5.6/46/48	NA
SC3-2'	ND	ND	ND	ND	0.014	0.18	ND	ND	ND	ND	ND/54/4.0/49/37	NA[2]
SC3-5'	510	ND	ND	ND	4.3	57	ND[1]	780	ND[1]	2,100	ND/31/9.8/19/39	NA
SC3-10'	130	ND	ND	ND	ND	7.3	ND[1]	510	ND[1]	47	ND/40/5.2/37/42	NA
SC4-2'	430	ND	1.2	ND	2.5	11	8,200	ND[1]	ND[1]	14,000	ND/37/14/38/59	ND
SC4-5'	170	ND	ND	ND	ND	3.3	1,900	ND[1]	ND[1]	2,800	ND/40/6.0/42/46	NA
SC4-9'	20	ND	0.13	0.08	0.03	0.20	110	ND[1]	ND[1]	26	ND/48/3.6/37/32	NA
SC5-2'	270	ND	ND	ND	ND	ND	1,300	ND[1]	ND[1]	6,400	ND/45/9.6/48/56	ND
SC5-5'	820	ND	ND	ND	1.6	ND	5,700	ND[1]	ND[1]	12,000	ND/32/5.6/33/38	NA
SC5-10'	290	ND	ND	ND	ND	ND	1,300	ND[1]	ND[1]	760	ND/40/6.9/42/55	NA
SC6-2'	770	ND	ND	2.4	2.6	15	6,000	ND[1]	ND[1]	11,000	ND/35/640/46/110	ND
SC6-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND/41/6.0/45/52	NA
SC6-9'	21	ND	ND	ND	ND	ND	28	ND[1]	ND[1]	ND	ND/34/3.8/33/35	NA

TABLE 1: PAGE 2 OF 8

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Ni/Pb/Zn	PCB's (µg/kg)
SC7-2'	ND	ND	ND	ND	ND	ND	33	ND[1]	ND[1]	270	ND/33/6.6/29/52	ND
SC7-5'	ND	ND	ND	ND	ND	ND	12	ND[1]	ND[1]	22	ND/35/5.0/40/44	NA
SC7-9.5'	230	ND	ND	ND	ND	ND	500	ND[1]	ND[1]	750	ND/29/4.7/30/39	NA
SC8-2'	110	ND	ND	0.28	0.9	2.0	390	ND[1]	ND[1]	6,200	ND/36/7.8/41/45	ND
SC8-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND/40/5.7/43/46	NA
SC8-10'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND/27/4.7/30/32	NA
SC9-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	NA	ND
SC9-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	NA	ND
SC9-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,500	NA	160
SC10-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	180	NA	ND
SC10-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,500	NA	ND
SC11-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND
SC11-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	38	NA	ND
SC11-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,100	NA	250
SC12-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	7,300	NA	ND
SC12-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,900	NA	ND
SC12-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	29,000	NA	ND

TABLE 1: PAGE 3 OF 8

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Ni/Pb/Zn	PCB's (µg/kg)
SC13-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	44,000	NA	240
SC13-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	190	NA	ND
SC13-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,800	NA	ND
SC14-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	240	NA	ND
SC14-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	22,000	NA	99
SC14-8'	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	NA	ND
SC15-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	28	ND/42/9.9/39/31	NA[2]
SC15-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND/39/6.4/50/51	NA
SC15-9'	230	ND	ND	ND	ND	ND	310	ND[1]	ND[1]	380	ND/27/4.9/31/33	NA
SC16-2'	1.6	ND	ND	ND	ND	0.022	ND	ND	ND	22	ND/36/7.0/39/27	NA[2]
SC16-5'	1.5	ND	ND	ND	ND	0.028	ND	ND	ND	55	ND/47/7.4/58/61	NA
SC16-8.5'	5,400	ND	ND	3.0	17	110	ND[1]	ND[1]	6,600	7,000	ND/26/4.8/27/28	NA
SC17-2'	1,200	ND	ND	ND	1.4	3.8	ND[1]	ND[1]	1,900	4,700	ND/41/6.3/31/32	ND
SC17-5'	18	ND	ND	ND	ND	0.03	ND[1]	ND[1]	410	430	ND/38/6.5/49/54	NA
SC17-8'	5,300	ND	ND	5.8	9.2	68	ND[1]	ND[1]	5,500	5,000	ND/37/5.9/42/45	NA
SC18-2'	3,800	ND	ND	3.6	4.7	37	ND[1]	ND[1]	3,400	6,500	ND/35/16/29/26	ND
SC18-5'	7,200	ND	ND	7.6	13	97	ND[1]	ND[1]	8,300	9,200	ND/20/4.7/31/32	NA
SC18-8'	8.1	ND	ND	ND	0.02	0.12	ND	ND	ND	ND	ND/31/3.6/34/33	NA

TABLE 1: PAGE 4 OF 8

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Nl/Pb/Zn	PCB's (µg/kg)
SC19-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND/47/5.4/37/32	NA[2]
SC19-5'	1,200	ND	ND	ND	ND	ND	ND[1]	2,900	ND[1]	2,100	ND/27/5.0/32/35	NA
SC19-8'	600	ND	ND	ND	ND	ND	ND[1]	1,600	ND[1]	1,100	ND/35/5.3/39/40	NA
SC20-2'	ND	ND	ND	ND	ND	ND	220	ND[1]	ND[1]	130	ND/38/15/45/40	ND
SC20-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	66	ND/29/6.6/36/38	NA
SC20-9'	4.3	ND	ND	ND	ND	ND	42	ND[1]	ND[1]	ND	ND/27/5.1/32/39	NA
SC21-2'	11	ND	ND	0.018	ND	0.086	28	ND[1]	ND[1]	NA	NA	NA
SC21-9'	19	ND	ND	ND	ND	0.052	100	ND[1]	ND[1]	NA	NA	NA
SC22-2'	1,400	ND	ND	ND	4.2	15	2,000	ND[1]	ND[1]	NA	NA	NA
SC22-5'	930	ND	ND	ND	ND	ND	5,500	ND[1]	ND[1]	NA	NA	NA
SC22-9'	850	ND	ND	ND	1.8	ND	6,200	ND[1]	ND[1]	NA	NA	NA
SC23-2'	510	ND	ND	ND	1.0	4.9	2,400	ND[1]	ND[1]	NA	NA	NA
SC23-5'	350	ND	ND	ND	ND	ND	780	ND[1]	ND[1]	NA	NA	NA
SC23-9'	490	ND	ND	ND	2.4	4.6	1,400	ND[1]	ND[1]	NA	NA	NA
SC24-2'	190	ND	ND	ND	ND	ND	2,400	ND[1]	ND[1]	NA	NA	NA
SC24-5'	84	ND	ND	ND	ND	ND	730	ND[1]	ND[1]	NA	NA	NA
SC24-9'	1,200	ND	ND	ND	ND	ND	8,400	ND[1]	ND[1]	NA	NA	NA
SC25-2'	460	ND	ND	ND	ND	ND	1,200	ND[1]	ND[1]	NA	NA	NA
SC25-5'	1.2	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC25-9'	250	ND	ND	ND	ND	ND	770	ND[1]	ND[1]	NA	NA	NA

TABLE 1: PAGE 5 OF 8

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Ni/Pb/Zn	PCB's (µg/kg)
SC26-2'	4,500	ND	7.8	5.6	34	160	6,000	ND[1]	ND[1]	NA	NA	NA
SC26-5'	2,100	ND	ND	1.5	4.9	12	4,800	ND[1]	ND[1]	NA	NA	NA
SC26-9'	230	ND	ND	ND	ND	ND	610	ND[1]	ND[1]	NA	NA	NA
SC27-2'	470	ND	ND	ND	ND	ND	1,900	ND[1]	ND[1]	NA	NA	NA
SC27-5'	840	ND	ND	ND	1.9	3.8	1,800	ND[1]	ND[1]	NA	NA	NA
SC27-9'	180	ND	ND	ND	ND	2.2	150	ND[1]	ND[1]	NA	NA	NA
SC28-2'	ND	ND	ND	ND	ND	0.015	580	ND[1]	ND[1]	NA	NA	NA
SC28-5'	1.2	ND	ND	ND	ND	0.015	26	ND[1]	ND[1]	NA	NA	NA
SC28-8.5'	3.8	ND	ND	0.007	0.005	0.095	24	ND[1]	ND[1]	NA	NA	NA
SC29-2'	600	ND	ND	ND	1.3	7.3	1,800	ND[1]	ND[1]	NA	NA	NA
SC29-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC29-9'	870	ND	ND	ND	1.7	11	2,300	ND[1]	ND[1]	NA	NA	NA
SC30-2'	1.0	ND	ND	ND	ND	0.029	980	ND[1]	ND[1]	NA	NA	NA
SC30-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC30-8.5'	160	ND	ND	ND	ND	ND	200	ND[1]	ND[1]	NA	NA	NA
SC31-2'	1.7	ND	ND	ND	ND	ND	7.2	ND[1]	ND[1]	NA	NA	NA
SC31-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC31-9'	2.1	ND	ND	ND	ND	0.044	5.2	ND[1]	ND[1]	NA	NA	NA

TABLE 1: PAGE 6 OF 8

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Ni/Pb/Zn	PCB's (µg/kg)
SC32-2'	1,900	ND	2.8	1.3	9.9	40	2,300	ND[1]	ND[1]	NA	NA	NA
SC32-5'	440	ND	ND	ND	ND	4.0	840	ND[1]	ND[1]	NA	NA	NA
SC32-9'	2,300	ND	5.5	2.1	29	41	3,900	ND[1]	ND[1]	NA	NA	NA
SC33-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC33-5'	4,200	ND	2.6	6	46	100	5,200	ND[1]	ND[1]	NA	NA	NA
SC33-9'	960	ND	3.4	3	12	27	370	ND[1]	ND[1]	NA	NA	NA
SC34-2'	3.1	ND	0.020	0.030	0.015	0.038	270	ND[1]	ND[1]	NA	NA	NA
SC34-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC34-9'	330	ND	ND	1.3	1.4	3.6	360	ND[1]	ND[1]	NA	NA	NA
SC35-2'	9.5	ND	0.094	0.045	0.62	1.2	130	ND[1]	ND[1]	NA	NA	NA
SC35-5'	5.0	ND	ND	ND	0.042	0.091	10	ND[1]	ND[1]	NA	NA	NA
SC35-8.5'	13,000	ND	61	35	240	1,100	7,400	ND[1]	ND[1]	NA	NA	NA
SC36-2'	3.4	ND	0.007	0.001	0.025	0.084	110	ND[1]	ND[1]	NA	NA	NA
SC36-5'	11	ND	0.025	0.001	0.022	0.054	350	ND[1]	ND[1]	NA	NA	NA
SC36-8'	1,200	ND	5.2	2.6	22	47	1,000	ND[1]	ND[1]	NA	NA	NA
SC37-2'	ND	ND	ND	ND	ND	ND	80	ND[2]	ND[1]	NA	NA	NA
SC37-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC37-9'	1,900	ND	3.9	3.5	4.0	11	3,400	ND[2]	ND[1]	NA	NA	NA

TABLE 1: PAGE 7 OF 8

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG	Heavy Metals Cd/Cr/Ni/Pb/Zn	PCB's (µg/kg)
SC38-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC38-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC38-9'	110	ND	ND	ND	ND	0.56	230	ND[2]	ND[1]	NA	NA	NA
SC39-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC39-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC39-8.5'	2.8	ND	ND	ND	ND	0.029	8.4	ND[2]	ND[1]	NA	NA	NA
SC40-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC40-5'	ND	ND	ND	ND	ND	ND	30	ND[2]	ND[1]	NA	NA	NA
SC40-9'	450	ND	ND	1.1	1.1	3.2	620	ND[2]	ND[1]	NA	NA	NA
SC41-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC41-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC41-8'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC42-2'	ND	ND	ND	ND	ND	ND	50	ND[2]	ND[1]	NA	NA	NA
SC42-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
SC42-9'	400	ND	ND	ND	ND	5.2	760	ND[2]	ND[1]	NA	NA	NA
MW4-5'	300	ND	ND	ND	ND	6.6	1,800	ND[2]	ND[1]	4,700	NA	310
MW4-9'	960	ND	ND	ND	1.3	14	2,300	ND[2]	ND[1]	1,700	NA	NA
MW5-5'	ND	ND	ND	ND	ND	0.019	220	ND[2]	ND[1]	350	NA	ND
MW5-9'	280	ND	ND	ND	ND	2.3	230	ND[2]	ND[1]	670	NA	NA

TABLE 1: PAGE 8 OF 8

NOTES:

ND = Analyte not detected above laboratory detection limit (as stated on the corresponding certified laboratory report).
NA = Sample not analyzed for this analyte.
Shading = Denotes sample analyzed for PCBs dependant upon the results of an EPA Method 8015 screen.
ND[1] = Analytical Sciences made a determination based upon the chromatographic pattern whether the contamination was most like Stoddard Solvent, Kerosene or Diesel. The value reported reflects the total amount of semi-volatile hydrocarbons observed and is so reported as the determined source.
ND[2] = Sample not analyzed for PCBs because TPHd was not detected.

TABLE 2: HVOCs in Soil (µg/kg unless otherwise noted)

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC1-2"	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND
SC1-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC1-12'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC2-2'	ND	ND	2.1	ND	5.9	ND	ND	ND	ND	ND	ND
SC2-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC2-10'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC3-2'	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC3-5'	12	94	1.8	190	1.2	4.2	ND	ND	ND	31	ND
SC3-10'	ND	4.1	ND	4.8	ND	ND	ND	ND	ND	1.3	ND
SC4-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC4-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC4-9'	ND	ND	ND	ND	ND	ND	ND	ND	1.6	4.2	ND

TABLE 2: PAGE 2 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC5-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC5-5'	ND	ND	ND	ND	ND	ND	ND	ND	2.1	3.7	ND
SC5-10'	ND	ND	ND	ND	ND	ND	1.6	ND	41	99	ND
SC6-2'	ND	ND	5.4	ND	2.6	2.1	ND	ND	ND	2.0	2.1
SC6-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC6-9'	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0	ND
SC7-2'	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND
SC7-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC7-9.5'	ND	ND	ND	ND	ND	ND	ND	ND	8.0	25	ND
SC7-12'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC8-2'	ND	ND	4.5	ND	1.6	3.6	13	24	5.9	12	75
SC8-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC8-10'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC9-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC9-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC9-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC10-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC10-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2: PAGE 3 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC11-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC11-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC11-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC12-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC12-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC12-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC13-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC13-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC13-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC14-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC14-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC14-8'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC15-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC15-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC15-9'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC16-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC16-5"	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC16-8.5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 2: PAGE 4 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC17-2'	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND
SC17-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC17-8'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC18-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC18-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC18-8"	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC19-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC19-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC19-8'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC20-2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC20-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC20-9'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SC21-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC21-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC22-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC22-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC22-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC23-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC23-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC23-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2: PAGE 5 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC24-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC24-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC24-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC25-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC25-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC25-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC26-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC26-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC26-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC27-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC27-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC27-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC28-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC28-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC28-8.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC29-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC29-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC29-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2: PAGE 6 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC30-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC30-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC30-8.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC31-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC31-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC31-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC32-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC32-5"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC32-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC33-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC33-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC33-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC34-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC34-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC34-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC35-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC35-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC35-8.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2: PAGE 7 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC36-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC36-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC36-8"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC37-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC37-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC37-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC38-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC38-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC38-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC39-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC39-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC39-8.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC40-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC40-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC40-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC41-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC41-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC41-8'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2: PAGE 8 OF 8

Sample ID	1,1-DCE	1,1-DCA	c-1,2-DCE	1,1,1-TCA	TCE	PCE	CB	CT	1,3-DCB	1,4-DCB	1,2-DCB
SC42-2'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC42-5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SC42-9'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW4-5'	ND	ND	ND	ND	ND	ND	2.0	ND	ND	ND	ND
MW4-9'	ND	ND	ND	ND	ND	ND	9.8	ND	ND	ND	1.0
MW4-15'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW5-5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW5-9'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

ND = Analyte not detected above laboratory detection limit (as stated on the corresponding certified laboratory report).
NA = Sample not analyzed for this analyte.
1,1-DCE = 1,1-Dichloroethylene
c-1,2-DCE = cis-1,2- Dichloroethylene
1,1,1-TCE = 1,1,1-Trichloroethylene
PCE = perchloroethylene (tetrachloroethylene)
CB = chlorobenzene
CT = chlorotoluene
1,3-DCB = 1,3-Dichlorobenzene
1,4-DCB = 1,4- Dichlorobenzene
1,2-DCB = 1,2- Dichlorobenzene

TABLE 3: SOIL PHYCICAL PARAMETERS

Sample #	% Organic Content	Total Porosity (%)	Dry Density (pcf)	Moisture Content (%)
SC44-2'	7.2	23	123	97
SC44-4'	5.8	47	89	29
SC44-9'	1.4	42	98	27

NOTES:
pcf = pounds per cubic foot

TABLE 4: WATER SAMPLE RESULTS (expressed in µg/l unless otherwise noted)

Sample #	TPHg	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	TPHd	TPHk	TPHss	TOG (mg/L)	PCB's
MW1-H20	8,200	ND	83	60	33	110	ND[1]	ND[1]	5,100	28	ND
MW2- H20	ND	ND	ND	ND	ND	ND	ND[1]	ND[1]	ND[1]	ND[1]	ND
MW3- H20	ND	ND	ND	ND	ND	ND	ND[1]	ND[1]	ND[1]	ND[1]	ND
MW4- H20	1,000	ND	6.1	2.2	1.6	6.9	ND[1]	ND[1]	240	1.4	ND
MW5- H20	270	9.2	0.70	ND	ND	2.8	ND[1]	ND[1]	ND[1]	ND[1]	ND

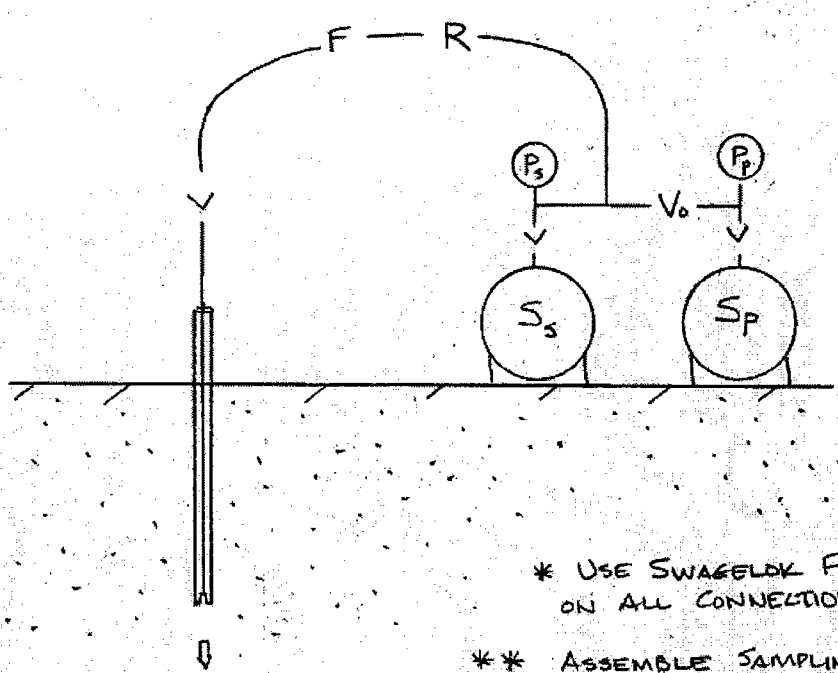
NOTES:
ND = Analyte not detected above laboratory detection limit (as stated on the corresponding certified laboratory report).
ND[1] = Analytical Sciences made a determination based upon the chromatographic pattern whether the contamination was most like Stoddard Solvent, Kerosene or Diesel. The value reported reflects the total amount of semi-volatile hydrocarbons observed and is so reported as the determined source.

APPENDIX C

SCHEMATIC DIAGRAM - SOIL VAPOR SAMPLING MANIFOLD

SCHEMATIC OF SUBSURFACE VAPOR SAMPLING SET-UP

V = VALVE
V_o = OPTIONAL VALVE
P = PRESSURE GAUGE
S_s = SAMPLE SUMMA CANISTER
S_p = PURGE SUMMA CANISTER
R = FLOW REGULATOR
F = FILTER



* USE SWAGELOK FITTINGS ON ALL CONNECTIONS

** ASSEMBLE SAMPLING APPARATUS AND LEAK TEST PRIOR TO MOBILIZING TO FIELD

6-3-04