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February 24, 1997

Ms. Juliet Shin
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

ENVIRONMENTAL
PROTECTION
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Dear Ms. Shin:

Subject: Transmittal of the "Subsurface Investigation Report and Response to Agency Comments to Addendum No. 2 to Materials Management Plan for EBMUD Adeline Maintenance Facility"

The above referenced document is provided for your review and approval. The document responds to comments received from Alameda County on Addendum 2 of the Materials Management Plan. It also includes the results of supplemental field investigation activities conducted in October 1996.

Based on the data collected during the supplemental field investigation activities, specific areas within and outside of the proposed new building footprints will be excavated. I will notify you in advance of the actual excavation activities. The final design documents for the phase 2 construction have not been completed. Once they are available, then the project team can discuss the sequencing of the remedial work. We anticipate phase 2 construction and associated remedial activities beginning sometime in late spring/early summer 1997.

Please call me if you have any additional comments and/or questions.

Sincerely,

510-403-2683
510-287-1661

EILEEN FANELLI
Senior Environmental Compliance Specialist

EMF:prb

cc: David Tsztoo/EBMUD
David Glick/Geoplexus

EC97095

510-287-1661

Walsh Pacific Construction
EBMUD Adeline Maintenance Facility
2130-A Adeline Street
Oakland, CA 94607
Attn. Mr. Mike Perotti

**Subject: Subsurface Investigation Report and Response to Agency Comments on
Addendum No. 2 to Materials Management Plan for EBMUD
Adeline Maintenance Facility, Oakland, CA**

- Reference: (a) Addendum No. 2 to Materials Management Plan for EBMUD Adeline Maintenance Facility, Oakland, CA prepared by Geo Plexus, Inc., dated September 12, 1996
(b) Materials Management Plan for EBMUD Adeline Maintenance Facility, Oakland, CA, prepared by Geo Plexus, Inc., dated January 18, 1996

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ENVIRONMENTAL
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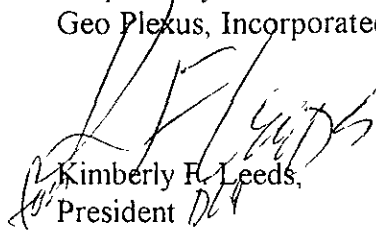
Dear Mr. Perotti

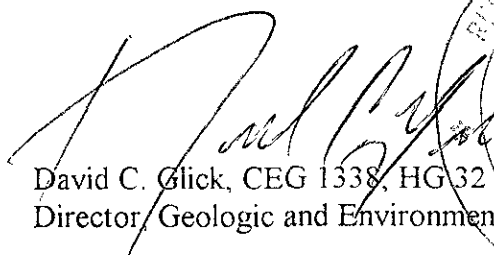
As requested and authorized, Geo Plexus, Incorporated is pleased to provide the attached Subsurface Investigation Report and Response to Agency Comments on Addendum No. 2 to the Materials Management Plan (MMP), reference (a), for the Phase 2 and Phase 3 construction sites at the EBMUD Adeline Maintenance Center (AMC). References (a) and (b) present the general site history and environmental issues for the project, an evaluation of human and environmental risks associated with the known soil contaminants, remedial action criteria for the planned construction phases, and phase-specific guidelines to be implemented to complete the earthwork associated with the construction.

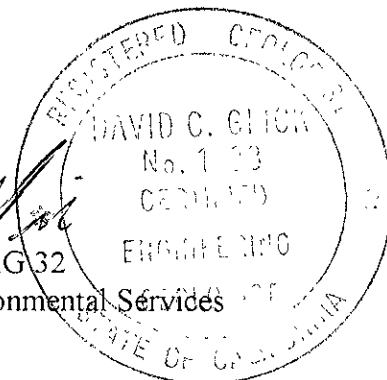
The attached report summarizes the investigation activities, analytical testing program, and findings of the investigation to further define and evaluate the known environmental site conditions for the AMC Phase 2 and Phase 3 construction sites. The document also includes a Response to Alameda County Department of Environmental Health comments on the RBCA Tier 1 evaluation presented in reference (a).

Should you require additional information or need clarification of any information presented in this document, please contact our office.

Respectfully submitted,
Geo Plexus, Incorporated


Kimberly F. Leeds,
President


David C. Glick, CEG 1338, HG 32
Director, Geologic and Environmental Services



cc C95041

**SUBSURFACE INVESTIGATION REPORT AND
RESPONSE TO AGENCY COMMENTS ON
ADDENDUM No. 2 TO
MATERIALS MANAGEMENT PLAN
for
EAST BAY MUNICIPAL UTILITY DISTRICT
ADELINE MAINTENANCE CENTER
1200 21st STREET
OAKLAND, CALIFORNIA**

prepared for:

Walsh Pacific Construction
EBMUD Adeline Maintenance Facility
2130-A Adeline Street
Oakland, California

and

Special Projects Division
Engineering Department
East Bay Municipal Utility District
375 Eleventh Street
Oakland, California

January 22, 1997

**SUBSURFACE INVESTIGATION REPORT AND
RESPONSE TO AGENCY COMMENTS ON
ADDENDUM No. 2 TO
MATERIALS MANAGEMENT PLAN
for
EAST BAY MUNICIPAL UTILITY DISTRICT
ADELINE MAINTENANCE CENTER
1200 21st STREET
OAKLAND, CALIFORNIA**

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**SUBSURFACE INVESTIGATION REPORT AND
RESPONSE TO AGENCY COMMENTS ON
ADDENDUM No. 2 TO
MATERIALS MANAGEMENT PLAN
for
EAST BAY MUNICIPAL UTILITY DISTRICT
ADELINE MAINTENANCE CENTER
1200 21st STREET
OAKLAND, CALIFORNIA**

APPENDICES

- Appendix A - Boring Permit and Logs
- Appendix B - Analytical Test Data - Supplemental Investigation
- Appendix C - Revised RBCA Tier-1 Analysis

**SUBSURFACE INVESTIGATION REPORT AND
RESPONSE TO AGENCY COMMENTS ON
ADDENDUM No. 2 TO
MATERIALS MANAGEMENT PLAN
for
EAST BAY MUNICIPAL UTILITY DISTRICT
ADELINE MAINTENANCE CENTER
1200 21st STREET
OAKLAND, CALIFORNIA**

FIGURES

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|----------|---|
| Figure 1 | Location Plan |
| Figure 2 | Phase 2 and 3 Site Plan |
| Figure 3 | Former Service Station Excavation Location Plan |
| Figure 4 | Former Service Station Excavation Sample Plan |
| Figure 5 | Preliminary Site Assessment Boring Plan |
| Figure 6 | Supplemental Investigation Boring Plan |

ACRONYMS

| | |
|------------|---|
| AMC | Adeline Maintenance Center |
| ASTM | American Society for Testing and Materials |
| BTEX | Volatile Aromatic Compounds (Benzene, Toluene, Ethyl benzene and Xylene) |
| DHS | State of California Department of Health Services |
| DTSC | State of California Department of Toxic Substance Control |
| EBMUD | East Bay Municipal Utility District |
| EPA | U.S. Environmental Protection Agency |
| FID | Flame Ionizing Detector |
| HVOC | Halogenated Volatile Organic Compounds |
| LUST | Leaking Underground Storage Tank |
| MMP | Materials Management Plan |
| OVA | Organic Vapor Analyzer |
| OVM | Organic Vapor Meter |
| PID | Photoionization Detector |
| RBCA | Risk-Based Corrective Action |
| RBSL | Risk-Based Screening Levels |
| RCRA | Resource Conservation and Reclamation Act |
| RWQCB | State of California Regional Water Quality Control Board |
| STLC | Soluble Threshold Limit Concentration |
| TPH gas | Total Petroleum Hydrocarbons as gasoline |
| TPH diesel | Total Petroleum Hydrocarbons as diesel |
| TTLC | Total Threshold Limit Concentrations |
| UST | Underground Storage Tank |
| WPC | Walsh Pacific Construction |
| VOA | Volatile Organic Analysis |
| VOC | Volatile Organic Compounds |

**SUBSURFACE INVESTIGATION REPORT AND
RESPONSE TO AGENCY COMMENTS ON
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EAST BAY MUNICIPAL UTILITY DISTRICT
ADELINE MAINTENANCE CENTER
1200 21st STREET
OAKLAND, CALIFORNIA**

1.0 INTRODUCTION

The following responds to comments from the Alameda County Health Agency regarding Addendum 2 to the Materials Management Plan (MMP) for the East Bay Municipal Utility District (EBMUD) Adeline Maintenance Center (AMC). Agency comments are outlined in two letters dated October 10 and November 19, 1996, respectively. In addition, the following presents and discusses the results of supplemental site investigation activities conducted in accordance with Addendum 2. The site investigation activities were completed in October, 1996.

The following provides project background information, summarizes the Agency comments, presents the results of the previous and supplemental site investigation activities and addresses the Agency comments with respect to the additional site information

1.1 Background

EBMUD is constructing a new Adeline Maintenance Center (AMC) at the site of the existing AMC. The AMC site comprises four city blocks, as shown in Figure 1. Walsh Pacific Construction (WPC) has been retained by EBMUD as the design/build contractor for the AMC project which includes demolition of several existing structures, the construction of 5 new buildings, and remodeling of 2 buildings. The construction project will be completed in 3-phases over a 2-year period ending approximately April, 1998. Phase-1 of construction is currently in progress and Phase-2 is scheduled to begin in December, 1996. Phase-3 of the construction is scheduled to begin in October, 1977. Figure 2 illustrates the Phase 2 and Phase 3 construction areas, the location of the existing structures, and the location of the planned structures.

Alameda County Health Agency is the lead regulatory agency providing oversight of environmental investigations and remedial activities conducted at the site.

The MMP for the EBMUD AMC was prepared by Geo Plexus, Inc., (dated January 18, 1996) and presented: the general history of the project site, a Tier-1 Risk-Based Corrective Action (RBCA) evaluation of human and environmental risks associated with the known soil contaminants, remedial action criteria for the planned construction phases, and phase-specific guidelines to be implemented to complete the earthwork associated with the construction

Addendum No. 1 was prepared to incorporate responses to Alameda County Health Agency comments on the MMP and to address additional characterization and proposed remedial action for the Phase-1 construction site.

Addendum No. 2 to the MMP was prepared by Geo Plexus, Inc (dated September 12, 1996) to present the work plan for supplemental investigation activities to further define the extent of soil contamination above the threshold criteria in areas included in the Phase 2 and Phase 3 construction. Addendum No. 2 also included a RBCA Tier 1 evaluation for volatile organic and polynuclear aromatic compounds known to be present or anticipated to be encountered in the Phase 2 and 3 construction areas which were not addressed in the MMP or Addendum No. 1.

Addendum No. 2 was forwarded to Alameda County Health Agency on October 1, 1996 and comments were received on October 10 and November 19, 1996, respectively. The comments primarily addressed:

- Residual benzene contamination adjacent to West Grand Avenue, associated with the former underground fuel storage tanks, removed in 1994,
- Delineation of potential contamination associated with the waste oil underground storage tank and adjacent to boring 2-7;
- The criteria for conducting metals analysis on soil samples from construction Phase 2 and Phase 3,
- Clarification on RBCA Tier-1 threshold criteria for ethylbenzene; and
- Use of the most conservative exposure pathways in setting threshold criteria for residual contamination left beneath the footprint of new buildings

1.2 Previous Site Investigation Activities

The following summarizes site soil analytical data collected during the removal of the underground fuel tanks at the former service station in 1994 and completion of a Preliminary Site Assessment in 1995. These data are more completely described in the following reports:

General Environmental Management Services, 1994, "Interim Remedial Action Summary Report for EBMUD Facility located at 1200 21st Street, Oakland, CA";

Geo Plexus, Inc., 1995, "Preliminary Site Assessment Report for Adeline Maintenance Facility", prepared for East Bay Municipal Utility District.

Six underground storage tanks were excavated and removed from the former gasoline service station located within the Phase 2 construction area in November, 1994 (see Figure 3). The excavation extended vertically to a depth of 13- to 16-feet below the ground surface and laterally to the excavation boundaries indicated on Figure 4. The final excavation sample locations are also indicated on Figure 4.

Table 1 presents the analytical test data for the excavation samples:

TABLE 1
1994 TANK EXCAVATION SAMPLES
SUMMARY OF ANALYTICAL TEST DATA
 (Concentrations in parts per million)

| Sample No. | TPHgas | TPHdiesel | Oil&Grease | Benzene | Toluene | Ethylbenzene | Xylene |
|------------|--------|-----------|------------|---------|---------|--------------|--------|
| 111 | 24 | 24 | ND | 0.3 | 0.028 | 0.15 | 0.50 |
| 112 | 13 | ND | NA | 0.028 | 0.015 | 0.19 | 0.33 |
| 113 | 22 | 13 | NA | 0.29 | 0.025 | 0.73 | 1.0 |
| 114 | 6.1 | ND | NA | 1.5 | 0.14 | 0.17 | 0.86 |
| 125 | ND | ND | ND | ND | ND | ND | ND |
| 126 | ND | ND | ND | ND | ND | ND | 0.009 |
| 127 | 11 | ND | ND | 0.054 | 0.59 | 0.80 | 0.14 |
| 128 | 420 | 440 | 10 | 0.58 | 0.48 | ND | 3.1 |
| 129 | ND | ND | ND | ND | ND | ND | ND |
| 130 | ND | ND | ND | ND | ND | ND | ND |
| 131 | 9.1 | ND | ND | 0.065 | 0.007 | ND | 0.076 |
| 132 | 57 | ND | ND | 0.18 | 0.026 | ND | 0.17 |
| 133 | 790 | 30 | 88 | 0.85 | 0.94 | ND | 3.1 |
| 134 | 380 | NA | ND | 3.5 | 2.3 | 3.3 | 13 |
| 135 | 430 | NA | 75 | 2.9 | 0.79 | 1.8 | 3.0 |
| 136 | 77 | NA | ND | 2.7 | 0.33 | 0.25 | 0.17 |
| 137 | 9.4 | NA | ND | 0.041 | 0.014 | ND | 0.10 |
| 138 | 310 | NA | 130 | <0.02 | 0.36 | <0.02 | 2.4 |
| 139 | 57 | NA | ND | 0.22 | 0.14 | 0.10 | 0.13 |
| 140 | 1400 | NA | 680 | 10 | 1.1 | 2.9 | 5.9 |
| 141 | 18 | NA | ND | 0.075 | 0.023 | ND | 0.18 |
| 142 | 2000 | NA | 900 | <0.5 | 6.6 | 6.3 | 20 |
| 143 | 2800 | NA | 540 | 16 | 18 | 28 | 14 |

Notes: **Bold Sample Numbers** indicate sample located within proposed AMC building footprint.

ND - Constituent not detected

NA - Constituent not analyzed

The preliminary site assessment was performed by Geo Plexus, Inc. in 1995 and included advancing 6 borings (B2-1, B2-3, B2-4, B2-5, B2-7, and B2-8) within the Phase 2 project site and 3 borings (B3-2, B3-3, and B3-4) within the Phase 3 project site (see Figure 5) Tables 2 and 3 present a summary of the analytical test data for the 1995 investigation:

TABLE 2

1995 PRELIMINARY SITE ASSESSMENT
SUMMARY OF ANALYTICAL TEST DATA
 (Concentrations in parts per million)

| Sample No. | TPHgas | TPHdiesel | Oil&Grease | Benzene | Toluene | Ethylbenzene | Xylene |
|-----------------|--------|-----------|------------|---------|---------|--------------|--------|
| EB2-1-S1 | ND | ND | ND | ND | ND | ND | ND |
| EB2-1-S2 | ND | NA | NA | ND | ND | ND | ND |
| EB2-3-S2 | ND | ND | NA | ND | ND | ND | ND |
| EB2-4-S1 | NA | ND | NA | NA | NA | NA | NA |
| EB2-7-S1 | 130 | 6400 | 24000 | 0.43 | 2.4 | 2.7 | 6.5 |
| EB2-7-S2 | ND | ND | ND | 0.008 | 0.014 | 0.005 | 0.029 |
| EB2-8-S2 | NA | 1.9 | ND | NA | NA | NA | NA |
| EB3-2-S1 | ND | ND | ND | ND | ND | ND | ND |
| EB3-3-S1 | 29 | 2200 | 1800 | 0.012 | 0.019 | 0.021 | 0.17 |
| EB3-3-S2 | 63 | 2300 | 13000 | 0.011 | 0.010 | ND | 0.42 |
| EB3-4-S1 | ND | 2.8 | ND | ND | ND | ND | ND |

Notes: **Bold Sample Numbers** indicate sample location within proposed AMC building footprint.

ND - Constituent not detected

NA - Constituent not analyzed

TABLE 3

1995 PRELIMINARY SITE ASSESSMENT
ANALYTICAL TESTING - SOIL DATA
 (Concentrations in parts per billion)

| Sample No. | 1,2-Dichloro benzene | 1,3-Dichloro benzene | 1,4-Dichloro benzene | 1,1-Dichloro ethane | cis 1,2-Dichloro ethene | Tetrachloro ethane | 1,1,1-Trichloro ethane | Trichloro ethene |
|-----------------|----------------------|----------------------|----------------------|---------------------|-------------------------|--------------------|------------------------|------------------|
| EB2-1-S1 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-1-S2 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-3-S1 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-4-S1 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-4-S2 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-5-S1 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-5-S2 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB2-7-S1 | 98 | ND | 30 | 210 | ND | 1900 | 540 | 870 |
| EB2-8-S2 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB3-3-S1 | ND | ND | ND | ND | ND | 68 | ND | ND |
| EB3-3-S2 | ND | ND | ND | ND | ND | ND | ND | ND |
| EB3-4-S1 | ND | ND | ND | ND | ND | ND | ND | ND |

Note: **Bold Sample Numbers** indicate sample location within proposed AMC building footprint
 ND - Constituent not detected

2.0 SUPPLEMENTAL INVESTIGATION

Supplemental investigation activities were performed as outlined in Addendum No. 2 to determine/verify the limits of known/suspected soil contamination and to reduce the uncertainty of remediation requirements for the Phase 2 and Phase 3 construction areas. The investigation was completed in October, 1996 and included advancing 15 soil borings at the locations indicated on Figure 6. The borings were located to delineate residual contamination in the vicinity of the former underground fuel storage tanks and the existing waste oil tank and to characterize the soil beneath the footprint of the planned shops building. In response to the Agency comment regarding the waste oil tank, borings B-9 and B-10 were located at the waste oil tank near previous boring 2-7 for the specific purpose of delineating any contamination associated with the waste oil tank. The borings encountered the tank backfill and underlying soil. The tank is located within the footprint of the proposed stores building. The tank will be removed and any soil containing contaminants above the established threshold criteria will be excavated during phase 3 AMC construction. The waste oil tank is shown on Figure 6.

2.1 Subsurface Borings and Soil Samples

The borings were advanced by Gregg Drilling and by Precision Sampling, State of California Licensed Drilling Contractors, and were logged under the supervision of a State of California Certified Engineering Geologist. An Alameda County (Zone 7) Soil Boring Permit was obtained prior to drilling. The boring permit and boring logs are presented in Appendix A.

The soil borings advanced by Gregg Drilling used an eight-inch, nominal diameter, continuous flight hollow stem auger.

The soil borings advanced by Precision Sampling used a limited-access, portable pneumatic drive assembly which advanced a double casing system with a split barrel sampler as the inside casing. The inner casing contained stainless steel tubes to retain the soil samples. The casings were driven into the soil in three-foot intervals. The sample casing was removed following each drive and replaced with a new sampler prior to advancing the boring. This drilling method achieved a "continuous core" of the soil materials for observation and sampling in lieu of 5-foot interval samples from conventional auger drilling.

All drilling and sampling equipment were thoroughly steam cleaned before drilling began to prevent the introduction of off-site contamination and steam cleaned again between the borings to prevent cross contamination. Sampling equipment was cleaned between sample events using a phosphate-free detergent bath and double rinsed to prevent cross

Sample liners from the borings which were identified as representative of the subsurface conditions were retained for analytical testing. The soil samples were immediately sealed in the tubes/liners and properly labeled including the date, time, boring location, depth interval, and project number. The samples were placed immediately into a chilled cooler (maintained at 3-5° C with dry ice) for transport to the laboratory under chain-of-custody documentation.

The drill cuttings and soil samples obtained from the boring were screened with a photo-ionization detector (PID) for volatile emissions and were monitored to observe moisture changes in the soils. PID recordings are included on the boring logs.

Soil cuttings from the boring were placed in 55-gallon containers and remain stored on-site pending disposal. The rinsate water derived from the boring/cleaning was also contained in 55-gallon containers and remain stored on-site.

2.2 Grab Water Samples

To assess the options for containment and disposal of perched ground water encountered during excavation of the building foundations, "grab" samples of water encountered in the borings were obtained through the use of disposable teflon bailers lowered into the selected borings. The water contained in the bailers was decanted directly into sterile 40-ml vials and 1-liter jars with Teflon lined screw caps.

The water samples were immediately sealed in the vials/jars and properly labeled including, the date, time, sample location, project number, and indication of any preservatives added to the sample. The samples were placed immediately into a chilled cooler and maintained at 3-5° C for transport to the laboratory under chain-of-custody documentation.

2.3 Boring Backfill

The borings were backfilled to the ground surface with a neat-cement slurry with 5% bentonite added.

2.4 Analytical Testing Schedule

The soil and ground water samples were submitted to and tested by McCampbell Analytical, a State of California, Department of Health Services certified testing laboratory. Analytical testing was scheduled and performed in accordance with the State of California, Regional Water Quality Control Board, and Alameda County Environmental Health Department guidelines. The testing included the following:

- Total Petroleum Hydrocarbons as gasoline by Method GCFID 5030/8015;
- Total Petroleum Hydrocarbons as diesel by Method GCFID 3550/8015;
- Volatile Aromatics (BTEX) and MTBE by EPA Method 8020;
- Oil and Grease Compounds by EPA Method 5520;
- Volatile Halogenated Compounds by EPA Method 8010;
- Polynuclear Aromatic Compounds by EPA Method 8100, and
- LUFT Metals by EPA Method 6000 series.

These analytes were selected based on the results of previous site investigation activities that indicated TPH-gasoline, TPH-diesel, BTEX, Oil and Grease, Volatile Organics and PNA's may be present in subsurface soils. The analytical test data and chain-of-custody documents are included as Appendix B.

2.5 Analytical Test Results

Tables 4, 5, and 6 present a summary of the analytical test data for the soil samples:

TABLE 4

1996 SUPPLEMENTAL INVESTIGATION
ANALYTICAL TESTING - SOIL DATA
 (Concentrations in parts per million)

| Sample No. | TPHgas | TPHdiesel | Oil&Grease | Benzene | Toluene | Ethylbenzene | Xylene | MTBE |
|----------------|--------|-----------|------------|---------|---------|--------------|--------|-------|
| B-1, 5-6' | ND | NA | NA | 0.016 | 0.007 | 0.009 | 0.012 | ND |
| B-1, 10-11.5' | ND | NA | NA | 0.007 | 0.012 | ND | 0.010 | ND |
| B-1, 15-16.5' | ND | NA | NA | ND | ND | ND | ND | ND |
| B-2, 5-6' | 1.1 | 3.0 | ND | ND | ND | ND | 0.013 | ND |
| B-2, 10-11.5' | ND | 1.6 | ND | ND | ND | ND | ND | ND |
| B-2, 15-16.5' | ND | ND | NA | ND | ND | ND | ND | ND |
| B-3, 5-6' | 87 | 620 | 1300 | ND | 0.061 | 0.075 | 0.39 | ND |
| B-3, 10-11.5' | ND | 2.3 | NA | ND | ND | ND | ND | ND |
| B-4, 5-6' | 29 | 34 | ND | 0.063 | 0.048 | 0.053 | 0.17 | <0.08 |
| B-4, 10-11.5' | ND | ND | NA | ND | ND | ND | 0.012 | ND |
| B-5, 5-6' | 1.1 | ND | ND | ND | ND | ND | 0.012 | ND |
| B-5, 10-11.5' | ND | 4.6 | ND | ND | ND | ND | ND | ND |
| B-6, 5-6' | ND | ND | NA | ND | ND | ND | ND | ND |
| B-7, 5-6' | 88 | 260 | 170 | 0.035 | 0.10 | 0.11 | 0.55 | <0.2 |
| B-7, 10-11.5' | ND | ND | ND | 0.040 | 0.007 | ND | ND | ND |
| B-8, 5-6' | ND | ND | NA | ND | ND | ND | ND | ND |
| B-9, 5-6' | 360 | 7000 | 54000 | 0.85 | 9.3 | 3.6 | 20 | <0.8 |
| B-9, 10-11.5' | ND | 4.3 | ND | ND | ND | ND | ND | ND |
| B-9, 15-16.5' | ND | NA | NA | ND | ND | ND | ND | ND |
| B-10, 5-6' | 380 | 15000 | 64000 | 0.55 | 6.7 | 11 | 69 | <0.4 |
| B-10, 10-11.5' | ND | 1.4 | ND | ND | ND | ND | ND | ND |

Notes: **Bold Sample Numbers** indicate sample located within proposed AMC building footprint.
 ND indicates constituent not detected.
 NA indicates constituent not analyzed.

TABLE 4 (cont'd)

**1996 SUPPLEMENTAL INVESTIGATION
 ANALYTICAL TESTING - SOIL DATA**
 (Concentrations in parts per million)

| Sample No. | TPHgas | TPHdiesel | Oil&Grease | Benzene | Toluene | Ethylbenzene | Xylene | MTBE |
|----------------|--------|-----------|------------|---------|---------|--------------|--------|-------|
| B-11, 5-6' | NA | NA | ND | NA | NA | NA | NA | NA |
| B-12, 3.5-4' | 4.2 | 1200 | 11000 | 0.010 | 0.013 | ND | 0.038 | ND |
| B-12, 9-9.5' | ND | NA | NA | ND | ND | ND | ND | ND |
| B-13, 5-5.5' | 12 | 1800 | 13000 | 0.006 | 0.012 | 0.010 | 0.10 | <0.06 |
| B-13, 9-9.5' | ND | NA | NA | ND | 0.012 | ND | 0.011 | ND |
| B-14, 4-5.5' | 35 | 57 | 180 | 0.23 | 0.080 | 0.16 | 0.48 | <0.2 |
| B-14, 8-8.5' | 110 | 99 | NA | ND | ND | 0.064 | 0.44 | <0.15 |
| B-14, 12.5-13' | ND | NA | NA | 0.007 | ND | ND | ND | 0.005 |
| B-15, 4-4.5' | 530 | 5700 | 190 | 1.8 | 1.3 | 0.76 | 4.5 | <3.5 |
| B-15, 8.5-9' | 1.6 | 4.2 | NA | 0.018 | 0.013 | ND | 0.016 | ND |

Notes: **Bold Sample Numbers** indicate sample located within proposed AMC building footprint.
 ND indicates constituent not detected.
 NA indicates constituent not analyzed.

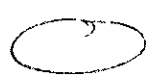
 = exceeds threshold values for w/in footprint areas.

TABLE 5

**1996 SUPPLEMENTAL INVESTIGATION
 ANALYTICAL TESTING - SOIL DATA**
 (Concentrations in parts per billion)

| Sample No. | 1,2-Dichloro benzene | 1,3-Dichloro benzene | 1,4-Dichloro benzene | 1,1-Dichloro ethane | cis 1,2-Dichloro ethene | Tetrachloro ethane | 1,1,1-Trichloro ethane | Trichloro ethene |
|----------------------|----------------------|----------------------|----------------------|---------------------|-------------------------|--------------------|------------------------|------------------|
| B2, 5-6.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B3, 5-6.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B5, 5-6.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B9, 5-6.5' | <100 | <100 | <100 | 220 | <100 | 3700 | 1700 | 1700 |
| B9, 10-11.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B10, 5-6.5' | 990 | 74 | 280 | 830 | 90 | 2600 | 550 | <50 |
| B10, 10-11.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B-115-6.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B12, 3.5-4' | ND | ND | ND | ND | ND | ND | ND | 5.2 |
| B12, 9-9.5' | ND | ND | ND | ND | ND | ND | ND | ND |
| B13, 5-5.5' | ND | ND | ND | ND | ND | 34 | ND | 5.4 |
| B13, 9-9.5' | ND | ND | ND | ND | ND | ND | ND | ND |

Notes: **Bold Sample Numbers** indicate sample location within proposed AMC building footprint.
 ND indicates constituent not detected

TABLE 6

**1996 SUPPLEMENTAL INVESTIGATION
 ANALYTICAL TESTING - SOIL DATA**
 (Concentrations in parts per million)

| Sample No. | Cadmium | Chromium | Lead | Nickel | Zinc |
|--------------------|---------|----------|------|--------|------|
| B9, 5-6.5' | ND | 20 | ND | 12 | 36 |
| B9, 10-11.5' | ND | 36 | ND | 22 | 32 |
| B10, 5-6.5' | ND | 30 | 4.3 | 34 | 34 |
| B12, 3.5-4' | ND | 38 | 80 | 38 | 66 |
| B13, 5-5.5' | ND | 61 | 64 | 48 | 77 |

Notes: **Bold Sample Numbers** indicate sample location within proposed AMC building footprint.
 ND indicates constituent not detected.

Tables 7 and 8 present the analytical test data for the samples of perched water:

TABLE 7

**1996 SUPPLEMENTAL INVESTIGATION
 ANALYTICAL TESTING - WATER DATA**
 (Concentrations in parts per billion)

| Sample No. | TPHgas | TPHdiesel | Oil&Grease | Benzene | Toluene | Ethylbenzene | Xylene | MTBE |
|------------|--------|-----------|------------|---------|---------|--------------|--------|------|
| B1 | ND | NA | NA | ND | ND | ND | ND | ND |
| B2 | 200 | 720 | ND | ND | ND | 0.50 | 1.2 | 130 |
| B3 | 220 | NA | NA | ND | ND | ND | 1.1 | <6 |
| B5 | 300 | 280 | ND | ND | ND | ND | 2.7 | ND |
| B9 | 380 | 16000 | 8.4 | 19 | 27 | 8.5 | 58 | 210 |
| B14 | 2900 | 59000 | 56 | 52 | 7.3 | 8.3 | 21 | <15 |

Notes: **Bold Sample Numbers** indicate sample location within proposed AMC building footprint
 ND indicates constituent not detected.
 NA indicates constituent not analyzed.

TABLE 8

1996 SUPPLEMENTAL INVESTIGATION
ANALYTICAL TESTING - WATER DATA
 (Concentrations in parts per billion)

| Sample No. | 1,2-Dichloro benzene | 1,3-Dichloro benzene | 1,4-Dichloro benzene | 1,1-Dichloro ethane | cis 1,2-Dichloro ethene | Tetrachloro ethane | 1,1,1-Trichloro ethane | Trichloro ethene |
|------------|----------------------|----------------------|----------------------|---------------------|-------------------------|--------------------|------------------------|------------------|
| B5 | ND | ND | ND | ND | ND | ND | ND | ND |
| B9 | ND | ND | ND | 18 | ND | 28 | 1.7 | 26 |
| B14 | ND | ND | ND | ND | ND | ND | ND | ND |

MCLs:
 Notes: **Bold Sample Numbers** indicate sample location within proposed AMC building footprint. ^{5 ppb} ^{1 ppb} ²⁰⁰ ^{5 ppb}
 ND indicates constituent not detected.

3.0 ANALYSIS AND DISCUSSION

To assess the potential health risk of VOC's and PNA's for the AMC Phase 2 and Phase 3 construction sites, an additional risk based corrective action analysis was performed in accordance with the procedures presented in ASTM E 1739-95. This analysis was performed using a commercially available, automated process known as "Tier 2 RBCA Tool Kit" published by Groundwater Services, Inc. This evaluation maintained the "commercial" health risk of 1×10^{-4} as established in the MMP and included the VOC and PNA constituents known or anticipated to be present at the AMC site. The exposure pathways considered in Addendum No. 2 included:

- soil contact for construction workers;
- soil ingestion,
- volatilization of soil gasses to indoor air;
- volatilization of soil gasses to outdoor air; and
- contaminant leaching to ground water.

In accordance with Agency comments, two additional exposure pathways were included in the revised analysis assuming the presence of contaminated "perched" water beneath building footprints:

- volatilization of soil gasses to indoor air; and
- volatilization of soil gasses to outdoor air.

In addition, 1,2-Dichlorobenzene and cis 1,2-Dichlorobenzene were included in the revised RBCA Tier-1 analysis (included as Appendix C) to evaluate additional constituents detected in the supplemental investigation. Anthracene and Methylene Chloride were included to comply with Agency request for inclusion in the analysis for consistency with the ASTM Standard.

In response to Agency comments, we have contacted Groundwater Services, Inc. (provider of the RBCA Tier-1 analysis used in this evaluation) to determine the reason that the ethylbenzene value of 130 ppm calculated in the "soil-leachate to protect ground water" analysis differs from the value of 1,610 ppm in the "Look-Up Table X2.1" published in the ASTM Standard. It is our understanding (based on conversations with Groundwater Services, Inc. personnel and Appendix 2 of the software documentation) that the ASTM Standard provides for calculation of two scenarios for each constituent (based on depth to water) and that the most conservative value calculated is used as threshold criteria, with the exception of ethylbenzene which only uses one scenario (deep water table conditions). Groundwater Services, Inc. personnel indicate that the software application maintains the two-scenario test for all constituents including ethylbenzene (as approved by ASTM and authorized by the Standard) which can produce more conservative values than would be achieved by using the ASTM Standard "Look-Up Table". Values for ethylbenzene similar to the values in the "Look-up Table" can reportedly be simulated by increasing the depth to ground water to over 99-feet. We have not forced this calculation and have selected the more conservative value calculated by the software for site conditions.

Evaluation of the Risk Based Screening Levels (RBSL's) assuming exposure from volatilization of contaminants from perched water to indoor or outdoor air indicated that these pathways were less conservative than the leaching to groundwater exposure pathway.

The revised analysis indicated that the most conservative risk values are derived assuming an exposure pathway of contaminant leaching to groundwater. In accordance with the MMP, these values are applied to the areas outside the footprints of proposed new buildings. State of California Water Quality Control Board Tri-Regional guideline criteria will be applied to areas within the footprints of the proposed buildings. In cases where Tri-Regional guidelines do not exist, the RBCA values are applied.

The threshold criteria for the phase 2 and phase 3 AMC construction sites are summarized on Table 9:

TABLE 9
THRESHOLD VALUES FOR SOIL

| Constituent | Threshold Values for Within Building Footprint | RBSL Threshold Values for Outside Building Footprint |
|-------------------------------|--|--|
| TPH gas | 100 ppm | unlimited |
| TPH diesel | 1,000 ppm | unlimited |
| Oil & Grease | 1,000 ppm | unlimited |
| Benzene | 0.3 ppm | 1.67 ppm* |
| Toluene | 0.3 ppm | 360 ppm |
| Ethylbenzene | 1 ppm | 130 ppm |
| Xylenes | 1 ppm | Res |
| Napthalene | 1 ppm | 64 ppm |
| Benzo(a)pyrene | Res | Res |
| Anthracene | Res | Res |
| 1,2 Dichlorobenzene | 2,300 ppm | 2,300 ppm |
| 1,4 Dichlorobenzene | 310 ppm | 310 ppm |
| 1,1 Dichloroethane | 92 ppm | 92 ppm |
| 1,2 Dichloroethane | 2.5 pm | 2.5 pm |
| cis-1,2 Dichloroethane | 6 4 ppm | 6 4 ppm |
| Fluoranthene | Res | Res |
| Methylene Chloride | 12 ppm | 12 ppm |
| Phenanthrene | Res | Res |
| Pyrene | Res | Res |
| Tetrachloroethane | 8,800 ppm | 8,800 ppm |
| 1,1,1-Trichloroethane | 330 ppm | 330 ppm |
| 1,1,2-Trichloroethane | 0 42 ppm | 0.42 ppm |
| Trichloroethene | 2.4 ppm | 2.4 ppm |

Notes: RBSL - Risk Based Screening Level from RBCA Tier 1 Evaluation.

* Value of 5.82 ppm reduced by 29 percent in accordance with RWQCB guidelines.

Res - selected risk level is not exceeded for pure compound present at any concentration

Constituents added in the revised analysis are indicated in **bold**.

4.0 CONCLUSIONS

4.1 Subsurface Soil Conditions

The soil borings revealed near-uniform subsurface soil conditions consisting of approximately 4- to 6-feet of sandy to silty clay fill material (containing concrete rubble, brick, wood debris, etc.) underlain by stiff to very stiff, silty clay (bay mud deposits) and dense, silty sand (native sediments). Very strong gasoline and diesel odors were encountered in borings EB-11, EB-12, and EB-13 and a visible sheen was observed on the soil samples recovered from boring EB-13.

4.2 Perched Water Conditions

Perched water was encountered within the fill material and at the interface between the fill and native sediments (silty sand or bay mud). The underlying native sediments did not exhibit free water and as such the perched water is not considered to represent ground water conditions.

4.3 Contaminants of Concern Review

The previous and current investigations have identified the presence of petroleum compounds which exceed the established threshold criteria within the footprints of the proposed structures and isolated areas of petroleum compounds which exceed threshold criteria outside of the building footprints.

With the exception of two samples from boring 2-7, which contained TCE at concentrations above RBSL's, no other volatile organics, PNA's, or heavy metals are present in site soils at concentrations exceeding RBSL's.

4.4 Anticipated Excavation Within Building Footprints

Based on the threshold criteria, the surface soils (extending to depths of 6- to 7-feet) in the areas of the former underground tanks (sample locations 114, 133, 134, 135, 136, and 138) and beneath the existing auto shop (borings EB3-3, B-12 and B-13) will be excavated and removed from the project site to mitigate the risk associated with the petroleum compounds.

Similarly, the area in the immediate vicinity of the underground waste oil tank and borings EB-7, B-9, and B-10 will be excavated at the time of the tank removal. The absence of VOC's in the soil collected from borings B-9 and B-10 indicate that the VOC contamination associated with the waste oil tank is limited in lateral extent and primarily associated with the backfill surrounding the tank. As such, the identified risk will be mitigated by removal of the tank and affected soil during phase 3 AMC construction.

4.5 Anticipated Excavation Outside Building Footprints

Comparison of the site soil data to the RBSL's indicate that with the exception of one sample from the area of the 1994 tank excavation (sample 143 obtained for the perimeter of the excavation for the former tanks along West Grand Avenue) and one sample from boring B-15, the concentration of petroleum compounds detected in the project area outside of the building footprints do not exceed RBSL threshold criteria.

Sample 143 was collected from fill material beneath the sidewalk at a depth of 7 feet below the ground surface. The sample collected immediately above 143, sample 142, did not contain detectable benzene and other surrounding samples contained benzene below RBSL's. Furthermore, the recent investigation activities confirmed that petroleum contamination is limited to the fill overlying native bay mud and silty sand sediments. This data suggest that the Benzene detected in sample 143 is of very limited extent and not representative of a continuing source of contamination to perched water in the fill or to groundwater.

4.6 Perched Water Control

Perched water within the planned excavations containing dissolved petroleum compounds and/or volatile organics will be evacuated and appropriately disposed of during construction. The perched water is associated with the fill overlying the native, uncontaminated soils. The fill soils in these areas will be replaced with compacted, less permeable soils mitigating the potential for future migration of perched water beneath the structure and exposure due to off-gassing.

4.7 Excavation Protocols

During phase 2 and 3 AMC construction, the soil excavation process, monitoring and verification sampling will be performed in accordance with the protocols presented in Addendum No. 2 to the MMP. Excavated soil that does not meet threshold criteria will be treated and/or disposed of off-site. The need for and scope of any groundwater investigation or monitoring program will be assessed once the AMC construction is completed.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of the Walsh Pacific Construction and East Bay Municipal Utility District and their authorized representatives. No reliance on this report shall be made by anyone other than the client for whom it was prepared.

We have only observed a small portion of the pertinent soil conditions present at the site. Subsurface conditions across the site have been extrapolated from information obtained from review of existing documents and from the field investigation. The conclusions made herein are based on the assumption that soil conditions do not deviate appreciably from those described in the reports and observed during the field investigation.

Geo Plexus, Incorporated provides consulting services in the fields of Geology and Engineering Geology performed in accordance with presently accepted professional practices. Professional judgments presented herein are based partly on information obtained from review of published documents, partly on evaluations of the technical information gathered, and partly on general experience in the fields of geology and engineering geology.

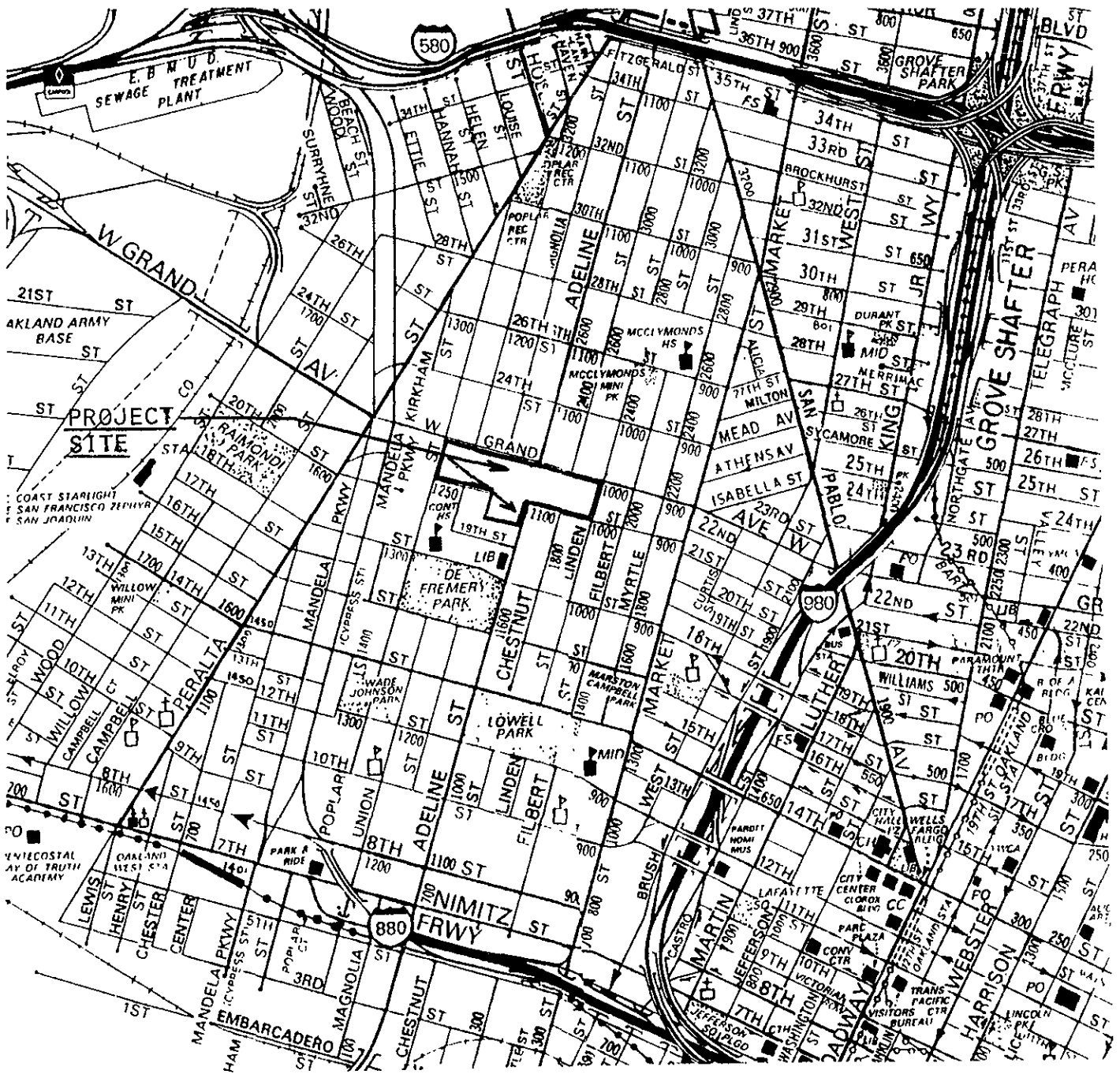
The findings and conclusions presented in this report are based on a preliminary field reconnaissance, a review of previous site investigation reports, on data obtained from the literature research, and on information derived from the subsurface investigation and analytical testing. This assessment did not include an inspection/evaluation for the presence of asbestos products and/or radon gas, or other organic/inorganic compounds not tested for.

This report provides neither certification nor guarantee that the property is free of hazardous substance contamination

This report has been prepared in accordance with generally accepted methodologies and standards of practice of the area. The personnel performing this assessment are qualified to perform such investigations. No warranty, expressed or implied, is made as to the findings, conclusions and recommendations included in the report

If you have questions regarding the findings, conclusions, or recommendations contained in this report, please contact us. We appreciate the opportunity to serve you.

Geo Plexus, Incorporated

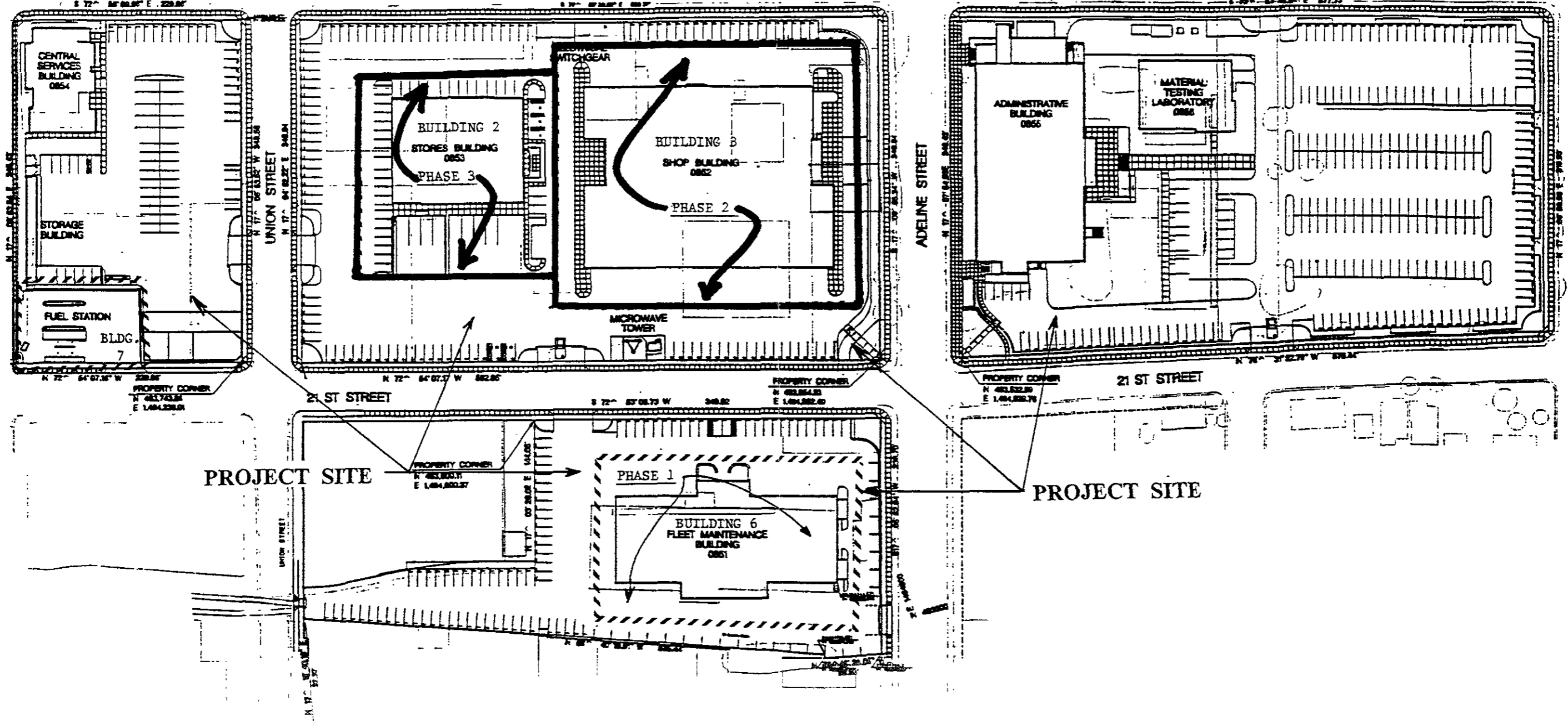


Source: Thomas Brothers Maps

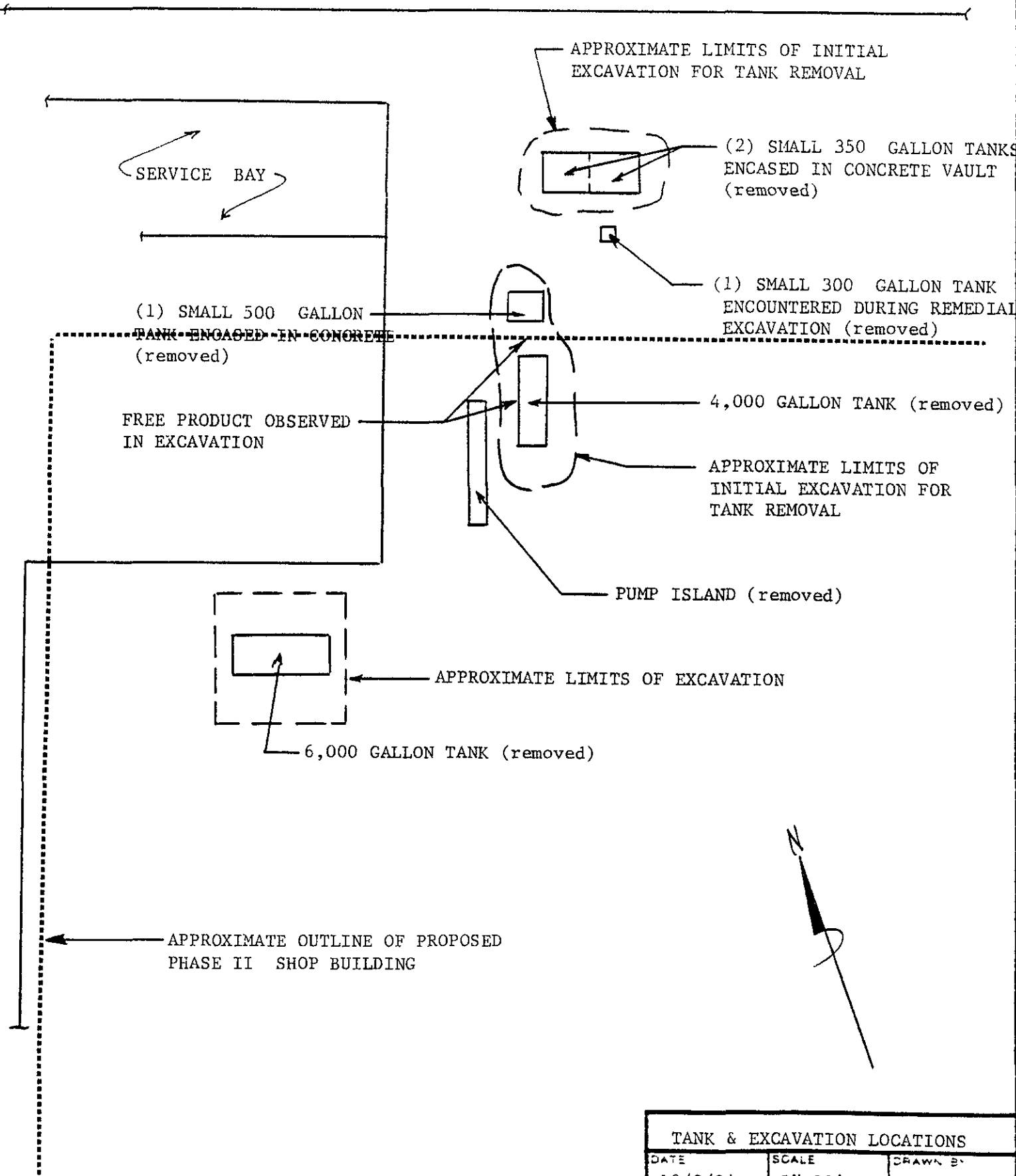
GeoPlexus, Inc.

| | | |
|-----------------------|--------------|-----------------|
| EAST BAY MUD FACILITY | | |
| DATE 11/19/94 | SCALE n/a | DRAWN BY dcg |
| LOCATION PLAN | | |
| | | Figure 1 |

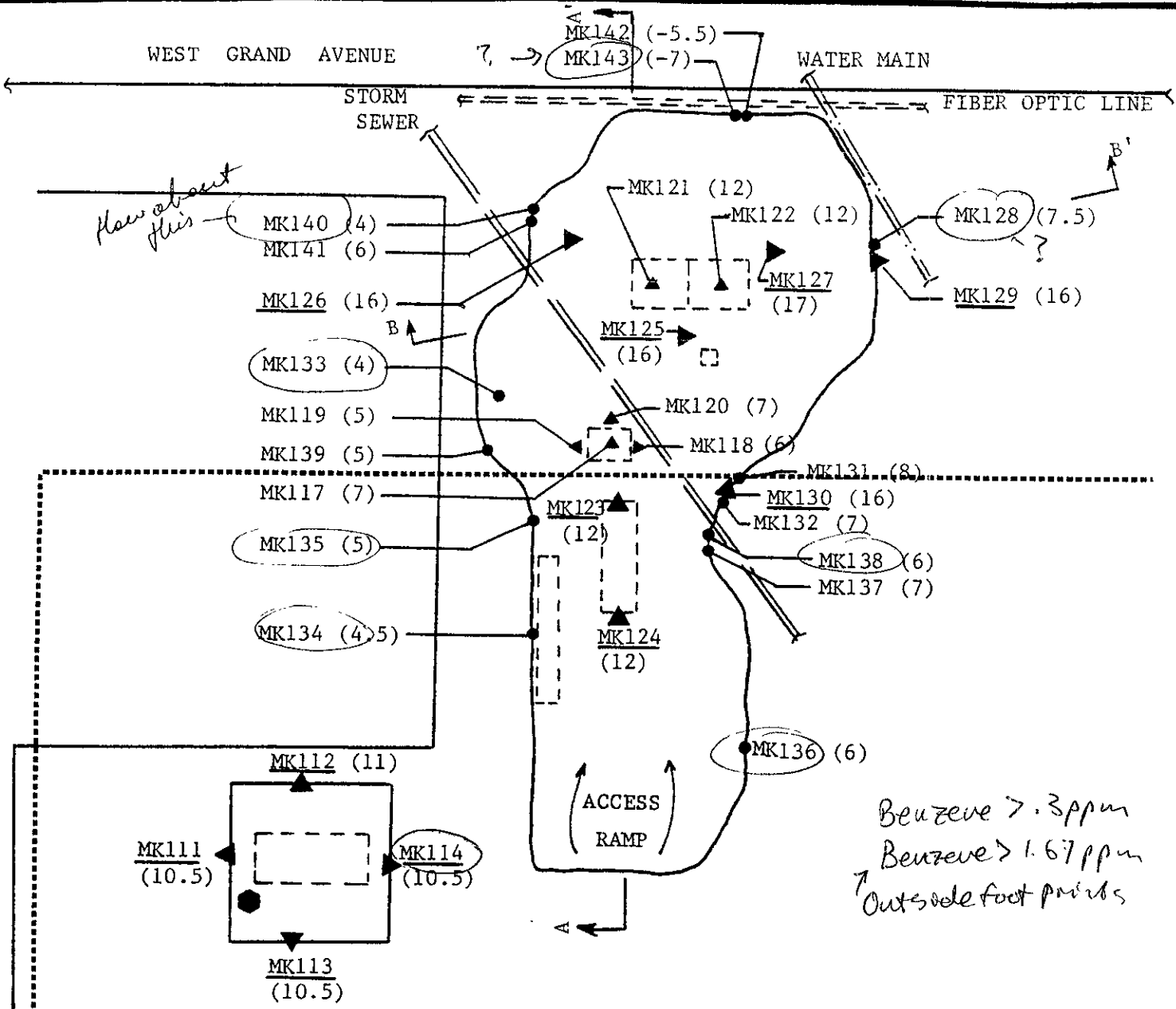
WEST GRAND AVENUE
WEST GRAND AVENUE



CONSTRUCTION PLAN
FIGURE 2



| TANK & EXCAVATION LOCATIONS | | |
|-----------------------------|--------|----------|
| DATE | SCALE | DRAWN BY |
| 12/2/94 | 1"=20' | dca |
| EBMUD FACILITY | | |
| | | Figure 3 |



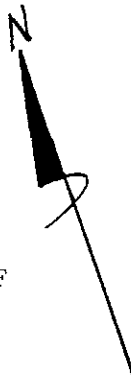
NOTE:

MK115A,B Water Samples
 MK116 Water Sample

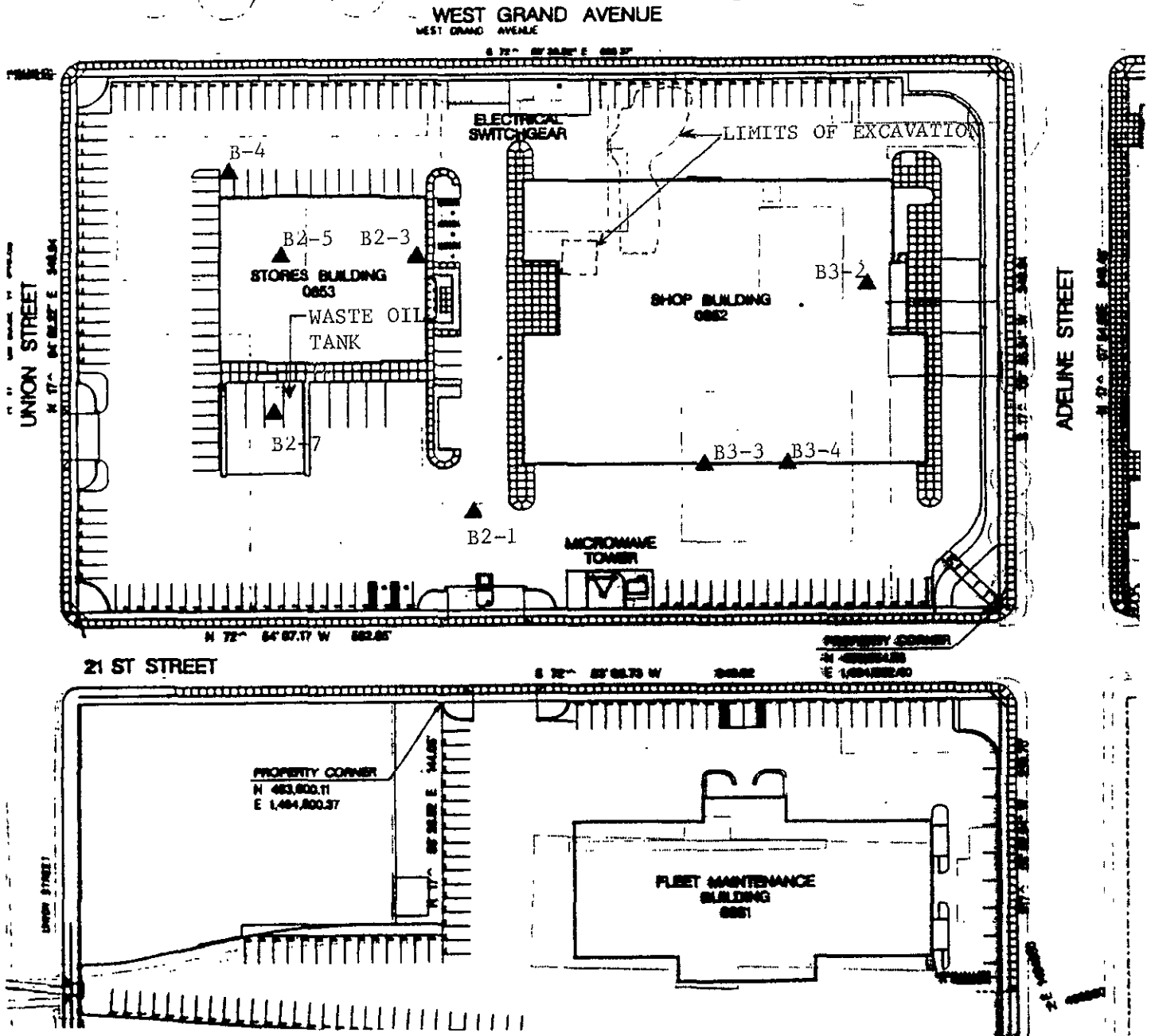
LEGEND

- ▲ Shallow Samples (Area Excavated)
- ▲ Final Bottom/Sidewall Samples
- Shallow Sidewall Samples (located in remaining shallow zone)
- (16) Depth Below Ground Surface of Samples

APPROXIMATE OUTLINE OF PROPOSED PHASE II SHOP BUILDING



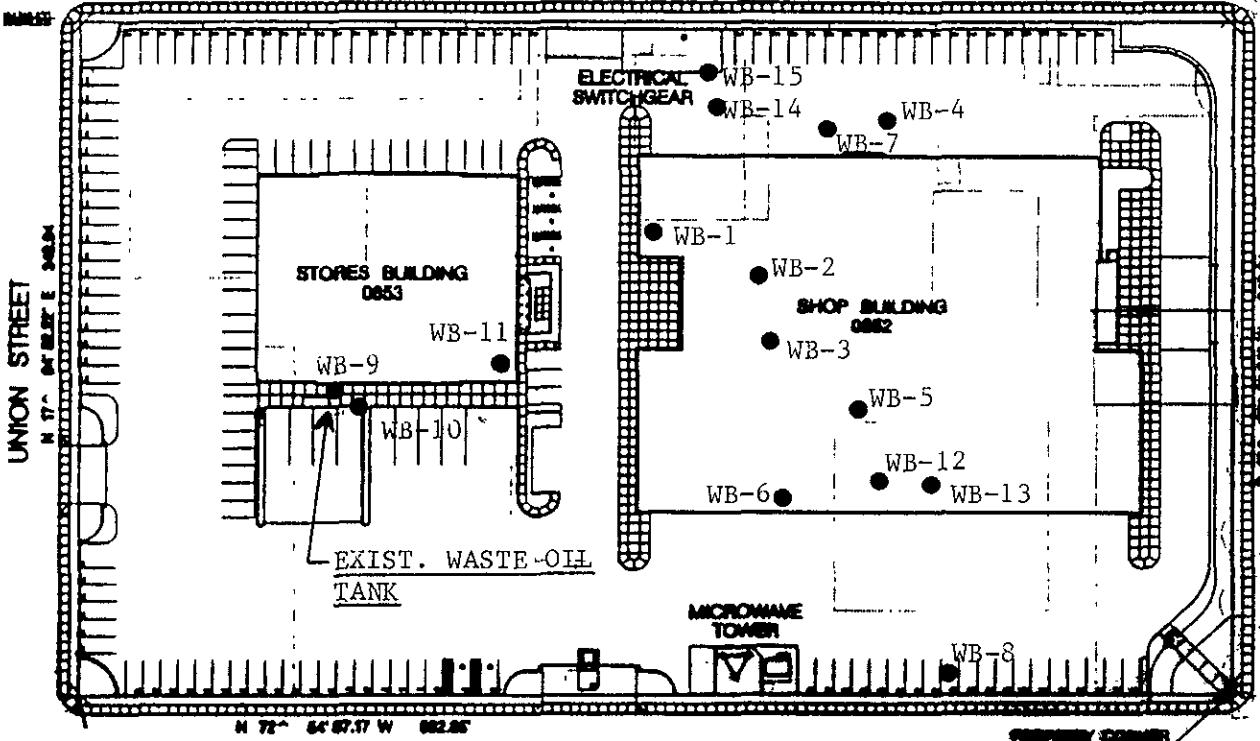
| SAMPLE LOCATION PLAN | | |
|----------------------|-----------------|-----------------|
| DATE 12/2/94 | SCALE 1"=20' | DRAWN BY dcg |
| EBMUD SITE | | |
| | | Figure 4 |



| 1995 BORING LOCATIONS | | |
|-----------------------|---------|----------|
| DATE | SCALE | DRAWN BY |
| 12/30/96 | 1"=100' | dcg |
| EBMUD SITE | | |
| Figure 5 | | |

WEST GRAND AVENUE
WEST GRAND AVENUE

S 72° 07' 30" E 682.57'



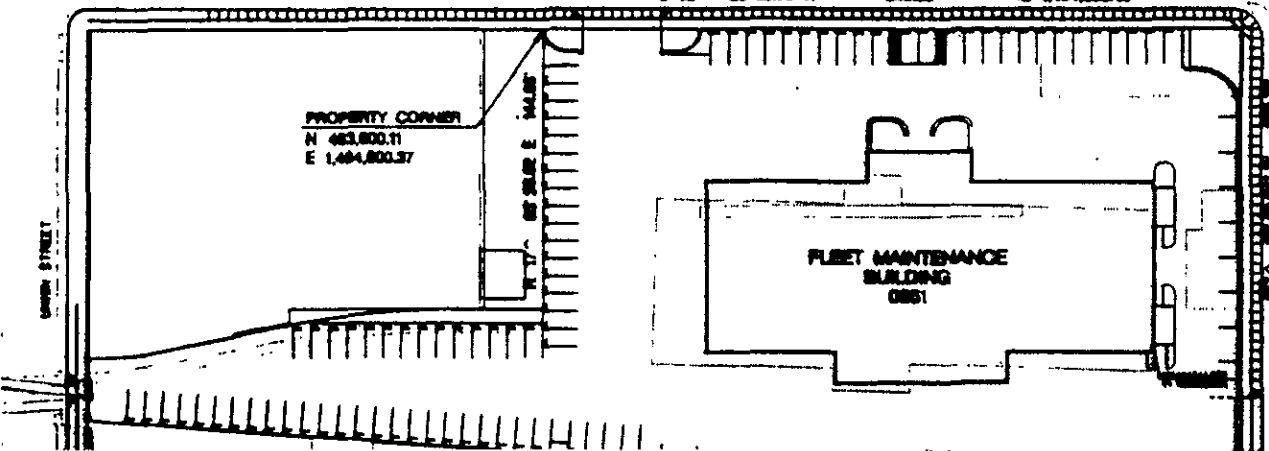
N 72° 04' 07.17" W 682.85'

PROPERTY CORNER

S 1° 00' 00" W
E 1,484,800.37'

21 ST STREET

S 82° 07' 00" W 682.85'



ADELINE STREET



| | | |
|-----------------------|------------------|-----------------|
| 1996 BORING LOCATIONS | | |
| DATE 12-30-96 | SCALE 1"=100' | DRAWN BY dgc |
| EBMUD SITE | | |
| | | Figure 6 |

APPENDIX A

BORING PERMIT AND LOGS

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-21-96

DRILLER Gregg Drilling

BORING No. WB-1

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|---|--------|---------|----------------|--------|------------|------------------------------------|
| | GRAVEL, gray, dense, dry 1/2-2" gravel | GW | | | | | FILL |
| | SILTY CLAY, green-gray, firm, moist, plastic | CL | | | | | |
| 5 | SILTY CLAY, gray-green, soft, moist, very plastic, interbedded with thin medium- to-coarse sand stringers, high organic content | CH | | | S1 | 6 | BAY MUD |
| 10 | gradation to green-black very porous along organic material, carbon nodules, iron nodules | | | | S2 | 2 | moderate H ₂ S odors |
| 15 | SANDY CLAY, blue-green, wet, firm, plastic | CH | | | S3 | 6 | |
| 20 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-21-96

DRILLER Gregg Drilling

BORING No. WB-2

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|-------------|---|--------|---------|-------------|--------|------------|---|
| | <u>SANDY GRAVEL</u> red-brown, dense, dry | GP | | | | | FILL |
| 5 | <u>SANDY CLAY</u> , blue-green to black, soft, moist, interbedded with thin sand stringers, low organic content, carbon nodules, oil seepage from fractures | CH | 350 | | S1 | 2 | oil seepage along fractures |
| 10 | <u>SILTY CLAY</u> , brown-black, soft, moist, very high organic content, interbedded with thin sand stringers, plastic, very porous along organic material | CH | 600 | | S2 | 3 | BAY MUD moderate H ₂ S odor |
| 15 | | | 230 | | S3 | 3 | |
| 20 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-21-96

DRILLER Gregg Drilling

BORING No. WB-3

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|-------------|---|--------|---------|-------------|--------|------------|---|
| | <u>SAND AND GRAVEL</u> , red-brown, dense, moist | GP | | | | | FILL |
| 5 | <u>SILTY CLAY</u> , blue-green to black, soft, moist plastic, interbedded with thin sand stringers moderate organic content, free product (oil) seepage from soil and fractures | CH | 100 | | S1 | 2 | strong oil odors seepage from fractures |
| 10 | <u>SILTY CLAY</u> , brown-gray, soft, moist, plastic very high organic content, porous along organic material | CH | 350 | | S2 | 3 | moderate H ₂ S odors |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-21-96

DRILLER Gregg Drilling

BORING No. WB-4

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|-------------|--|--------|---------|-------------|--------|------------|------------------|
| | <u>SANDY GRAVEL</u> , red-gray, dense, dry | GP | | | | | FILL |
| 5 | <u>SILTY CLAY</u> , gray-green, soft, wet, very plastic, black carbon nodules moderate organic content, very porous | CH | 350 | | S1 | 2 | strong oil odors |
| 10 | <u>SILTY CLAY</u> , gray-brown, firm, moist, plastic moderate organic content | CH | 30 | | S2 | 5 | --- BAY MUD |
| 15 | <u>SANDY CLAY</u> , blue-green, firm, moist | CL | 10 | | S3 | 7 | |
| | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-21-96

DRILLER Gregg Drilling

BORING No. WB-5

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|-------------|--|--------|---------|-------------|--------|------------|--|
| | <u>GRAVEL</u> , green-gray, dense, dry | GP | | | | | FILL |
| | <u>SILTY CLAY</u> , dark gray, firm, moist | CL | | | | | very strong oil odors |
| 5 | <u>SILTY CLAY</u> , blue-green, soft, wet, very plastic, carbon nodules, low organic content | CH | 230 | | S1 | 3 | BAY MUD strong H ₂ S odors |
| 10 | | | 460 | | S2 | 2 | |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-21-96

DRILLER Gregg Drilling

BORING No. WB-6

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|--|--------|---------|----------------|--------|------------|----------|
| | <u>GRAVEL AND SAND</u> , red-brown, dense, dry | GP | | | | | FILL |
| 5 | <u>SILTY CLAY</u> , blue-green, soft, moist, very plastic, carbon nodules | CH | 120 | | S1 | 3 | --- |
| 10 | <u>SANDY CLAY</u> , dark gray-brown, soft, moist moderate organic content, medium plastic, interbedded with thin sand lenses | CH | 80 | | S2 | 5 | BAY MUD |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-22-96

DRILLER Gregg Drilling

BORING No. WB-8

| DEPTH (ft.) | DESCRIPTION | U. S. C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|---|----------|---------|----------------|--------|------------|----------|
| 5 | <u>RUBBLE FILL</u> , concrete, brick, timber | | 60 | | S1 | 5 | FILL |
| | <u>SAND</u> , brown, loose, moist | SM | | | | | |
| | <u>SILTY CLAY</u> , dark gray, firm, moist | CL | | | | | |
| | <u>SAND</u> , fine-grained, dark gray, loose, wet | SM | | | | | |
| 10 | <u>SANDY CLAY</u> , blue-gray, firm, moist | CL | 40 | | S2 | 10 | NATIVE |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintance Center

DATE 10-22-96

DRILLER Gregg Drilling

BORING No. WB-11

| DEPTH (ft.) | DESCRIPTION | U.S.C | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|--|-------|---------|----------------|--------|------------|----------|
| 5 | <u>SAND AND GRAVEL</u> , red-brown, dense, dry | GP | 650 | | S1 | 4 | FILL |
| | <u>SAND</u> , fine- to medium-grained, black, loose abundant shell fragments | SM | | | | | |
| 10 | <u>SILTY CLAY</u> , gray-green, soft, wet | CH | 60 | | S2 | 2 | NATIVE |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-24-96

DRILLER Precision Sampling

BORING No. WB-12

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|--|--------|---------|----------------|--------|------------|--------------------------|
| 5 | <u>SILTY CLAY</u> , dark gray, soft, moist | CH | 1400 | | S1 | | very strong oil odors |
| | <u>CLAYEY SAND</u> , gray-brown, loose, moist | SC | | | | | |
| | <u>SILTY CLAY</u> , blue-green, soft, moist, black organic nodules, plastic | CH | | | | | |
| | <u>SAND</u> , medium-grained, dark gray, loose, wet | SM | | | | | |
| 10 | <u>SILTY CLAY</u> , blue-gray, soft, wet, moderate organic content, porous along organic matter | CH | 240 | | S2 | | |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-24-96

DRILLER Gregg Drilling

BORING No. WB-13

| DEPTH (ft) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|---------------|---|--------|---------|----------------|--------|------------|-----------------------|
| 5 | <u>SILTY CLAY</u> , blue-green, soft, moist, thin sand lenses | CH | 1800 | | | | very strong oil odors |
| | <u>SILTY CLAY</u> , blue-gray, soft, moist, carbon nodules | CH | | | | S1 | |
| 10 | <u>SAND</u> , fine- to medium-grained, loose, wet | SP | 250 | | | | |
| | <u>SILTY CLAY</u> , blue-green, soft, moist | CH | | | | S2 | |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-24-96

DRILLER Precision Sampling

BORING No. WB-14

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|---|--------|---------|----------------|--------|------------|------------------------------------|
| | CLAYEY, SANDY GRAVEL, gray-green, dense, moist | GC | | | | | |
| 5 | SILTY CLAY, blue-green, soft, moist, high organic content, with thin sand stringers | CH | 2100 | | S1 | | strong gas odors seepage from soil |
| | SANDY CLAY, green, soft, moist | CH | | | S2 | | |
| 10 | SILTY CLAY, gray-green, soft, moist | CH | | | | | |
| | SILTY CLAY, dark gray, soft, moist, high organic content | | 580 | | S3 | | |
| 15 | | | | | | | |

BORING LOG

LOCATION EBMUD Adeline Maintenance Center

DATE 10-24-96

DRILLER Precisions Sampling

BORING No. WB-15

| DEPTH (ft.) | DESCRIPTION | U.S.C. | OVM/PID | WELL DESIGN | SAMPLE | BLOW COUNT | COMMENTS |
|----------------|--|--------|---------|----------------|--------|------------|---|
| | CLAYEY SAND AND GRAVEL, gray-green, dense, moist | GC | 2300 | | S1 | | very strong gas odors visable sheen on soil |
| 5 | CLAYEY SAND, black, loose, wet | SC | | | | | |
| | SILTY CLAY, blue-green, soft, moist | CH | | | | | |
| | CLAYEY SAND, green, loose, wet | SC | 1800 | | S2 | | |
| 10 | SILTY CLAY, dark gray, soft, moist | CH | | | | | |
| | | | | | | | |

APPENDIX B

CHAIN-OF-CUSTODY FORMS
AND
ANALYTICAL TEST DATA

AGP290

| PROJECT NUMBER | | PROJECT NAME | | | | Number of Cntrs | Type of Containers | Type of Analysis | | | | | | 70407 |
|---------------------------|-----------------------|--------------|------|------------|------------------------|-----------------|---------------------|--------------------|-------|---|------------|------|--|-------|
| Send Report Attention of: | | Report Due | | Verbal Due | | | | TPH/MS/AS/TEX/INTX | TPH/J | 5.570 | 217.91/ETA | 8210 | LUFT MSTRAS | |
| Sample Number | Date | Time | Comp | Grab | Station Location | | | | | | | | 70409 | |
| CA5041 | WALSH Pacific / EBMUD | | | | | | | | | | | | 70410 | |
| DAVID GLICK | | / / | / / | / / | | | | | | | | | 70411 | |
| WB1-01 | 10/21/96 | 927 | | / | BORING WB1 5-6.5' | 1EA | W" BLAST TUBE #7 | ✓ | | | | | 70412 | |
| WB1-02 | | 933 | | / | BORING WB1 10-11.5' | | | ✓ | | | | | 70413 | |
| WB1-03 | | 938 | | / | BORING WB1 15-16.5' | | | ✓ | | | | | 70414 | |
| WB2-01 | | 1020 | | / | BORING WB2 J-6.5' | | | ✓ | ✓ | ✓ | ✓ | ✓ | 70415 | |
| WB2-02 | | 1028 | | / | BORING WB2 10-11.5' | | | ✓ | ✓ | ✓ | | | 70416 | |
| WB2-03 | | 1033 | | / | BORING WB2 15-16.5' | | | ✓ | ✓ | | | | 70417 | |
| WB3-01 | | 1110 | | / | BORING WB3 5-6.5' | | | ✓ | ✓ | ✓ | ICE/T X | | VOAS O&G METALS OTHER PRESERVATIVE APPROPRIATE CONTAINERS X | |
| WB3-02 | | 1115 | | / | BORING WB3 10-11.5' | | | ✓ | ✓ | GOOD CONDITION X HEAD SPACE ABSENT X | | | | |
| WB4-01 | | 1245 | | / | BORING WB4 5-6.5' | | | ✓ | ✓ | ✓ | | | 70418 | |
| WB4-02 | | 1249 | | / | BORING WB4 10-11.5' | | | ✓ | ✓ | | | | | |
| WB4-03 | | 1303 | | / | BORING WB4 15-16.5' | | | ✓ | ✓ | | | | | |
| WB5-01 | | 1345 | | / | BORING WB5 5-6.5' | | | ✓ | ✓ | ✓ | ✓ | ✓ | | |

| | | | | |
|--|-------------------------------|--|--------------------------------|-----------------------------------|
| Relinquished by: (Signature) <i>[Signature]</i> | Date/Time 10/22/96 1900 | Received by: (Signature) <i>[Signature]</i> | Date/Time 10/22/96 1906 | Remarks: STANDARD TURNAROUND 1073 |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Date/Time | |
| Relinquished by: (Signature) <i>[Signature]</i> | Date/Time 10/22/96 1045 | Received by: (Signature) <i>[Signature]</i> | Date/Time 10/22/96 20:45 | |

7453AGR290

| PROJECT NUMBER | | PROJECT NAME | | | | Number of Cntrs | Type of Containers | Type of Analysis | | | | | | 70419 | | |
|------------------------------|----------|----------------------|---|--------------------------|------------------------|-------------------|---------------------|--------------------------------------|-------|-----------|------------------|------------|------------|-------|-------|--|
| CG5041 | | WAISH Pacific / EBMD | | | | | | TRK/6/015/118 | IP11d | SEVEN 520 | 6210 | LIF METALS | PMH'S | | 70420 | |
| Send Report Attention of: | | Report Due | | Verbal Due | | Sample Number | Date | Time | Comp | Grab | Station Location | Type | Containers | 70421 | 70422 | |
| DAVID ALICK | | / | / | / | / | | | | | | | | | | | |
| WB5-52 | 10/21/96 | 1349 | / | / | BORING WB5 10-11.5 | 18A | 1" BORE TV BC 19 | | | | | | | | | |
| WB6-51 | | 1435 | / | / | BORING WB6 5-6.5 | | | | | | | | | | | |
| WB6-52 | | 1445 | / | / | BORING WB6 10-11.5 | | | | | | | | | | | |
| WB7-51 | | 1524 | / | / | BORING WB7 5-6.5' | | | | | | | | | | | |
| WB7-52 | | 1535 | / | / | BORING WB7 10-11.5 | | | | | | | | | | | |
| WB7-53 | | 1540 | / | / | BORING WB7 15-16.5 | | | | | | | | | | | |
| WB8-51 | 10/27/96 | 830 | / | / | BORING WB8 5-6.5' | | | | | | | | | | | |
| WB8-52 | | 837 | / | / | BORING WB8 10-11.5 | | | | | | | | | | | |
| WB9-51 | | 915 | / | / | BORING WB9 5-6.5' | | | | | | | | | | | |
| WB9-52 | | 920 | / | / | BORING WB9 10-11.5' | | | | | | | | | | | |
| WB9-53 | | 927 | / | / | BORING WB9 15-16.5' | | | | | | | | | | | |
| WB10-51 | | 950 | / | / | BORING WB10 5-6.5' | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | Remarks: STANDARD TRANSMITTED 2 of 3 | | | | | | | | |
| [Signature] | | 10/22/96 1900 | | [Signature] | | 10/22/96 1900 | | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | | | | | | | | | |
| [Signature] | | 10/22/96 20:45 | | [Signature] | | 10/22/96 20:45 | | | | | | | | | | |

VOAS O&G METALS OTHER

PRESERVATIVE APPROPRIATE CONTAINERS X

ICE? X
GOOD CONDITION X
HEAD SPACE ABSENT X

7453AGP290

| PROJECT NUMBER | | PROJECT NAME | | | | Number of Cntrns | Type of Containers | Type of Analysis | | | | | | 70431 |
|------------------------------|----------|----------------------|------|--------------------------|--------------------------|------------------|------------------------------|-------------------------------------|-------|-------------------|----------------|--------------------------|-----------------------------|-------|
| C95041 | | WASH Pacific / EBMUD | | | | | | IPACYS / BTEX / NITR | TPH d | 55°C GULF METALS | E.C.C. | LUG METALS | PNA'S | |
| Send Report Attention of: | | Report Due | | Verbal Due | | 70433 | 70434 | | | | | | | 70435 |
| DAVID CLICIL | | / / | | / / | | | | 70438 | 70439 | | | | | |
| Sample Number | Date | Time | Comp | Grab | Station Location | | | | | | | | | |
| WB10-SZ | 10/22/96 | 955 | | 1 | BORING WB10 10-11.5' | 1 EA | 6" BILAB TL BE31 | ✓ | ✓ | ✓ | ✓ | | | |
| WB10-S3 | | 1005 | | 1 | BORING WB10 15-16.5' | | | | | | | | | |
| WB11-S1 | | 1035 | | 1 | BORING WB11 5-6.5' | | | ✓ | ✓ | | | | | |
| WB11-SZ | | 1045 | | 1 | BORING WB11 10-11.5' | | | | | | | | | |
| WB1-W51A | 10/2/96 | 1000 | | 1 | BORING WB1 GRAB WATER | 1 EA | 40 ml ACIDIFIED VDA 35 | ✓ | | ICE/ | GOOD CONDITION | PRESERVATIVE APPROPRIATE | VOAS O&G METALS OTHER | |
| WB2-W51A | | 1005 | | 1 | BORING WB2 GRAB WATER | | | ✓ | | HEAD SPACE ABSENT | | CONTAINERS | | |
| WB2-W52A | | 1005 | | 1 | | | 1 LTR AMB 42 | ✓ | ✓ | | | | 70438 | |
| WB3-W51A | | 1010 | | 1 | BORING WB3 GRAB WATER | | 40 ml ACIDIFIED VDA 31 | ✓ | | | | | 70439 | |
| WB5-W51A | | 1020 | | 1 | BORING WB5 GRAB WATER | | | ✓ | | | ✓ | | | |
| WB5-W52A | | 1020 | | 1 | | | 1 LTR AMB 42 | ✓ | ✓ | | | | | |
| WB9-W51A | 10/22/96 | 1010 | | 1 | BORING WB9 GRAB WATER | | 40 ml ACIDIFIED VDA 31 | ✓ | | | ✓ | | | |
| WB9-W521 | | 1010 | | 1 | | | 1 LTR AMB 30 | ✓ | ✓ | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | Remarks: STANDARD TURNAROUND 3 of 3 | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | | | | | | | |

| | | |
|---------------------------|------------------------------------|--------------------------------|
| Geo Plexus, Inc | Client Project ID: # C95041, Walsh | Date Sampled: 10/21-10/22/96 |
| 1900 Wyatt Drive, Suite 1 | Pacific/EBMUD | Date Received: 10/22/96 |
| Santa Clara, CA 95054 | Client Contact: David Glick | Date Extracted: 10/22-10/28/96 |
| | Client P.O | Date Analyzed: 10/22-10/28/96 |

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 | Ethylbenzene | Xylenes | % Rec. Surrogate |
|--|-----------|-----------|----------------------|-----------|---------|---------|--------------|---------|------------------|
| 70407 | WB1-S1 | S | ND | ND | 0.016 | 0.007 | 0.009 | 0.012 | 104 |
| 70408 | WB1-S2 | S | ND | ND | 0.007 | 0.012 | ND | 0.010 | 106 |
| 70409 | WB1-S3 | S | ND | ND | ND | ND | ND | ND | 105 |
| 70410 | WB2-S1 | S | 1.1.b | ND | ND | ND | ND | 0.013 | 105 |
| 70411 | WB2-S2 | S | ND | ND | ND | ND | ND | ND | 102 |
| 70412 | WB2-S3 | S | ND | ND | ND | ND | ND | ND | 105 |
| 70413 | WB3-S1 | S | 87,g,j | ND | ND | 0.061 | 0.075 | 0.39 | 110 [#] |
| 70414 | WB3-S2 | S | ND | ND | ND | ND | ND | ND | 104 |
| 70415 | WB4-S1 | S | 29,g,j | ND < 0.08 | 0.063 | 0.048 | 0.053 | 0.17 | --- [#] |
| 70416 | WB4-S2 | S | ND | ND | ND | ND | ND | 0.012 | 105 |
| 70418 | WB5-S1 | S | 1.1.b.d | ND | ND | ND | ND | 0.012 | 100 |
| 70419 | WB5-S2 | S | ND | ND | ND | ND | ND | ND | 98 |
| 70420 | WB6-S1 | S | ND | ND | ND | ND | ND | ND | 101 |
| 70422 | WB7-S1 | S | 88,g,j | ND < 0.2 | 0.035 | 0.10 | 0.11 | 0.55 | 102 |
| 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, soil and sludge samples in mg/kg, and all TCLP extracts in mg/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.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|---|---|-------------------------------|
| Geo Plexus, Inc. (1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041; Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 |
| | Client Contact: David Glick | Date Received: 10/22/96 |
| | Client P.O: | Date Analyzed: 10/22-10/28/96 |

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 | Ethylbenzene | Xylenes | % Rec. Surrogate |
|--|-----------|--------|---------------------|----------|---------|---------|--------------|---------|------------------|
| 70423 | WB7-S2 | S | ND | ND | 0.040 | 0.007 | ND | ND | 96 |
| 70425 | WB8-S1 | S | ND | ND | ND | ND | ND | ND | 98 |
| 70427 | WB9-S1 | S | 360,g,d | ND < 0.8 | 0.85 | 9.3 | 3.6 | 20 | 100 |
| 70428 | WB9-S2 | S | ND | ND | ND | ND | ND | ND | 106 |
| 70429 | WB9-S3 | S | ND | ND | ND | ND | ND | ND | 105 |
| 70430 | WB10-S1 | S | 380,g,d | ND < 0.4 | 0.55 | 6.7 | 11 | 69 | 100 |
| 70431 | WB10-S2 | S | ND | ND | ND | ND | ND | ND | 102 |
| 70435 | WB1-WS1A | W | ND | ND | ND | ND | ND | ND | 99 |
| 70436 | WB2-WS1A | W | 200,b | 130 | ND | ND | 0.50 | 1.2 | 96 |
| 70437 | WB3-WS1A | W | 220,b,d | ND < 6 | ND | ND | ND | 1.1 | 100 |
| 70438 | WB5-WS1A | W | 300,b,d | ND | ND | ND | ND | 2.7 | 101 |
| 70439 | WB9-WS1A | W | 380,a,i | 210 | 19 | 27 | 8.5 | 58 | 103 |
| | | | | | | | | | |
| | | | | | | | | | |
| 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, soil and sludge samples in mg/kg, and all TCLP extracts in mg/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.

| | | |
|--|--|--------------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041, Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 |
| | | Date Received: 10/22/96 |
| | Client Contact: David Glick | Date Extracted: 10/22-10/28/96 |
| | Client P.O.: | Date Analyzed: 10/22-10/28/96 |

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID | Client ID | Matrix | TPH(d) ⁺ | % Recovery Surrogate |
|--|-----------|--------|---------------------|----------------------|
| 70410 | WB2-S1 | S | 3.0,b/g | 102 |
| 70411 | WB2-S2 | S | 1.6,g | 106 |
| 70412 | WB2-S3 | S | ND | 102 |
| 70413 | WB3-S1 | S | 620,b/d,g | 107 |
| 70414 | WB3-S2 | S | 2.3,b/g | 110 |
| 70415 | WB4-S1 | S | 34,d,g | 105 |
| 70416 | WB4-S2 | S | ND | 106 |
| 70418 | WB5-S1 | S | ND | 107 |
| 70419 | WB5-S2 | S | 4.6,b | 108 |
| 70420 | WB6-S1 | S | ND | 99 |
| 70422 | WB7-S1 | S | 260,b/d,g | 116 [#] |
| 70423 | WB7-S2 | S | ND | 101 |
| 70425 | WB8-S1 | S | ND | 100 |
| 70427 | WB9-S1 | S | 7000,g,b | 107 |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | | W | 50 ug/L | |
| | | S | 1.0 mg/kg | |

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

[#] cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.⁺ 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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

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| | | |
|--|--|--------------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID. # C95041, Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 |
| | | Date Received: 10/22/96 |
| | Client Contact: David Glick | Date Extracted: 10/22-10/28/96 |
| | Client P.O: | Date Analyzed: 10/22-10/28/96 |

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID | Client ID | Matrix | TPH(d) ⁺ | % Recovery Surrogate |
|--|-----------|--------|---------------------|----------------------|
| 70428 | WB9-S2 | S | 4.3,g | 108 |
| 70430 | WB10-S1 | S | 15,000,g,b/d | 103 |
| 70431 | WB10-S2 | S | 1.4,b | 105 |
| 70436 | WB2-WS2A | W | 720,b/d,g | 111 |
| 70438 | WB5-WS2A | W | 280,b/d | 107 |
| 70439 | WB9-WS2A | W | 16,000,a,c/g,i | 107 |
| | | | | |
| | | | | |
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| | | | | |
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| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Reporting Limit unless otherwise stated, ND means not detected above the reporting limit | W | | 50 ug/L | |
| | S | | 1.0 mg/kg | |

* water samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP and STLC extracts in mg/L
cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.
+ 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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

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Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|--|--|--------------------------------|
| Geo Plexis, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041; Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 |
| | | Date Received: 10/22/96 |
| | Client Contact: David Glick | Date Extracted: 10/28-10/30/96 |
| | Client P.O: | Date Analyzed: 10/28-10/30/96 |

Petroleum Oil & Grease (with Silica Gel Clean-up) *

EPA methods 413.1, 9070 or 9071, Standard Methods 5520 D/E&F or 503 D&E for solids and 5520 B&F or 503 A&E for liquids

| Lab ID | Client ID | Matrix | Oil & Grease* |
|--|-----------|--------|---------------|
| 70410 | WB2-S1 | S | ND |
| 70411 | WB2-S2 | S | ND |
| 70413 | WB3-S1 | S | 1300 |
| 70415 | WB4-S1 | S | ND |
| 70418 | WB5-S1 | S | ND |
| 70419 | WB5-S2 | S | ND |
| 70422 | WB7-S1 | S | 170 |
| 70423 | WB7-S2 | S | ND |
| 70427 | WB9-S1 | S | 54,000 |
| 70428 | WB9-S2 | S | ND |
| 70430 | WB10-S1 | S | 64,000 |
| 70431 | WB10-S2 | S | ND |
| 70433 | WB11-S1 | S | ND |
| 70436 | WB2-WS2A | W | ND |
| 70438 | WB5-WS2A | W | ND |
| 70439 | WB9-WS2A | W | 8.4,i |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W | | 5 mg/L |
| | S | | 50 mg/kg |

* water samples are reported in mg/L and soil and sludge samples in mg/kg

(h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5vol. % sediment.

DHS Certification No 1644

Edward Hamilton, Lab Director

| | | |
|--|--|------------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041, Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 |
| | | Date Received: 10/22/96 |
| | Client Contact: David Glick | Date Extracted: 10/23/96 |
| | Client P.O: | Date Analyzed: 10/24/96 |

Volatlie Halocarbons

EPA method 601 or 8010

| Lab ID | 70410 | 70413 | 70418 | 70427 |
|--|----------------|---------|---------|----------|
| Client ID | WB2-S1 | WB3-S1 | WB5-S1 | WB9-S1 |
| Matrix | S | S | S | S |
| Compound | Concentration* | | | |
| Bromodichloromethane | ND | ND | ND | ND < 100 |
| Bromoform ^(b) | ND | ND | ND | ND < 100 |
| Bromomethane | ND | ND | ND | ND < 100 |
| Carbon Tetrachloride ^(c) | ND | ND | ND | ND < 100 |
| Chlorobenzene | ND | ND | ND | ND < 100 |
| Chloroethane | ND | ND | ND | ND < 100 |
| 2-Chloroethyl Vinyl Ether ^(d) | ND | ND | ND | ND < 100 |
| Chloroform ^(e) | ND | ND | ND | ND < 100 |
| Chloromethane | ND | ND | ND | ND < 100 |
| Dibromochloromethane | ND | ND | ND | ND < 100 |
| 1,2-Dichlorobenzene | ND | ND | ND | 110 |
| 1,3-Dichlorobenzene | ND | ND | ND | ND < 100 |
| 1,4-Dichlorobenzene | ND | ND | ND | ND < 100 |
| Dichlorodifluoromethane | ND | ND | ND | ND < 100 |
| 1,1-Dichloroethane | ND | ND | ND | 220 |
| 1,2-Dichloroethane | ND | ND | ND | ND < 100 |
| 1,1-Dichloroethene | ND | ND | ND | ND < 100 |
| cis 1,2-Dichloroethene | ND | ND | ND | ND < 100 |
| trans 1,2-Dichloroethene | ND | ND | ND | ND < 100 |
| 1,2-Dichloropropane | ND | ND | ND | ND < 100 |
| cis 1,3-Dichloropropene | ND | ND | ND | ND < 100 |
| trans 1,3-Dichloropropene | ND | ND | ND | ND < 100 |
| Methylene Chloride ^(f) | ND < 20 | ND < 20 | ND < 20 | ND < 100 |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND < 100 |
| Tetrachloroethene | ND < 10 | ND < 10 | ND < 10 | 3700 |
| 1,1,1-Trichloroethane | ND | ND | ND | 1700 |
| 1,1,2-Trichloroethane | ND | ND | ND | ND < 100 |
| Trichloroethene | ND | ND | ND | 1700 |
| Trichlorofluoromethane | ND | ND | ND | ND < 100 |
| Vinyl Chloride ^(g) | ND | ND | ND | ND < 100 |
| % Recovery Surrogate | 100 | 100 | 97 | 105 |
| Comments | | | | |

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

Reporting limit unless otherwise stated: water/TCLP extracts, ND < 0.5ug/L, soil and sludge, ND < 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol % sediment.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|--|--|------------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041, Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 |
| | | Date Received: 10/22/96 |
| | Client Contact: David Glick | Date Extracted: 10/23/96 |
| | Client P.O.: | Date Analyzed: 10/24/96 |

Volatile Halocarbons

EPA method 601 or 8010

| Lab ID | 70428 | 70430 | 70431 | 70433 |
|--|----------------|---------|---------|---------|
| Client ID | WB9-S2 | WB10-S1 | WB10-S2 | WB11-S1 |
| Matrix | S | S | S | S |
| Compound | Concentration* | | | |
| Bromodichloromethane | ND | ND < 50 | ND | ND |
| Bromoform ^(b) | ND | ND < 50 | ND | ND |
| Bromomethane | ND | ND < 50 | ND | ND |
| Carbon Tetrachloride ^(c) | ND | ND < 50 | ND | ND |
| Chlorobenzene | ND | ND < 50 | ND | ND |
| Chloroethane | ND | ND < 50 | ND | ND |
| 2-Chloroethyl Vinyl Ether ^(d) | ND | ND < 50 | ND | ND |
| Chloroform ^(e) | ND | ND < 50 | ND | ND |
| Chloromethane | ND | ND < 50 | ND | ND |
| Dibromochloromethane | ND | ND < 50 | ND | ND |
| 1,2-Dichlorobenzene | ND | 990 | ND | ND |
| 1,3-Dichlorobenzene | ND | 74 | ND | ND |
| 1,4-Dichlorobenzene | ND | 280 | ND | ND |
| Dichlorodifluoromethane | ND | ND < 50 | ND | ND |
| 1,1-Dichloroethane | ND | 830 | ND | ND |
| 1,2-Dichloroethane | ND | ND < 50 | ND | ND |
| 1,1-Dichloroethene | ND | ND < 50 | ND | ND |
| cis 1,2-Dichloroethene | ND | 90 | ND | ND |
| trans 1,2-Dichloroethene | ND | ND < 50 | ND | ND |
| 1,2-Dichloropropane | ND | ND < 50 | ND | ND |
| cis 1,3-Dichloropropene | ND | ND < 50 | ND | ND |
| trans 1,3-Dichloropropene | ND | ND < 50 | ND | ND |
| Methylene Chloride ^(f) | ND < 20 | ND < 50 | ND < 20 | ND < 20 |
| 1,1,2,2-Tetrachloroethane | ND | ND < 50 | ND | ND |
| Tetrachloroethene | ND < 10 | 2600 | ND < 10 | ND < 10 |
| 1,1,1-Trichloroethane | ND | 550 | ND | ND |
| 1,1,2-Trichloroethane | ND | ND < 50 | ND | ND |
| Trichloroethene | ND | ND < 50 | ND | ND |
| Trichlorofluoromethane | ND | ND < 50 | ND | ND |
| Vinyl Chloride ^(g) | ND | ND < 50 | ND | ND |
| % Recovery Surrogate | 100 | 109 | 99 | 95 |
| Comments | | | | |

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

Reporting limit unless otherwise stated: water/TCLP extracts, ND < 0.5ug/L; soil and sludge, ND < 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

| | | |
|---|---|---|
| Geo Plexus, Inc 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID. # C95041, Walsh Pacific/EBMUD | Date Sampled: 10/21-10/22/96 Date Received: 10/22/96 |
| | Client Contact: David Gluck | Date Extracted: 10/23/96 |
| | Client P.O.: | Date Analyzed: 10/23/96 |

Volatile Halocarbons

EPA method 601 or 8010

| Lab ID | 70439 | 70438 | |
|--|----------------|----------|--|
| Client ID | WB9-WS1A | WB5-WS1A | |
| Matrix | W | W | |
| Compound | Concentration* | | |
| Bromodichloromethane | ND < 1 | ND | |
| Bromoform ^(b) | ND < 1 | ND | |
| Bromomethane | ND < 1 | ND | |
| Carbon Tetrachloride ^(c) | ND < 1 | ND | |
| Chlorobenzene | ND < 1 | ND | |
| Chloroethane | ND < 1 | ND | |
| 2-Chloroethyl Vinyl Ether ^(d) | ND < 1 | ND | |
| Chloroform ^(e) | ND < 1 | ND | |
| Chloromethane | ND < 1 | ND | |
| Dibromochloromethane | ND < 1 | ND | |
| 1,2-Dichlorobenzene | ND < 1 | ND | |
| 1,3-Dichlorobenzene | ND < 1 | ND | |
| 1,4-Dichlorobenzene | ND < 1 | ND | |
| Dichlorodifluoromethane | ND < 1 | ND | |
| 1,1-Dichloroethane | 18 | ND | |
| 1,2-Dichloroethane | ND < 1 | ND | |
| 1,1-Dichloroethene | ND < 1 | ND | |
| cis 1,2-Dichloroethene | ND < 1 | ND | |
| trans 1,2-Dichloroethene | ND < 1 | ND | |
| 1,2-Dichloropropane | ND < 1 | ND | |
| cis 1,3-Dichloropropene | ND < 1 | ND | |
| trans 1,3-Dichloropropene | ND < 1 | ND | |
| Methylene Chloride ^(f) | 1.8 | ND | |
| 1,1,2,2-Tetrachloroethane | ND < 1 | ND | |
| Tetrachloroethene | 2.8 | ND | |
| 1,1,1-Trichloroethane | 1.7 | ND | |
| 1,1,2-Trichloroethane | ND < 1 | ND | |
| Trichloroethene | 2.6 | ND | |
| Trichlorofluoromethane | ND < 1 | ND | |
| Vinyl Chloride ^(g) | ND < 1 | ND | |
| % Recovery Surrogate | 106 | 101 | |
| Comments | i,h | | |

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

Reporting limit unless otherwise stated: water/TCLP extracts, ND < 0.5ug/L; soil and sludge, ND < 5ug/kg

ND means not detected above the reporting limit. N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) sample diluted due to high organic content; (i) liquid sample that contains greater than ~ 5 vol. % sediment

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Geo Plexus, Inc.
 1900 Wyatt Drive, Suite 1
 Santa Clara, CA 95054

Client Project ID: # C95041, Walsh Pacific/EBMUD

Date Sampled: 10/21-10/22/96

Date Received: 10/22/96

Client Contact: David Glick

Date Extracted: 10/23-10/29/96

Client P.O.

Date Analyzed: 10/24-10/30/96

LUFT Metals^{*}

EPA analytical methods 6010/200.7, 239.2^{*}

| Lab ID | Client ID | Matrix | Extraction ^o | Cadmium | Chromium | Lead | Nickel | Zinc | % Rec. Surrogate |
|--|-----------|-----------|-------------------------|---------|----------|------|--------|------|------------------|
| 70427 | WB9-S1 | S | TTLC | ND | 20 | ND | 12 | 36 | 97 |
| 70428 | WB9-S2 | S | TTLC | ND | 36 | ND | 22 | 32 | 92 |
| 70430 | WB10-S1 | S | TTLC | ND | 30 | 4.3 | 34 | 34 | 93 |
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| | | | | | | | | | |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | S | TTLC | 0.5 mg/kg | 0.5 | 3.0 | 2.0 | 1.0 | | |
| | W | TTLC | 0.005 mg/L | 0.005 | 0.005 | 0.05 | 0.05 | | |
| | --- | STLC,TCLP | 0.01 mg/L | 0.05 | 0.2 | 0.05 | 0.05 | | |

* soil samples and sludge are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L
^o Lead is analysed using EPA method 6010 (ICP) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples
^o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22
[#] surrogate diluted out of range; N/A means surrogate not applicable to this analysis
^Δ reporting limit raised due matrix interference
 i) liquid sample that contains greater than ~ 2 vol. % sediment, this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations

McCAMPBELL ANALYTICAL INC.

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/22/96-10/23/96

Matrix: Soil

| Analyte | Concentration (mg/kg) Sample (#67146) | | | Amount Spiked | % Recovery | | |
|--------------------------|---|-------|-------|------------------|------------|-----|-----|
| | MS | MSD | MSD | | MS | MSD | RPD |
| TPH (gas) | 0.000 | 1.918 | 1.908 | 2.03 | 94 | 94 | 0.5 |
| Benzene | 0.000 | 0.216 | 0.196 | 0.2 | 108 | 98 | 9.7 |
| Toluene | 0.000 | 0.216 | 0.208 | 0.2 | 108 | 104 | 3.8 |
| Ethylbenzene | 0.000 | 0.204 | 0.198 | 0.2 | 102 | 99 | 3.0 |
| Xylenes | 0.000 | 0.622 | 0.606 | 0.6 | 104 | 101 | 2.6 |
| TPH (diesel) | 0 | 317 | 320 | 300 | 106 | 107 | 1.2 |
| TRPH (oil and grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/28/96

Matrix: Soil

| Analyte | Concentration (mg/kg) Sample (#68822) | | | Amount Spiked | % Recovery | | RPD |
|--------------------------|---|-------|-------|------------------|------------|-----|-----|
| | MS | MSD | MSD | | MS | MSD | |
| TPH (gas) | 0.000 | 1.973 | 1.943 | 2.03 | 97 | 96 | 1.5 |
| Benzene | 0.000 | 0.178 | 0.178 | 0.2 | 89 | 89 | 0.0 |
| Toluene | 0.000 | 0.194 | 0.194 | 0.2 | 97 | 97 | 0.0 |
| Ethylbenzene | 0.000 | 0.178 | 0.178 | 0.2 | 89 | 89 | 0.0 |
| Xylenes | 0.000 | 0.534 | 0.534 | 0.6 | 89 | 89 | 0.0 |
| TPH (diesel) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| TRPH (oil and grease) | 0.0 | 28.6 | 29.4 | 29.6 | 97 | 99 | 2.8 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/30/96-10/31/96

Matrix: Soil

| Analyte | Concentration (mg/kg) | | | Amount Spiked | % Recovery | | RPD |
|-----------------------|-----------------------|-------|-------|---------------|------------|-----|-----|
| | Sample (#68822) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.000 | 1.845 | 1.857 | 2.03 | 91 | 91 | 0.6 |
| Benzene | 0.000 | 0.168 | 0.172 | 0.2 | 84 | 86 | 2.4 |
| Toluene | 0.000 | 0.176 | 0.180 | 0.2 | 88 | 90 | 2.2 |
| Ethylbenzene | 0.000 | 0.182 | 0.182 | 0.2 | 91 | 91 | 0.0 |
| Xylenes | 0.000 | 0.532 | 0.534 | 0.6 | 89 | 89 | 0.4 |
| TPH (diesel) | 0 | 316 | 307 | 300 | 105 | 102 | 3.0 |
| TRPH (oil and grease) | 0.0 | 23.4 | 23.6 | 20.8 | 113 | 113 | 0.9 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/22/96

Matrix: Water

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | RPD |
|---------------------|----------------------|------|------|---------------|------------|-------|------|
| | Sample (#70334) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.0 | 88.8 | 97.7 | 100.0 | 88.8 | 97.7 | 9.5 |
| Benzene | 0.0 | 9.1 | 10.3 | 10.0 | 91.0 | 103.0 | 12.4 |
| Toluene | 0.0 | 9.2 | 10.3 | 10.0 | 92.0 | 103.0 | 11.3 |
| Ethyl Benzene | 0.0 | 9.4 | 10.4 | 10.0 | 94.0 | 104.0 | 10.1 |
| Xylenes | 0.0 | 27.6 | 31.0 | 30.0 | 92.0 | 103.3 | 11.6 |
| TPH (diesel) | 0 | 156 | 157 | 150 | 104 | 104 | 0.3 |
| TRPH (oil & grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/28/96

Matrix: Water

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | RPD |
|---------------------|----------------------|------|------|---------------|------------|-------|-----|
| | Sample (#70325) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.0 | 93.5 | 93.4 | 100.0 | 93.5 | 93.4 | 0.2 |
| Benzene | 0.0 | 9.8 | 10.0 | 10.0 | 98.0 | 100.0 | 2.0 |
| Toluene | 0.0 | 9.9 | 10.4 | 10.0 | 99.0 | 104.0 | 4.9 |
| Ethyl Benzene | 0.0 | 9.7 | 10.6 | 10.0 | 97.0 | 106.0 | 8.9 |
| Xylenes | 0.0 | 28.8 | 31.7 | 30.0 | 96.0 | 105.7 | 9.6 |
| TPH (diesel) | 0 | 172 | 169 | 150 | 115 | 113 | 1.7 |
| TRPH (oil & grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/30/96-10/31/96

Matrix: Water

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | RPD |
|---------------------|----------------------|-------|-------|---------------|------------|-------|-----|
| | Sample (#70317) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.0 | 104.7 | 105.7 | 100.0 | 104.7 | 105.7 | 0.9 |
| Benzene | 0.0 | 9.5 | 9.6 | 10.0 | 95.0 | 96.0 | 1.0 |
| Toluene | 0.0 | 9.9 | 9.9 | 10.0 | 99.0 | 99.0 | 0.0 |
| Ethyl Benzene | 0.0 | 9.8 | 10.0 | 10.0 | 98.0 | 100.0 | 2.0 |
| Xylenes | 0.0 | 28.7 | 29.6 | 30.0 | 95.7 | 98.7 | 3.1 |
| TPH (diesel) | 0 | 173 | 159 | 150 | 116 | 106 | 8.7 |
| TRPH (oil & grease) | 0 | 26400 | 25800 | 23700 | 111 | 109 | 2.3 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

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Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 10/24/96

Matrix: Soil

| Analyte | Concentration (ug/kg) | | | | % Recovery | | |
|-----------------|-----------------------|-----|-----|------------------|------------|-----|-----|
| | Sample (#67146) | MS | MSD | Amount Spiked | MS | MSD | RPD |
| 1,1-DCE | 0 | 90 | 92 | 100 | 90 | 92 | 2.2 |
| Trichloroethene | 0 | 90 | 93 | 100 | 90 | 93 | 3.3 |
| EDB | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Chlorobenzene | 0 | 96 | 99 | 100 | 96 | 99 | 3.1 |
| Benzene | 0 | 100 | 103 | 100 | 100 | 103 | 3.0 |
| Toluene | 0 | 100 | 103 | 100 | 100 | 103 | 3.0 |
| Chlorobz (PID) | 0 | 94 | 97 | 100 | 94 | 97 | 3.1 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR EPA 8010/8020/EDB

Date: 10/23/96

Matrix: Water

| Analyte | Concentration (ug/L) | | | | % Recovery | | |
|-----------------|----------------------|------|------|------------------|------------|-----|-----|
| | Sample (#70080) | MS | MSD | Amount Spiked | MS | MSD | RPD |
| 1,1-DCE | 0.0 | 10.3 | 11.0 | 10.0 | 103 | 110 | 6.6 |
| Trichloroethene | 0.0 | 8.9 | 9.5 | 10.0 | 89 | 95 | 6.5 |
| EDB | 0.0 | 8.4 | 8.8 | 10.0 | 84 | 88 | 4.7 |
| Chlorobenzene | 0.0 | 9.5 | 10.2 | 10.0 | 95 | 102 | 7.1 |
| Benzene | 0.0 | 10.2 | 11.0 | 10.0 | 102 | 110 | 7.5 |
| Toluene | 0.0 | 9.4 | 10.1 | 10.0 | 94 | 101 | 7.2 |
| Chlorobz (PID) | 0.0 | 9.3 | 10.0 | 10.0 | 93 | 100 | 7.3 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR METALS

Date: 10/24/96

Matrix: Soil

Extraction: TTLC

| Analyte | Concentration (mg/kg) | | | Amount Spiked | % Recovery | | RPD |
|------------|--------------------------|-------|-------|------------------|------------|-----|-----|
| | Sample | MS | MSD | | MS | MSD | |
| Arsenic | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Selenium | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Molybdenum | 0.0 | 4.7 | 4.8 | 5.0 | 94 | 96 | 2.4 |
| Silver | 0.0 | 0.5 | 0.5 | 0.5 | 91 | 92 | 1.1 |
| Thallium | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Barium | 0.0 | 4.4 | 4.5 | 5.0 | 89 | 90 | 1.7 |
| Nickel | 0.0 | 4.8 | 4.9 | 5.0 | 97 | 99 | 2.2 |
| Chromium | 0.0 | 4.8 | 4.9 | 5.0 | 95 | 98 | 2.3 |
| Vanadium | 0.0 | 4.8 | 4.8 | 5.0 | 95 | 96 | 1.3 |
| Beryllium | 0.0 | 4.8 | 4.9 | 5.0 | 96 | 98 | 1.5 |
| Zinc | 0.0 | 5.0 | 5.1 | 5.0 | 100 | 103 | 2.9 |
| Copper | 0.0 | 4.6 | 4.9 | 5.0 | 93 | 97 | 4.4 |
| Antimony | 0.0 | 4.5 | 4.6 | 5.0 | 91 | 92 | 1.3 |
| Lead | 0.0 | 4.6 | 4.8 | 5.0 | 92 | 95 | 3.3 |
| Cadmium | 0.0 | 5.1 | 5.2 | 5.0 | 102 | 104 | 2.4 |
| Cobalt | 0.0 | 4.5 | 4.6 | 5.0 | 90 | 91 | 1.1 |
| Mercury | 0.000 | 0.251 | 0.258 | 0.250 | 100 | 103 | 2.8 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR ICP and/or AA METALS

Date: 10/30/96

Matrix: Soil

| Analyte | Concentration (mg/kg, mg/L) | | | Amount Spiked | % Recovery | | RPD |
|----------------|--------------------------------|------|------|------------------|------------|-----|-----|
| | Sample | MS | MSD | | MS | MSD | |
| Total Lead | 0.0 | 5.09 | 5.03 | 5.0 | 102 | 101 | 1.2 |
| Total Cadmium | 0.0 | 5.49 | 5.46 | 5.0 | 110 | 109 | 0.5 |
| Total Chromium | 0.0 | 5.05 | 5.05 | 5.0 | 101 | 101 | 0.1 |
| Total Nickel | 0.0 | 4.95 | 4.95 | 5.0 | 99 | 99 | 0.0 |
| Total Zinc | 0.0 | 5.31 | 5.24 | 5.0 | 106 | 105 | 1.3 |
| Total Copper | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Organic Lead | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE
Received: October 23, 1996

Project#: 7453

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB2-S1

Spl#: 104845

Matrix: SOIL

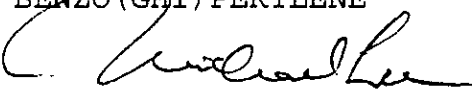
Extracted: October 28, 1996

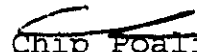
Sampled: October 21, 1996

Run#: 3789

Analyzed: October 28, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|----------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHYLENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHENE | N.D. | 0.10 | N.D. | 78.7 | 1 |
| FLUORENE | N.D. | 0.10 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.10 | N.D. | -- | 1 |
| ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.10 | N.D. | 79.9 | 1 |
| BENZO (A) ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (B) FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (K) FLUORANTHENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (A) PYRENE | N.D. | 0.035 | N.D. | -- | 1 |
| INDENO (1, 2, 3-CD) PYRENE | N.D. | 0.20 | N.D. | -- | 1 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO(GHI) PERYLENE | N.D. | 0.20 | N.D. | -- | 1 |


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE
Received: October 23, 1996

Project#: 7453

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB5-S1

Spl#: 104846

Matrix: SOIL

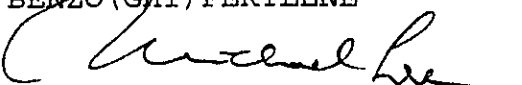
Extracted: October 28, 1996


Sampled: October 21, 1996

Run#: 3789

Analyzed: October 28, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE SPIKE (%) | DILUTION FACTOR |
|----------------------------|-------------------|-------------------------------|----------------------------|-----------------------------|--------------------|
| NAPHTHALENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHYLENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHENE | N.D. | 0.10 | N.D. | 78.7 | 1 |
| FLUORENE | N.D. | 0.10 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.10 | N.D. | -- | 1 |
| ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.10 | N.D. | 79.9 | 1 |
| BENZO (A) ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (B) FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (K) FLUORANTHENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (A) PYRENE | N.D. | 0.035 | N.D. | -- | 1 |
| INDENO (1, 2, 3-CD) PYRENE | N.D. | 0.20 | N.D. | -- | 1 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (GHI) PERYLENE | N.D. | 0.20 | N.D. | -- | 1 |


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE

Project#: 7453

Received: October 23, 1996

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB9-S1

Spl#: 104847

Matrix: SOIL

Extracted: October 28, 1996

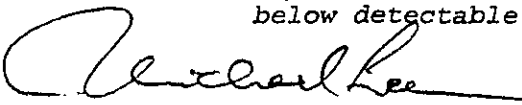
Sampled: October 21, 1996


Run#: 3789

Analyzed: October 29, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|--------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 10 | N.D. | -- | 100 |
| ACENAPHTHYLENE | N.D. | 10 | N.D. | -- | 100 |
| ACENAPHTHENE | N.D. | 10 | N.D. | 78.7 | 100 |
| FLUORENE | N.D. | 10 | N.D. | -- | 100 |
| PHENANTHRENE | N.D. | 10 | N.D. | -- | 100 |
| ANTHRACENE | N.D. | 10 | N.D. | -- | 100 |
| FLUORANTHENE | N.D. | 10 | N.D. | -- | 100 |
| PYRENE | N.D. | 10 | N.D. | 79.9 | 100 |
| BENZO (A) ANTHRACENE | N.D. | 10 | N.D. | -- | 100 |
| CHRYSENE | N.D. | 10 | N.D. | -- | 100 |
| BENZO (B) FLUORANTHENE | N.D. | 10 | N.D. | -- | 100 |
| BENZO (K) FLUORANTHENE | N.D. | 20 | N.D. | -- | 100 |
| BENZO (A) PYRENE | N.D. | 3.5 | N.D. | -- | 100 |
| INDENO (1,2,3-CD) PYRENE | N.D. | 20 | N.D. | -- | 100 |
| DIBENZO (A,H) ANTHRACENE | N.D. | 20 | N.D. | -- | 100 |
| BENZO (GHI) PERYLENE | N.D. | 20 | N.D. | -- | 100 |

Note: Reporting limits raised due to matrix interference. Surrogates were diluted below detectable levels.


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE
Received: October 23, 1996

Project#: 7453

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

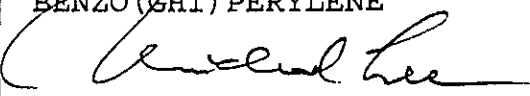
Client Sample ID: WB9-S2


Spl#: 104848
Sampled: October 21, 1996

Matrix: SOIL
Run#: 3789

Extracted: October 28, 1996
Analyzed: October 29, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|----------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHYLENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHENE | N.D. | 0.10 | N.D. | 78.7 | 1 |
| FLUORENE | N.D. | 0.10 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.10 | N.D. | -- | 1 |
| ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.10 | N.D. | 79.9 | 1 |
| BENZO (A) ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (B) FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (K) FLUORANTHENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (A) PYRENE | N.D. | 0.035 | N.D. | -- | 1 |
| INDENO (1, 2, 3-CD) PYRENE | N.D. | 0.20 | N.D. | -- | 1 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (GHI) PERYLENE | N.D. | 0.20 | N.D. | -- | 1 |


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE

Project#: 7453

Received: October 23, 1996

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB10-S1

Spl#: 104849

Matrix: SOIL

Extracted: October 28, 1996

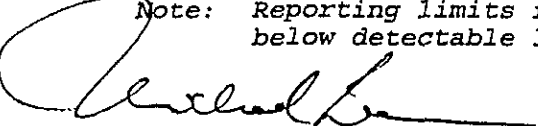
Sampled: October 21, 1996


Run#: 3789

Analyzed: October 29, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|------------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 10 | N.D. | -- | 100 |
| ACENAPHTHYLENE | N.D. | 10 | N.D. | -- | 100 |
| ACENAPHTHENE | N.D. | 10 | N.D. | 78.7 | 100 |
| FLUORENE | N.D. | 10 | N.D. | -- | 100 |
| PHENANTHRENE | N.D. | 10 | N.D. | -- | 100 |
| ANTHRACENE | N.D. | 10 | N.D. | -- | 100 |
| FLUORANTHENE | N.D. | 10 | N.D. | -- | 100 |
| PYRENE | N.D. | 10 | N.D. | 79.9 | 100 |
| BENZO (A) ANTHRACENE | N.D. | 10 | N.D. | -- | 100 |
| CHRYSENE | N.D. | 10 | N.D. | -- | 100 |
| BENZO (B) FLUORANTHENE | N.D. | 10 | N.D. | -- | 100 |
| BENZO (K) FLUORANTHENE | N.D. | 20 | N.D. | -- | 100 |
| BENZO (A) PYRENE | N.D. | 3.5 | N.D. | -- | 100 |
| INDENO (1, 2, 3 - CD) PYRENE | N.D. | 20 | N.D. | -- | 100 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 20 | N.D. | -- | 100 |
| BENZO (GHI) PERYLENE | N.D. | 20 | N.D. | -- | 100 |

Note: Reporting limits raised due to matrix interference. Surrogates were diluted below detectable levels.


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE

Project#: 7453

Received: October 23, 1996

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB10-S2

Spl#: 104850

Matrix: SOIL

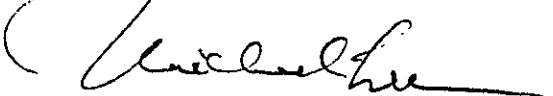
Extracted: October 28, 1996


Sampled: October 21, 1996

Run#: 3789

Analyzed: October 29, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|----------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHYLENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHENE | N.D. | 0.10 | N.D. | 78.7 | 1 |
| FLUORENE | N.D. | 0.10 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.10 | N.D. | -- | 1 |
| ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.10 | N.D. | 79.9 | 1 |
| BENZO (A) ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (B) FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (K) FLUORANTHENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (A) PYRENE | N.D. | 0.035 | N.D. | -- | 1 |
| INDENO (1, 2, 3-CD) PYRENE | N.D. | 0.20 | N.D. | -- | 1 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (GHI) PERYLENE | N.D. | 0.20 | N.D. | -- | 1 |


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610335

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GP-WPE
Received: October 23, 1996

Project#: 7453

re: **Surrogate** report for 6 samples for Polynuclear Aromatic
Method: EPA 8270
Lab Run#: 3789
Matrix: SOIL

| Sample# | Client Sample ID | Surrogate | % Recovered | Recovery Limits |
|----------|------------------|------------------|-------------|-----------------|
| 104845-1 | WB2-S1 | NITROBENZENE-D5 | 74.3 | 23-120 |
| 104845-1 | WB2-S1 | 2-FLUOROBIPHENYL | 64.7 | 30-115 |
| 104845-1 | WB2-S1 | TERPHENYL-D14 | 85.7 | 18-137 |
| 104846-1 | WB5-S1 | NITROBENZENE-D5 | 78.0 | 23-120 |
| 104846-1 | WB5-S1 | 2-FLUOROBIPHENYL | 75.9 | 30-115 |
| 104846-1 | WB5-S1 | TERPHENYL-D14 | 85.1 | 18-137 |
| 104848-1 | WB9-S2 | NITROBENZENE-D5 | 73.9 | 23-120 |
| 104848-1 | WB9-S2 | 2-FLUOROBIPHENYL | 77.8 | 30-115 |
| 104848-1 | WB9-S2 | TERPHENYL-D14 | 81.0 | 18-137 |
| 104850-1 | WB10-S2 | NITROBENZENE-D5 | 77.2 | 23-120 |
| 104850-1 | WB10-S2 | 2-FLUOROBIPHENYL | 86.9 | 30-115 |
| 104850-1 | WB10-S2 | TERPHENYL-D14 | 73.4 | 18-137 |

| Sample# | QC Sample Type | Surrogate | % Recovered | Recovery Limits |
|----------|------------------------------|------------------|-------------|-----------------|
| 105424-1 | Reagent blank (MDB) | NITROBENZENE-D5 | 63 | 23-120 |
| 105424-1 | Reagent blank (MDB) | 2-FLUOROBIPHENYL | 64 | 30-115 |
| 105424-1 | Reagent blank (MDB) | TERPHENYL-D14 | 91 | 18-137 |
| 105425-1 | Spiked blank (BSP) | NITROBENZENE-D5 | 64 | 23-120 |
| 105425-1 | Spiked blank (BSP) | 2-FLUOROBIPHENYL | 70 | 30-115 |
| 105425-1 | Spiked blank (BSP) | TERPHENYL-D14 | 88 | 18-137 |
| 105426-1 | Spiked blank duplicate (BSD) | NITROBENZENE-D5 | 60 | 23-120 |
| 105426-1 | Spiked blank duplicate (BSD) | 2-FLUOROBIPHENYL | 73 | 30-115 |
| 105426-1 | Spiked blank duplicate (BSD) | TERPHENYL-D14 | 80 | 18-137 |

S105
QCSURR1229 MIKELEE 30-Oct-96 12

7409AGR291

| PROJECT NUMBER | | PROJECT NAME | | | | Number of Cntrs | Type of Containers | Type of Analysis | | | | | | Condition of Samples | Initial |
|------------------------------|----------|---------------------|------------|--------------------------|--------------------------|-----------------|--------------------------|--|-------|-------------------------|------|-------------|-------|----------------------|---------|
| C95041 | | WASH PACIFIC / EBMD | | | | | | TPH/GS / BTEX / AMBER | TPH/D | 5520 / 12.1 / 9.2 / 8.8 | BOID | LUFA METHYS | PNP'S | | |
| Send Report Attention of: | | | Report Due | | Verbal Due | | | | | | | | | | |
| DAVID GLICK | | | / / | | / / | | | | | | | | | | |
| Sample Number | Date | Time | Comp | Grab | Station Location | | | | | | | | | | |
| WB12-51 | 10/24/96 | 900 | | / | BORING WB12 3.5-4' | 1 CA | 4" STAINLESS STEEL TUBES | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 70483 | |
| WB12-52 | | 910 | | / | BORING WB12 9-9.5' | | | ✓ | | ✓ | | | | 70484 | |
| WB13-51 | | 935 | | / | BORING WB13 5-5.5' | | | ✓ | ✓ | ✓ | ✓ | ✓ | | 70485 | |
| WB13-52 | | 945 | | / | BORING WB13 9-9.5' | | | ✓ | | ✓ | | | | 70486 | |
| WB14-51 | | 1050 | | / | BORING WB14 4-4.5' | | | ✓ | ✓ | ✓ | | | | 70487 | |
| WB14-52 | | 1055 | | / | BORING WB14 8-8.5' | | | ✓ | ✓ | | | | | 70488 | |
| WB14-53 | | 1100 | | / | BORING WB14 12-5-13' | | | ✓ | | | | | | 70489 | |
| WB15-51 | | 1120 | | / | BORING WB15 4-4.5' | | | ✓ | ✓ | ✓ | | | | 70490 | |
| WB15-52 | | 1125 | | / | BORING WB15 8.5-9' | | | ✓ | ✓ | | | | | 70491 | |
| WB14-531A | | 1140 | | / | BORING WB14 9 GRAB WATER | | 4" STAINLESS STEEL TUBES | ✓ | | ✓ | | | | 70492 | |
| WB14-532A | | 1140 | | / | | 1 CA | 1 LTR AMBER | ✓ | ✓ | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | Remarks: STANDARD TURNIT/ROUND | | | | | | | |
| <i>[Signature]</i> | | 10/25/96 1355 | | <i>[Signature]</i> | | 10/25/96 1455 | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | | | | | | | | |
| <i>[Signature]</i> | | | | <i>[Signature]</i> | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | Date/Time | | ICE/T ✓ GOOD CONDITION ✓ PRESERVATIVE APPROPRIATE CONTAINERS ✓ VOAS U&G METALS OTHER | | | | | | | |
| <i>[Signature]</i> | | 10/25/96 1450 | | <i>[Signature]</i> | | 10/25/96 1450 | | | | | | | | | |

| | | |
|---|--|--------------------------------|
| Geo Plexus, Inc 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID. # C95041; Walsh Pacific/EBMUD | Date Sampled: 10/24/96 |
| | Client Contact: David Glck | Date Received: 10/25/96 |
| | Client P.O: | Date Extracted: 10/25-10/29/96 |
| | | Date Analyzed: 10/25-10/29/96 |

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 | Ethylbenzene | Xylenes | % Rec. Surrogate |
|--|-----------|--------|---------------------|----------|---------|---------|--------------|---------|------------------|
| 70483 | WB12-S1 | S | 4.2j | ND | 0.010 | 0.013 | ND | 0.038 | 108 |
| 70484 | WB12-S2 | S | ND | ND | ND | ND | ND | ND | 103 |
| 70485 | WB13-S1 | S | 12j | ND< 0.06 | 0.006 | 0.012 | 0.010 | 0.10 | 104 |
| 70486 | WB13-S2 | S | ND | ND | ND | 0.012 | ND | 0.011 | 107 |
| 70487 | WB14-S1 | S | 35j | ND< 0.2 | 0.23 | 0.080 | 0.16 | 0.48 | 106 |
| 70488 | WB14-S2 | S | 110j | ND< 0.15 | ND | ND | 0.064 | 0.44 | 99 |
| 70489 | WB14-S3 | S | ND | 0.005 | 0.007 | ND | ND | ND | 105 |
| 70490 | WB15-S1 | S | 530j | ND< 3.5 | 1.8 | 1.3 | 0.76 | 4.5 | 99 |
| 70491 | WB15-S2 | S | 1.6,b,d | ND | 0.018 | 0.013 | ND | 0.016 | 105 |
| 70492 | WB14-WS1A | W | 2900,j,h,i | ND< 15 | 52 | 7.3 | 8.3 | 21 | 105 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 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, soil and sludge samples in mg/kg, and all TCLP extracts in mg/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.

| | | |
|--|---|--|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID # C95041, Walsh Pacific/EBMUD Client Contact: David Glick Client P.O.: | Date Sampled: 10/24/96 Date Received: 10/25/96 Date Extracted: 10/25/96 Date Analyzed: 10/25-10/28/96 |
|--|---|--|

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510, California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID | Client ID | Matrix | TPH(d)* | % Recovery Surrogate |
|--|-----------|--------|----------------|----------------------|
| 70483 | WB12-S1 | S | 1200,c/g | 105 |
| 70485 | WB13-S1 | S | 1800,g,d/b | 108 |
| 70487 | WB14-S1 | S | 57,d,g | 113 |
| 70488 | WB14-S2 | S | 99,d,b/g | 112 |
| 70490 | WB15-S1 | S | 5700,e | 108 |
| 70491 | WB15-S2 | S | 4.2,b | 105 |
| 70492 | WB14-WS2A | W | 59,000,d,g,h,i | 109 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | | W | 50 ug/L | |
| | | S | 1.0 mg/kg | |

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ 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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (Kerosene?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tel: 510-798-1620 Fax: 510-798-1622

| | | |
|--|--|--------------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041: Walsh Pacific/EBMUD | Date Sampled: 10/24/96 |
| | Client Contact: David Glick | Date Received: 10/25/96 |
| | Client P.O: | Date Extracted: 10/30-11/01/96 |
| | | Date Analyzed: 10/30-11/01/96 |

Petroleum Oil & Grease (with Silica Gel Clean-up) *

EPA methods 413.1, 9070 or 9071; Standard Methods 5520 D/E&F or 503 D&E for solids and 5520 B&F or 503 A&E for liquids

| Lab ID | Client ID | Matrix | Oil & Grease * |
|--|-----------|----------|----------------|
| 70483 | WB12-S1 | S | 11,000 |
| 70485 | WB13-S1 | S | 13,000 |
| 70487 | WB14-S1 | S | 180 |
| 70490 | WB15-S1 | S | 190 |
| 70492 | WB14-WS2A | W | 56,h,i |
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| | | | |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W | 5 mg/L | |
| | S | 50 mg/kg | |

* water samples are reported in mg/L and soil and sludge samples in mg/kg
h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5vol. % sediment.

| | | |
|--|--|-------------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041, Walsh Pacific/EBMUD | Date Sampled: 10/24/96 |
| | | Date Received: 10/25/96 |
| | Client Contact: David Glick | Date Extracted: 10/25/96 |
| | Client P.O: | Date Analyzed: 10/25-10/29/96 |

Volatile Halocarbons

EPA method 601 or 8010

| Lab ID | 70483 | 70484 | 70485 | 70486 |
|--|---------------|---------|---------|---------|
| Client ID | WB12-S1 | WB12-S2 | WB13-S1 | WB13-S2 |
| Matrix | S | S | S | S |
| Compound | Concentration | | | |
| Bromodichloromethane | ND | ND | ND | ND |
| Bromoform ^(b) | ND | ND | ND | ND |
| Bromomethane | ND | ND | ND | ND |
| Carbon Tetrachloride ^(c) | ND | ND | ND | ND |
| Chlorobenzene | ND | ND | ND | ND |
| Chloroethane | ND | ND | ND | ND |
| 2-Chloroethyl Vinyl Ether ^(d) | ND | ND | ND | ND |
| Chloroform ^(e) | ND | ND | ND | ND |
| Chloromethane | ND | ND | ND | ND |
| Dibromochloromethane | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | ND | ND | ND | ND |
| Dichlorodifluoromethane | ND | ND | ND | ND |
| 1,1-Dichloroethane | ND | ND | ND | ND |
| 1,2-Dichloroethane | ND | ND | ND | ND |
| 1,1-Dichloroethene | ND | ND | ND | ND |
| cis 1,2-Dichloroethene | ND | ND | ND | ND |
| trans 1,2-Dichloroethene | ND | ND | ND | ND |
| 1,2-Dichloropropane | ND | ND | ND | ND |
| cis 1,3-Dichloropropene | ND | ND | ND | ND |
| trans 1,3-Dichloropropene | ND | ND | ND | ND |
| Methylene Chloride ^(f) | ND < 10 | ND < 10 | ND < 10 | ND < 10 |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND |
| Tetrachloroethene | ND < 15 | ND < 15 | 34 | ND < 15 |
| 1,1,1-Trichloroethane | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND |
| Trichloroethene | 5.2 | ND | 5.4 | ND |
| Trichlorofluoromethane | ND | ND | ND | ND |
| Vinyl Chloride ^(g) | ND | ND | ND | ND |
| % Recovery Surrogate | 100 | 101 | 100 | 101 |
| Comments | | | | |

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

Reporting limit unless otherwise stated: water/TCLP extracts, ND < 0.5ug/L; soil and sludge, ND < 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene;

(h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|---|---|--------------------------------|
| Geo Plexus, Inc 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID: # C95041; Walsh Pacific/EBMUD | Date Sampled: 10/24/96 |
| | | Date Received: 10/25/96 |
| | Client Contact: David Glick | Date Extracted: 10/26-10/29/96 |
| | Client P.O: | Date Analyzed: 10/26-10/29/96 |

Volatile Halocarbons

EPA method 601 or 8010

| Lab ID | 70492 | | |
|--|----------------|--|--|
| Client ID | WB14-WS1A | | |
| Matrix | W | | |
| Compound | Concentration* | | |
| Bromodichloromethane | ND < 5 | | |
| Bromoform ^(b) | ND < 5 | | |
| Bromomethane | ND < 5 | | |
| Carbon Tetrachloride ^(c) | ND < 5 | | |
| Chlorobenzene | ND < 5 | | |
| Chloroethane | ND < 5 | | |
| 2-Chloroethyl Vinyl Ether ^(d) | ND < 5 | | |
| Chloroform ^(e) | ND < 5 | | |
| Chloromethane | ND < 5 | | |
| Dibromochloromethane | ND < 5 | | |
| 1,2-Dichlorobenzene | ND < 5 | | |
| 1,3-Dichlorobenzene | ND < 5 | | |
| 1,4-Dichlorobenzene | ND < 5 | | |
| Dichlorodifluoromethane | ND < 5 | | |
| 1,1-Dichloroethane | ND < 5 | | |
| 1,2-Dichloroethane | ND < 5 | | |
| 1,1-Dichloroethene | ND < 5 | | |
| cis 1,2-Dichloroethene | ND < 5 | | |
| trans 1,2-Dichloroethene | ND < 5 | | |
| 1,2-Dichloropropane | ND < 5 | | |
| cis 1,3-Dichloropropene | ND < 5 | | |
| trans 1,3-Dichloropropene | ND < 5 | | |
| Methylene Chloride | ND < 5 | | |
| 1,1,2,2-Tetrachloroethane | ND < 5 | | |
| Tetrachloroethene | ND < 5 | | |
| 1,1,1-Trichloroethane | ND < 5 | | |
| 1,1,2-Trichloroethane | ND < 5 | | |
| Trichloroethene | ND < 5 | | |
| Trichlorofluoromethane | ND < 5 | | |
| Vinyl Chloride | ND < 5 | | |
| % Recovery Surrogate | 105 | | |
| Comments | h,i,f | | |

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

Reporting limit unless otherwise stated. water/TCLP extracts, ND < 0.5ug/L; soil and sludge, ND < 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) sample diluted due to high organic content; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

| | | |
|--|---|--------------------------|
| Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054 | Client Project ID # C95041; Walsh Pacific/EBMUD | Date Sampled: 10/24/96 |
| | Client Contact: David Glick | Date Received: 10/25/96 |
| | Client P.O: | Date Extracted: 10/25/96 |
| | | Date Analyzed: 10/28/96 |

LUFT Metals*

EPA analytical methods 6010/200.7, 239.2^o

| Lab ID | Client ID | Matrix | Extraction ^o | Cadmium | Chromium | Lead | Nickel | Zinc | % Rec. Surrogate |
|--|-----------|-----------|-------------------------|---------|----------|------|--------|------|------------------|
| 70483 | WB12-S1 | S | TTLC | ND | 38 | 80 | 38 | 66 | 86 |
| 70485 | WB13-S1 | S | TTLC | ND | 61 | 64 | 48 | 77 | 91 |
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| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | S | TTLC | 0.5 mg/kg | 0.5 | 3.0 | 2.0 | 1.0 | | |
| | W | TTLC | 0.005 mg/L | 0.005 | 0.005 | 0.05 | 0.05 | | |
| | --- | STLC,TCLP | 0.01 mg/L | 0.05 | 0.2 | 0.05 | 0.05 | | |

* soil samples and sludge are reported in mg/kg. and water samples and all STLC & TCLP extracts in mg/L
^o Lead is analysed using EPA method 6010 (ICP) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples
^o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22
^o surrogate diluted out of range; N/A means surrogate not applicable to this analysis
^o reporting limit raised due matrix interference
^o liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
 Tel: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/25/96-10/26/96

Matrix: Soil

| Analyte | Concentration (mg/kg) | | | Amount Spiked | % Recovery | | RPD |
|-----------------------|-----------------------|-------|-------|---------------|------------|-----|-----|
| | Sample (#68822) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.000 | 1.946 | 1.949 | 2.03 | 96 | 96 | 0.2 |
| Benzene | 0.000 | 0.198 | 0.186 | 0.2 | 99 | 93 | 6.3 |
| Toluene | 0.000 | 0.206 | 0.194 | 0.2 | 103 | 97 | 6.0 |
| Ethylbenzene | 0.000 | 0.198 | 0.188 | 0.2 | 99 | 94 | 5.2 |
| Xylenes | 0.000 | 0.594 | 0.564 | 0.6 | 99 | 94 | 5.2 |
| TPH (diesel) | 0 | 326 | 325 | 300 | 109 | 108 | 0.4 |
| TRPH (oil and grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/29/96

Matrix: Soil

| Analyte | Concentration (mg/kg) | | | Amount Spiked | % Recovery | | RPD |
|-----------------------|-----------------------|-------|-------|---------------|------------|-----|-----|
| | Sample (#68822) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.000 | 1.942 | 1.932 | 2.03 | 96 | 95 | 0.6 |
| Benzene | 0.000 | 0.172 | 0.178 | 0.2 | 86 | 89 | 3.4 |
| Toluene | 0.000 | 0.188 | 0.194 | 0.2 | 94 | 97 | 3.1 |
| Ethylbenzene | 0.000 | 0.178 | 0.182 | 0.2 | 89 | 91 | 2.2 |
| Xylenes | 0.000 | 0.528 | 0.546 | 0.6 | 88 | 91 | 3.4 |
| TPH (diesel) | 0 | 327 | 318 | 300 | 109 | 106 | 2.6 |
| TRPH (oil and grease) | 0.0 | 10.6 | 11.0 | 10 | 106 | 110 | 3.7 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

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Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 11/01/96-11/02/96

Matrix: Soil

| Analyte | Concentration (mg/kg) Sample (#68823) | | | Amount Spiked | % Recovery | | RPD |
|--------------------------|---|-------|-------|------------------|------------|-----|-----|
| | MS | MSD | MSD | | MS | MSD | |
| TPH (gas) | 0.000 | 1.840 | 1.853 | 2.03 | 91 | 91 | 0.7 |
| Benzene | 0.000 | 0.172 | 0.174 | 0.2 | 86 | 87 | 1.2 |
| Toluene | 0.000 | 0.182 | 0.184 | 0.2 | 91 | 92 | 1.1 |
| Ethylbenzene | 0.000 | 0.174 | 0.176 | 0.2 | 87 | 88 | 1.1 |
| Xylenes | 0.000 | 0.524 | 0.534 | 0.6 | 87 | 89 | 1.9 |
| TPH (diesel) | 0 | 314 | 315 | 300 | 105 | 105 | 0.2 |
| TRPH (oil and grease) | 0.0 | 11.4 | 11.3 | 10 | 114 | 113 | 0.9 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 10/25/96-10/26/96

Matrix: Soil

| Analyte | Concentration (ug/kg) | | | | % Recovery | | |
|-----------------|-----------------------|-----|-----|------------------|------------|-----|-----|
| | Sample (#68822) | MS | MSD | Amount Spiked | MS | MSD | RPD |
| 1,1-DCE | 0 | 93 | 93 | 100 | 93 | 93 | 0.0 |
| Trichloroethene | 0 | 85 | 92 | 100 | 85 | 92 | 7.9 |
| EDB | 0 | 83 | 90 | 100 | 83 | 90 | 8.1 |
| Chlorobenzene | 0 | 93 | 98 | 100 | 93 | 98 | 5.2 |
| Benzene | 0 | 102 | 108 | 100 | 102 | 108 | 5.7 |
| Toluene | 0 | 98 | 100 | 100 | 98 | 100 | 2.0 |
| Chlorobz (PID) | 0 | 95 | 100 | 100 | 95 | 100 | 5.1 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
 Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 10/28/96-10/29/96

Matrix: Soil

| Analyte | Concentration (ug/kg) | | | | % Recovery | | |
|-----------------|-----------------------|----|-----|---------------|------------|-----|------|
| | Sample (#68822) | MS | MSD | Amount Spiked | MS | MSD | RPD |
| 1,1-DCE | 0 | 89 | 98 | 100 | 89 | 98 | 9.6 |
| Trichloroethene | 0 | 85 | 93 | 100 | 85 | 93 | 9.0 |
| EDB | 0 | 81 | 91 | 100 | 81 | 91 | 11.6 |
| Chlorobenzene | 0 | 93 | 101 | 100 | 93 | 101 | 8.2 |
| Benzene | 0 | 97 | 105 | 100 | 97 | 105 | 7.9 |
| Toluene | 0 | 88 | 97 | 100 | 88 | 97 | 9.7 |
| Chlorobz (PID) | 0 | 87 | 98 | 100 | 87 | 98 | 11.9 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tel: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 10/25/96-10/26/96

Matrix: Water

| Analyte | Concentration (ug/L) | | | | % Recovery | | |
|-----------------|----------------------|------|------|------------------|------------|-----|-----|
| | Sample (#70287) | MS | MSD | Amount Spiked | MS | MSD | RPD |
| 1,1-DCE | 0.0 | 11.7 | 10.8 | 10.0 | 117 | 108 | 8.0 |
| Trichloroethene | 0.0 | 10.0 | 9.2 | 10.0 | 100 | 92 | 8.3 |
| EDB | 0.0 | 10.1 | 9.3 | 10.0 | 101 | 93 | 8.2 |
| Chlorobenzene | 0.0 | 10.7 | 9.8 | 10.0 | 107 | 98 | 8.8 |
| Benzene | 0.0 | 11.9 | 10.8 | 10.0 | 119 | 108 | 9.7 |
| Toluene | 0.0 | 10.9 | 9.9 | 10.0 | 109 | 99 | 9.6 |
| Chlorobz (PID) | 0.0 | 11.0 | 10.2 | 10.0 | 110 | 102 | 7.5 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR EPA 8010/8020/EDB

Date: 10/28/96-10/29/96

Matrix: Water

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | |
|-----------------|----------------------|------|------|---------------|------------|-----|-----|
| | Sample (#70080) | MS | MSD | | MS | MSD | RPD |
| 1,1-DCE | 0.0 | 9.9 | 10.5 | 10.0 | 99 | 105 | 5.9 |
| Trichloroethene | 0.0 | 9.4 | 9.8 | 10.0 | 94 | 98 | 4.2 |
| EDB | 0.0 | 9.0 | 9.3 | 10.0 | 90 | 93 | 3.3 |
| Chlorobenzene | 0.0 | 10.1 | 10.5 | 10.0 | 101 | 105 | 3.9 |
| Benzene | 0.0 | 10.4 | 10.9 | 10.0 | 104 | 109 | 4.7 |
| Toluene | 0.0 | 9.5 | 10.0 | 10.0 | 95 | 100 | 5.1 |
| Chlorobz (PID) | 0.0 | 9.6 | 10.1 | 10.0 | 96 | 101 | 5.1 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR METALS

Date: 10/28/96

Matrix: Soil

Extraction: TTLC

| Analyte | Concentration (mg/kg) | | | Amount Spiked | % Recovery | | RPD |
|------------|--------------------------|-----|-----|------------------|------------|-----|-----|
| | Sample | MS | MSD | | MS | MSD | |
| Arsenic | 0.0 | 5.1 | 5.1 | 5.0 | 102 | 101 | 0.6 |
| Selenium | 0.0 | 4.8 | 4.8 | 5.0 | 95 | 96 | 0.5 |
| Molybdenum | 0.0 | 4.8 | 4.8 | 5.0 | 96 | 96 | 0.1 |
| Silver | 0.0 | 0.5 | 0.5 | 0.5 | 105 | 104 | 0.6 |
| Thallium | 0.0 | 4.9 | 4.8 | 5.0 | 98 | 97 | 1.4 |
| Barium | 0.0 | 4.6 | 4.6 | 5.0 | 93 | 91 | 1.2 |
| Nickel | 0.0 | 5.0 | 5.0 | 5.0 | 99 | 99 | 0.2 |
| Chromium | 0.0 | 4.9 | 4.9 | 5.0 | 98 | 98 | 0.3 |
| Vanadium | 0.0 | 4.9 | 4.9 | 5.0 | 98 | 98 | 0.6 |
| Beryllium | 0.0 | 5.2 | 5.2 | 5.0 | 105 | 104 | 0.5 |
| Zinc | 0.0 | 5.1 | 5.1 | 5.0 | 102 | 101 | 0.7 |
| Copper | 0.0 | 4.7 | 4.6 | 5.0 | 94 | 93 | 1.5 |
| Antimony | 0.0 | 4.9 | 4.8 | 5.0 | 97 | 97 | 0.2 |
| Lead | 0.0 | 4.9 | 4.9 | 5.0 | 98 | 98 | 0.1 |
| Cadmium | 0.0 | 5.3 | 5.2 | 5.0 | 105 | 105 | 0.5 |
| Cobalt | 0.0 | 5.0 | 5.0 | 5.0 | 100 | 100 | 0.2 |
| Mercury | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7
PACHECO, CA 94553

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 24 HOUR 48 HOUR 5 DAY ROUTINE

(510) 798-1620

FAX (510) 798-1622

REPORT TO: *Ed Hamilton* BILL TO: *MAI*

PROJECT NUMBER: *7469* PROJECT NAME: *G-W.P.-C95041*

PROJECT LOCATION:

ANALYSIS REQUEST

OTHER

SUBJECT: *...*
CLIENT: *...*
DOB: *...*
REF: *...*

| SAMPLE ID | LOCATION | SAMPLING | | # CONTAINERS | TYPE CONTAINERS | MATRIX | | | | | METHOD PRESERVED | | | | EPA 601/8010 | EPA 602/8020 | EPA 608/8080 | EPA 608/8080 - PCBs Only | EPA 624/8240/8260 | EPA 625/8270 | CAM - 17 Metals | EPA - Priority Pollutant Metals | LUFT Metals | LEAD (7240/7421/239.2/6010) | ORGANIC LEAD | RCI | PNA'S | COMMENTS |
|----------------|----------|-----------------|------|--------------|-----------------|--------|----------|-----|--------|-------|------------------|------|-----|-------|--------------|--------------|--------------|--------------------------|-------------------|--------------|-----------------|---------------------------------|-------------|-----------------------------|--------------|----------|--------------|----------|
| | | DATE | TIME | | | WATER | SOIL | AIR | SLUDGE | OTHER | HCL | HNO3 | ICE | OTHER | | | | | | | | | | | | | | |
| <i>WB12-S1</i> | | <i>10/24/96</i> | | <i>1</i> | <i>VDA</i> | | <i>X</i> | | | | | | | | | | | | | | | | | | | <i>X</i> | <i>70483</i> | |
| <i>WB13-S1</i> | | <i>"</i> | | <i>1</i> | <i>VDA</i> | | <i>X</i> | | | | | | | | | | | | | | | | | | | <i>X</i> | <i>70485</i> | |

RELINQUISHED BY: *Heidi Green* DATE: *10/28/96* TIME: *12:23* RECEIVED BY: *B. Norwood*

RELINQUISHED BY: *[Signature]* DATE: *10/28/96* TIME: *10:45* RECEIVED BY: *[Signature]*

RELINQUISHED BY: _____ DATE: _____ TIME: _____ RECEIVED BY LABORATORY: *[Signature]*

REMARKS:

CHROMALAB, INC.

Environmental Services (SDB)

November 4, 1996

Submission #: 9610404

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: G-W.P.-C95041

Project#: 7469

Received: October 28, 1996

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB12-S1

Spl#: 105410

Matrix: SOIL

Extracted: October 31, 1996

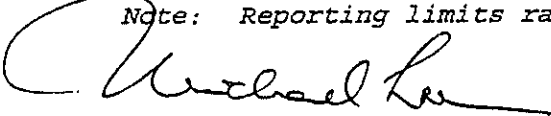
Sampled: October 24, 1996

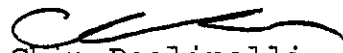
Run#: 3835

Analyzed: October 31, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|------------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 1.0 | N.D. | -- | 10 |
| ACENAPHTHYLENE | N.D. | 1.0 | N.D. | -- | 10 |
| ACENAPHTHENE | N.D. | 1.0 | N.D. | 84.1 | 10 |
| FLUORENE | N.D. | 1.0 | N.D. | -- | 10 |
| PHENANTHRENE | N.D. | 1.0 | N.D. | -- | 10 |
| ANTHRACENE | N.D. | 1.0 | N.D. | -- | 10 |
| FLUORANTHENE | N.D. | 1.0 | N.D. | -- | 10 |
| PYRENE | N.D. | 1.0 | N.D. | 113 | 10 |
| BENZO (A) ANTHRACENE | N.D. | 1.0 | N.D. | -- | 10 |
| CHRYSENE | N.D. | 1.0 | N.D. | -- | 10 |
| BENZO (B) FLUORANTHENE | N.D. | 1.0 | N.D. | -- | 10 |
| BENZO (K) FLUORANTHENE | N.D. | 2.0 | N.D. | -- | 10 |
| BENZO (A) PYRENE | N.D. | 0.35 | N.D. | -- | 10 |
| INDENO (1, 2, 3 - CD) PYRENE | N.D. | 2.0 | N.D. | -- | 10 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 2.0 | N.D. | -- | 10 |
| BENZO (GHI) PERYLENE | N.D. | 2.0 | N.D. | -- | 10 |

Note: Reporting limits raised due to matrix interference.


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

November 4, 1996

Submission #: 9610404

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: G-W.P.-C95041

Project#: 7469

Received: October 28, 1996

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: EPA 8270

Client Sample ID: WB13-S1

Spl#: 105411

Matrix: SOIL

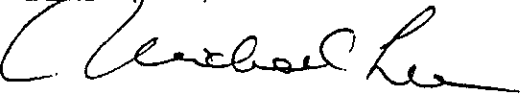
Extracted: October 31, 1996

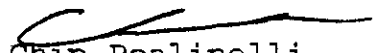
Sampled: October 24, 1996

Run#: 3835

Analyzed: October 31, 1996

| ANALYTE | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE (%) | DILUTION FACTOR |
|----------------------------|-------------------|-------------------------------|----------------------------|-----------------------|--------------------|
| NAPHTHALENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHYLENE | N.D. | 0.10 | N.D. | -- | 1 |
| ACENAPHTHENE | N.D. | 0.10 | N.D. | 84.1 | 1 |
| FLUORENE | N.D. | 0.10 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.10 | N.D. | -- | 1 |
| ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.10 | N.D. | 113 | 1 |
| BENZO (A) ANTHRACENE | N.D. | 0.10 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (B) FLUORANTHENE | N.D. | 0.10 | N.D. | -- | 1 |
| BENZO (K) FLUORANTHENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (A) PYRENE | N.D. | 0.035 | N.D. | -- | 1 |
| INDENO (1, 2, 3-CD) PYRENE | N.D. | 0.20 | N.D. | -- | 1 |
| DIBENZO (A, H) ANTHRACENE | N.D. | 0.20 | N.D. | -- | 1 |
| BENZO (GHI) PERYLENE | N.D. | 0.20 | N.D. | -- | 1 |


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

November 4, 1996

Submission #: 9610404

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: G-W.P.-C95041
Received: October 28, 1996

Project#: 7469

re: **Surrogate** report for 2 samples for Polynuclear Aromatic
Method: EPA 8270
Lab Run#: 3835
Matrix: SOIL

| Sample# | Client Sample ID | Surrogate | % Recovered | Recovery Limits |
|----------|------------------|------------------|-------------|-----------------|
| 105410-1 | WB12-S1 | NITROBENZENE-D5 | 62.6 | 23-120 |
| 105410-1 | WB12-S1 | 2-FLUOROBIPHENYL | 67.7 | 30-115 |
| 105410-1 | WB12-S1 | TERPHENYL-D14 | 49.2 | 18-137 |
| 105410-2 | WB12-S1 | NITROBENZENE-D5 | 96.0 | 23-120 |
| 105410-2 | WB12-S1 | 2-FLUOROBIPHENYL | 98.0 | 30-115 |
| 105410-2 | WB12-S1 | TERPHENYL-D14 | 86.4 | 18-137 |
| 105411-1 | WB13-S1 | NITROBENZENE-D5 | 74.0 | 23-120 |
| 105411-1 | WB13-S1 | 2-FLUOROBIPHENYL | 66.1 | 30-115 |
| 105411-1 | WB13-S1 | TERPHENYL-D14 | 68.1 | 18-137 |

| Sample# | QC Sample Type | Surrogate | % Recovered | Recovery Limits |
|----------|------------------------------|------------------|-------------|-----------------|
| 105739-1 | Reagent blank (MDB) | NITROBENZENE-D5 | 80 | 23-120 |
| 105739-1 | Reagent blank (MDB) | 2-FLUOROBIPHENYL | 78 | 30-115 |
| 105739-1 | Reagent blank (MDB) | TERPHENYL-D14 | 92 | 18-137 |
| 105737-1 | Spiked blank (BSP) | NITROBENZENE-D5 | 79 | 23-120 |
| 105737-1 | Spiked blank (BSP) | 2-FLUOROBIPHENYL | 81 | 30-115 |
| 105737-1 | Spiked blank (BSP) | TERPHENYL-D14 | 95 | 18-137 |
| 105738-1 | Spiked blank duplicate (BSD) | NITROBENZENE-D5 | 82 | 23-120 |
| 105738-1 | Spiked blank duplicate (BSD) | 2-FLUOROBIPHENYL | 81 | 30-115 |
| 105738-1 | Spiked blank duplicate (BSD) | TERPHENYL-D14 | 98 | 18-137 |
| 105740-1 | Matrix spike (MS) | NITROBENZENE-D5 | 69 | 23-120 |
| 105740-1 | Matrix spike (MS) | 2-FLUOROBIPHENYL | 75 | 30-115 |
| 105740-1 | Matrix spike (MS) | TERPHENYL-D14 | 66 | 18-137 |
| 105741-1 | Matrix spike duplicate (MSD) | NITROBENZENE-D5 | 77 | 23-120 |
| 105741-1 | Matrix spike duplicate (MSD) | 2-FLUOROBIPHENYL | 75 | 30-115 |
| 105741-1 | Matrix spike duplicate (MSD) | TERPHENYL-D14 | 71 | 18-137 |

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APPENDIX C

REVISED RBCA TIER-1 ANALYSIS

RBCA TIER 1/TIER 2 EVALUATION

Site Name EBMUD Adeline Maintenance Kb Identification run2
 Site Location Oakland, CA Date Completed 11/24/96
 Completed By David Glick

Software GSI RBCA Spreadsheet
 Version v1.0

Output Table 1

DEFAULT PARAMETERS

NOTE values which differ from Tier 1 default values are shown in bold italics and underlined

| Exposure Parameter | Definition (Units) | Residential | | Commercial/Industrial | | |
|--------------------|---|-------------|----------|-----------------------|-------------|------------|
| | | Adult | (1-6yrs) | (1-16 yrs) | Chronic | Constructn |
| ATc | Averaging time for carcinogens (yr) | 70 | | | | |
| ATn | Averaging time for non-carcinogens (yr) | 30 | | | | |
| BW | Body Weight (kg) | 70 | 6 | 16 | 25 | 1 |
| ED | Exposure Duration (yr) | 30 | 15 | 35 | 70 | |
| EF | Exposure Frequency (days/yr) | 350 | 6 | 16 | 25 | 1 |
| EF Derm | Exposure Frequency for dermal exposure | 350 | | | 250 | 180 |
| IRgw | Ingestion Rate of Water (l/day) | 2 | | | 250 | |
| IRs | Ingestion Rate of Soil (mg/day) | 100 | | | 1 | |
| IRadj | Adjusted soil ing rate (mg-yr/kg-d) | 1.1E+02 | 200 | | 50 | 100 |
| IRa in | Inhalation rate indoor (m ³ /day) | 15 | | | 9.4E+01 | |
| IRa out | Inhalation rate outdoor (m ³ /day) | 20 | | | 20 | |
| SA | Skin surface area (dermal) (cm ²) | 5.8E+03 | | | 20 | 10 |
| SAadj | Adjusted dermal area (cm ² -yr/kg) | 2.1E+03 | | 2.0E+03 | 5.8E+03 | 5.8E+03 |
| M | Soil to Skin adherence factor | 1 | | | 1.7E+03 | |
| AAFs | Age adjustment on soil ingestion | <u>TRUE</u> | | | <u>TRUE</u> | |
| AAFd | Age adjustment on skin surface area | <u>TRUE</u> | | | <u>TRUE</u> | |
| tox | Use EPA tox data for air (or PEL based) | <u>TRUE</u> | | | <u>TRUE</u> | |
| gwMCL? | Use MCL as exposure limit in groundwater? | FALSE | | | | |

| Surface Parameters | Definition (Units) | Residential | | Commercial/Industrial | |
|--------------------|--|----------------|--------------|-----------------------|----------------|
| | | Chronic | Construction | Chronic | Construction |
| t | Exposure duration (yr) | 30 | | 25 | 1 |
| A | Contaminated soil area (cm ²) | <u>9.3E+06</u> | | | |
| W | Length of affected soil parallel to wind (cm) | <u>1.5E+03</u> | | | <u>9.3E+06</u> |
| W gw | Length of affected soil parallel to groundwater (cm) | 1.5E+03 | | | <u>1.5E+03</u> |
| Uair | Ambient air velocity in mixing zone (cm/s) | 2.3E+02 | | | |
| delta | Air mixing zone height (cm) | 2.0E+02 | | | |
| Lss | Definition of surficial soils (cm) | 1.0E+02 | | | |
| Pe | Particulate areal emission rate (g/cm ² /s) | 2.2E-10 | | | |

| Groundwater Parameters | Definition (Units) | Value | | |
|------------------------|---|---------|--------------|------------|
| | | Chronic | Construction | Foundation |
| l | Groundwater mixing zone depth (cm) | 2.0E+02 | | |
| Ugw | Groundwater infiltration rate (cm/yr) | 3.0E+01 | | |
| Ugw tr | Groundwater Darcy velocity (cm/yr) | 2.5E+03 | | |
| Ks | Groundwater Transport velocity (cm/yr) | 6.6E+03 | | |
| grad | Saturated Hydraulic Conductivity (cm/s) | | | |
| Sw | Groundwater Gradient (cm/cm) | | | |
| Sd | Width of groundwater source zone (cm) | | | |
| BC | Depth of groundwater source zone (cm) | | | |
| BIO? | Biodegradation Capacity (mg/L) | | | |
| phi eff | Is Bioattenuation Considered | FALSE | | |
| foc sat | Effective Porosity in Water-Bearing Unit | 3.8E-01 | | |
| | Fraction organic carbon in water-bearing unit | 1.0E-03 | | |

| Soil Parameters | Definition (Units) | Value | | |
|-----------------|---|----------------|--------|------------|
| | | capillary | vadose | foundation |
| hc | Capillary zone thickness (cm) | <u>6.1E+00</u> | | |
| hv | Vadose zone thickness (cm) | <u>2.1E+02</u> | | |
| rho | Vadose zone thickness (cm) | 1.7 | | |
| foc | Soil density (g/cm ³) | 1.7 | | |
| phi | Fraction of organic carbon in vadose zone | 0.01 | | |
| Lgw | Soil porosity in vadose zone | 0.38 | | |
| Ls | Depth to groundwater (cm) | <u>2.1E+02</u> | | |
| Lsubs | Depth to top of affected soil (cm) | 1.0E+02 | | |
| pH | Thickness of affected subsurface soils (cm) | <u>3.6E+02</u> | | |
| | Soil/groundwater pH | 6.5 | | |
| phi w | Volumetric water content | 0.342 | 0.12 | 0.12 |
| phi a | Volumetric air content | 0.038 | 0.26 | 0.26 |

| Building Parameters | Definition (Units) | Residential | | Commercial | |
|---------------------|---|-------------|---------|------------|---------|
| | | Distance | On-Site | Distance | On-Site |
| Lb | Building volume/area ratio (cm) | 2.0E+02 | | 3.0E+02 | |
| ER | Building air exchange rate (s ⁻¹) | 1.4E-04 | | 2.3E-04 | |
| Lcrk | Foundation crack thickness (cm) | 1.5E+01 | | | |
| eta | Foundation crack fraction | 0.01 | | | |

| Matrix of Exposed Persons to Complete Exposure Pathways | Residential | | Commercial/Industrial | |
|---|---|------------|-----------------------|------------|
| | Chronic | Constructn | Chronic | Constructn |
| Groundwater Pathways: | | | | |
| GW i | Groundwater Ingestion | FALSE | | |
| GW v | Volatilization to Outdoor Air | FALSE | FALSE | |
| GW b | Vapor Intrusion to Buildings | FALSE | TRUE | |
| Soil Pathways: | | | | |
| S v | Volatiles from Subsurface Soils | FALSE | TRUE | |
| SS v | Volatiles and Particulate Inhalation | FALSE | TRUE | |
| SS d | Direct Ingestion and Dermal Contact | FALSE | TRUE | TRUE |
| S i | Leaching to Groundwater from all Soils | FALSE | TRUE | TRUE |
| S b | Intrusion to Buildings - Subsurface Soils | FALSE | TRUE | |

| Matrix of Receptor Distance and Location on- or off-site | Residential | | Commercial/Industrial | |
|--|---------------------------|---------|-----------------------|---------|
| | Distance | On-Site | Distance | On-Site |
| GW | Groundwater receptor (cm) | | | |
| S | Inhalation receptor (cm) | TRUE | | TRUE |
| | | TRUE | | TRUE |

| Matrix of Target Risks | Definition (Units) | Residential | |
|------------------------|-------------------------------------|----------------|------------|
| | | Individual | Cumulative |
| TRab | Target Risk (class A&B carcinogens) | <u>1.0E-04</u> | |
| TRc | Target Risk (class C carcinogens) | <u>1.0E-04</u> | |
| THQ | Target Hazard Quotient | 1.0E+00 | |
| Opt | Calculation Option (1, 2 or 3) | 1 | |
| Tier | RBCA Tier | 1 | |

| Dispersive Transport Parameters | Definition (Units) | Residential | | Commercial | |
|---------------------------------|--|-------------|--------------|------------|--------------|
| | | Chronic | Construction | Chronic | Construction |
| ax | Longitudinal dispersion coefficient (cm) | | | | |
| ay | Transverse dispersion coefficient (cm) | | | | |
| az | Vertical dispersion coefficient (cm) | | | | |
| Vapor | | | | | |
| dcy | Transverse dispersion coefficient (cm) | | | | |
| dcz | Vertical dispersion coefficient (cm) | | | | |

REPRESENTATIVE COC CONCENTRATIONS IN SOURCE MEDIA

(Complete the following table)

| CONSTITUENT | Representative COC Concentration | | | | | |
|-----------------------------|----------------------------------|------|-----------------|------|--------------------|------|
| | in Groundwater | | in Surface Soil | | in Subsurface Soil | |
| | value (mg/L) | note | value (mg/kg) | note | value (mg/kg) | note |
| Acenaphthene | | | | max | | |
| Anthracene | | | | max | | |
| Benzene | 5.2E-2 | | 1.2E-2 | max | 4.3E-1 | |
| Dichlorobenzene (1,2) (-o) | | | | max | 9.8E-2 | |
| Dichlorobenzene, (1,4) (-p) | | | | max | 3.0E-2 | |
| Dichloroethane, 1,1- | 1.8E-2 | | | max | 2.1E-1 | |
| Dichloroethane, 1,2- | | | | max | | |
| Dichloroethene, cis-1,2- | | | 9.0E-2 | | | |
| Ethylbenzene | 8.5E-3 | | 2.1E-2 | max | 2.7E+0 | |
| Fluoranthene | | | 2.9E+0 | max | | |
| Methylene chloride | 1.8E-3 | | | | | |
| Naphthalene | | | | max | | |
| Phenanthrene | | | 3.9E+0 | max | | |
| Pyrene | | | 3.3E+0 | max | | |
| Tetrachloroethene | 2.8E-3 | | | max | 1.9E+0 | |
| Toluene | 2.7E-2 | | 1.9E-2 | max | 2.4E+0 | |
| Trichloroethane, 1,1,1- | 1.7E-3 | | | max | 5.4E-1 | |
| Trichloroethane, 1,1,2- | | | | max | | |
| Trichloroethene | 2.6E-3 | | | max | 8.7E+2 | |
| Xylene (mixed isomers) | 5.8E-2 | | 1.7E-1 | max | 6.5E+0 | |

Site Name: EBMUD Adeline Maintenance Center
 Site Location: Oakland, CA

Completed By: David Glick
 Date Completed: 11/24/1996

GROUNDWATER DAF VALUES

(Enter DAF values in the grey area of the following table)

Dilution Attenuation Factor

(DAF) in Groundwater

| CONSTITUENT | Residential | Comm./Ind. |
|-----------------------------|-------------|------------|
| | Receptor | Receptor |
| Acenaphthene | 1.0E+0 | 1.0E+0 |
| Anthracene | 1.0E+0 | 1.0E+0 |
| Benzene | 1.0E+0 | 1.0E+0 |
| Dichlorobenzene (1,2) (-o) | 1.0E+0 | 1.0E+0 |
| Dichlorobenzene, (1,4) (-p) | 1.0E+0 | 1.0E+0 |
| Dichloroethane, 1,1- | 1.0E+0 | 1.0E+0 |
| Dichloroethane, 1,2- | 1.0E+0 | 1.0E+0 |
| Dichloroethene, cis-1,2- | 1.0E+0 | 1.0E+0 |
| Ethylbenzene | 1.0E+0 | 1.0E+0 |
| Fluoranthene | 1.0E+0 | 1.0E+0 |
| Methylene chloride | 1.0E+0 | 1.0E+0 |
| Naphthalene | 1.0E+0 | 1.0E+0 |
| Phenanthrene | 1.0E+0 | 1.0E+0 |
| Pyrene | 1.0E+0 | 1.0E+0 |
| Tetrachloroethene | 1.0E+0 | 1.0E+0 |
| Toluene | 1.0E+0 | 1.0E+0 |
| Trichloroethane, 1,1,1- | 1.0E+0 | 1.0E+0 |
| Trichloroethane, 1,1,2- | 1.0E+0 | 1.0E+0 |
| Trichloroethene | 1.0E+0 | 1.0E+0 |
| Xylene (mixed isomers) | 1.0E+0 | 1.0E+0 |

Site Name: EBMUD Adeline Maintenance Center

Completed By: David Glick

Site Location: Oakland, CA

Date Completed: 11/24/1996

RBCA SITE ASSESSMENT

Tier 1 Worksheet 8.1

Site Name: EBMUD Adeline Maintenance Center

Site Location: Oakland, CA

Completed By: David Glick

Date Completed 11/24/1996

1 OF 6

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

AIR EXPOSURE PATHWAYS

■ (CHECKED IF PATHWAY IS ACTIVE)

SURFACE SOILS: VAPOR AND
DUST INHALATION

Exposure Concentration

1) Source Medium

2) NAF Value (m³/kg)
Receptor

3) Exposure Medium
Air POE Conc (mg/m³) (1) / (2)

4) Exposure Multiplier
(IRxETxEFxED)x(BWxAT) (m³/kg-day)

5) Average Daily Intake Rate
(mg/kg-day) (3) X (4)

| Constituents of Concern | Surface Soil Conc (mg/kg) | On-Site Commercial | On-Site Commercial | On-Site Commercial | On-Site Commercial |
|-----------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|
| Acenaphthene | 0.0E+0 | 1.5E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 |
| Anthracene | 0.0E+0 | 1.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 |
| Benzene | 1.2E-2 | 1.4E+5 | 8.8E-8 | 7.0E-2 | 6.1E-9 |
| Dichlorobenzene (1,2) (-o) | 0.0E+0 | 1.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 |
| Dichlorobenzene, (1,4) (-p) | 0.0E+0 | 1.4E+5 | 0.0E+0 | 7.0E-2 | 0.0E+0 |
| Dichloroethane, 1,1- | 0.0E+0 | 1.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 |
| Dichloroethane, 1,2- | 0.0E+0 | 1.4E+5 | 0.0E+0 | 7.0E-2 | 0.0E+0 |
| Dichloroethene, cis-1,2- | 9.0E-2 | 1.4E+5 | 6.6E-7 | 2.0E-1 | 1.3E-7 |
| Ethylbenzene | 2.1E-2 | 1.4E+5 | 1.5E-7 | 2.0E-1 | 3.0E-8 |
| Fluoranthene | 2.9E+0 | 1.4E+5 | 2.1E-5 | 2.0E-1 | 4.1E-6 |
| Methylene chloride | 0.0E+0 | 1.4E+5 | 0.0E+0 | 7.0E-2 | 0.0E+0 |
| Naphthalene | 0.0E+0 | 1.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 |
| Phenanthrene | 3.9E+0 | 2.6E+5 | 1.5E-5 | 2.0E-1 | 2.9E-6 |
| Pyrene | 3.3E+0 | 3.8E+7 | 8.7E-8 | 2.0E-1 | 1.7E-8 |
| Tetrachloroethene | 0.0E+0 | 2.5E+5 | 0.0E+0 | 7.0E-2 | 0.0E+0 |
| Toluene | 1.9E-2 | 1.4E+5 | 1.4E-7 | 2.0E-1 | 2.7E-8 |
| Trichloroethane, 1,1,1- | 0.0E+0 | 1.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 |
| Trichloroethane, 1,1,2- | 0.0E+0 | 1.4E+5 | 0.0E+0 | 7.0E-2 | 0.0E+0 |
| Trichloroethene | 0.0E+0 | 1.4E+5 | 0.0E+0 | 7.0E-2 | 0.0E+0 |
| Xylene (mixed isomers) | 1.7E-1 | 1.4E+5 | 1.2E-6 | 2.0E-1 | 2.4E-7 |

NOTE ABS = Dermal absorption factor (dim)
AF = Adherence factor
AT = Averaging time (days)

BW = Body Weight (kg)
CF = Units conversion factor
ED = Exp. duration (yrs)

EF = Exposure frequency (days/yr)
ET = Exposure time (hrs/day)
IR = Intake rate (L/day or mg/day)

POE = Point of exposure
SA = Skin surface area (cm²)

RBCA SITE ASSESSMENT

Tier 1 Worksheet 8.1

Site Name: EBMUD Adeline Maintenance Center

Site Location: Oakland, CA

Completed By: David Glick

Date Completed: 11/24/1996

2 OF 6

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

AIR EXPOSURE PATHWAYS

(CHECKED IF PATHWAY IS ACTIVE)

SUBSURFACE SOILS: VAPOR

Exposure Concentration

TOTAL PATHWAY INTAKE (mg/kg-day)

INHALATION

1) Source Medium

2) NAF Value (m³/kg)

3) Exposure Medium

4) Exposure Multiplier

5) Average Daily Intake Rate

(Sum Intake values from surface & subsurface routes)

Receptor

Air POE Conc (mg/m³) (1) / (2)

(IR x ET x EF x ED) / (BW x AT) (m³/kg-day)

(mg/kg-day) (3) X (4)

Subsurface Soil

Conc (mg/kg)

On-Site Commercial

On-Site Commercial

On-Site Commercial

On-Site Commercial

On-Site Commercial

Constituents of Concern

| Constituents of Concern | Subsurface Soil Conc (mg/kg) | On-Site Commercial | On-Site Commercial | On-Site Commercial | On-Site Commercial | On-Site Commercial |
|-----------------------------|------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Acenaphthene | 0.0E+0 | 2.0E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 0.0E+0 |
| Anthracene | 0.0E+0 | 5.9E+4 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 0.0E+0 |
| Benzene | 4.3E-1 | 3.8E+4 | 1.1E-5 | 7.0E-2 | 7.8E-7 | 7.9E-7 |
| Dichlorobenzene (1,2) (-o) | 9.8E-2 | 1.4E+5 | 6.9E-7 | 2.0E-1 | 1.3E-7 | 1.3E-7 |
| Dichlorobenzene, (1,4) (-p) | 3.0E-2 | 1.8E+5 | 1.7E-7 | 7.0E-2 | 1.2E-8 | 1.2E-8 |
| Dichloroethane, 1,1- | 2.1E-1 | 3.8E+4 | 5.5E-6 | 2.0E-1 | 1.1E-6 | 1.1E-6 |
| Dichloroethane, 1,2- | 0.0E+0 | 3.8E+4 | 0.0E+0 | 7.0E-2 | 0.0E+0 | 0.0E+0 |
| Dichloroethene, cis-1,2- | 0.0E+0 | 3.8E+4 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 1.3E-7 |
| Ethylbenzene | 2.7E+0 | 3.8E+4 | 7.0E-5 | 2.0E-1 | 1.4E-5 | 1.4E-5 |
| Fluoranthene | 0.0E+0 | 1.7E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 4.1E-6 |
| Methylene chloride | 0.0E+0 | 3.8E+4 | 0.0E+0 | 7.0E-2 | 0.0E+0 | 0.0E+0 |
| Naphthalene | 0.0E+0 | 1.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 0.0E+0 |
| Phenanthrene | 0.0E+0 | 6.4E+5 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 2.9E-6 |
| Pyrene | 0.0E+0 | 2.6E+10 | 0.0E+0 | 2.0E-1 | 0.0E+0 | 1.7E-8 |
| Tetrachloroethene | 1.9E+0 | 5.7E+5 | 3.3E-6 | 7.0E-2 | 2.3E-7 | 2.3E-7 |
| Toluene | 2.4E+0 | 3.8E+4 | 6.3E-5 | 2.0E-1 | 1.2E-5 | 1.2E-5 |
| Trichloroethane, 1,1,1- | 5.4E-1 | 3.8E+4 | 1.4E-5 | 2.0E-1 | 2.8E-6 | 2.8E-6 |
| Trichloroethane, 1,1,2- | 0.0E+0 | 3.8E+4 | 0.0E+0 | 7.0E-2 | 0.0E+0 | 0.0E+0 |
| Trichloroethene | 8.7E+2 | 3.8E+4 | 2.3E-2 | 7.0E-2 | 1.6E-3 | 1.6E-3 |
| Xylene (mixed isomers) | 6.5E+0 | 3.8E+4 | 1.7E-4 | 2.0E-1 | 3.3E-5 | 3.3E-5 |

NOTE ABS = Dermal absorption factor (dim)
AF = Adherence factor
AT = Averaging time (days)

BW = Body Weight (kg)
CF = Units conversion factor
ED = Exp duration (yrs)

EF = Exposure frequency (days/yr)
ET = Exposure time (hrs/day)
IR = Intake rate (L/day or mg/day)

POE = Point of exposure
SA = Skin surface area (cm²)

RBCA SITE ASSESSMENT

Tier 1 Worksheet 8.1

Site Name EBMUD Adeline Maintenance Site Location: Oakland, CA

Completed By: David Glick

Date Completed 11/24/1996

3 OF 6

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

SOIL EXPOSURE PATHWAYS

(CHECKED IF PATHWAY IS ACTIVE)

SURFACE SOILS OR SEDIMENTS:

DERMAL CONTACT

Exposure Concentration

1) Source Medium

4) Exposure Multiplier

(SA*AF*ABS*CF*EF*ED)/(BW*AT) (1/day)

5) Average Daily Intake Rate

(mg/kg-day)

| Constituents of Concern | Surface Soil Conc (mg/kg) | On-Site Residential | On-Site Commercial | On-Site Residential | On-Site Commercial |
|-----------------------------|---------------------------|---------------------|--------------------|---------------------|--------------------|
| Acenaphthene | 0.0E+0 | | 2.3E-6 | | 0.0E+0 |
| Anthracene | 0.0E+0 | | 2.3E-6 | | 0.0E+0 |
| Benzene | 1.2E-2 | | 8.2E-6 | | 9.8E-8 |
| Dichlorobenzene (1,2) (-o) | 0.0E+0 | | 2.3E-5 | | 0.0E+0 |
| Dichlorobenzene, (1,4) (-p) | 0.0E+0 | | 8.2E-6 | | 0.0E+0 |
| Dichloroethane, 1,1- | 0.0E+0 | | 2.3E-5 | | 0.0E+0 |
| Dichloroethane, 1,2- | 0.0E+0 | | 8.2E-6 | | 0.0E+0 |
| Dichloroethene, cis-1,2- | 9.0E-2 | | 2.3E-5 | | 2.1E-6 |
| Ethylbenzene | 2.1E-2 | | 2.3E-5 | | 4.8E-7 |
| Fluoranthene | 2.9E+0 | | 2.3E-6 | | 6.6E-6 |
| Methylene chloride | 0.0E+0 | | 8.2E-6 | | 0.0E+0 |
| Naphthalene | 0.0E+0 | | 2.3E-6 | | 0.0E+0 |
| Phenanthrene | 3.9E+0 | | 2.3E-6 | | 8.9E-6 |
| Pyrene | 3.3E+0 | | 2.3E-6 | | 7.6E-6 |
| Tetrachloroethene | 0.0E+0 | | 8.2E-6 | | 0.0E+0 |
| Toluene | 1.9E-2 | | 2.3E-5 | | 4.3E-7 |
| Trichloroethane, 1,1,1- | 0.0E+0 | | 2.3E-5 | | 0.0E+0 |
| Trichloroethane, 1,1,2- | 0.0E+0 | | 8.2E-6 | | 0.0E+0 |
| Trichloroethene | 0.0E+0 | | 8.2E-6 | | 0.0E+0 |
| Xylene (mixed isomers) | 1.7E-1 | | 2.3E-5 | | 3.9E-6 |

NOTE ABS = Dermal absorption factor (dim)
AF = Adherence factor
AT = Averaging time (days)

BW = Body Weight (kg)
CF = Units conversion factor
ED = Exp. duration (yr*365) = Intake rate (L/day or mg/day)

EF = Exposure frequency (days/yr)
ET = Exposure time (hrs/day)

POE = Point of exposure
SA = Skin surface area (cm²)

RBCA SITE ASSESSMENT

Tier 1 Worksheet 8.1

Site Name: EBMUD Adeline Maintena Site Location: Oakland, CA

Completed By: David Glick

Date Completed: 11/24/1996

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TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

SOIL EXPOSURE PATHWAYS

■ (CHECKED IF PATHWAY IS ACTIVE)

SURFACE SOILS OR SEDIMENTS:

Exposure Concentration

TOTAL PATHWAY INTAKE (mg/kg-day)

INGESTION

1) Source Medium

4) Exposure Multiplier
(IRxCxEFxED)/(BWxAT) (1/day)

5) Average Daily Intake Rate
(mg/kg-day)

(Sum intake values from
dermal & ingestion routes.)

| Constituents of Concern | Surface Soil Conc (mg/kg) | On-Site Residential | | On-Site Commercial | | TOTAL PATHWAY INTAKE (mg/kg-day) | |
|-----------------------------|---------------------------|---------------------|--------------------|---------------------|--------------------|----------------------------------|--------------------|
| | | On-Site Residential | On-Site Commercial | On-Site Residential | On-Site Commercial | On-Site Residential | On-Site Commercial |
| Acenaphthene | 0.0E+0 | | 2.6E-6 | | 0.0E+0 | | 0.0E+0 |
| Anthracene | 0.0E+0 | | 2.6E-6 | | 0.0E+0 | | 0.0E+0 |
| Benzene | 1.2E-2 | | 9.2E-7 | | 1.1E-8 | | 1.1E-7 |
| Dichlorobenzene (1,2) (-o) | 0.0E+0 | | 2.6E-6 | | 0.0E+0 | | 0.0E+0 |
| Dichlorobenzene, (1,4) (-p) | 0.0E+0 | | 9.2E-7 | | 0.0E+0 | | 0.0E+0 |
| Dichloroethane, 1,1- | 0.0E+0 | | 2.6E-6 | | 0.0E+0 | | 0.0E+0 |
| Dichloroethane, 1,2- | 0.0E+0 | | 9.2E-7 | | 0.0E+0 | | 0.0E+0 |
| Dichloroethene, cis-1,2- | 9.0E-2 | | 2.6E-6 | | 2.3E-7 | | 2.3E-6 |
| Ethylbenzene | 2.1E-2 | | 2.6E-6 | | 5.4E-8 | | 5.3E-7 |
| Fluoranthene | 2.9E+0 | | 2.6E-6 | | 7.4E-6 | | 1.4E-5 |
| Methylene chloride | 0.0E+0 | | 9.2E-7 | | 0.0E+0 | | 0.0E+0 |
| Naphthalene | 0.0E+0 | | 2.6E-6 | | 0.0E+0 | | 0.0E+0 |
| Phenanthrene | 3.9E+0 | | 2.6E-6 | | 1.0E-5 | | 1.9E-5 |
| Pyrene | 3.3E+0 | | 2.6E-6 | | 8.5E-6 | | 1.6E-5 |
| Tetrachloroethene | 0.0E+0 | | 9.2E-7 | | 0.0E+0 | | 0.0E+0 |
| Toluene | 1.9E-2 | | 2.6E-6 | | 4.9E-8 | | 4.8E-7 |
| Trichloroethane, 1,1,1- | 0.0E+0 | | 2.6E-6 | | 0.0E+0 | | 0.0E+0 |
| Trichloroethane, 1,1,2- | 0.0E+0 | | 9.2E-7 | | 0.0E+0 | | 0.0E+0 |
| Trichloroethene | 0.0E+0 | | 9.2E-7 | | 0.0E+0 | | 0.0E+0 |
| Xylene (mixed isomers) | 1.7E-1 | | 2.6E-6 | | 4.4E-7 | | 4.3E-6 |

NOTE

ABS = Dermal absorption factor (dim)
AF = Adherence factor
AT = Averaging time (days)

BW = Body Weight (kg)
CF = Units conversion factor
ED = Exp. duration (yrs)

EF = Exposure frequency (days/yr)
ET = Exposure time (hrs/day)
IR = Intake rate (L/day or mg/day)

POE = Point of exposure
SA = Skin surface area (cm²)

Site Name: EBMUD Adeline Maintenance Center

Site Location: Oakland, CA

Completed By: David Glick

Date Completed: 11/24/1996

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TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

(CHECKED IF PATHWAY IS ACTIVE)

GROUNDWATER EXPOSURE PATHWAYS

SOIL: LEACHING TO GROUNDWATER
INGESTION

Exposure Concentration
1) Source Medium

Constituents of Concern

| Constituents of Concern | Soil Concentration (mg/kg) |
|-----------------------------|----------------------------|
| Acenaphthene | 0.0E+0 |
| Anthracene | 0.0E+0 |
| Benzene | 4.3E-1 |
| Dichlorobenzene (1,2) (-o) | 9.8E-2 |
| Dichlorobenzene, (1,4) (-p) | 3.0E-2 |
| Dichloroethane, 1,1- | 2.1E-1 |
| Dichloroethane, 1,2- | 0.0E+0 |
| Dichloroethene, cis-1,2- | 9.0E-2 |
| Ethylbenzene | 2.7E+0 |
| Fluoranthene | 2.9E+0 |
| Methylene chloride | 0.0E+0 |
| Naphthalene | 0.0E+0 |
| Phenanthrene | 3.9E+0 |
| Pyrene | 3.3E+0 |
| Tetrachloroethene | 1.9E+0 |
| Toluene | 2.4E+0 |
| Trichloroethane, 1,1,1- | 5.4E-1 |
| Trichloroethane, 1,1,2- | 0.0E+0 |
| Trichloroethene | 8.7E+2 |
| Xylene (mixed isomers) | 6.5E+0 |

| 2) NAF Value (L/kg) Receptor | 3) Exposure Medium Groundwater POE CONC (mg/L) (1)/(2) | 4) Exposure Multiplier (IR x EF x ED) / (BW x AT) (L/kg-day) | 5) Average Daily Intake Rate (mg/kg-day) |
|---------------------------------|--|---|---|
| On-Site Commercial | On-Site Commercial | On-Site Commercial | On-Site Commercial |
| 8.6E+2 | 0.0E+0 | 9.8E-3 | 0.0E+0 |
| 1.7E+3 | 0.0E+0 | 9.8E-3 | 0.0E+0 |
| 5.9E+0 | 7.3E-2 | 3.5E-3 | 2.6E-4 |
| 2.5E+2 | 3.9E-4 | 9.8E-3 | 3.8E-6 |
| 2.6E+2 | 1.2E-4 | 3.5E-3 | 4.0E-7 |
| 9.0E+0 | 2.3E-2 | 9.8E-3 | 2.3E-4 |
| 7.9E+0 | 0.0E+0 | 3.5E-3 | 0.0E+0 |
| 6.2E+0 | 1.4E-2 | 9.8E-3 | 1.4E-4 |
| 1.3E+1 | 2.1E-1 | 9.8E-3 | 2.0E-3 |
| 4.6E+3 | 6.3E-4 | 9.8E-3 | 6.2E-6 |
| 3.2E+0 | 0.0E+0 | 3.5E-3 | 0.0E+0 |
| 1.6E+2 | 0.0E+0 | 9.8E-3 | 0.0E+0 |
| 1.7E+3 | 2.3E-3 | 9.8E-3 | 2.2E-5 |
| 4.6E+3 | 7.2E-4 | 9.8E-3 | 7.0E-6 |
| 1.6E+4 | 1.2E-4 | 3.5E-3 | 4.2E-7 |
| 1.8E+1 | 1.4E-1 | 9.8E-3 | 1.3E-3 |
| 3.6E+1 | 1.5E-2 | 9.8E-3 | 1.5E-4 |
| 1.0E+0 | 0.0E+0 | 3.5E-3 | 0.0E+0 |
| 3.8E+0 | 2.3E+2 | 3.5E-3 | 7.9E-1 |
| 3.0E+1 | 2.1E-1 | 9.8E-3 | 2.1E-3 |

NOTE AT = Averaging time (days)

BW = Body Weight (kg)
CF = Units conversion factor
ED = Exp duration (yrs)

EF = Exposure frequency (days/yr)
IR = Intake rate (L/day)

POE = Point of exposure

RBCA SITE ASSESSMENT

Tier 1 Worksheet 8.2

Site Name EBMUD Adeline Maintenance Center

Site Location: Oakland, CA

Completed By: David Glick

Date Completed 11/24/1996

1 OF 3

TIER 1 PATHWAY RISK CALCULATION

AIR EXPOSURE PATHWAYS

■ (CHECKED IF PATHWAYS ARE ACTIVE)

| Constituents of Concern | (1) EPA Carcinogenic Classification | CARCINOGENIC RISK | | | TOXIC EFFECTS | | | |
|-----------------------------|-------------------------------------|--|---|-----------------------------------|--|---|--|---------------|
| | | (2) Total Carcinogenic Intake Rate (mg/kg/day) | (3) Inhalation Slope Factor (mg/kg-day) ⁻¹ | (4) Individual COC Risk (2) x (3) | (5) Total Toxicant Intake Rate (mg/kg/day) | (6) Inhalation Reference Dose (mg/kg-day) | (7) Individual COC Hazard Quotient (5) / (6) | |
| | | On-Site Commercial | | On-Site Commercial | On-Site Commercial | | On-Site Commercial | |
| Acenaphthene | | | | | 0.0E+0 | 6.0E-2 | 0.0E+0 | |
| Anthracene | D | | | | 0.0E+0 | 3.0E-1 | 0.0E+0 | |
| Benzene | A | 7.9E-7 | 2.9E-2 | 2.3E-8 | 2.2E-6 | 1.7E-3 | 1.3E-3 | |
| Dichlorobenzene (1,2) (-o) | D | | | | 1.3E-7 | 4.0E-2 | 3.4E-6 | |
| Dichlorobenzene, (1,4) (-p) | C | 1.2E-8 | 2.4E-2 | 2.8E-10 | 3.3E-8 | 2.3E-1 | 1.5E-7 | |
| Dichloroethane, 1,1- | C | | | | 1.1E-6 | 1.4E-1 | 7.5E-6 | |
| Dichloroethane, 1,2- | B2 | 0.0E+0 | 9.1E-2 | 0.0E+0 | 0.0E+0 | 2.9E-3 | 0.0E+0 | |
| Dichloroethane, cis-1,2- | D | | | | 1.3E-7 | 1.0E-2 | 1.3E-5 | |
| Ethylbenzene | D | | | | 1.4E-5 | 2.9E-1 | 4.8E-5 | |
| Fluoranthene | D | | | | 4.1E-6 | 4.0E-2 | 1.0E-4 | |
| Methylene chloride | B2 | 0.0E+0 | 1.6E-3 | 0.0E+0 | 0.0E+0 | 8.6E-1 | 0.0E+0 | |
| Naphthalene | D | | | | 0.0E+0 | 4.0E-3 | 0.0E+0 | |
| Phenanthrene | D | | | | 2.9E-6 | 4.0E-3 | 7.3E-4 | |
| Pyrene | D | | | | 1.7E-8 | 3.0E-2 | 5.7E-7 | |
| Tetrachloroethene | C-B2 | 2.3E-7 | 2.0E-3 | 4.7E-10 | | | | |
| Toluene | D | | | | 1.2E-5 | 1.1E-1 | 1.1E-4 | |
| Trichloroethane, 1,1,1- | D | | | | 2.8E-6 | 2.9E-1 | 9.6E-6 | |
| Trichloroethane, 1,1,2- | C | 0.0E+0 | 5.7E-2 | 0.0E+0 | | | | |
| Trichloroethene | | 1.6E-3 | 6.0E-3 | 9.5E-6 | | | | |
| Xylene (mixed isomers) | D | | | | 3.3E-5 | 2.0E+0 | 1.7E-5 | |
| | | Total Pathway Carcinogenic Risk = | | 9.5E-6 | 0.0E+0 | Total Pathway Hazard Index = | 2.3E-3 | 0.0E+0 |

RBCA SITE ASSESSMENT

Tier 1 Worksheet 8.2

Site Name: EBMUD Adeline Maintenance Center

Site Location: Oakland, CA

Completed By: David Glick

Date Completed: 11/24/1996

2 OF 3

TIER 1 PATHWAY RISK CALCULATION

SOIL EXPOSURE PATHWAYS

■ (CHECKED IF PATHWAYS ARE ACTIVE)

| Constituents of Concern | (1) EPA Carcinogenic Classification | CARCINOGENIC RISK | | | | | | TOXIC EFFECTS | | | |
|-----------------------------|-------------------------------------|--|--------------------|--------------------------|-----------------------------------|-------------------------------------|--|--------------------|-------------------------|--|--------------------|
| | | (2) Total Carcinogenic Intake Rate (mg/kg/day) | | (3) Oral Slope Factor | (4) Individual COC Risk (2) x (3) | | (5) Total Toxicant Intake Rate (mg/kg/day) | | (6) Oral Reference Dose | (7) Individual COC Hazard Quotient (5) / (6) | |
| | | On-Site Residential | On-Site Commercial | (mg/kg-day) ¹ | On-Site Residential | On-Site Commercial | On-Site Residential | On-Site Commercial | (mg/kg-day) | On-Site Residential | On-Site Commercial |
| Acenaphthene | D | | | | | | 0.0E+0 | 6.0E-2 | | 0.0E+0 | |
| Anthracene | D | | | | | | 0.0E+0 | 3.0E-1 | | 0.0E+0 | |
| Benzene | A | | 1.1E-7 | 2.9E-2 | | | 3.2E-9 | | | | |
| Dichlorobenzene (1,2) (-o) | D | | | | | | 0.0E+0 | 9.0E-2 | | 0.0E+0 | |
| Dichlorobenzene, (1,4) (-p) | C | | 0.0E+0 | 2.4E-2 | | | 0.0E+0 | 2.3E-1 | | 0.0E+0 | |
| Dichloroethane, 1,1- | C | | | | | | 0.0E+0 | 1.0E-1 | | 0.0E+0 | |
| Dichloroethane, 1,2- | B2 | | 0.0E+0 | 9.1E-2 | | | 0.0E+0 | | | | |
| Dichloroethene, cis-1,2- | D | | | | | | 2.3E-6 | 1.0E-2 | | 2.3E-4 | |
| Ethylbenzene | D | | | | | | 5.3E-7 | 1.0E-1 | | 5.3E-6 | |
| Fluoranthene | D | | | | | | 1.4E-5 | 4.0E-2 | | 3.5E-4 | |
| Methylene chloride | B2 | | 0.0E+0 | 7.5E-3 | | | 0.0E+0 | 6.0E-2 | | 0.0E+0 | |
| Naphthalene | D | | | | | | 0.0E+0 | 4.0E-3 | | 0.0E+0 | |
| Phenanthrene | D | | | | | | 1.9E-5 | 4.0E-3 | | 4.7E-3 | |
| Pyrene | D | | | | | | 1.6E-5 | 3.0E-2 | | 5.3E-4 | |
| Tetrachloroethene | C-B2 | | 0.0E+0 | 5.2E-2 | | | 0.0E+0 | 1.0E-2 | | 0.0E+0 | |
| Toluene | D | | | | | | 4.8E-7 | 2.0E-1 | | 2.4E-6 | |
| Trichloroethane, 1,1,1- | D | | | | | | 0.0E+0 | 9.0E-2 | | 0.0E+0 | |
| Trichloroethane, 1,1,2- | C | | 0.0E+0 | 5.7E-2 | | | 0.0E+0 | 4.0E-3 | | 0.0E+0 | |
| Trichloroethene | C | | 0.0E+0 | 1.1E-2 | | | 0.0E+0 | 6.0E-3 | | 0.0E+0 | |
| Xylene (mixed isomers) | D | | | | | | 4.3E-6 | 2.0E+0 | | 2.2E-6 | |
| | | Total Pathway Carcinogenic Risk = | | 0.0E+0 | 3.2E-9 | Total Pathway Hazard Index = | | 0.0E+0 | 5.9E-3 | | |

RBCA SITE ASSESSMENT

Tier 1 Worksheet 6 1

Site Name EBMUD Adeline Maintenance Center
 Site Location Oakland, CA

Completed By David Glick

Date Completed 11/24/1996

Target Risk (Class A & B) 1.0E-4

Target Risk (Class C) 1.0E-4

Target Hazard Quotient 1.0E+0

MCL exposure limit?

PEL exposure limit?

1 OF 1

Calculation Option. 1

**SURFACE SOIL RBSL VALUES
 (< 3 FT BGS)**

RBSL Results For Complete Exposure Pathways ("X" If Complete)

| CONSTITUENTS OF CONCERN | Representative Concentration | RBSL Results For Complete Exposure Pathways ("X" If Complete) | | | | | | | | | |
|-------------------------|------------------------------|---|------------------------------|----------------------|---------------------------|--|----------------------|----------------------|---------------------|--------------------------|--------------------|
| | | X | Soil Leaching to Groundwater | | | X Ingestion, Inhalation and Dermal Contact | | X | Construction Worker | Applicable RBSL | RBSL Exceeded? |
| CAS No. | Name | (mg/kg) | Residential (on-site) | Commercial (on-site) | Regulatory(MCL) (on-site) | Residential (on-site) | Commercial (on-site) | Commercial (on-site) | (mg/kg) | ■ If yes | Only if "yes" left |
| 83-32-9 | Acenaphthene | 0.0E+0 | NA | >Res | NA | NA | >Res | >Res | >Res | <input type="checkbox"/> | <1 |
| 120-12-7 | Anthracene | 0.0E+0 | NA | >Res | NA | NA | >Res | >Res | >Res | <input type="checkbox"/> | <1 |
| 71-43-2 | Benzene | 1.2E-2 | NA | 5.8E+0 | NA | NA | 3.6E+2 | >Res | 5.8E+0 | <input type="checkbox"/> | <1 |
| 95-50-1 | Dichlorobenzene (1,2) (-o) | 0.0E+0 | NA | 2.3E+3 | NA | NA | >Res | >Res | 2.3E+3 | <input type="checkbox"/> | <1 |
| 106-46-7 | Dichlorobenzene, (1,4) (-p) | 0.0E+0 | NA | 3.1E+2 | NA | NA | 4.3E+2 | >Res | 3.1E+2 | <input type="checkbox"/> | <1 |
| 75-34-3 | Dichloroethane, 1,1- | 0.0E+0 | NA | 9.2E+1 | NA | NA | 3.8E+3 | 3.3E+3 | 9.2E+1 | <input type="checkbox"/> | <1 |
| 107-06-2 | Dichloroethane, cis-1,2- | 0.0E+0 | NA | 2.5E+0 | NA | NA | 1.1E+2 | 2.3E+3 | 2.5E+0 | <input type="checkbox"/> | <1 |
| 156-59-2 | Dichloroethene, cis-1,2- | 9.0E-2 | NA | 6.4E+0 | NA | NA | 3.7E+2 | 2.9E+2 | 6.4E+0 | <input type="checkbox"/> | <1 |
| 100-41-4 | Ethylbenzene | 2.1E-2 | NA | 1.3E+2 | NA | NA | >Res | >Res | 1.3E+2 | <input type="checkbox"/> | <1 |
| 206-44-0 | Fluoranthene | 2.9E+0 | NA | >Res | NA | NA | >Res | >Res | >Res | <input type="checkbox"/> | <1 |
| 75-09-2 | Methylene chloride | 0.0E+0 | NA | 1.2E+1 | NA | NA | 1.4E+3 | 2.7E+3 | 1.2E+1 | <input type="checkbox"/> | <1 |
| 91-20-3 | Naphthalene | 0.0E+0 | NA | 6.4E+1 | NA | NA | >Res | >Res | 6.4E+1 | <input type="checkbox"/> | <1 |
| 85-01-8 | Phenanthrene | 3.9E+0 | NA | >Res | NA | NA | >Res | >Res | >Res | <input type="checkbox"/> | <1 |
| 129-00-0 | Pyrene | 3.3E+0 | NA | >Res | NA | NA | >Res | >Res | >Res | <input type="checkbox"/> | <1 |
| 127-18-4 | Tetrachloroethene | 0.0E+0 | NA | 8.8E+3 | NA | NA | 2.1E+2 | 6.4E+3 | 2.1E+2 | <input type="checkbox"/> | <1 |
| 108-88-3 | Toluene | 1.9E-2 | NA | 3.6E+2 | NA | NA | >Res | >Res | 3.6E+2 | <input type="checkbox"/> | <1 |
| 71-55-6 | Trichloroethane, 1,1,1- | 0.0E+0 | NA | 3.3E+2 | NA | NA | 3.5E+3 | 3.6E+3 | 3.3E+2 | <input type="checkbox"/> | <1 |
| 79-00-5 | Trichloroethane, 1,1,2- | 0.0E+0 | NA | 4.2E-1 | NA | NA | 1.8E+2 | >Res | 4.2E-1 | <input type="checkbox"/> | <1 |
| 79-01-6 | Trichloroethene | 0.0E+0 | NA | 2.4E+0 | NA | NA | >Res | >Res | 2.4E+0 | <input type="checkbox"/> | <1 |
| ##### | Xylene (mixed isomers) | 1.7E-1 | NA | >Res | NA | NA | >Res | >Res | >Res | <input type="checkbox"/> | <1 |

RBCA SITE ASSESSMENT

Tier 1 Worksheet 6.2

Site Name EBMJD Adeline Maintenance Center
 Site Location Oakland, CA

Completed By David Glick
 Date Completed 11/24/1995

1 OF 1

SUBSURFACE SOIL RBSL VALUES
 (> 3 FT BGS)

Target Risk (Class A & B) 1.0E-4
 Target Risk (Class C) 1.0E-4
 Target Hazard Quotient 1.0E+0

MCL exposure limit?
 PEL exposure limit?

Calculation Option: 1

RBSL Results For Complete Exposure Pathways ("X" If Complete)

| CAS No. | Name | Representative Concentration (mg/kg) | Soil Leaching to Groundwater | | | Soil Volatilization to Indoor Air | | Soil Volatilization to Outdoor Air | | Applicable RBSL (mg/kg) | RBSL Exceeded ? "■" If yes | Required CRF Only if "yes" left |
|-----------|-----------------------------|--------------------------------------|------------------------------|----------------------|---------------------------|-----------------------------------|----------------------|------------------------------------|----------------------|-------------------------|-------------------------------------|------------------------------------|
| | | | Residential (on-site) | Commercial (on-site) | Regulatory(MCL) (on-site) | Residential (on-site) | Commercial (on-site) | Residential (on-site) | Commercial (on-site) | | | |
| 83-32-9 | Acenaphthene | 0.0E+0 | NA | >Res | NA | NA | >Res | NA | >Res | >Res | <input type="checkbox"/> | <1 |
| 120-12-7 | Anthracene | 0.0E+0 | NA | >Res | NA | NA | >Res | NA | >Res | >Res | <input type="checkbox"/> | <1 |
| 71-43-2 | Benzene | 4.3E-1 | NA | 5.8E+0 | NA | NA | 7.8E-1 | NA | 3.3E+2 | 7.8E-1 | <input type="checkbox"/> | <1 |
| 95-50-1 | Dichlorobenzene (1,2) (-o) | 9.8E-2 | NA | 2.3E+3 | NA | NA | 1.1E+3 | NA | >Res | 1.1E+3 | <input type="checkbox"/> | <1 |
| 106-46-7 | Dichlorobenzene, (1,4) (-p) | 3.0E-2 | NA | 3.1E+2 | NA | NA | 3.9E+2 | NA | >Res | 3.1E+2 | <input type="checkbox"/> | <1 |
| 75-34-3 | Dichloroethane, 1,1- | 2.1E-1 | NA | 9.2E+1 | NA | NA | 6.5E+1 | NA | >Res | 6.5E+1 | <input type="checkbox"/> | <1 |
| 107-06-2 | Dichloroethane, 1,2- | 0.0E+0 | NA | 2.5E+0 | NA | NA | 2.6E+0 | NA | 5.6E+2 | 2.5E+0 | <input type="checkbox"/> | <1 |
| 156-59-2 | Dichloroethene, cis-1,2- | 0.0E+0 | NA | 6.4E+0 | NA | NA | 4.6E+0 | NA | >Res | 4.6E+0 | <input type="checkbox"/> | <1 |
| 100-41-4 | Ethylbenzene | 2.7E+0 | NA | 1.3E+2 | NA | NA | 1.3E+2 | NA | >Res | 1.3E+2 | <input type="checkbox"/> | <1 |
| 206-44-0 | Fluoranthene | 0.0E+0 | NA | >Res | NA | NA | >Res | NA | >Res | >Res | <input type="checkbox"/> | <1 |
| 75-09-2 | Methylene chloride | 0.0E+0 | NA | 1.2E+1 | NA | NA | 7.8E+1 | NA | >Res | 1.2E+1 | <input type="checkbox"/> | <1 |
| 91-20-3 | Naphthalene | 0.0E+0 | NA | 6.4E+1 | NA | NA | 1.1E+2 | NA | >Res | 6.4E+1 | <input type="checkbox"/> | <1 |
| 85-01-8 | Phenanthrene | 0.0E+0 | NA | >Res | NA | NA | >Res | NA | >Res | >Res | <input type="checkbox"/> | <1 |
| 129-00-0 | Pyrene | 0.0E+0 | NA | >Res | NA | NA | >Res | NA | >Res | >Res | <input type="checkbox"/> | <1 |
| 127-18-4 | Tetrachloroethene | 1.9E+0 | NA | 8.8E+3 | NA | NA | 1.5E+4 | NA | >Res | 8.8E+3 | <input type="checkbox"/> | <1 |
| 108-88-3 | Toluene | 2.4E+0 | NA | 3.6E+2 | NA | NA | 5.5E+1 | NA | >Res | 5.5E+1 | <input type="checkbox"/> | <1 |
| 71-55-6 | Trichloroethane, 1,1,1- | 5.4E-1 | NA | 3.3E+2 | NA | NA | 1.3E+2 | NA | >Res | 1.3E+2 | <input type="checkbox"/> | <1 |
| 79-00-5 | Trichloroethane, 1,1,2- | 0.0E+0 | NA | 4.2E-1 | NA | NA | 2.2E+0 | NA | >Res | 4.2E-1 | <input type="checkbox"/> | <1 |
| 79-01-6 | Trichloroethene | 8.7E+2 | NA | 2.4E+0 | NA | NA | 2.1E+1 | NA | >Res | 2.4E+0 | <input checked="" type="checkbox"/> | 3.7E+02 |
| 1330-20-7 | Xylene (mixed isomers) | 6.5E+0 | NA | >Res | NA | NA | >Res | NA | >Res | >Res | <input type="checkbox"/> | <1 |

RBCA SITE ASSESSMENT

Tier 1 Worksheet 6.3

Site Name: EBMUD Adefine Maintenance Center
 Site Location: Oakland, CA

Completed By: David Glick
 Date Completed: 11/24/1996

1 OF 1

GROUNDWATER RBSL VALUES

Target Risk (Class A & B) 1 0E-4
 Target Risk (Class C) 1 0E-4
 Target Hazard Quotient 1 0E+0

MCL exposure limit?
 PEL exposure limit?

Calculation Option: 1

RBSL Results For Complete Exposure Pathways ("x" if Complete)

| CAS No. | Name | Representative Concentration (mg/L) | Groundwater Ingestion | | | Groundwater Volatilization to Indoor Air | | Groundwater Volatilization to Outdoor Air | | Applicable RBSL (mg/L) | RBSL Exceeded ? | Required CRF |
|-----------|-----------------------------|-------------------------------------|-----------------------|----------------------|---------------------------|--|----------------------|---|----------------------|------------------------|--------------------------|--------------|
| | | | Residential (on-site) | Commercial (on-site) | Regulatory(MCL) (on-site) | Residential (on-site) | Commercial (on-site) | Residential (on-site) | Commercial (on-site) | | | |
| 83-32-9 | Acenaphthene | 0 0E+0 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |
| 120-12-7 | Anthracene | 0.0E+0 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |
| 71-43-2 | Benzene | 5.2E-2 | NA | NA | NA | NA | 1.4E+0 | NA | 3.6E+2 | 1.4E+0 | <input type="checkbox"/> | <1 |
| 95-50-1 | Dichlorobenzene (1,2) (-o) | 0 0E+0 | NA | NA | NA | NA | 9.4E+1 | NA | >Sol | 9.4E+1 | <input type="checkbox"/> | <1 |
| 106-46-7 | Dichlorobenzene, (1,4) (-p) | 0.0E+0 | NA | NA | NA | NA | 3.1E+1 | NA | >Sol | 3 1E+1 | <input type="checkbox"/> | <1 |
| 75-34-3 | Dichloroethane, 1,1- | 1 8E-2 | NA | NA | NA | NA | 6.1E+1 | NA | >Sol | 6.1E+1 | <input type="checkbox"/> | <1 |
| 107-06-2 | Dichloroethane, 1,2- | 0.0E+0 | NA | NA | NA | NA | 6.6E+0 | NA | 1 2E+3 | 6.6E+0 | <input type="checkbox"/> | <1 |
| 156-59-2 | Dichloroethene, cis-1,2- | 0 0E+0 | NA | NA | NA | NA | 2.2E+0 | NA | 6.6E+2 | 2.2E+0 | <input type="checkbox"/> | <1 |
| 100-41-4 | Ethylbenzene | 8.5E-3 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |
| 206-44-0 | Fluoranthene | 0.0E+0 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |
| 75-09-2 | Methylene chloride | 1 8E-3 | NA | NA | NA | NA | 1.9E+2 | NA | >Sol | 1 9E+2 | <input type="checkbox"/> | <1 |
| 91-20-3 | Naphthalene | 0 0E+0 | NA | NA | NA | NA | 1.3E+1 | NA | >Sol | 1.3E+1 | <input type="checkbox"/> | <1 |
| 85-01-8 | Phenanthrene | 0 0E+0 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |
| 129-00-0 | Pyrene | 0 0E+0 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |
| 127-18-4 | Tetrachloroethene | 2 8E-3 | NA | NA | NA | NA | 3 5E+1 | NA | >Sol | 3 5E+1 | <input type="checkbox"/> | <1 |
| 108-88-3 | Toluene | 2 7E-2 | NA | NA | NA | NA | 9.2E+1 | NA | >Sol | 9 2E+1 | <input type="checkbox"/> | <1 |
| 71-55-6 | Trichloroethane, 1,1,1- | 1.7E-3 | NA | NA | NA | NA | 1.1E+2 | NA | >Sol | 1.1E+2 | <input type="checkbox"/> | <1 |
| 79-00-5 | Trichloroethane, 1,1,2- | 0 0E+0 | NA | NA | NA | NA | 2.1E+1 | NA | 3.1E+3 | 2.1E+1 | <input type="checkbox"/> | <1 |
| 79-01-6 | Trichloroethene | 2 6E-3 | NA | NA | NA | NA | 1 5E+1 | NA | >Sol | 1 5E+1 | <input type="checkbox"/> | <1 |
| 1330-20-7 | Xylene (mixed isomers) | 5.8E-2 | NA | NA | NA | NA | >Sol | NA | >Sol | >Sol | <input type="checkbox"/> | <1 |