ALLCAL PROPERTY SERVICES, INC.
ENVIRONMENTAL INVESTIGATIONS

August 25, 1999

REPORT OF PHASE III SOIL AND GROUNDWATER ASSESSMENT

Morris F. Donnelly
Jeffery W. Kerry
Kerry & Associates
151 Callan Avenue, Suite 202
San Leandro, CA 94577

RE: Palace Garage, 14336 Washington Avenue, San Leandro, CA 94587

Dear Messrs. Donnelly and Kerry:

Thank you for contracting with Allcal Property Services, Inc. (ALLCAL) to write this letter report of a soil and groundwater assessment (Phase III) at the above referenced property. The assessment was conducted according to an April 9, 1999, work plan approved by the Alameda County Health Care Services Agency (ACHCSA) in a May 10, 1999, letter (attached).

BACKGROUND

Tank Closure and Soil Remediation

Background information regarding tank closure and soil remediation is summarized from information provided by you (Client).

On February 11, 1991, a 550-gallon, single-walled, steel, underground, gasoline storage tank (UST) was removed by Verl's Construction, Inc. (Verl). The UST and its associated dispenser and piping were located at the northeast corner of the Palace Garage building [see attached SITE PLANS]. Examination of the UST, after its removal, revealed four small holes at the top of the southerly end of the tank. Two holes were pin size and the other two were about .25- and .5-inches in diameter. The piping appeared in good condition. Soil in the tank excavation contained gasoline contamination based on visual observations, the presence of odor, and head-space analysis using a photoionization detector (PID). One discrete soil sample (SS-1) was collected for chemical analysis from native soil directly below the tank at a depth of about 10 feet below grade. Results of chemical analyses detected total petroleum hydrocarbons as gasoline (TPHG) at a concentration of 19 parts per million (ppm).

Benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected at concentrations of .21 ppm, .41 ppm, .043 ppm, and .14 ppm, respectively. Organic lead was detected at a concentration of 7 ppm.

On the day of the UST removal, additional soil excavation (overexcavation) was conducted to remove contaminated soil. It is reported (June 8, 1994, Kerry & Associates letter) that additional soil was removed to the depth that the on-site backhoe could reach, about 18 to 20 feet. A March 7, 1991, UST closure report prepared by Century West Engineering Corporation (Century West) included PID head-space measurements, from 5 to 12.5 feet deep, that were recorded during overexcavation activities. The head-space measurements showed increasing field vapors, from 170 ppm at 5 feet below grade to 880 ppm at 12.5 feet below grade. A February 25, 1991, letter from Verl indicates that soil samples from the bottom of the final excavation had vapor concentrations "substantially" lower than those shallower in the excavation; however, there is no documentation of these lower concentrations. One composite soil sample (SS-2.1, 2.2, and 2.3) was collected for chemical analysis from the stockpiled soil (resulting from tank removal and overexcavation activities) to assess disposal options. Results of chemical analyses detected concentrations of TPHG at 1,900 ppm. BTEX were detected at concentrations of 1.2 ppm, 14 ppm, 11 ppm, and 67 ppm, respectively. Organic lead was detected at a concentration of 9.9 ppm.

After conducting remedial overexcavation, the hole was lined with plastic and backfilled with pea gravel.

No groundwater was encountered during the tank removal or overexcavation activities.

The excavated soil was spread and aerated on site. After aeration, Century West sampled and characterized the soil for off-site disposal. Verl hauled and disposed of the soil to a landfill in Richmond, California.

Phase I Soil and Groundwater Assessment - 2/1/99

On February 1, 1999, ALLCAL supervised the drilling of four soil borings to assess gasoline contamination in the vadose zone soil and groundwater in the area of the former UST. Chemical analytical results were evaluated with respect to the American Society of Testing and Materials' (ASTM) Standard for Risked Based Corrective Action (RBCA) ASTM E-1739-95. Analytical results suggested that vadose zone soil contamination by benzene may pose a cancer risk as leachate in the area of SB-1 [see attached SITE PLANS], and groundwater contamination by benzene may pose a cancer risk in terms of vapor intrusion into buildings in the area of borings SB-1 and SB-2. Details of this investigation are documented in ALLCAL's February 17, 1999, **REPORT OF SOIL AND GROUNDWATER ASSESSMENT AND PROPOSED WORK PLAN FOR FURTHER ASSESSMENT**.

Based on the above report/work plan, ALLCAL conducted a Phase II soil and groundwater assessment on March 23, 1999.

Phase II Soil and Groundwater Assessment - 3/23/99

On March 23, 1999, ALLCAL supervised the drilling of three additional soil borings [SB-5, SB-6, and SB-7, see attached SITE PLANS] to further assess gasoline contamination in the vadose zone soil and groundwater in the area of the former UST. Field observations indicated that no contamination was present in the vadose zone; however, analytical results suggested that groundwater contamination by benzene may pose a cancer risk, in terms of vapor intrusion into buildings, in the area of borings SB-5 and SB-6. Details of this investigation are documented in ALLCAL's April 9, 1999, **REPORT OF PHASE II SOIL AND GROUNDWATER ASSESSMENT AND PROPOSED WORK PLAN FOR PHASE III FURTHER ASSESSMENT**.

Based on the above report/work plan, ALLCAL conducted a Phase III soil and groundwater assessment which is discussed below.

SOIL AND GROUNDWATER ASSESSMENT PROCEDURES

As a further assessment (Phase III) of gasoline contamination of the vadose zone soil and groundwater, **ALLCAL drilled eight additional soil borings for** the collection and analysis of soil and "grab" groundwater samples.

The following work was conducted:

- Submitted an April 9, 1999, report/work plan to the Client and ACHCSA for their comment and approval.
- Obtained a soil boring permit from the Alameda County Public Works Agency (ACPWA), subcontracted an underground utility locator to "clear" each boring location of underground utilities, and notified Underground Service Alert (USA).
- Drilled eight exploratory soil borings and continuously logged the soil profile.
- Collected soil and "grab" groundwater samples from each boring for chemical analysis.
- Analyzed all soil and groundwater samples for TPHG, BTEX, and methyl tert-butyl ether (MTBE).
- Sealed all borings to ground surface with cement slurry.
- Prepared this report.

Details of the above work are presented below.

Pre-field Activities

Prior to drilling soil borings, ALLCAL: (1) obtained approval of an April 9, 1999, report/work plan from the ACHCSA (see attached May 10, 1999, letter), (2) obtained a soil boring permit (attached) from the ACPWA, (3) visited the site to mark the locations of the proposed soil borings; subcontracted Cruz Brothers Sub-Surface Locators, Inc., of Scotts Valley, California, to "clear" each boring location of underground utilities, and notified USA, (4) subcontracted Fast-Tek Engineering Support Services (C57 License 589008) of Point Richmond, California, to drill the soil borings, and (5) gave 48 hours' notice to the ACHCSA prior to drilling the borings.

Locations of Soil Borings

On July 29, 1999, ALLCAL supervised the drilling of eight soil borings (SB-8 through SB-15), at the approximate locations shown in the attached SITE PLANS, to further assess vadose zone soil and groundwater contamination by TPHG, BTEX, and MTBE. ALLCAL's April 9, 1999, report/workplan recommended three additional borings as a Phase III investigation. However, the ACHCSA, in their May 10, 1999, letter, suggested drilling five additional borings in this phase of investigation in anticipation that the expanded scope of work would prove cost-effective in the long run.

Boring locations were chosen based on the need to further define the limits of the groundwater plume, drill rig accessibility, and the estimated direction of regional groundwater flow (southwest to south-southwest). Borings SB-8, SB-9, SB-12, and SB-15 were drilled at locations estimated to be down-gradient from the former UST; borings SB-10, SB-11, and SB-14 were drilled at locations estimated to be cross-gradient to the groundwater plume; and boring SB-13 was drilled at a location estimated to be up-gradient of the former UST. See attached SITE PLANS for soil boring locations.

Soil and Groundwater Assessment Methodology

The following discusses soil boring and soil and groundwater sampling procedures. See Attachments A, B, and C for ALLCAL's sample handling procedures, quality assurance and quality control procedures, and waste handling and decontamination procedures.

Soil Boring and Soil and Groundwater Sampling Procedures

All borings were continuously cored to a total depth of about 16 feet with the Geoprobe System, small diameter (about 2-inch) drill casing, direct-push technology. Soil samples were continuously collected as core into a polyethylene terephthalate glycol (PETG) liner in 4-foot depth intervals. The liner was contained within the 2-inch drill casing. The drill casing and enclosed PETG liner, were pushed by drill rods in 4-foot depth intervals to the total depth of each boring. After driving each 4-foot interval, the drill casing and enclosed liner were retrieved and the soil core was examined for contamination, for selection of soil samples to be analyzed, and for construction of lithologic logs.

One soil sample was selected from each boring within a depth range of about 14 to 15 feet below

grade and preserved for chemical analysis. Samples were selected at this depth because the soil is believed to be representative of the capillary fringe; depth to groundwater is estimated to have been in the range of 15 to 16 feet below grade. **Because of the presence of apparent shallow contamination in boring [redacted], a second sample was collected at the depth of about 7.5 feet below grade.** See attached EXPLORATORY BORING LOGS for soil sample locations.

To minimize the potential for cross-contamination, the drill casing was equipped with a clean drill shoe between sampling events and prior to beginning each boring.

Groundwater samples were collected by using a Geoprobe, stainless-steel, discrete water sampler. "Grab" samples were obtained in each boring by using an expendable drive point to drive the sampler from 16 to 20 feet in depth, then, about 4 feet of an internal screen was exposed to allow water to enter the sampler. **Water was collected from the sampler with a "mini" stainless-steel bailer.** After all soil and groundwater samples were collected, each boring was sealed with Portland Type II cement slurry.

A log of the soil profile was prepared for each boring (attached). The soil was logged according to the Unified Soil Classification System by a California Registered Geologist.

Drill cuttings are stored on site in labeled 5-gallon pails. The labels show contents, date stored, suspected contaminant, expected date of removal, company name, contact person, and telephone number.

Sample Handling Methods

Soil samples selected for chemical analysis were preserved in PETG liners with no head-space by quickly covering the open ends with Teflon sheeting and capping them with plastic end-caps. The samples were labeled to show site name, project number, date, time, sample name, depth collected, and sampler name; sealed in quart-size plastic bags; and stored in an iced-cooler.

"Grab" groundwater samples were stored in laboratory provided, 40-milliliter, HCL-preserved VOAs having Teflon-lined plastic caps. Each sample was labeled and stored as above.

Chemical Analyses

All soil and groundwater samples were delivered under chain-of-custody to California Department of Health Services certified McCampbell Analytical Inc., located in Pacheco California, for chemical analysis for TPHG, BTEX, and MTBE by EPA Methods GCFID, 5030/8015 modified; 8020; and 8020; respectively.

RESULTS OF SOIL AND GROUNDWATER ASSESSMENT

Soil Profile and Occurrence of Groundwater

Below the surface cover of asphalt, concrete, and/or aggregate base material, the soil profile was

similar among the borings and those borings conducted earlier. In the subject borings, a clay was encountered beneath the surface cover to a depth ranging from 12 to ~~16~~ 15 feet. The clay was initially dark brown to black and became light brown and silty with depth. In all borings, except SB-10, the clay was underlain by about 1.0 to 2.5 feet of brown silt. In SB-10, the silt was replaced by about 4.0 feet of brown sand. The above silt was either present to the total depth explored or underlain by saturated gravel or sand to the total depth explored. Based on field observations and odor, apparent contamination by gasoline was detected in borings SB-12, SB-13, and SB-14.

sand or gravel

Depth to groundwater was estimated to range from 15 to 16 feet below grade.

Results of Chemical Analyses

Soil Samples

All analytes were nondetecteable in all borings, with the exception of boring SB-13. In boring SB-13, at the depth of about 15 feet below grade, TPHG benzene, toluene, ethylbenzene, and xylenes were detected at concentrations of 460 ppm, 6.3 ppm, 3.3 ppm, 13 ppm, and 42 ppm, respectively. The laboratory noted that the chromatogram for TPHG results indicated unmodified or weakly modified gasoline is significant. The sample results are believed to be within the capillary fringe.

Groundwater Samples

All analytes were nondetectable for "grab" groundwater samples from borings SB-8, SB-9, SB-10, and SB-11. MTBE was nondetectable in all borings.

With the exception of boring SB-12, benzene was nondetectable in the remainder of the borings In boring SB-12, benzene was detected at a concentration of 6,000 parts per billion (ppb).

TPHG was detected in borings SB-12, SB-13, SB-14, and SB-15 at concentrations of 59,000 ppb, 270 ppb, 250 ppb, and 220 ppb, respectively. The laboratory noted that the chromatogram for TPHG results indicated: (1) unmodified or weakly modified gasoline was significant and a lighter than immiscible sheen was present in the water sample from SB-12, (2) heavier gasoline range compounds were significant (aged gasoline?) and there was no recognizable pattern in the water sample from SB-13, and (3) no recognizable patterns were present for the water samples from SB-14 and SB-15.

The attached figures, *ESTIMATED TPHG ISOCONCENTRATION MAP-GROUNDWATER* and *ESTIMATED BENZENE ISOCONCENTRATION MAP-GROUNDWATER*, incorporate all TPHG and benzene data collected to date and are estimates of the locations, geometries, and sizes of the two plumes.

See the attached table for concentrations of other BTEX chemicals in the above water samples.

CONCLUSIONS

ALLCAL concludes that the "rapid site assessment tools" used to date have provided sufficient soil and groundwater data to arrive at a reasonable understanding of the horizontal and lateral extent of TPHG contamination in the vadose zone soil and of the lateral extent of TPHG contamination in the groundwater.

Vadose Zone Soil

Contamination of the vadose zone soil appears to be limited in extent and of minor concentration, ranging to a high of 880 ppm. Soil sample analytical results ranging as high as 4,700 ppm (see attached TABLE), at depths of around 15 feet below grade, are believed to be representative of the capillary fringe or zone of seasonal water table fluctuation. This interval of the soil column is believed to be an integral part of the groundwater plume.

Groundwater

Because of high TPHG (up to 94,000 ppb) and benzene (up to 6,000 ppb) concentrations detected in the groundwater, ALLCAL believes further characterization of the groundwater plume is necessary in order to evaluate the vertical extent of the gasoline groundwater contaminant plume and its risk to human health.

Recommended further work includes:

(1) Installation of three groundwater monitoring wells to measure direction of groundwater flow and to investigate the vertical character of the aquifer.

(2) Sampling the wells according to established regulator protocol to obtain higher quality water samples than those collected to date ("grab" samples).

ALLCAL believes the construction of monitoring wells, which will probably have 10 to 15-foot long intake screens, will probably yield lower dissolved concentrations of analytes since the previous Geoprobe water samples were obtained over shorter 4-foot intervals (or less) at the very top of the aquifer where the richest gasoline contaminant concentrations would be expected to be present. The probable longer screen interval of the monitoring wells would be expected to yield lower (average) analyte concentrations more representative of the overall aquifer. This type of analytical data will be useful in characterizing the vertical extent of gasoline contamination in the aquifer and in evaluating risk to human health.

(3) After installing the above wells, measuring groundwater gradient, and obtaining analytical results of the higher quality water samples, conduct an RBCA analysis to determine if an unacceptable risk to human health is present. If an unacceptable risk is present, the RBCA analysis will recommend an appropriate cleanup concentration.

ALLCAL recommends that a work plan, acceptable to the regulators, be developed for conducting the above work. The attached figure, *ESTIMATED TPHG ISOCONCENTRATION MAP-GROUNDWATER*, shows ALLCAL's proposed locations for the above three wells. Well MW-1 is proposed to be 4-inches in diameter in the event floating product is present and needs to be removed. The remaining two wells are proposed to be 2-inches in diameter.

LIMITATIONS

This report is based on laboratory analyses of soil and groundwater samples. The chemical analytical results for the samples are considered applicable to that horizontal and vertical location from which they were collected. The conclusions contained herein are based on field observations, analytical data, and professional judgment which is in accordance with current standards of professional practice.

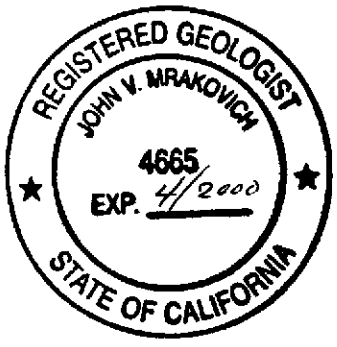
Representations made of soil and groundwater conditions between sample locations are extrapolations based on professional opinions and judgments and accepted industry practice. No warranty is expressed or implied. The extent of testing and data collection directly affects the statistical confidence level of all work performed. As a practical matter, to reach or even approach a 100 percent statistical level would be prohibitively expensive.

The findings and conclusions of this report are valid as of the present time; however, the passing of time could change the conditions of the subsurface due to natural processes or the influence of man. Accordingly, the findings of this report may be invalidated, wholly or partly, by changes beyond ALLCAL's control. Therefore, this report should not be relied upon after an extended period of time without being reviewed by a Civil Engineer or Registered Geologist.

If you have any questions, please call me at (510) 581-2320.

Sincerely,

John V. Mrakovich, Ph.D.
Registered Geologist No. 4665



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

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

May 10, 1999

STID 2355

Morris F. Donnelly
Jeffrey W. Kerry
Kerry & Associates
151 Callahan Avenue, Ste. 202
San Leandro, CA 94577

RE: Palace Garage, 14336 Washington Avenue, San Leandro

Dear Messrs. Donnelly and Kerry:

Thank you for our receipt of the April 9, 1999 All Cal Property Service, Inc. (All Cal) report for the second stage of the environmental investigation at your site. This report also encloses a work plan proposing an additional phase of investigation.

All Cal reports that up to 91,000 micrograms per liter (ug/l) total petroleum hydrocarbons as gasoline (TPH-G) and 5900-ug/l benzene, among other fuel constituents, were identified in sampled groundwater encountered beneath the site. In addition, up to 3200 parts per million (ppm) TPH-G and 22 ppm benzene, among others, were also identified in soil samples collected at a depth of 15 – 15.5' in boring SB-6. These concentrations, particularly benzene, are higher than those collected from the borings advanced during the initial phase of the investigation.

All Cal correctly concludes that further assessment work is required to reasonably define the extent of the release from this site.

I contacted All Cal's John Mrakovich today to discuss the expected scope of the next phase of the assessment. We still anticipate using so-called "rapid site assessment tools" as in the prior two phases. However, it appears prudent at this time to increase the number of sample points and to expand their locations laterally from the source zone in an attempt to reach the leading edge of the plume quickly. I anticipate that this expanded scope will prove more cost-effective in the long run, reducing remobilization and associated labor costs.

Attached please find a base map supplied by All Cal on which is indicated the proposed additional sample locations Mr. Mrakovich and I discussed today (A-E). These sample locations are in addition to those already proposed by All Cal for the pending phase of work (SB-8, -9, and -10).

The cited All Cal work plan is accepted, with the addition of five more sample points, for the next phase of this investigation.

Please call me at (510) 567-6783 when fieldwork has been scheduled or should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

Attachment

cc: Chuck Headlee, RWQCB (w/o)
Mike Bakaldin, San Leandro Hazardous Materials Program (w/o)
John Mrakovich, All Cal Property Services, Inc. (w/ attachment)
27973 High Country Dr., Hayward, CA 94542-2530

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 14336 WASHINGTON AVE. SAN LEANDRO, CA 94577

California Coordinates Source / / ft Accuracy ± ft.
CCN / / ft. CCE / / ft.
APN / / /

CLIENT
Name JEFFREY KELLY
Address 151 CALLAN AVE #201 Phone 510 483 4211
City SAN LEANDRO Zip 94577

APPLICANT
Name JOHN MRAKOVICH
Address ALLCAL PROP. SVS. INC. Fax 510 581 9690
Address 2973 HEGENBERGER RD Phone 510 581 2320
City HAYWARD Zip 94545

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒ GEOPROBE		

DRILLER'S LICENSE NO. C57 683865

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter ____ in. Depth ____ ft.
Surface Seal Depth ____ ft. Number ____

GEOTECHNICAL PROJECTS
Number of Borings 8 Maximum
Hole Diameter 2 in. Depth 20 ft.

ESTIMATED STARTING DATE 7/29/99
ESTIMATED COMPLETION DATE 7/29/99

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE John Mrakovich DATE 7/20/99

FOR OFFICE USE

PERMIT NUMBER 99WR449
WELL NUMBER
APN

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A) GENERAL
(1) A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
(2) Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

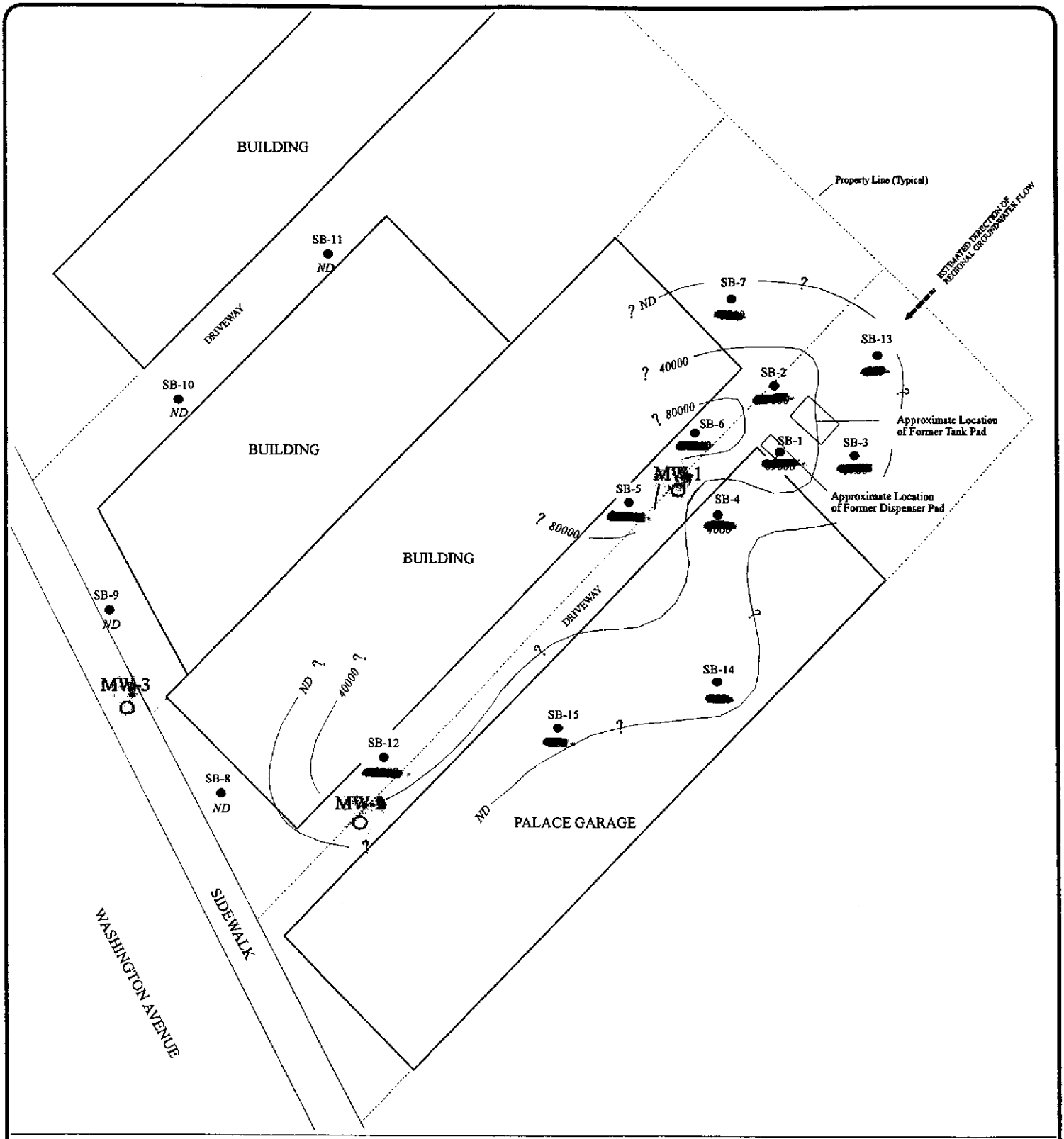
D. GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

(G) SPECIAL CONDITIONS See Attached Information.

APPROVED [signature] DATE 7-21-99



Legend

SB-1 ● Name and Location of Soil Boring with TPHG
69000 Concentration in ppb

MW-1 ○ Name and Location of Proposed Groundwater Monitoring Well

ND = Nondetectable

40000 TPHG Isoconcentration Contour (ppb)

Contour Interval = 40000 ppb

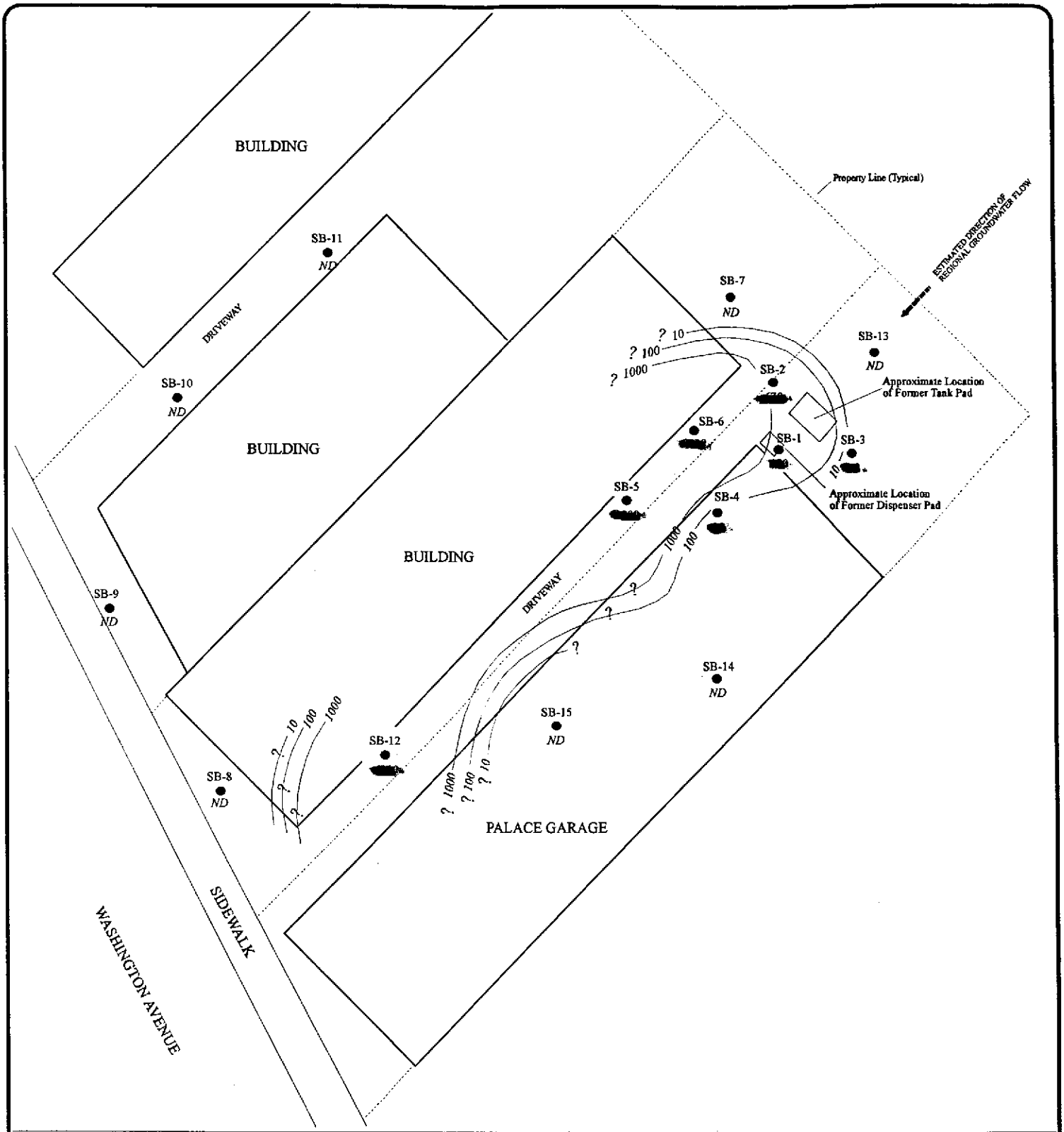
0 30
Approximate Scale (ft)

ALLCAL **PROPERTY SERVICES**

SITE PLAN - PALACE GARAGE

ESTIMATED [redacted] ISOCONCENTRATION MAP GROUNDWATER

14336 WASHINGTON AVENUE
SAN LEANDRO, CA 94577



Legend

SB-1
1500 Name and Location of Soil Boring with Benzene Concentration in ppb

ND = Nondetectable

1000 Benzene Isoconcentration Contour (ppb)

Logarithmic Contour Interval Beginning with 10 ppb

0 30
Approximate Scale (ft)

N

ALLCAL PROPERTY SERVICES

SITE PLAN - PALACE GARAGE

ESTIMATED [redacted] ISOCONCENTRATION MAP GROUNDWATER

14336 WASHINGTON AVENUE
SAN LEANDRO, CA 94577

EXPLORATORY BORING LOG

Project Number: 135 Boring Number: SB-8

Project Name: 14336 Washington Avenue San Leandro, CA 94578 Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC Date: 7/29/99 Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .5 FT.: ASPHALT UNDERLAIN BY AGGREGATE BASE MATERIAL
48/48							.5 - 14.0 FT.: CLAY (CL), DARK BROWN, SILTY, SANDY, OCCASIONAL GRAVEL SEAMS, FIRM, DAMP, NO ODOR.
				5			
48/48						CL	
							@ 8.0 FT.: LIGHT BROWN.
				10			
48/48							
							@ 12.0 FT.: VERY SILTY.
48/48			▼			ML	14.0 - 15.0 FT.: SILT (ML), LIGHT BROWN, VERY CLAYEY, MOIST, NO ODOR.
				15		GP	15.0 - 16.0 FT.: GRAVEL (GP), BROWN, MEDIUM TO COARSE-GRAINED, SATURATED, NO ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135

Boring Number: SB-9

Project Name: 14336 Washington Avenue
San Leandro, CA 94578

Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC

Date: 7/29/99

Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .17 FT.: ASPHALT
48/48							.17- 13.0 FT.: CLAY (CL), DARK BROWN, SILTY, SANDY, GRAVELLY, SEAMS, FIRM, DAMP, NO ODOR.
				5			
48/48						CL	
							@ 8.0 FT.: LIGHT BROWN, VERY SILTY.
48/48				10			
48/48						ML	13.0 - 15.0 FT.: SILT (ML), BROWN, CLAYEY, MOIST, NO ODOR.
			▼	15		SP	13.0 - 16.0 FT.: SAND (SP), BROWN, FINE TO MEDIUM-GRAINED, SATURATED, NO ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135

Boring Number: SB-10

Project Name: 14336 Washington Avenue
San Leandro, CA 94578

Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC

Date: 7/29/99

Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .83 FT.: CONCRETE UNDERLAIN BY AGGREGATE BASE MATERIAL.
36/48							.83 - 12.0 FT.: CLAY (CL), BLACK, SILTY, MEDIUM FIRM, DAMP, NO ODOR.
				5			@ 5.0 FT.: DARK BROWN, **GRAVELLY**.
48/48						CL	@ 7.0 FT.: LIGHT BROWN, **OCCASIONAL GRAVELLY SEAMS** WITH QUARTZ PEBBLES TO .5-INCH DIAMETER.
48/48				10			@ 12.0 FT.: FRAGMENTS OF WEATHERED ROCK.
48/48			▼	15		SP	12.0 - 16.0 FT.: **SAND (SP)**, BROWN, MEDIUM TO COARSE-GRAINED, VERY GRAVELLY, SATURATED, NO ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135 Boring Number: SB-11

Project Name: 14336 Washington Avenue, San Leandro, CA 94578 Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC Date: 7/29/99 Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .33 FT.: CONCRETE.
36/48							.33 - 14.0 FT.: CLAY (CL), BLACK, SILTY, MEDIUM FIRM, DAMP, NO ODOR.
				5			@ 5.0 FT.: DARK BROWN.
48/48							@ 6.0 FT.: LIGHT BROWN.
						CL	
				10			
48/48							@ 11.0 FT.: VERY SILTY.
48/48			▼	15		ML	14.0 - 15.0 FT.: SILT (ML), BROWN, SANDY, MOIST, NO ODOR.
						SP	15.0 - 16.0 FT.: SAND (SP), BROWN, SILTY, BLACK GRAVEL TO .75-INCH DIAMETER, MEDIUM TO COARSE-GRAINED, SATURATED, NO ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135

Boring Number: SB-12

Project Name: 14336 Washington Avenue
San Leandro, CA 94578

Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC

Date: 7/29/99

Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .66 FT.: ASPHALT UNDERLAIN BY AGGREGATE BASE MATERIAL.
36/48				5		CL	.66 - 14.0 FT.: CLAY (CL), BLACK, SILTY, MEDIUM FIRM, DAMP, NO ODOR. @ 4.0 FT.: ABUNDANT ROOTLETS, H2S ODOR. @ 5.0 FT.: DARK BROWN, FIRM.
48/48							
48/48				10			
48/48			▼	15		ML	14.0 - 16.0 FT.: SILT (ML), BROWN WITH GREEN STAINNING, SANDY, MOIST, HYDROCARBON ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135 Boring Number: SB-13

Project Name: 14336 Washington Avenue, San Leandro, CA 94578 Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC Date: 7/29/99 Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .66 FT.: ASPHALT UNDERLAIN BY AGGREGATE BASE MATERIAL.
36/48							.66 - 13.0 FT.: CLAY (CL), BLACK, SILTY, SANDY, ORGANICS, MEDIUM FIRM, DAMP, NO ODOR.
							@ 2.0 FT.: MOTTLED DARK BROWN AND BLACK, SOME FINE-GRAINED GRAVEL.
				5			
48/48							
						CL	@ 7.0 FT.: GREEN STAINING WITH HYDROCARBON ODOR.
				10			
48/48							
48/48			▼			ML	13.0 - 15.50 FT.: SILT (ML), GREEN, MOIST, HYDROCARBON ODOR.
				15		SP	15.5 - 16.0 FT.: SAND (SP), GREEN, MEDIUM TO COARSE-GRAINED, GRAVELLY, SATURATED, HYDROCARBON ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135 Boring Number: SB-14

Project Name: 14336 Washington Avenue
San Leandro, CA 94578 Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC Date: 7/29/99 Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .5.0 FT.: CONCRETE UNDERLAIN BY AGGREGATE BASE MATERIAL.
48/48							.50 - 14.0 FT.: CLAY (CL), MOTTLED BLACK AND BROWN, SANDY, GRAVELLY, RED BRICK FRAGMENTS, MEDIUM FIRM, DAMP, NO ODOR.
				5			@ 2.0 FT.: BLACK.
48/48							@ 6.0 FT.: BROWN.
						CL	
48/48				10			
							@ 12.0 FT.: VERY SILTY.
48/48			▼	15		ML	14.0 - 16.0 FT.: SILT (ML), GREEN, CLAYEY, SANDY SEAMS, MOIST, SLIGHT HYDROCARBON ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

EXPLORATORY BORING LOG

Project Number: 135
Boring Number: SB-15

Project Name: 14336 Washington Avenue
San Leandro, CA 94578
Page Number: 1 of 1

By: ALLCAL PROPERTY SERVICES, INC Date: 7/29/99 Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND-WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .50 FT.: CONCRETE UNDERLAIN BY AGGREGATE BASE MATERIAL.
36/48							.50 - 14.0 FT.: CLAY (CL), DARK BROWN TO BLACK, SANDY, MEDIUM FIRM, DAMP, NO ODOR.
				5			@ 5.0 FT.: DARK BROWN.
48/48						CL	
				10			
48/48							@ 12.0 FT.: VERY SILTY.
48/48			▼	15		ML	14.0 - 16.0 FT.: CLAYEY SILT (ML), BROWN, MOIST, NO ODOR.
							CONTINUOUSLY CORED TO 16 FT. DISCRETE WATER SAMPLER PUSHED TO 20 FEET WITH 4 FEET OF SCREEN EXPOSED.
				20			

Remarks: BORING CONTINUOUSLY CORED WITH 2.0 - INCH O. D., DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1.75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH NEAT PORTLAND TYPE II CEMENT.

TABLE

SUMMARY OF SOIL AND GROUNDWATER CHEMICAL ANALYSES

Soil Boring	Matrix	Depth (ft)	TPHG	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
SB-1	soil[1]	10-10.5	440b	0.51	2.6	8.1	47	<0.5
SB-1	soil	15-15.5	4700a	12	21	88	480	<10
SB-2	soil	10-10.5	<1.0	0.016	0.012	<0.005	0.016	<0.05
SB-2	soil	15-15.5	790a	0.64	4.8	5.3	18	<0.5
SB-3	soil	10-10.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-3	soil	15-15.5	<1.0	<0.005	0.021	<0.005	0.010	<0.05
SB-4	soil	11.5-12	<1.0	<0.005	0.010	<0.005	0.007	<0.05
SB-4	soil	15-15.5	35bj	0.029	0.32	0.13	0.22	<0.05
SB-5	soil	11.5-12	2.8a	0.092	0.023	0.064	0.11	<0.05
SB-5	soil	15-15.5	1900a	4.3	14	35	170	<10
SB-6	soil	10-10.5	880a	3.5	16	18	89	<1
SB-6	soil	15-15.5	3200a	22	160	89	460	<10
SB-7	soil	10-10.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-7	soil	15-15.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-8	soil	14-14.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-9	soil	15-15.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-10	soil	14.5-15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-11	soil	15-15.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-12	soil	15-15.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-13	soil	7.5-8	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-13	soil	15-15.5	460a	6.3	3.3	13	42	<0.50
SB-14	soil	15-15.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-15	soil	15-15.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
SB-1	water[2]	17-21	69000ah	370	6200	3500	15000	<200

SB-2	water	17-21	69000ah	670	760	2700	8600	<400
SB-3	water	17-21	1700a	8.8	28	52	160	<5.0
SB-4	water	17-21	4000a	18	170	120	480	<10.0
SB-5	water	16-20	91000ahi	3800	4300	4600	21000	<200
SB-6	water	16-20	94000ah	5900	10000	5000	25000	<900
SB-7	water	16-20	1500bji	<0.5	0.89	3.6	1.1	<10
SB-8	water	16-20	<50	<0.5	<0.5	<0.5	<0.5	<5.0
SB-9	water	16-20	<50	<0.5	<0.5	<0.5	<0.5	<5.0
SB-10	water	16-20	<50	<0.5	<0.5	<0.5	<0.5	<5.0
SB-11	water	16-20	<50	<0.5	<0.5	<0.5	<0.5	<5.0
SB-12	water	16-20	59000ah	6000	560	4500	10000	<200
SB-13	water	16-20	270bj	<0.5	0.53	5.4	15	<5.0
SB-14	water	16-20	250j	<0.5	8.0	<0.5	<0.5	<5.0
SB-15	water	16-20	220j	<0.5	6.5	<0.5	<0.5	<5.0

[1] Contaminant concentrations for soil reported in parts per million (ppm). [2] Contaminant concentrations for water reported in parts per billion (ppb). a) Unmodified or weakly modified gasoline is significant. b) Heavier gasoline range compounds are significant (aged gasoline?). h) Higher than water immiscible sheen is present. i) liquid sample contains greater than~5 vol.% sediment. j) No recognizable pattern.

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

ALLCAL Property Services 27973 High Country Drive Hayward, CA 94542-2530	Client Project ID: #135; 14336 Washington Ave.	Date Sampled: 07/29/99
		Date Received: 07/30/99
	Client Contact: John Mrakovich	Date Extracted: 07/30/99
	Client P.O:	Date Analyzed: 07/30/99

08/07/99

Dear John:

Enclosed are:

1). the results of **17** samples from your **#135; 14336 Washington Ave.** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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ALLCAL Property Services 27973 High Country Drive Hayward, CA 94542-2530	Client Project ID: #135; 14336 Washington Ave.	Date Sampled: 07/29/99
		Date Received: 07/30/99
	Client Contact: John Mrakovich	Date Extracted: 07/30-08/03/99
	Client P.O:	Date Analyzed: 07/31-08/03/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)[+]	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
16436	SB8-14-14.5	S	ND	ND	ND	ND	ND	ND	97
16437	SB9-15-15.5	S	ND	ND	ND	ND	ND	ND	107
16438	SB10-14.5-15	S	ND	ND	ND	ND	ND	ND	119
16439	SB11-15-15.5	S	ND	ND	ND	ND	ND	ND	99
16440	SB12-15-15.5	S	ND	ND	ND	ND	ND	ND	101
16441	SB13-7.5-8	S	ND	ND	ND	ND	ND	ND	99
16442	SB13-15-15.5	S	460,a	ND<0.50	6.3	3.3	13	42	101
16443	SB14-15-15.5	S	ND	ND	ND	ND	ND	ND	99
16444	SB15-15-15.5	S	ND	ND	ND	ND	ND	ND	99
16445	SB8-W	W	ND	ND	ND	ND	ND	ND	108
16446	SB9-W	W	ND	ND	ND	ND	ND	ND	108
16447	SB10-W	W	ND	ND	ND	ND	ND	ND	107
16448	SB11-W	W	ND	ND	ND	ND	ND	ND	108
16449	SB12-W	W	59,000,a,h	ND<200	6000	560	4500	10,000	100
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

[#] cluttered chromatogram; sample peak coelutes with surrogate peak

[+]The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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ALLCAL Property Services 27973 High Country Drive Hayward, CA 94542-2530	Client Project ID: #135; 14336 Washington Ave.	Date Sampled: 07/29/99
		Date Received: 07/30/99
	Client Contact: John Mrakovich	Date Extracted: 07/30-08/03/99
	Client P.O:	Date Analyzed: 07/31-08/03/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
16450	SB13-W	W	270,b,j	ND	ND	0.53	5.4	15	103
16451	SB14-W	W	250,j	ND	ND	8.0	ND	ND	90
16452	SB15-W	W	220,j	ND	ND	6.5	ND	ND	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/30/99-07/31/99 Matrix: WATER

Analyte	Concentration (ug/L) Sample (#16108)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	108.4	109.3	100.0	108.4	109.3	0.8
Benzene	0.0	10.0	10.1	10.0	100.0	101.0	1.0
Toluene	0.0	10.2	10.3	10.0	102.0	103.0	1.0
Ethyl Benzene	0.0	10.5	10.7	10.0	105.0	107.0	1.9
Xylenes	0.0	31.7	32.0	30.0	105.7	106.7	0.9
TPH(diesel)	0.0	7291	7094	7500	97	95	2.7
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/30/99-07/31/99 Matrix: SOIL

Analyte	Concentration (mg/kg) Sample (#09617)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.000	2.241	2.096	2.03	110	103	6.7
Benzene	0.000	0.214	0.210	0.2	107	105	1.9
Toluene	0.000	0.222	0.216	0.2	111	108	2.7
Ethylbenzene	0.000	0.224	0.218	0.2	112	109	2.7
Xylenes	0.000	0.656	0.634	0.6	109	106	3.4
TPH(diesel)	0	284	279	300	95	93	1.8
TRPH (oil and grease)	0.0	23.5	23.8	20.8	113	114	1.3

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

ALLCAL PROPERTY SERVICES
ENVIRONMENTAL INVESTIGATIONS
27973 HIGH COUNTRY DRIVE FAX (510) 581-8490
HAYWARD, CA 94542-2530 Ph (510) 581-2320

LAB: MCCAMPBELL ANALYTICAL
TURNAROUND: NORMAL
P.O. #: NA

16143zac6.doc

CHAIN OF CUSTODY

PROJECT NO.	SITE NAME & ADDRESS
135	14336 WASHINGTON AVE. SAN LEANDRO, CA

SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: JOHN MRAKOVICH

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	TOTAL LIGHT HC	AROMATIC HC (BTX) MTBE	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
SB8-14.0-14.5	7/29/99	8:45	X		SB-8	PETG LINER	X	X					16436
SB9-15.0-15.5		9:50			SB-9								16437
SB10-14.5-15.0		10:50			SB-10								16438
SB11-15.0-15.5		11:50			SB-11								16439
SB12-15.0-15.5		1:30			SB-12								16440
SB13-7.5-8.0		2:35			SB-13								16441
SB13-15.0-15.5		2:45			SB-13								16442
SB14-15.0-15.5		3:40			SB-14								16443
SB15-15.0-15.5	↓	4:40	↓		SB-15	↓	↓	↓					16444

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Jack Mrakovich	7/30/99 12:07	H Marlin 303			
H Marlin 303	7/30/99 1:07				
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			7/30 1:07		

VOAS | O&G | METALS | OTHER

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION: APPROPRIATE CONTAINERS ✓

ALLCAL PROPERTY SERVICES
ENVIRONMENTAL INVESTIGATIONS
27973 HIGH COUNTRY DRIVE FAX (510) 581-8490
HAYWARD, CA 94542-2530 PH (510) 581-2320

LAB: McCAMPBELL ANALYTICAL
TURNAROUND: NORMAL
P.O. #: NA

CHAIN OF CUSTODY

PROJECT NO.: 135
SITE NAME & ADDRESS: 14336 WASHINGTON AVE. SAN LEANDRO, CA
SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: JOHN MRAKOVICH

	ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	TOTAL LIGHT HC	AROMATIC HC (BTX)/MTBE	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
x3	SB8-W	7/29/30	9:05		X	SB-8	2-40ML VOA	X	X					16445
x3	SB9-W		10:00			SB-9								16446
x3	SB10-W		11:05			SB-10								16447
x5	SB11-W		12:00			SB-11								16448
x5	SB12-W		1:40			SB-12								16449
x3	SB13-W		2:50			SB-13								16450
x3	SB14-W		3:50			SB-14								16451
x5	SB15-W	V	4:55		V	SB-15		V	V					16452

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
John Mrakovich	7/30/99 12:07				
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
	7/30/99 1:07				
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			7/30 1:07		

ICE/ ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
PRESERVATION APPROPRIATE CONTAINERS
VOAS | O&G | METALS | OTHER
DATE:

ATTACHMENT A

SAMPLE HANDLING PROCEDURES

Soil and groundwater samples will be packaged carefully to avoid breakage or contamination and will be delivered to the laboratory in an iced-cooler. Sample bottle/sleeve lids will not be mixed. All sample lids will stay with the original containers.

Samples will be stored in iced-coolers to maintain custody, control temperature, and prevent breakage during transportation to the laboratory. Ice, blue ice, or dry ice will be used to cool samples during transport to the laboratory. Water samples will be cooled with crushed ice.

Each sample will be identified by affixing a label on the container(s). This label will contain the site identification, sample identification number, date and time of sample collection, and the collector's initials.

Soil samples collected in brass or stainless-steel tubes or PETG liners will be preserved by covering the ends with Teflon tape and capping with plastic end-caps. The tubes and liners will be labeled, sealed in quart-size bags, and placed in an iced-cooler for transport to the laboratory.

All groundwater sample containers will be precleaned and will be obtained from a State Department of Health Services certified analytical laboratory.

A chain-of-custody form will be completed for all samples and accompany the sample cooler to the laboratory. All sample transfers will be documented in the chain-of-custody. All field personnel are personally responsible for sample collection and the care and custody of collected samples until the samples are transferred or properly dispatched.

The custody record will be completed by the field technician or professional who has been designated as being responsible for sample shipment to the appropriate laboratory. The custody record will include the following information: site identification, name of person collecting the sample(s), date and time sample(s) were collected, type of sampling conducted (composite/grab), location of sampling station, number and type of containers used, and signature of the person relinquishing samples to another person with the date and time of transfer noted.

ATTACHMENT B

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

The overall objectives of the field sampling program include generation of reliable data that will support development of a remedial action plan. Sample quality will be checked by the use of proper sampling, handling, and testing methods. Additional sample quality control methods may include the use of background samples, equipment rinsate samples, and trip and field blanks. Chain-of-custody forms, use of a qualified laboratory, acceptable detection limits, and proper sample preservation and holding times also provide assurance of accurate analytical data.

A quality assurance and quality control (QA/QC) program may be conducted in the field to ensure that all samples collected and field measurements taken are representative of actual field and environmental conditions and that data obtained are accurate and reproducible. These activities and laboratory QA/QC procedures are described below.

Field Samples: Additional samples may be taken in the field to evaluate both sampling and analytical methods. Three basic categories of QA/QC samples that may be collected are trip blanks, field blanks, and duplicate samples.

Trip blanks are a check for cross-contamination during sample collection, shipment, and laboratory analysis. They are water samples that remain with the collected samples during transportation and are analyzed along with the field samples to check for residual contamination. Analytically confirmed organic-free water will be used for organic parameters and deionized water for metal parameters. Blanks will be prepared by the laboratory supplying the sample containers. The blanks will be numbered, packaged, and sealed in the same manner as the other samples. One trip blank will be used for each sample set of less than 20 samples. At least 5% blanks will be used for sets greater than 20 samples. The trip blank is not to be opened by either the sample collectors or the handlers.

The field blank is a water sample that is taken into the field and is opened and exposed at the sampling point to detect contamination from air exposure. The water sample is poured into appropriate containers to simulate actual sampling conditions. Contamination due to air exposure can vary considerably from site to site.

The laboratory will not be informed about the presence of trip and field blanks, and false identifying numbers will be put on the labels.

Duplicate samples are identical sample pairs (collected in the same place and at the same time), placed in identical containers. For soils, adjacent sample liners will be analyzed. For the purpose of data reporting, one is arbitrarily designated the sample, and the other is designated as a duplicate sample. Both sets of results are reported to give an indication of the precision of sampling and analytical methods.

The laboratory's precision will be assessed without the laboratory's knowledge by labeling one of the duplicates with false identifying information. Data quality will be evaluated on the basis of the duplicate results.

Laboratory QA/QC: Execution of a strict QA/QC program is an essential ingredient in high-quality analytical results. By using accredited laboratory techniques and analytical procedures, estimates of the experimental values can be very close to the actual value of the environmental sample. The experimental value is monitored for its precision and accuracy by performing QC tests designed to measure the amount of random and systematic errors and to signal when correction of these errors is needed.

The QA/QC program describes methods for performing QC tests. These methods involve analyzing method blanks, calibration standards, check standards (both independent and the United States Environmental Protection Agency-certified standards), duplicates, replicates, and sample spikes. Internal QC also requires adherence to written methods, procedural documentation, and the observance of good laboratory practices.

ATTACHMENT C

WASTE HANDLING AND DECONTAMINATION PROCEDURES

Decontamination: Any drilling, sampling, or field equipment that comes into contact with soil or groundwater will be decontaminated prior to its use at the site and after each incident of contact with the soil or groundwater being investigated. Decontamination is essential to obtain samples that are representative of environmental conditions and to accurately characterize the extent of soil and groundwater contamination. Hollow-stem auger flights, the drill bit, and all other soil boring devices will be steam-cleaned between the drilling of each boring.

All sample equipment, including the split-spoon sampler and brass or stainless-steel tubes, will be cleaned by washing with trisodium phosphate or Alconox type detergent, followed by rinsing with tap water. Where required by specific regulatory guidelines, a nonphosphate detergent will be used.

Waste Handling: Waste materials generated during site characterization activities will be handled and stored as hazardous waste and will be stored on site in appropriately labeled containers. Waste materials anticipated include: excavated soil, drill cuttings, development and purge water, water generated during aquifer testing, water generated during decontamination, and used personnel protection equipment such as gloves and Tyvek. The site owner will be responsible for providing the storage containers and will be responsible for the disposal of the waste materials. Drill cuttings from individual borings will be stored separately in drums or covered by plastic sheeting, and the appropriate disposal procedure will be determined by the site owner following receipt of the soil sample analytical results. Storage containers will be labeled to show material stored, known or suspected contaminant, date stored, expected removal date, company name, contact, and telephone number.