

SOIL AND GROUNDWATER INVESTIGATION

American President Lines Terminal 1395 Middle Harbor Road Port of Oakland Oakland, California

Prepared for

Port of Oakland 530 Water Street Oakland, California

April 1993 Project No. 2026

Geomatrix Consultants



May 10, 1993

Ms. Jennifer Eberle Hazardous Materials Division Department of Environmental Health Alameda County Health Services Agency 80 Swan Way, Room 200 Oakland, CA 94621

SUBJECT: American President Lines (APL), Berth 60-63, Port of Oakland, Oakland, California

Dear Ms. Eberle:

Enclosed, you will find a copy of the Soil and Groundwater Investigation, American President Lines Terminal, 1395 Middle Harbor Road, Port of Oakland, Oakland, California. The report was completed by Geomatrix Consultants for the Port of Oakland. Four Underground Storage Tanks (USTs), two diesel, one gasoline and one waste oil, were removed from this site between 6 January and 4 March 1992. The sampling and analysis for this report was conducted in accordance with the workplan prepared by Geomatrix dated October 1992.

Please call me at (510)-272-1184 if you have any comments or questions.

/ Jon Amdur

Sincerely,

Environmental Scientist

cc: Mr. Rich Hiett, SFRWQCB, 2101 Webster Street, 5th Floor, Oakland, CA 94612 enclosure\

4721 Tidewater Avenue, Suite C Oakland, CA 94614 (510) 535-2445 • FAX (510) 535-2408



29 April 1993 Project 2026

Mr. Jon Amdur Port of Oakland 530 Water Street Oakland, California 94607

Subject:

Soil and Groundwater Investigation American President Lines Terminal

1395 Middle Harbor Road

Port of Oakland Oakland, California

Dear Mr. Amdur:

Enclosed is the Soil and Groundwater Investigation report for the subject site. The report presents the results of sampling and analyses conducted at the subject site in accordance with our October 1992 Work Plan.

We appreciate the opportunity to continue to provide our consulting services to the Port of Oakland. If you have any questions about this report or require further information, please contact either of the undersigned.

Sincerely,

GEOMATRIX CONSULTANTS, INC.

Elizabeth K. Wells, P.E. Project Engineer

EKW/SEG/lam 2026/2026SAGI-LTR

Enclosure

Sally E. Goodin, R.G. Senior Geologist



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SOIL AND GROUNDWATER INVESTIGATION

American President Lines Terminal 1395 Middle Harbor Road Port of Oakland Oakland, California

1.0 INTRODUCTION

This report presents the results of field activities conducted to assess the lateral extent of soil affected by petroleum hydrocarbons and volatile organic compounds and to assess groundwater quality in the vicinity of the former underground storage tanks at the American President Lines (APL) Terminal, 1395 Middle Harbor Road, at the Port of Oakland (Port), Oakland, California (Figure 1). The work was conducted in response to the 13 November 1992 Alameda County Health Care Services Agency letter to the Port. The work was performed on behalf of the Port by Geomatrix Consultants, Inc. (Geomatrix), in accordance with our 30 December 1992 scope of services. This report presents site background information, a summary of field activities, analytical results, and our conclusions and recommendations.

2.0 BACKGROUND

Four underground storage tanks were removed from the site between 6 January and 4 March 1992. It is unknown when the tanks were installed. Until removal in 1992, two tanks were used to store diesel (one 10,000-gallon capacity fiberglass and one 5,000-gallon capacity steel), one tank was used to store gasoline (1,000-gallon capacity fiberglass), and one tank was used to store waste oil (550-gallon capacity steel). Observations of the tanks upon removal indicated that the diesel tanks contained no holes, the gasoline tank was punctured during removal, and the waste oil tank contained several small holes. In addition, free-phase petroleum product was observed floating on the groundwater in the tank excavation.



Approximately 300 cubic yards of soil containing petroleum hydrocarbons and halogenated volatile organic compounds (VOCs) were excavated. The soil was then aerated on site to remove halogenated VOCs and subsequently transported off site to the Port's bioremediation facility for treatment. Soil samples collected from the excavation indicated that soil in the northern, western, and southern portions of the tank excavation contained petroleum hydrocarbons and halogenated VOCs. Some of the affected soil was left in place due to physical obstructions preventing further excavation. A grab groundwater sample collected from the tank excavation contained elevated concentrations of VOCs. Details of the tank removal, excavation, and sampling activities are presented in Geomatrix's "Underground Storage Tank Removal Report", dated June 1992.

3.0 FIELD ACTIVITIES

Field activities conducted as part of this investigation included drilling and compline coil borings, installing and developing monitoring wells, measuring water levels, and sampling translature. These activities are described below.

Geomatrix obtained a drilling and well installation permit from the Alameda County Flood Control and Water Conservation District before drilling began. A copy of the permit is included in Appendix A. Boring and monitoring well locations were cleared for underground utilities before drilling by Cruz Brothers of Milpitas, California. Drilling, well installation, and well development were performed between 18 January and 4 February 1993 by Gregg Drilling and Testing, Inc. (Gregg), of Pacheco, California, under the observation of a Geomatrix field engineer. Drilling, sampling, and well construction and development activities were conducted in accordance with Geomatrix protocols.

All down-hole equipment (augers, samplers, rods, etc.) was either steam-cleaned or washed with Alconox detergent and rinsed with municipal water before being advanced into



boreholes or wells. Soil cuttings and development and purge water from the boreholes and wells were placed in 55-gallon drums and stored temporarily on site.

3.1 SOIL BORINGS

To further assess the extent of petroleum hydrocarbons and VOCs in the vicinity of the former tank excavation, eleven exploratory soil berings were drilled to an approximate depth of ten feet below ground surface. Boring locations are shown on Figure 3. Drilling was conducted using a Mobil B53 drill rig with 6.5 and 8-inch outside diameter (O.D.) hollow-stem augers. The borings were continuously cored using a 5-foot continuous core barrel or sampled using an 18-inch split-spoon drive sampler, depending on field conditions. Soil samples were collected by the field engineer for visual soil classification and for chemical analysis. Lithologic logs were made in the field. The lithologic logs are presented in Appendix B.

Soil samples for chemical analysis generally were collected from immediately above the water table, and at a depth of 5 feet below the water table when soil recovery permitted. Samples were collected in clean, brass liners, which were sealed with Teflon sheeting, plastic end caps, wrapped with duct tape, and then stored in an ice-cooled chest. The samples were delivered to Clayton Environmental Consultants (Clayton), of Pleasanton, California, a state-certified analytical laboratory, under Geomatrix chain-of-custody procedures. Chain-of-custody records are included in Appendix C. Harman Laboratory and the field readings using a photon in the consultants (PID) during drilling.

Completed boreholes that were not converted to monitoring wells were grouted to ground surface using a high-solids bentonite grout. Boring locations were surveyed for horizontal control by the Port's survey department.



3.2 MONITORING WELL INSTALLATION AND DEVELOPMENT

Three of the eleven soil borings, one in the assumed upgradient direction and two in the assumed downgradient direction from the tank excavation, were converted to monitoring wells. Well locations are shown on Figure 2. The monitoring wells were drilled to a maximum depth of 11.5 feet, and screened between the depths of 3 and 10 feet. The wells were constructed using 2-inch-diameter, flush-threaded, schedule-40 polyvinyl chloride (PVC) casing and with a 0.01-inch slot size factory slotted PVC screen. The annulus was backfilled with Lonestar #0/30 quartz sand filter pack from the base of the boring to one-half foot above the slotted screen section. Two to four inches of 3/8-inch bentonite pellets were placed as a seal above the filter pack, and the remaining annulus was backfilled with a neat cement grout to provide protection from surface water runoff. A locking cap and traffic-rated Christy Box were placed over the monitoring well at the ground surface. Following well completion, the well casings were surveyed by the Port to establish their locations and top-of-casing elevations. Well construction details are presented in Appendix B.

After allowing the well seals to set for 72 hours, Gregg developed the wells using surging and bailing methods under the observation of a Geomatrix field engineer. During development, a surge block was used to pull in sediment that may have accumulated in the filter pack during well installation, to consolidate the filter pack around the well screen, and to enhance the hydraulic connection between the water-bearing zone and the well. A stainless steel bailer was then used to remove the sediment that had accumulated in the bottom of the well and to remove water standing inside the well. This procedure was repeated until the produced groundwater was visually clear and the temperature, pH, and conductivity measurements had stabilized.

3.3 WATER-LEVEL MEASUREMENTS

On 8 March 1993, water levels were measured in the three monitoring wells to determine the direction of the horizontal hydraulic gradient beneath the site. Water levels were



measured at both low and high tides to evaluate tidal effects, if any. Water-levels were measured to the nearest 0.01 foot using a steel tape.

3.4 GROUNDWATER SAMPLING

On 5 February 1993, a groundwater sample was collected from each of the newly installed monitoring wells for chemical analysis. To obtain samples representative of groundwater beneath the site, the wells were purged until temperature, pH, and conductivity had stabilized. A minimum of four casing volumes were purged. The samples were collected using a clean disposable plastic bailer lowered to the approximate mid-point of the screened interval. The sample was decanted from the bailer directly into the appropriate container. After samples were collected and labeled, they were stored in an ice-cooled chest. Groundwater samples were delivered under Geomatrix chain-of-custody procedures to Clayton. Chain-of-custody records are included in Appendix D.

4.0 RESULTS

The results of the investigation are presented in this section. The stratigraphy in the vicinity of the tank excavation area is discussed in Section 4.1; the occurrence and movement of groundwater are discussed in Section 4.2; the analytical results of the soil sampling are presented in Section 4.3; the analytical results of the groundwater sampling are presented in Section 4.4.

4.1 STRATIGRAPHY

The lithologic data collected from the soil borings advanced in the tank excavation area generally indicate that the site is underlain by 3 to 6 feet of fill consisting of silty sand and gravel, which is underlain by approximately 1 to 10 feet of sand. The sand is underlain by either an organic soil or a lean clay (Bay Mud) to the maximum depth of the borings (15.5 feet). Ground water was ensuranced during drilling at depths of 3.5 to 6.5 feet below ground surface.



4.2 OCCURRENCE AND MOVEMENT OF GROUNDWATER

At low tide on 8 March 1993, water levels in monitoring wells MW-1, MW-2, and MW-3 were measured at elevations of 7.07, 6.58, and 6.76 feet Moon Low Low Water Port Gattons (MLLW; Jim Baker, Port of Oakland, personal communication, March 1993), respectively (Figure 3). This indicates that the horizontal hydraulic gradient is oriented toward the southwest. Water-levels elevations in monitoring wells MW-1, MW-2, and MW-3 at high. tide were 7.08, 6.69, and 6.98 feet MLLW, respectively. These high tide elevations indicate a horizontal hydraulic gradient oriented toward the west-sections.

4.3 SOIL ANALYTICAL RESULTS

Soil samples were analyzed for the compounds that were detected at elevated concentrations in the tank excavation. These include total petroleum hydrocarbons as gasoline (TPHg) by modified U.S. Environmental Protection Agency (EPA) Method 8015; total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015; total oil and grease (TOG) by Standard Method 5520E and F; benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020; and halogenated VOCs by EPA method 8010. In addition, samples from boring B-3, the boring closest to the former waste oil tank location, also was analyzed by EPA Method 8270. Analytical results of the soil samples are summarized in Table 1.

milligrams per kilogram (mg/kg). A concentration of 710 mg/kg was detected in the soil sample from B-4 collected at a depth of 4 feet; the concentration decreased to 110 mg/kg in the sample collected from a depth of 10 feet. TPHg was reported in 8 of 16 samples analyzed at concentrations of 0.3 to 480 mg/kg. TPHg was detected at a concentration greater than 100 mg/kg only in the sample from B-4 collected at a depth of 4 feet. Clayton characterized samples from a depth of 4 feet from borings B-1, B-2, B-3, B-4, and B-6 as weathered gasoline. TPHG was detected at a concentration up to 120 mg/kg. TPHd was detected at a concentration greater than 100 mg/kg only in the sample from B-4 collected at a depth of 4 feet. BTEX were detected at a maximum

& UG



concentration of 0.14, 2.9, 4.8, and 22 mg/kg, respectively. Halogenated VOCs by EPA Method 8010 were not detected in any of the samples. The two samples collected from boring B-3, closest to the former waste oil tank, contained no detectable semi-volatile organic compounds when analyzed by EPA Method 8270.

In summary, elevated concentration of TPH as diesel and TPH as gasoline were observed only in the soil samples from a depth of 4 feet in boring B-4. TOG was detected at concentrations greater than 100 mg/kg in samples B-2 (at a depth of 4 feet), B-4 (at a depths of 4 and 10.5 feet), and B-10 (at a depth of 5.5 feet).

4.4 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples were analyzed for TPHg by modified U.S. EPA Method 8015; TPHd by EPA Method 8015; TOG by Standard Method 5520C and F; halogenated VOCs by EPA Method 8010; and BTEX by EPA Method 8020. In addition, each sample was analyzed for total dissolved solids to assess the general groundwater quality. Copies of the analytical laboratory reports are included in Appendix B. Analytical results of groundwater samples are summarized in Table 2.

TPHg, TPHd, and TOG were detected in the sample from monitoring well MW-1, the upgradient well, at concentrations of 1,800, 4,700, and 5,000 micrograms per liter (μ g/l), respectively. BTEX were detected in the sample from MW-1 at concentrations of 9.2, 1.6, 8.9, and 2.7 μ g/l, respectively. The only VOC detected in the sample from MW-1, 1,1-dichloroethane (DCA), was reported at a concentration of 0.8 μ g/l. The groundwater sample from monitoring well MW-2, downgradient of the tank excavation, contained TPHd and TOG at concentrations of 840 and 2,000 μ g/l, respectively. TPHg, BTEX, and VOCs were not detected in the sample from MW-2. The groundwater sample from monitoring well MW-3, also downgradient of the former tank excavation, contained TPHd and TOG at concentrations of 3,400 and 2,000 μ g/l, respectively. BTEX were detected in the sample from MW-3 at concentrations of 2.1, 0.9, 1.7, and 3.1 μ g/l respectively. Cis-1,2-



dichloroethylene (DCE), the only VOC detected in the sample from MW-3, was reported at a concentration of 0.4 μ g/l. TPHg was not detected in the sample from MW-3. Total dissolved solids were reported at concentrations of 3,000, 23,000, and 1,600 milligrams per liter (mg/l) in MW-1, MW-2, and MW-3, respectively.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Soil analytical results indicate that soil containing petroleum hydrocarbon concentrations greater that 100 mg/kg extends to the west of the former excavation and is not fully defined in the westerly direction. Affected soil may extend under the APL Terminal building.

Affected soil is generally located downgradient of the former APL tank excavations, west of boring B-6. Soil affected by BTEX is generally located above the water table (BTEX in downgradient of the former APL tank excavations, and to the west of boring B-6.

On 8 March 1993, the horizontal hydraulic gradient was oriented to the southwest.

Groundwater analytical results indicate upgradient monitoring well MW-1 contains elevated concentrations of TPHg, TPHd, TOG, and benzene. Affected groundwater at the MW-1 location is considered unlikely to be associated with the former underground storage tanks at APL. Groundwater from the downgradient monitoring wells MW-2 and MW-3 also contain elevated concentrations of TPHd, TOG, and benzene; however, the concentrations in MW-2 and MW-3 are less than those in MW-1. Affected groundwater at MW-2 and MW-3 locations may be associated with the former APL underground storage tanks.

We recommend continued quarterly groundwater monitoring in the three on site wells. Following the fourth quarterly sampling event, the water-level elevation data and the groundwater analytical data will be evaluated and recommendations for future action, if necessary, will be made.



TABLE 1

SUMMARY OF COMPOUNDS DETECTED IN SOIL SAMPLES

American President Lines Terminal 1395 Middle Harbor Road Port of Oakland Oakland, California

Concentrations in parts per million (mg/kg)

| B-1 4 1.6(a) ND ND | ND | ND | 0.011 | | | 8270 |
|----------------------|-------|-------|-------|-------|----|------|
| | | | 0.011 | 0.013 | ND | 1084 |
| | | | | | | |
| B-2 4 8(a) 7 | ND | 0.08 | 0.06 | 0.16 | ND | |
| B-2 9 ND ND ND | ND | ND | ND | ND | ND | - |
| | | | | | | |
| B-3 4 1.4(a) ND ND | ND | 0.007 | ND | 0.006 | ND | ND |
| B-3 10.5 ND ND 60 | 0.007 | ND | ND | ND | ND | ND |
| | | | | | | |
| B-4 4 489(x) 120 710 | | 2.9 | 4.8 | 22 | ND | ** |
| B-4 10.5 0.5 12 110 | ND | ND | ND | ND | ND | |
| | | | | | | |
| B-5 6.5 ND ND ND | ND | ND | ND | ND | ND | :#5 |
| B-5 11.5 ND ND ND | ND | ND | ND | ND | ND | |
| | | | | | | |
| B-6 4 11(a) 10 ND | ND | 0.011 | 0.035 | 0.11 | ND | 594 |
| • • | | | | | | |
| B-7 3.5 0.3 ND ND | ND | 0.007 | ND | 0.02 | ND | 922 |

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Page 1 of 2



TABLE 1
SUMMARY OF COMPOUNDS DETECTED IN SOIL SAMPLES

Page 2 of 2

| Boring No. | Sample Depth (feet) | TPH as Gasoline | TPH as Diesel | Total Oil and Grease | Benzene | Toluene | Ethylbenzene | Total Xylenes | EPA Method 8010 | EPA Method 8270 |
|---------------|---------------------------|--------------------|------------------|-------------------------|---------|---------|--------------|------------------|--------------------|--------------------|
| B-7 | 12 | ND | ND | ND | ND | ND | ND | ND | ND | 22 |
| B-8 | 6 | ND | 25 | ND | ND | ND | ND | ND | ND | *** |
| B-8A | 11 | ND | ND | ND | ND | ND | ND | ND | ND | 225 |
| B-10 | 5.5 | ND | ND | 140 | ND | ND | ND | ND | ND | - |
| B-11 | 6 | 3.9 | ND | ND | ND | 0.034 | 0.015 | 0.022 | ND | |

Notes:

2. TPH = total petroleum hydrocarbons

ND = not detected at or above detection limit

not analyzed

(a) = Clayton Environmental Consultants noted that the petroleum hydrocarbon detected appears to be weathered gasoline

^{1.} Samples collected by Geomatrix Consultants, Inc. and analyzed by Clayton Environmental Consultants of Pleasanton, California, for TPH as gasoline by modified EPA Method 8015; TPH as diesel by EPA Method 8015; total oil and grease by Standard Method 5520 E and F; and benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8020. No soil samples from boring B-9 were collected for chemical analysis.



TABLE 2

SUMMARY OF COMPOUNDS DETECTED IN GROUNDWATER SAMPLES

American President Lines Terminal 1395 Middle Harbor Road Port of Oakland Oakland, California

Concentrations in parts per billion (µg/l)

| Well No. | TPH as Gasoline | TPH as Diesel | Total Oil and Grease | Benzene | Toluene | Ethylbenzene | Total Xylenes | EPA Method 8010 |
|----------|--------------------|---------------|-------------------------|---------|---------|--------------|---------------|-----------------|
| MW-1 | 1,800 | 4,700 | 5,000 | 9.2 | 1.6 | 8.9 | 2.7 | 1,1-DCA 0.8 |
| MW-2 | ND | 840 | 2,000 | ND | ND | ND | ND | ND |
| MW-3 | ND | 3,400 | 2,000 | 2.1 | 0.9 | 1.7 | 3.1 | Cis-1,2-DCE 0.4 |

Notes:

Samples collected by Geomatrix Consultants, Inc. and analyzed by Clayton Environmental Consultants of Pleasanton, California, for TPH as gasoline by modified EPA Method 8015; TPH as diesel by EPA Method 8015; total oil and grease by Standard Method 5520 C and F; benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8020; and halogenated volatile organic compounds by EPA Method 8010. Samples also analyzed for total dissolved solids (TDS) by EPA Method 160.1; samples from monitoring wells MW-1, MW-2, and MW-3 contained 3,000, 23,000, and 1,600 milligrams per liter (ppm) TDS, respectively.

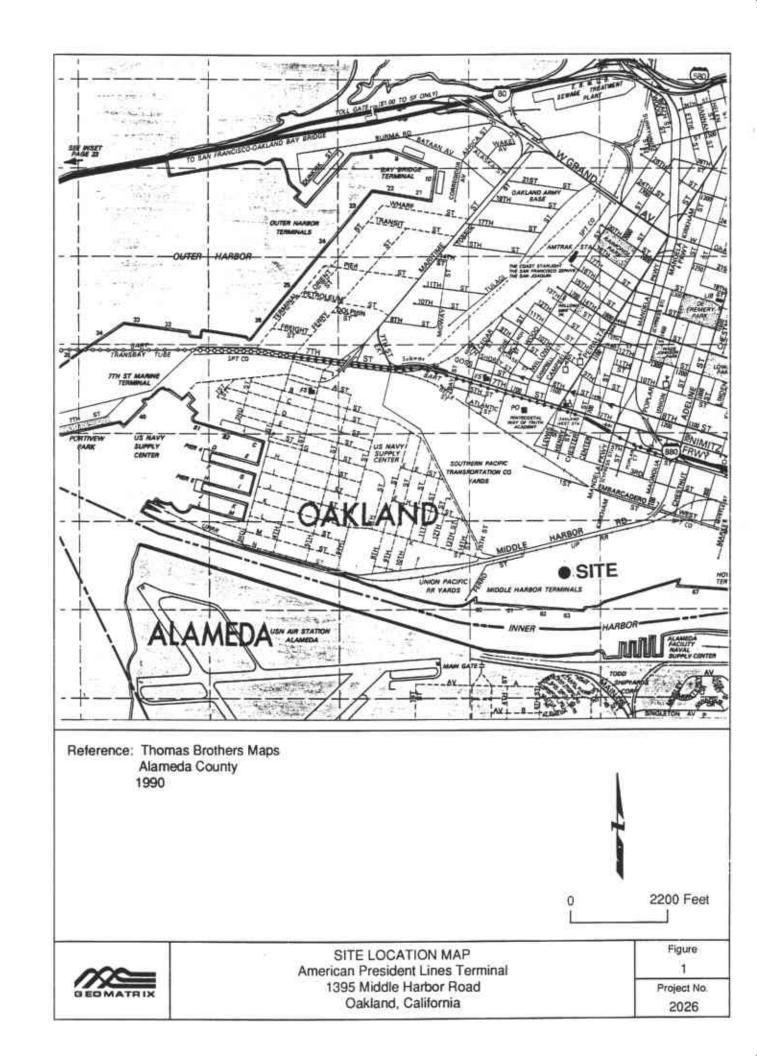
2. TPH = total petroleum hydrocarbons

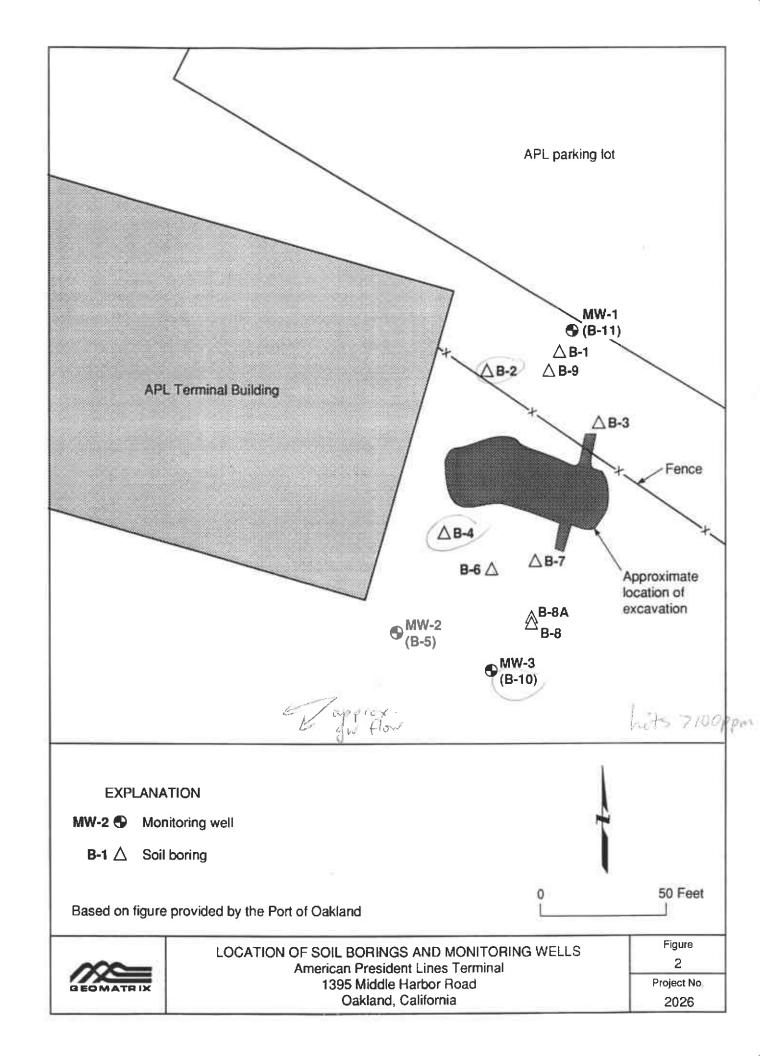
ND = not detected at or above detection limit

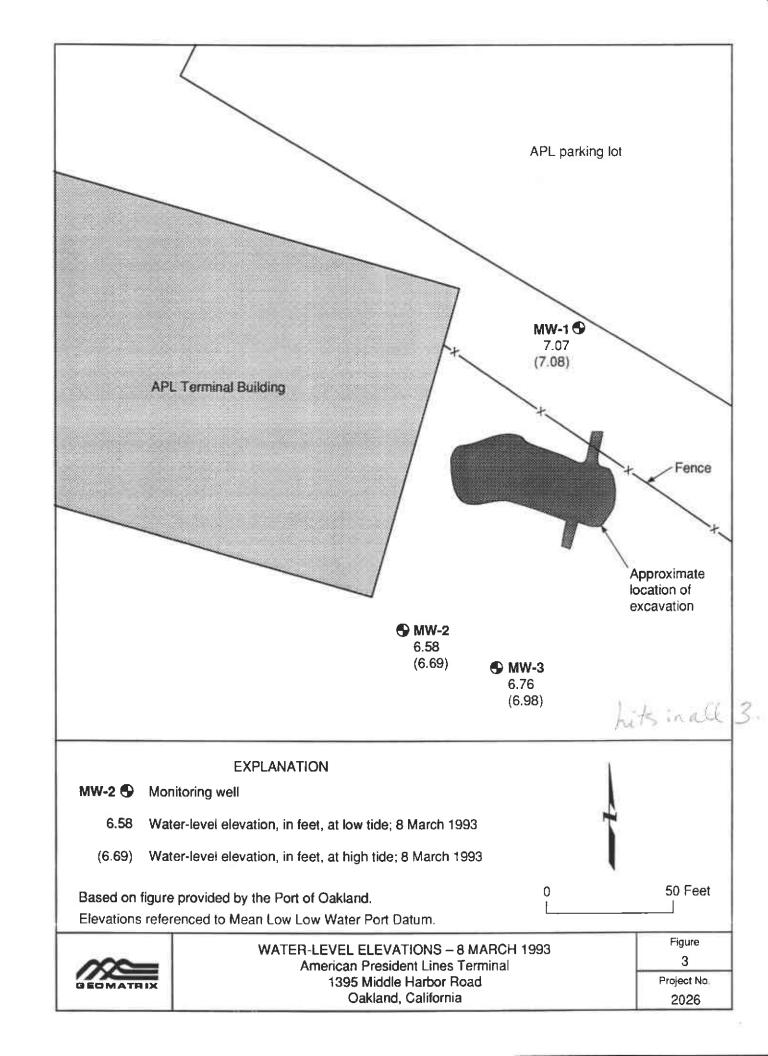
3. Total Dissolved Solids reported in parts per million (mg/l).

2026\2026SAGI.TB2

Page 1 of 1









APPENDIX A DRILLING PERMIT



SIGNATURE

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600 FAX (510) 462-3914

DRILLING PERMIT APPLICATION

| FOR APPLICANT TO COMPLETE | FOR OFFICE USE |
|---|---|
| LOCATION OF PROJECT APL Terminal | PERMIT NUMBER 93001 LOCATION NUMBER |
| Octions Ch | EGGN HOLL (TOWNER) |
| CLIENT Nama Port of Ogkland Address 530 Water Start Phone (510) 222 - 1184 City Ogkland Zip 9460-7 | PERMIT CONDITIONS Circled Permit Requirements Apply |
| APPLICANT Name Jams Abita Geometria Consultants, Tal. Address 120 Pine St. 15th Fl. Phone (415) 434-9400 City Saa Francisco | A. GENERAL. 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. 2. Submit to Zone 7 within 60 days after completion of permitted |
| TYPE OF PROJECT Well Construction Cathodic Protection Water Supply Monitoring Geotechnical Investigation General Contamination Well Destruction | work the eriginal Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location akerch for geotechnical projects. S. Permit is void if project not begun within 90 days of approval date. B. WATER WELLS, INCLUDING PIEZOMETERS |
| PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation DRILLING METHOD: | Minimum surface seal thickness is two inches of coment grout placed by tremis. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for |
| Mud Rotary Air Rotary Auger | monitoring wells is the maximum depth practicable or 20 feet. C. GEOTECHNICAL. Backill bore hole with compacted outlings or heavy bentonite and upper two feet with compacted material, in |
| WELL PROJECTS | areas of known or suspected contamination, trained cament grout shall be used in piace of compacted outlings. D. CATHODIC. Fill hole above enode zone with concrete placed by |
| Orill Hole Diameter B In, Maximum Casing Diameter L In. Depth 2.5 ft. Surface Seal Depth a.5 ft. Number 3 | tremie. E. WELL DESTRUCTION. See attached. |
| GEOTECHNICAL PROJECTS Number of Sorings 11 Hole Diameter 8 in. Depth 20 ft. | |
| ESTIMATED COMPLETION DATE 18 January 1913 | Annews Warman Abona |
| I hereby agree to comply with all requirements of this permit and Alameda County Ordinanca No. 73-68. | Approved //////////////////////////////////// |
| APPLICANTS () | V |

Date | 4 17



APPENDIX B LITHOLOGIC LOGS AND WELL CONSTRUCTION DETAILS

| PROJ | ECT: | 139 | 95 Mid | | bor Road | Bori | ng I | Log E | x | olanati | on Sheet |
|-----------------|---------------|-------|-------------------|---------------------------------------|--|---|---------------------------|--|-----------|-------------|------------------|
| BORII | NG LO | | rt of Oa TION: | DURINE | ······································ | ELEVATIO | NA NO | D DATUN | A: | | |
| | | | ITRAC | TOR: | | DATE STA | ARTE | 5 : | | DATE FINI | ISHED: |
| | | | HOD: | | | TOTAL DE | РТН: | | | MEASURII | NG POINT: |
| | | | IIPME | NT. | | DEPTH TO | 0 | FIRST | | COMPL. | 24 HRS. |
| | | | THOD | | | WATER LOGGED | BY: | <u>i </u> | | 1 | |
| HAMI | | | | · · · · · · · · · · · · · · · · · · · | DROP: | RESPON | SIBLE | PROFES | SIC | NAL: | REG. NO. |
| | 1 04 | MD | | _1 | | | | | T | | <u>i</u> |
| DEPTH (feet) | Sample No. | m pie | }8.65 36.65 | OVM Reading | DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cen | nentation, react. | w/HCl, | geo. inter. | | R | EMARKS |
| | <u>₩</u> ~ | Š | 黃正 | Ē. | Surface Elevation: | | | | \exists | | ··· |
| | B1-4 | | | | Soil descriptions are in accordance with the by ASTM D2488-90 "Standard Practice for Identification of Soils (Visual-Manual Proceducentification of Soils Soil Strata represent approach of the Soil Interval of Interval of Soil Compounds of Soil Interval of Interval Interval of Interval of Interval Inte | Description dure)." Solor Charant inferred may be a sproximate als. arts per meanify indicate point indicate | t. dabrupe illion. cative | e of | | | B-1-Expl (11/92 |
| | | | 1 | | | | T . | -4.84- | | | B-1-Expl (11/92) |
| l . | | | | | Geomatrix Consultants | | Proje | ct No. 20 | J26 | | Figure |

| PROJECT: APL TERMINA 1395 Middle Ha Port of Oakland | arbor Road | Log of Bor | ing No. B-1 |
|---|--|--|------------------------------------|
| | feet north of former excavation | ELEVATION AND DATUM: 10.24 MLLW | |
| DRILLING CONTRACTOR: | Gregg Drilling and Testing, Inc. | DATE STARTED: 1/19/93 | DATE FINISHED: 1/19/93 |
| DRILLING METHOD: Holl | low stem auger (8 1/4" diameter) | TOTAL DEPTH: 10.5' | MEASURING POINT: Ground surface |
| DRILLING EQUIPMENT: | Mobile B-53 | DEPTH TO FIRST 4.0 | COMPL. 24 HRS. |
| SAMPLING METHOD: 5' | CME continuous core | LOGGED BY: J. M. Abitz | |
| HAMMER WEIGHT: 140 | lbs DROP: 40 inches | RESPONSIBLE PROFESSION Sally E. Goodin | DNAL: REG. NO. RG 3743 |
| CEPTH (feet) No. Sample Blows/Foot PIO (ppm) | DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, c | ementation, react. w/HCl, geo, inter. | REMARKS |
| San San San Pi | Surface Elevation: | | |
| | Asphalt | | |
| 1 - 2 - 3 - 4 - 8-1-4 - 5 - 5 - 6 | SAND with SILT and GRAVEL (SW - SM) Light olive brown (2.5Y5/6), moist, 60% fin 30% fine gravel, 10% low plasticity fines [F | = LL - - - - | |
| 6- 7- 8- | SAND (SP) Dark gray (7.5YR 4/0), wet, 95% fine sand fines SILT (ML) Greenish gray (5GY 5/1), 100% fines, low [BAY MUD] | | Dark brown liquid observed |
| 9- | Bottom of boring at 10.5 feet | | |
| 14 | | | B-1 (11/92) |
| | Geomatrix Consultants | Project No. 2026 | |

| PROJ | 1 | APL TE 395 Mi | iddle I | Harbor Road | | Lo | g of Bor | ing No | o. B-2 |
|-----------------|--------|-------------------|---------|-------------|--|------------------------|--------------------|--|---------------------|
| BORI | | | | | of former excavation | ELEVATIO 10.03 ML | N AND DATUM: | - | <u></u> |
| | | | | | rilling and Testing, Inc. | DATE STA 1/18/93 | | DATE FINIS 1/18/93 | SHED: |
| | | | | | auger (6 1/4" diameter) | TOTAL DE 15.5' | РТН: | MEASURIN Ground su | |
| | | | | Mobile B- | | DEPTH TO WATER | FIRST 4.0 | COMPL. | 24 HRS. |
| | | | | | tinuous core | LOGGED 6 | BY: | <u>. </u> | |
| HAM | AER WI | EIGHT: | 140 |) lbs | DROP: 40 inches | | BLE PROFESSION | DNAL: | REG. NO. RG 3743 |
| Εœ | | PLES | | | DESCRIPT | | | ··· | 1100140 |
| DEPTH (feet) | Sample | Blows/ Foot | e (| NAME (| USCS Symbol): color, moist, % by wt., plast., densit | | w/HCl, gea, inter. | RE | MARKS |
| | 8 1 | <u> </u> | +- | Δer | Surface Elevati Shalt | ion: | | | |
| - | ┨ | $\dashv \mid$ | | · | | MY - SMY | | | |
| 1- | 1 1 | | | Dai | ND with SILT and GRAVEL (SInk reddish brown (5YR 3/3), mo | oist, 60% fine sand, | 30% fine | | |
| - | | / | | gra | vel, 10% low plasticity fines [Fl | LLJ | | | |
| 2- | | M = M + M | | | | | | | |
| - | 1 / | | | | | | | | |
| 3- | 1 / | | | | | |] | | |
| | B-2-4 | | 4 | | ND with SILT and GRAVEL (S | | ATD ▽ | | |
| 4. |] [| \prod | | ∣ ∪a | rk greenish gray (5GY 4/1), mo % fine gravel, 10% low plasticit | | _ | | |
| 5 |] | | | | · · | | | | |
| ". |] | $\coprod \coprod$ | | | | | | | |
| 6 | | | | | | | | | |
| | 1 | | | | | | | | |
| 7 | | | | | | | | | |
| | | | | | .T (ML) ve (5Y 4/4), wet, 100% fines, lo | ow plasticity, very so | oft [BAY | | |
| 8 | 4 | | | MU | | | - | | |
| | | | | | Color change to black (5Y 2.5/1 |), with dark red (2.5 | 5YR 3/6) | | |
| 9 | 8-2-9 | | 1. | <u> </u> | enses, roots and wood pieces | | | | |
| | - | | | | AN CLAY (CL) rk greenish gray (5G 4/1), wet, | 100% fines, low pla | asticity, | | |
| 10 | | | | | n [BAY MUD] | • | - | | |
| | ┨╏ | $H \mid$ | | | | | - | | |
| 11 | - | | 1 | | | | - | | |
| | | | | | | | - | | |
| 12 | | | | | | | - | | |
| | | | | | | | - | l: | |
| 13 | - | | | | | | - | | |
| | | | | | | | - | | |
| 14 | | | | I | | | | | B-1 (11/92) |
| | | | | | Geomatrix Consultants | 1 | Project No. 2026. | J | Figure |

PROJECT: APL TERMINAL Log of Boring No. B-2 cont'd 1395 Middle Harbor Road Port of Oakland SAMPLES Dia (india) DESCRIPTION REMARKS NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react, w/HCl, geo. inter. LEAN CLAY (CL) (continued) SAND with SILT (SW - SM) Black (10 YR 2/1), wet, 90% fine sand, 10% low plasticity fines 15 Bottom of boring at 15.5 feet 16-17: 18 19 20 21 22 23: 24 -25 26 27 28 29 30 31 B-2 (11/92) Figure ---Project No. 2026J

Geomatrix Consultants

| PROJECT: APL TERMINAL 1395 Middle Har Port of Oakland | | Log of Bo | ring No. B-3 |
|--|---|---|------------------------------------|
| | r former north-extending trench | ELEVATION AND DATUM: 10.51 MLLW | |
| DRILLING CONTRACTOR: | Gregg Drilling and Testing, Inc. | DATE STARTED: 1/18/93 | DATÉ FINISHED: 1/18/93 |
| DRILLING METHOD: Holic | ow stem auger (6 1/4" diameter) | TOTAL DEPTH: 15.5' | MEASURING POINT: Ground surface |
| DRILLING EQUIPMENT: M | lobile B-53 | DEPTH TO FIRST WATER 4.5 | COMPL. 24 HRS. |
| SAMPLING METHOD: 5' C | CME continuous core | LOGGED BY: J. M. Abitz | |
| HAMMER WEIGHT: | DROP: | RESPONSIBLE PROFESS Sally E. Goodin | ONAL: REG. NO. RG 3743 |
| Sample Sample Sample Sample Sample Sample Sample Sample Foot piD (ppm) | DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density. | | REMARKS |
| S S S | Surface Elevation | vn: | |
| | Asphalt SAND with SILT and GRAVEL (SW | | |
| 1- 2- 3- 3- 4-B-3-4 4-B-3-4 5- 6- 7- 8- 9- 10- 8-3- 10.5 11- | Lean CLAY with SAND (CL) Dark gray (5Y 4/1), moist, 70% fine high plasticity, firm SAND (SP) Dark greenish gray (5GY 4/1), wet plasticity fines Lean CLAY (CL) Dark greenish gray (5GY 4/1), wet roots, firm [BAY MUD] | sand, 30% fine gravel, 10% es, 30% fine sand, ATD | |
| 12 - | | | _ |
| 13 - | Change to no roots | | 1 |
| | † | | - |
| 14 | Geomatrix Consultants | Project No. 2026 | B-1 (11/92) |

PROJECT: APL TERMINAL Log of Boring No. B-3 cont'd 1395 Middle Harbor Road Port of Oakland SAMPLES 를 (E. DESCRIPTION Blows/ Foot REMARKS NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, comentation, react, w/HCl. geo. inter. LEAN CLAY (CL) (continued) CLAYEY SAND (SC) 15 Dark gray (N 4/), wet, 70% firm sand, 30% high plasticity fines Bottom of boring at 15.5 feet 16-17-181 19-20 21 22-23 24-25 26 27 28 29 30 31 B-2 (11/92) Figure ---Project No. 2026J **Geomatrix Consultants**

| PROJECT: APL TERI 1395 Midd Port of Oa | lle Harbor Road | | Log of Bo | ring No. B-4 |
|---|------------------------------------|---|---|----------------------------|
| | | est of former excavation | ELEVATION AND DATUM: 9.99 MLLW | |
| DRILLING CONTRAC | DATE STARTED: 1/18/93 | DATE FINISHED: 1/18/93 | | |
| DRILLING METHOD: | TOTAL DEPTH: 15.5' | MEASURING POINT: Ground surface | | |
| DRILLING EQUIPMEN | IT: Mobile B-53 | | DEPTH TO FIRST 4.0 | COMPL. 24 HRS. |
| SAMPLING METHOD | 5' CME contin | uous core | LOGGED BY: J. M. Abitz | |
| HAMMER WEIGHT: | 140 lbs | DROP: 40 inches | RESPONSIBLE PROFESS Sally E. Goodin | IONAL: REG. NO. RG 3743 |
| (feet) (feet) No. Sample Sample Sample Foot Foot | Q Ê NAME/IIR | DESCRIPTION CS Symbol): color, moist, % by wt., plast., density, structure, ce | ementation read, w/HCl. dec. inter. | REMARKS |
| OEPT (feet) Sample No. Sample Blows/ Foot | OF WAME (US | Surface Elevation: | STREET, TOUCH, WITCH, WOLLD | REMARKS |
| | Asph | | | |
| 1 - 2 - 3 - 3 - 4 - 8 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 8 - 10.5 11 - 12 - 12 - 12 - 12 - 12 - 12 - 12 | 30% [FILL SAN Black SAN Dark grave | greenish gray (5GY 4/1), moist, 60% fine to medium coarse gravel, 10% lo D (SP) C (5Y 2.5/1), wet, 95% fine sand, 5% l D with SILT and GRAVEL (SP - SM) gray (5Y 4/1), wet, 70% fine to medicel, 10% low plasticity fines N CLAY (CL) gray (5Y 4/1), wet, 100% fines, high is [BAY MUD] | w plasticity fines ATD Iow plasticity fines Irm sand, 20% fine | Sheen |
| 13 - | 42 | | | 1 |
| 14 | | | | B-1 (11) |

PROJECT: APL TERMINAL Log of Boring No. B-4 cont'd 1395 Middle Harbor Road Port of Oakland **SAMPLES** (feet)
Sample
No.
Sample
Blows/
Foot Old (mdd) DESCRIPTION REMARKS NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react, w/HCl, geo. inter. LEAN CLAY (CL) (continued) 15-**CLAYEY SAND (SM)** Very dark gray (7.5YR N/3), wet, 70% firm sand, 30% low plasticity fines, roots 16-Bottom of boring at 15.5 feet 171 18-19-20 21 -22 23 24 25 26 27 28 29 30 31 B-2 (11/92) Figure ---Project No. 2026J **Geomatrix Consultants**

| PROJECT: APL TERMINA 1395 Middle H | AL Harbor Road - Port of Oakland | Log of Well N | lo. MW-2 (B-5) | |
|--|--|--|--|--|
| BORING LOCATION: 50 fe | eet southwest of former excavation | ELEVATION AND DATUM: 10.03 MLLW | | |
| DRILLING CONTRACTOR: | Gregg Drilling and Testing, Inc. | DATE STARTED: DATE FINISHED: 1/20/93 1/20/93 | | |
| | ow stem auger (8 1/4" and 10 1/4" OD) | TOTAL DEPTH: | SCREEN INTERVAL: 3 - 10' | |
| DRILLING EQUIPMENT: Mo | | DEPTH TO WATER ATD: 5.5' | CASING: 2" dia SCH 40 PVC | |
| SAMPLING METHOD: 5' CM | ME continuous core and 18" x 2" split spoon | LOGGED BY: J. M. Abitz | 1 | |
| HAMMER WEIGHT: 140 Ib | | RESPONSIBLE PROFESSION Sally E. Goodin | DNAL: REG. NO. RG 3743 | |
| DEPTH (feet) Sample No. Sample Blows/ Foot OVM Reading | DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure comentation, react. w/HCl, geo, inter. | . WEL | L CONSTRUCTION D/OR DRILLING REMARKS | |
| | | | 17 | |
| | Asphalt | | | |
| 1 — 2 — — — — — — — — — — — — — — — — — | SAND with SILT and GRAVEL (SW - SM) Light clive brown (2.5Y 5/6), moist, 60% fine 30% fine gravel, 10% low plasticity fines [FIL SAND with SILT and CLAY (SW - SC) Dark greenish gray (5GY 4/1), moist, 60% fir sand, 20% low plastic fines, 20% high plastic | L.] | 2" locking cap Neat cement grout 2" diameter SCH PVC 3/8" bentonite pellets 2" dia SCH 40 PVC 0.010" slot | |
| 7 - B-5- 6.5 | SAND (SP Dark greenish gray (5GY 4/1), wet, 100% fire Lean CLAY (CL) Dark greenish gray (5GY 4/1), wet, 70% fine organics, high plasticity, firm [BAY MUD] | | | |
| 10 - | Organic SOIL (OL/OH) Dark greenish gray (5GY 4/1), wet, 50% high plastic fines, 50% organics, very soft [BAY M | 1 | Slip end cap | |
| 12 - 11.5 | Bottom of boring at 11.5 feet | | W-1 (11/92) | |
| | Geomatrix Consultants | Project No. 2067 | Figure | |

| PROJECT: APL TERMINAL 1395 Middle Ha Port of Oakland | | Log of Bo | ring No. B-6 |
|--|---|--|------------------------------------|
| | eet south of former excavation | 9.85 MLLW | |
| ORILLING CONTRACTOR: | Gregg Drilling and Testing, Inc. | DATE STARTED: 1/18/93 | DATE FINISHED: 1/18/93 |
| DRILLING METHOD: Holk | ow stem auger (6 1/4" diameter) | TOTAL DEPTH: | MEASURING POINT: Ground surface |
| DRILLING EQUIPMENT: N | obile B-53 | DEPTH TO FIRST 4.0 | COMPL. 24 HRS. |
| SAMPLING METHOD: 5' (| CME continuous core | LOGGED BY: J. M. Abitz | |
| HAMMER WEIGHT: 140 | bs DROP: 40 inches | RESPONSIBLE PROFESS Sally E. Goodin | ONAL: REG. NO. RG 3743 |
| SAMPLES OF | DESCRIPTION | | |
| (feet) Sample Sample Blows/ Foot (ppm) | NAME (USCS Symbol): color, moist, % by wt., plast., density, structur Surface Elevation: | re, cementation, react, WIHCI, geo. Inter. | REMARKS |
| | Asphalt Surface Elevation: | | |
| 1- | SAND with SILT and GRAVEL (SW - SM Olive (5Y 4/4), moist, 65% fine sand, 25 plasticity fines [FILL] | M) 5% fine gravel, 10% low - | |
| 3 - 27.9 | | - | |
| 4 - B-6-4 240 5 - 371 173 | SAND with SILT and GRAVEL (SW - SI Dark gray (5Y 4/1), wet, 50% fine to coa coarse gravel, 10% low plasticity fines Color change to black (5Y 2.5/1) | | |
| 7- | SAND (SP) Black (5Y 2.5/1), wet, 95% fine sand, 59 | % low plasticity fines | |
| 8 - | | - | |
| 10 - | | | |
| 11 - | | | |
| 12 - | | | - |
| 14 | Geomatrix Consultants | Project No. 2026 | B-1 (11 |

PROJECT: APL TERMINAL Log of Boring No. B-6 cont'd 1395 Middle Harbor Road Port of Oakland SAMPLES Of (made) DESCRIPTION REMARKS NAME (USCS Symbol); color, moist, % by wt., plast., density, structure, cementation, react, w/HCl, geo. inter. SAND (SP) (continued) 15 Bottom of boring at 15.5 feet 16 17 18 191 20 21-22 23 24 25 26 27 28 29 30 31 B-2 (11/92) Project No. 2026J Figure ---**Geomatrix Consultants**

| PROJECT: APL TERMINAL 1395 Middle Harbor Road Port of Oakland | | | | | | | Log of Boring No. B-7 | | | |
|---|---|-----------------------|----------------|--------------|---|--|-----------------------------------|------------------------------------|-----------------------|--|
| BORIN | NG LO | | | | r former south-extending trench | | ELEVATION AND DATUM: 9,97 MLLW | | | |
| | | | | | Gregg Drilling and Testing, Inc. | DATE STA 1/18/93 | | DATE FINI 1/18/93 | SHED: | |
| | | | | | ow stem auger (6 1/4" diameter) | TOTAL DE 15.5' | РТН: | MEASURING POINT: Ground surface | | |
| | | | | | Mobile B-53 | DEPTH TO WATER | FIRST 3.5' | COMPL. | 24 HRS. | |
| SAMP | PLING | ME | THOD | : 5' C | CME continuous core | LOGGED 8 | BY: | <u> </u> | | |
| HAM | | | | | DROP: | | IBLE PROFESSI | IONAL: | REG. NO. RG 3743 | |
| I | SAMPLES | | | | DESCRIPTION | | 3000111 | | 1 NG 3743 | |
| (feet | (feet) (Sample No. Sample Blows/ Foot PID (ppm) | | | PID (ppm) | NAME (USCS Symbol): color, moist, % by wt., plast, density, structure, cementation, react, w/HCl, geo. inter. | | | REMARKS | | |
| | ν ₀ | S | ш | | Surface Elevation | n: | | | | |
| - | - | - | | | Asphalt | (011) | | 1 | • | |
| 1- | 4 | | | | SAND with SILT and GRAVEL (SW Yellowish brown (10YR 5/8), moist, | | e sand, | | | |
| <u> </u> | $\frac{1}{2}$ | | | | 25% fine gravel, 10% low plasticity | | - | - | | |
| 2- | - | | | | CLAYEY SAND (SC) | ···· | | - | | |
| - | - | | | | Black (10YR 2/1), moist, 70% fine s | (10YR 2/1), moist, 70% fine sand, 30% low plasticity | | - | | |
|] з- | B-7- | | | | fines, wood chunks [FILL] CLAYEY SAND (SC) | | ATD | _ | | |
| - | 3.5 | | | 8.3 | Dark greenish gray (5GY 4/1), wet, | | o‰ ^{ATD} ∑ - | | | |
| 4 - | 4 | M | | | medium plasticity fines, decreasing | clay with depth | - | _ | | |
| - | - | X | | | | | - | | | |
| 5- | 4 | V | | | | | - | - | | |
| . | - | | | | | | - | - | | |
| 6- | - | | | | | | - | - | | |
| - | - | $\ \ $ | | | | | - | - | | |
| 7- | 4 | \mathbb{N} | | | | | - | 4 | | |
| | 4 | V | | | | | - | - | | |
| 8- | 4 | | | | | | - | - | | |
| | _ | M | | | | | | - | | |
| 9. | _] | $\parallel \parallel$ | | | | | - | 4 | | |
| . | | $\ \cdot \ $ | | | | | . | 4 | | |
| 10 | | | \blacksquare | | | | | _ | | |
| '`, |] | <u></u> | , | | | | | 1 | | |
| 11 - | ╛ | \mathbb{N} | $\langle $ | | | | | 1 | | |
| ''. |] | ΙX | | | | | | _ | | |
| 12 | B-7- | | \ | 1.7 | L | | | | | |
| '2' |] '* | | | | Lean CLAY (CL) | n de la la companya de la companya d | | _ | | |
| 12 | | | | | Dark gray (5Y 4/1), wet, 100% fine [BAY MUD] | s, nigh plasticity, ti | (11) | _ | | |
| 13 | | | | | [2 | | | | | |
| | 7 | | | | | | | | | |
| 14 | | | | | Geomatrix Consultants | | Project No. 2026 | 5J | B-1 (11/92) Figure | |

PROJECT: APL TERMINAL Log of Boring No. B-7 cont'd 1395 Middle Harbor Road Port of Oakland SAMPLES Blows/ Foot PiD (ppm) DESCRIPTION REMARKS NAME (USCS Symbol): color, moist, % by wt., ptast., density, structure, cementation, react, w/HCl, geo. inter. Lean CLAY (CL) (continued) 15 CLAYEY SAND (SM) Very dark gray (7.5YR N/3), wet, 70% fine sand, 30% low plasticity fines 16 Bottom of boring at 15.5 feet 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 B-2 (11/92) Figure ---Project No. 2026J **Geomatrix Consultants**

| PROJECT: | APL TERI 1395 Midd Port of Oa | ile Har | bor Road | | Log of Boring No. B-8 | | | |
|--|-------------------------------------|----------------------|---|---|--------------------------------------|---|--|--|
| BORING LC | | | et south of former excavation | | ELEVATION AND DATUM: 9.86 MLLW | | | |
| | | | Gregg Drilling and Testing, Inc. | DAT | TE STARTED: 9/93 | DATE FINISHED: 1/19/93 | | |
| | | | ow stem auger (8 1/4" diameter) | TAL DEPTH: | MEASURING POINT: Ground surface | | | |
| | | | obile B-53 | | PTH TO FIRST | COMPL. 24 HRS. | | |
| SAMPLING | | GGED BY: M. Abitz | | | | | | |
| HAMMER V | VEIGHT: | | DROP: | RE | SPONSIBLE PROFESSI Illy E. Goodin | ONAL: REG. NO. RG 3743 | | |
| | MPLES 왕성 | PID (ppm) | DESCRIPT: NAME (USCS Symbol): color, moist, % by wt., plast., density | ION | | REMARKS | | |
| DEPT (feet) Sample No. | Sample Blows/ Foot | <u>و</u> ق | Surface Elevation: | | | | | |
| | | | Asphalt | | | | | |
| 1- 2- 3- 4- 5- 6- 7- 8- 9- 10- 11- 12- 13- | | | SAND with SILT and GRAVEL (SV Olive (5Y 4/4), moist, 60% fine sar plasticity fines [FILL] Lean CLAY (CL) Dark greenish gray (5GY 4/1), mosand seams, high plasticity, firm, seand seams, high plasticity fines SAND (SP) Dark greenish gray (5GY 4/1), we gravel, 5% high plasticty fines | nd, 30% fine on the sist, 100% fine shell fragmen | es, trace fine ts [BAY MUD] | No recovery from 7 to 12 feet. See boring B-8A for lithology. | | |
| - | | | | | | - | | |
| 14 | | | | | | B-1 (11/92 | | |
| 1 | | | Geomatrix Consultants | | Project No. 2026 | 6J Figure | | |

| PROJE | | 139 | 5 Mide | | rbor Road | | | Log | of Bo | orii | ng No | . B-8A |
|--------------------|---------------|----------|----------------|--------------|-----------------|--|---|--------------------------|--------------|----------|---------------------|----------------------|
| BORIN | | | | | | former excavation | | ELEVATION 9.84 MLLW | | IM: | | |
| DRILLI | NG C | ON. | TRAC | TOR: | Gregg Drillin | ng and Testing, Inc. | | DATE STAR 1/19/93 | | | DATE FIN 1/19/93 | |
| DRILLI | NG M | 1ETI | HOD: | Holla | ow stem aug | ger (8 1/4" diameter) | | TOTAL DEP | TH: | | MEASURI Ground s | NG POINT: surface |
| DRILLI | NG E | :QUI | PMEI | NT: M | Nobile B-53 | | | DEPTH TO WATER | FIRST | | COMPL | 24 HRS. |
| SAMP | LING | ME | THOD | : 18" | x2" split spc | on | - | LOGGED BY J. M. Abitz | ' : | | | |
| НАММ | ER W | /EIG | HT: | 140 l | bs | DROP: 40 inches | | RESPONSIE Sally E. Go | | ssio | NAL: | REG. NO. RG 3743 |
| DEPTH (feet) | _ | MPL 읦 | | PID (ppm) | NAME (USCS | DES S Symbol): color, moist, % by wt., pla | SCRIPTION ast., density, structure, cerr | | | | R | EMARKS |
| | Sample No. | Sam | Blows/ Foot | <u>. ē</u> | | | e Elevation: | | | 士 | | <u>-</u> |
| | | | | | Aspha | lt | | | | ↓ | | y from boring |
| 2- | | | | | SAND Olive (| with SILT and GRAV (5Y 4/4), moist, 60% fi ity fines [FILL] | /EL (SW - SM) fine sand, 30% fi | ine gravel, | 10% low | | B-8 for | |
| 5- 6- | | | | T. | Dark (| CLAY (CL) greenish gray (5GY 4/ s, shell fragments, hig | | | sand | | | |
| 7- | | | i | | | O (SP) greenish gray (5GY 4, I, 5% high plasticity fir | | e sand, 10° | % fine | | | |
| 8 - 9 - 10 - | | | | | Dark (| nic SOIL (OL/OH) greenish gray (5GY 4, organics, very soft [BA | | gh plasticity | fines, | | | |
| 11 - | B-8A -11 | 7 | | | Dark seam | CLAY (CL) greenish gray (5GY 4 s, high plasticity, firm | [BAY MUD] | ines, fine sa | and | | | |
| 12 - | | | | | Botto | m of boring at 11.5 fee | et | | | | | |
| 14 · | | <u></u> | <u> </u> | 1 | <u></u> | | | | | <u></u> | | B-1 (11/92) |
| | | | | | Geo | omatrix Consultants | | Р | roject No. ; | 2026J | 1 | Figure |

| PROJ | ECT: | 139 | 5 Mid | | arbor Road | | Log of Bo | oring | No. B-9 |
|--|---------------|----------|---------------------------------------|--------------|---|------|--|--------------|------------------------------|
| BORII | NG LC | - | | | eet north of former excavation | | ELEVATION AND DATUM: 10.24 MLLW | | |
| DRILL | ING (| CON | TRAC | TOR: | Gregg Drilling and Testing, Inc. | | DATE STARTED: 1/21/93 | DATE 1/21 | FINISHED: /93 |
| | | | | | ow stem auger (8 1/4" diameter) | | TOTAL DEPTH: | MEA | SURING POINT: and surface |
| DRILL | ING E | QU | IPME | NT: N | Mobile B-53 | | DEPTH TO FIRST WATER 4.5 | CON | |
| SAME | LING | ME | THOD | : 5' (| CME continuous core | | LOGGED BY: J. M. Abitz | <u> </u> | |
| HAM | /ER V | VEIC | SHT: | | DROP: | | RESPONSIBLE PROFES. Sally E. Goodin | SIONAL: | REG. NO. RG 3743 |
| DEPTH (feet) | Sample No. | 를 일 | | PiO (ppm) | DESCRIPT NAME (USCS Symbol): color, moist, % by wt., plast., densit | | | | REMARKS |
| <u> </u> | Sar | P.S. | Bio Fc | | Surface Elevati | ion: | | _ | |
| _ | | | | | Asphalt | | | | |
| 1- 2- 3- 3- 4- 5- 6- 7- 8- 8- 10- 11- | | | | 304 | SAND with SILT and GRAVEL (S) Olive (5Y 5/3), moist, 60% fine sai plasticity fines [FILL] Bottom of boring at 7 feet | | ine gravel, 10% low | | |
| 13 | 1 | | | | | | | + | |
| | 1 | | | | | | | 1 | |
| 14 | .1 | <u>-</u> | · · · · · · · · · · · · · · · · · · · | | Geomatrix Consultants | | Project No. 202 | 26.1 | B-1 (11/92) Figure |

| PROJECT: APL TERMII 1395 Middle | NAL Harbor Road - Port of Oakland | Log of Well | No. MW-3 (B-10) |
|---|---|----------------------------------|--|
| BORING LOCATION: 60 | feet south of former excavation | ELEVATION AND DATUM 9.84 MLLW | : |
| | Gregg Drilling and Testing, Inc. | DATE STARTED: 1/20/93 | DATE FINISHED: 1/20/93 |
| | low stem auger (8 1/4" and 10 1/4" OD) | TOTAL DEPTH: | SCREEN INTERVAL: 3 - 10' |
| DRILLING EQUIPMENT: N | | DEPTH TO WATER ATD: 6.5' | CASING: 2" dia SCH 40 PVC |
| SAMPLING METHOD: 5' (| OME continuous core and 18" x 2" split spoon | LOGGED BY: | 2 018 3011 401 70 |
| HAMMER WEIGHT: 140 | | J. M. Abitz RESPONSIBLE PROFESS | |
| Semple Sample No. No. Sample Blows/ Sample Foot OVM Reading | DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure comentation, react. w/HCl, geo. inter. | | RG 3743 ELL CONSTRUCTION AND/OR DRILLING REMARKS |
| R - R E - | Surface Elevation: | | |
| | Asphalt | | Traffic rated Christy Box (G-5) |
| 2 - 3 - 4 - 5 - B-10 -5.5 | 30% fine gravel, 10% low plastic fines, inc plasticity with depth [FILL] SAND (SP) | ATD V | 2" locking cap Neat cement grout 2" diameter SCH PVC 3/8" bentonite pellets 2" dia SCH 40 PVC 0.010" slot 0/30 RMC Lonestar sand |
| 8- | Dark greenish gray (5GY 4/1), wet, 95% fi medium sand, 5% low plasticity fines Gravel Lean CLAY (CL) Dark greenish gray (5GY 4/1), wet, 80% fi organics, trace gravel, high plasticity, decrorganics with depth, firm [BAY MUD] | nes, 20% | Slip end cap |
| 11 - 12 - 13 - 14 | Bottom of boring at 10 feet | | 1Å 1.212.00 |
| 14 | Geomatrix Consultants | Project No. 206 | W-1 (11/9 Figure |

| PROJ | ECT: APL 1395 | | NAL Harbor Road - Port of Oakland | Log | g of Well N | lo. MW-1 (B-11) |
|--|---------------------------|----------------|--|---------------------------|------------------------|---|
| BORII | NG LOCATIO | N: 50 | feet north of former excavation | ELEVATI 10.37 M | ON AND DATUM: | <u> </u> |
| DRILLING CONTRACTOR: Group Drilling and Tosting Inc. | | | | | ARTED: | DATE FINISHED: 1/21/93 |
| | | | llow stem auger (8 1/4" and 10 1/4" OD) | 1/21/93 TOTAL D 10' | EPTH: | SCREEN INTERVAL: 3 - 10' |
| | | | Mobile B-53 | DEPTH T | O WATER ATD: | CASING: |
| - | | | | 6' LOGGED | BY: | 2" dia SCH 40 PVC |
| <u> </u> | | | CME continuous core and 18" x 2" split spoon | J. M. Ab | itz ISIBLE PROFESSI | ONAL: REG. NO. |
| HAMI | JER WEIGHT | | | Sally E. | Goodin | RG 3743 |
| DEPTH (feet) | Sample No. Sample Blows/ | — ∤ ∑ ≦ | DESCRIPTION NAME (USCS Symbol): color, moist, % by wl., plast., density, strucementation, react. w/HCl, geo. inter. | cture, | | LL CONSTRUCTION ND/OR DRILLING REMARKS |
| | S Z S B | | Surface Elevation: | | | |
| _ |] [| | Asphalt | | | Traffic rated Christy |
| 1- | | | SAND with SILT and GRAVEL (SW - SM) Light olive brown (2.5Y 5/4), moist, 60% fi | ne to | | Box (G-5) |
| - | | | coarse sand, 30% fine gravel, 10% low pla | | - | 2" locking cap |
| 2 - | | | fines [FILL] | | | Neat cement grout |
| - | 1 N/I | | • | | | 2" diameter SCH PVC |
| 3 - | 1 | | | | | 3/6" bentonite pellets |
| - | 1 /\ | | | | | 2" dia SCH 40 PVC 0.010" |
| 4- | | | | | | słot |
| - |]]]] | | | | | and Date I |
| 5- | | | | | | 0/30 RMC Lonestar sand |
| - |] [] | | | | | |
| 6 - | B-11- | | | ATD ∑ | | |
| - | 1 | | SAND (SP) | | | |
| 7- | 1 1 | | Dark greenish gray (5GY 4/1), wet, 95% fi medium sand, 5% low plasticity fines | ne to | 1 | |
| | 1 \ | | Organic SOIL (OL/OH) | | | |
| 8 - | 1 \ | | Dark greenish gray (5GY 4/1), wet, 50% h | | | |
| - | 1 17 | | plasticity fines, 50% organics, very soft [B | AT MOD | | |
| 9 - | 1 [\[| | | | | |
| - | 1 \ | | Lean CLAY (CL) | | | |
| 10 - | 1 | | Dark greenish gray (5GY 4/1), wet, 100% | fines, / | - MA | Slip end cap |
| - | high plasticity [BAY MUD] | | | | | |
| Bottom of boring at 10 feet | | | | | - | |
| - | 1 | | | | | |
| 12 - | | | | | - | |
| . | - | | | | - | |
| 13 - | | | | | - | |
| . | | | | | - | |
| 14 - | | | | | | W-1 (11/92 |
| | | | Geomatrix Consultants | | Project No. 2067 | Figure |

H



APPENDIX C

ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS SOIL SAMPLES

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



February 2, 1993

Ms. Elizabeth Wells GEOMATRIX CONSULTANTS 100 Pine Street, 10th Floor San Francisco, CA 94111

> Client Ref. 2026 Clayton Project No. 93012.00

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on January 22, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH

Koneld H. Pek

Director, Laboratory Services

Western Operations

RHP/tb

Attachments



Page 2 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: B-11-6 01/21/93 Date Sampled: Lab Number: 9301200-01A Date Received: 01/22/93 Sample Matrix/Media: SOIL Date Prepared: 01/26/93 Preparation Method: EPA 5030 Date Analyzed: 01/26/93 Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|-------------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | 0.034 | 0.005 |
| Ethylbenzene | 100-41-4 | 0.015 | 0.005 |
| p,m-Xylenes | | 0.013 | 0.005 |
| o-Xylene | 95-47-6 | 0.009 | 0.005 |
| Gasoline | | 3.9 | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 60 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable Results are reported on a wet weight basis, as received

of 15 Page 3

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9301200-02A

Date Received:

Sample Matrix/Media:

SOIL

Date Prepared: 01/26/93

Preparation Method:

EPA 5030

Date Analyzed: 01/26/93

Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|-------------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 67 | 50 - 150 |
| | | | |

Not detected at or above limit of detection Information not available or not applicable Results are reported on a wet weight basis, as received

Page 4 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: B-11-6 Date Sampled: 01/21/93 Lab Number: 9301200-01A Date Received: 01/22/93 Sample Matrix/Media: SOIL Date Prepared: 01/27/93 Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride , | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



Page 5 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: B-11-6 Date Sampled: 01/21/93 Lab Number: 9301200-01A Date Received: 01/22/93 Sample Matrix/Media: SOIL Date Prepared: 01/27/93 Preparation Method: EPA 5030 01/27/93 Date Analyzed: Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 92 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Page 6 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301200-02A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/27/93
Preparation Method: EPA 5030 Date Analyzed: 01/27/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Page 7 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK Date Sampled: -- Lab Number: 9301200-02A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/27/93
Preparation Method: EPA 5030 Date Analyzed: 01/27/93
Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 115 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



Page 8 of 15

Results of Analysis for Geomatrix Consultants/ Port of Cakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: B-11-6

Lab Number: 9301200-01

Sample Matrix/Media: SOIL

Date Sampled:

01/21/93

Date Received: (

01/22/93

| Analyte | Concentration | Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Analysis Method |
|--------------------|---------------|--------------------|-------|------------------|------------------|----------------|--------------------|
| Diesel | ND | 1 | mg/kg | 01/26/93 | 02/01/93 | EPA 3550 | EPA 8015 |
| Hydrocarbons | ND | 50 | mg/kg | 01/25/93 | 01/28/93 | SM 5520E | SM 5520F |
| Total Oil & Grease | 60 | 50 | mg/kg | 01/25/93 | 01/28/93 | SM 5520E | SM 5520E |

ND Not detected at or above limit of detection

Results are reported on a wet weight basis, as received

Not detected at or above limit of detection

Information not available or not applicable



Page 9 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK

Lab Number:

9301200-02

Sample Matrix/Media:

SOIL

Date Sampled:

Date Received: --

| | | Detection | | Date | Date | Prep | Analysis |
|--------------------|---------------|-----------|-------|----------|----------|----------|----------|
| Analyte | Concentration | Limit | Units | Prepared | Analyzed | Method | Method |
| Diesel | NĐ | 1 | mg/kg | 01/26/93 | 02/01/93 | EPA 3550 | EPA 8015 |
| Hydrocarbons | ND | 50 | mg/kg | 01/25/93 | 01/28/93 | SM 5520E | SM 5520F |
| Total Oil & Grease | ND | 50 | mg/kg | 01/25/93 | 01/28/93 | SM 5520E | SM 5520E |
| | | | | | | | |

ND Not detected at or above limit of detection

Results are reported on a wet weight basis, as received

Not detected at or above limit of detection

Information not available or not applicable

Clayton Lab Number: Ext./Prep. Method: 9301202-01A EPA 5030

Date:

01/26/93 PF

Analyst: Std. Source:

V921223-01W

Sample Matrix/Media:

SOIL

Analytical Method: EPA8015_8020
Instrument ID: 05587
Date: 01/26/93

Date: Time: Analyst: Units: 05587 01/26/93 19:21 PF MG/KG

| Analyte | | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL | RPD (%) | UCL (%RPD) |
|-----------|-------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|-----|------------|---------------|
| BENZENE | (PID) | ND | 0. 0100 | 0.00800 | 80 | 0. 00800 | 80 | 80 | 53 | 140 | 0.0 | 28 |
| GASOL INE | (FID) | ND | 0. 500 | 0.387 | 77 | 0, 374 | 75 | 76 | 41 | 164 | 3.4 | 37 |
| TOLUENE | (PID) | ND | 0.0400 | 0.0290 | 73 | 0.0310 | 78 | 75 | 60 | 139 | 6.7 | 22 |

Clayton Lab Number: Ext./Prep. Method:

9301174-14A EPA5030 01/27/93

Date: Analyst:

CB

Std. Source: Sample Matrix/Media; V930118-01W SOIL

Analytical Method: Instrument ID:

EPAB010 8020 $\overline{0}2911$

Date: Time: 01/27/93 22: 36 CB

MG/KG

Analyst: Units:

MS MSD Average LCL UCL RPD UCL Matrix Recovery Matrix Spike Recovery Recovery Sample Result Spike Level Spike Result (%) Duplicate Result (%) (% R) (% R) (% R) (%) (%RPD) Analyte ND 2.00 1.44 72 1.64 82 77 41 149 13 30 1, 1 - DICHLOROETHENE (HALL) (HALL) 2.00 1.60 80 1.77 89 84 66 151 10 30 CHLOROBENZENE ND 2.00 1.71 86 1.78 89 87 38 161 30 TRICHLOROETHENE (HALL) ND 4.0

Clayton Lab Number: Ext./Prep. Method:

9301202-MB EPA3550

Date: Analyst: 01/26/93 GD

Std. Source: Sample Matrix/Media: G930111-01W SOIL

Analytical Method:

Instrument ID: Date: Time: Analyst:

EPA8015 02883 02/01/93 14:04 AM

Units:

MG/KG

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| DIESEL | ND | 11.0 | 9, 78 | 89 | 10.2 | 93 | 91 | 51 | 147 | 4.5 | 30 |

Clayton Lab Number: Ext./Prep. Method: 9301200-01A SM5520EF

Date: Analyst: 01/25/93 HYT

Std. Source:

E920917-01W

Sample Matrix/Media:

£92091 S01L Analytical Method: |nstrument |D: | Date: SM5520EF 02883 01/28/93

Time: Analyst: Units: 1/28/93 16:34 CS MG/KG

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| DIESEL | ND | 11. 0 | 6. 04 | 55 | 5. 30 | 48 | 52 | 51 | 147 | 13 | 30 |

Clayton Lab Number: Ext./Prep. Method: 9301200-01A SM5520E 01/25/93

Date: Analyst: Std. Source;

HYT E920917-01W

Sample Matrix/Media:

E920917 SOIL Analytical Method: Instrument ID: SM5520E AE200 01/28/93

Date: Fime: Analyst: /28/93 15: 00 CS

Units:

CS Mg/kg

| Analyte | Sample Result | Spike Leve‡ | Matrix Spike Result | MS Recovery (%) | Matrix Spike Dupilcate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|----------------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| OIL AND GREASE | 60. 0 | 1,040 | 1, 090 | 99 | 1, 030 | 93 | 96 | 75 | 125 | 5. 2 | 25 |

Clayton Lab Number: Ext./Prep. Method: Date: 9301200-01A SM5520EF 01/25/93

Analyst: Std. Source: HYT E920917-01W

Sample Matrix/Media:

E920917-01

Analytical Method: Instrument ID: SM5520EF AE200 01/28/93 15:30

Date: Time: Analyst: Units:

15: 30 CS MG/KG

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Resuit | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|------------------------------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| TOTAL PETROLEUM HYDROCARBONS | 40.0 | 1, 040 | 885 | 81 | 850 | 78 | 80 | 73 | 103 | 4.0 | 25 |

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106 Clayton ENVIRONMENTAL CONSULTANTS

February 2, 1993

Ms. Elizabeth Wells GEOMATRIX CONSULTANTS 100 Pine Street, 10th Floor San Francisco, CA 94111

> Client Ref. 2026 Clayton Project No. 93012.00

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on January 22, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH

Director, Laboratory Services

Western Operations

RHP/tb Attachments



Page 2 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Date Sampled: 01/21/93 Sample Identification: B-11-6 Date Received: 01/22/93 9301200-01A Lab Number: Date Prepared: 01/26/93 Sample Matrix/Media: SOIL Date Analyzed: 01/26/93 Preparation Method: EPA 5030 Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | 0.034 | 0.005 |
| Ethylbenzene | 100-41-4 | 0.015 | 0.005 |
| p,m-Xylenes | | 0.013 | 0.005 |
| o-Xylene | 95-47-6 | 0.009 | 0.005 |
| Gasoline | | 3.9 | 0.3 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 60 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



Page 3 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301200-02A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/26/93
Preparation Method: EPA 5030 Date Analyzed: 01/26/93
Analytical Method: EPA 8015/8020

Limit of Concentration Detection CAS # (mg/kg) (mg/kg) Analyte BTEX/Gasoline 0.005 Benzene 71-43-2 ND 0.005 Toluene 108-88-3 ND 0.005 Ethylbenzene 100-41-4 ND 0.005 p,m-Xylenes ND 0.005 95-47-6 o-Xylene ND 0.3 Gasoline ND QC Limits (%) LCL UCL Recovery (%) Surrogates 50 - 150 67 a,a,a-Trifluorotoluene 98-08-8

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Page 4 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: B-11-6

Lab Number: 9301200-01A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/21/93

Date Received: 01/22/93

Date Prepared: 01/27/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Page 5 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

| Sample Identification: | B-11-6 | Date Sampled: | 01/21/93 |
|------------------------|-------------|----------------|----------|
| Lab Number: | 9301200-01A | Date Received: | 01/22/93 |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/27/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/27/93 |
| Analytical Method: | EPA 8010 | | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 92 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Page 6 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301200-02A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/27/93
Preparation Method: EPA 5030 Date Analyzed: 01/27/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detectior (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | · | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Page 7 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301200-02A Date Received: --

Sample Matrix/Media: SOIL Date Received: -
Preparation Method: EPA 5030 Date Analyzed: 01/27/93

Analytical Method: EPA 8010

Limit of Concentration Detection

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detectior (mg/kg) |
|--------------------------------|--------------|--|----------------------------------|
| Purgeable Halocarbons (continu | | ······································ | ,g,g, |
| ruigeable naiocalbons (concin | <u>ueu j</u> | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | OC Limits (% |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 115 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable Results are reported on a wet weight basis, as received



Page 8 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: B-11-6

Lab Number: 9301200-01

Sample Matrix/Media: SOIL

Date Sampled:

01/21/93

Date Received: 01/22/93

| | | Date | Date | Prep | Analysis | | |
|--------------|---------------|-------|-------|----------|----------|----------|----------|
| Analyte | Concentration | Limit | Units | Prepared | Analyzed | Method | Method |
| Diesel | ND | 1 | mg/kg | 01/26/93 | 02/01/93 | EPA 3550 | EPA 8015 |
| Hydrocarbons | ND | 50 | mg/kg | 01/25/93 | 01/28/93 | SM 5520E | SM 55201 |

ND Not detected at or above limit of detection

Not detected at or above limit of detection

-- Information not available or not applicable

Results are reported on a wet weight basis, as received



Page 9 of 15

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93012.00

Sample Identification: METHOD BLANK

Lab Number: Sample Matrix/Media: 9301200-02

SOIL

Date Sampled:

Date Received: --

| | | Detection | • | Date | Date | Prep | Analysis |
|--------------|---------------|-----------|-------|----------|----------|----------|----------|
| Analyte | Concentration | Limit | Units | Prepared | Analyzed | Method | Method |
| Diesel | ND | 1 | mg/kg | 01/26/93 | 02/01/93 | EPA 3550 | EPA 8015 |
| Hydrocarbons | ND | 50 | mg/kg | 01/25/93 | 01/28/93 | SM 5520E | SM 55201 |

Not detected at or above limit of detection

Results are reported on a wet weight basis, as received

Not detected at or above limit of detection <

Information not available or not applicable

Clayton Lab Number: Ext./Prep. Method: Date: 9301202-01A EPA 5030 01/26/93

Analyst: Std. Source: PF V921223-01W

Sample Matrix/Media:

V92122 SOIL Analytical Method: EPA8015 8020
Instrument ID: 05587
Date: 01/26/93
Time: 19:21
Analyst: PF
Units: MG/KG

| Analyte | | Sample Result | Spike Level | Motrix Spike Result | MS Recovery (%) | Matrix Spike Duplicale Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|-----------|-------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|--------------|---------------|
| BENZENE | (PID) | ND | 0. 0100 | 0.00800 | 80 | 0. 00800 | 80 | BO | 53 | 140 | 0 . 0 | 28 |
| GASOL INE | (F1D) | ND | ō, 50G | 0. 387 | 77 | 0, 374 | 75 | 76 | 41 | 164 | 3.4 | 37 |
| TOLUENE | (PID) | ND | 0. 0400 | 0. 0290 | 73 | 0. 0310 | 78 | 75 | 60 | 139 | 6.7 | 22 |

Clayton Lab Number: Ext./Prep. Method:

9301174-14A EPA5030 01/27/93

Date: Analyst:

Std. Source: V930118-01W SOIL

Sample Matrix/Media:

Analytical Method:

Instrument 1D: Date: Time:

EPA8010 B020 Ö2911 01/27/93 22: 36

Analyst: Units:

CB MG/KG

| Analyte | | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Dupilcate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------------------|--------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| 1, 1-DICHLOROETHENE | (HALL) | ND | 2. 00 | 1.44 | 72 | 1. 64 | 82 | 77 | 41 | 149 | 13 | 30 |
| CHLOROBENZENE | (HALL) | ND | 2. 00 | 1.60 | 80 | 1. 77 | 89 | 84 | 66 | 151 | 10 | 30 |
| TRICHLOROETHENE | (HALL) | ND | 2. 00 | 1.71 | 86 | 1. 78 | 89 | 87 | 38 | 161 | 4. 0 | 30 |

Clayton Lab Number: Ext./Prep. Method:

9301202-MB EPA3550 01/26/93

Analyst: Std. Source:

Date:

GD G930111-01W

Sample Matrix/Media:

SOIL

Analytical Method: EPA8015 instrument ID: 02883 Date: Time: 02/01/93 14:04 Analyst: AM Units: MG/KG

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Ouplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) | |
|---------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|--|
| DIESEL | ND | 11. 0 | 9. 78 | В9 | 10.2 | 93 | 91 | 51 | 147 | 4. 5 | 30 | |

Clayton Lab Number: Ext./Prep. Method: 9301200-01A SM5520EF 01/25/93

Date: Analyst:

HYT E920917-01W

Std. Source: Sample Matrix/Media:

SOIL

Analytical Method: SM5520EF Instrument ID: 02883 Date: 01/28/93 Time: 16:34 Analyst: CS Units: MG/KG

| Analyte | Sample Result | Spike Level | Malrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCI (%RPD) | |
|---------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|--|
| DIESEL | ND | 11.0 | 6. 04 | 5.5 | 5. 30 | 48 | 52 | 51 | 147 | 13 | 30 | |

Clayton Lab Number: Ext./Prep. Method:

9301200-01A

Date:

3M5520E 01/25/93

SOIL

Analyst: S14. Source: HYT

Sample Matrix/Media:

E920917-01W

Analytical Method: Instrument 10:

SM5520E AE200

Date: Time: 01/28/93 15:00 CS

Analyst: Units:

MG/KG

| Analyle | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Ouplicate Result | MSD Recovery (%) | Average Recovery (% fl) | LCL (% R) | UCL (% R) | RPD (%) | UCL (XRPD) |
|----------------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|-------------------------------|--------------|--------------|------------|---------------|
| OIL AND GREASE | 60. 0 | 1, 040 | 1,090 | 99 | 1,030 | 93 | 96 | 75 | 125 | 5. 2 | 25 |

Clayton Lab Number: Ext./Prep. Method:

9301200-01A SM5520EF

Date: Analyst: 01/25/93 HYT

Std. Source: Sample Matrix/Media: E920917-01W

SOIL

Analytical Method: Instrument ID: SM5520EF AE200 01/28/93 Date: Time: 15:30 Analyst:

CS Units: MG/KG

| Analyte | Sample Result | Spike Level | Matrix Spiks Result | MS Recovery (%) | Matrix Spike Dupilcate Resuit | MSD Recovery (%) | Average Recovery (% R) | LCI (% R) | UCL (% R) | RPD (%) | UC1 (%RPD) |
|------------------------------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| TOTAL PETROLEUM HYDROCARBONS | 40.0 | 1, 040 | 885 | 81 | 850 | 78 | 80 | 73 | 103 | 4.0 | 25 |

| | Chai | n-of-Custod | ly F | lec | or | ď | | | | | | Νo | | • . | j: | | | | \neg | Da | te. | | 2 | Τ, | 9: | S Page (of / |
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1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106 Clayton
ENVIRONMENTAL
CONSULTANTS

January 29, 1993

Ms. Elizabeth Wells GEOMATRIX CONSULTANTS 100 Pine Street, 10th Floor San Francisco, CA 94111

> Client Ref. 2026 Clayton Project No. 93011.74

Dear Ms. Wells:

Attached is our analytical laboratory report and quality assurance data package for the samples received on January 20, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH

Director, Laboratory Services

Western Operations

RHP/caa Attachments



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-7-3.5 | Date Sampled: | 01/20/93 |
|---|---------------------------|----------------|----------|
| Lab Number: | 9301174-01A | Date Received: | |
| Sample Matrix/Media: | SOIL | Date Prepared: | |
| Preparation Method: Analytical Method: | EPA 5030 EPA 8015/8020 | Date Analyzed: | 01/25/93 |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | 0.007 | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | 0.014 | 0.005 |
| o-Xylene | 95-47-6 | 0.006 | 0.005 |
| Gasoline | | 0.3 | 0.3 |
| Surrogates | | Da (9.) | QC Limits (%) |
| Bullogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 78 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-7-12 Date Sampled: 01/18/93 Lab Number: 9301174-02A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 EPA 5030 Preparation Method: Date Analyzed: 01/25/93 Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ИD | 0.005 |
| Gasoline | | ND | 1a |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 77 | 50 - 150 |

a Detection limits increased due to presence of heavier hydrocarbons



Page 4 of 63

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-6-4 | Date Sampled: | 01/18/93 |
|------------------------|---------------|----------------|----------|
| Lab Number: | 9301174-03A | Date Received: | 01/20/93 |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/22/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/25/93 |
| Analytical Method: | EPA 8015/8020 | _ | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | 0.011 | 0.005 |
| Ethylbenzene | 100-41-4 | 0.035 | 0.005 |
| p,m-Xylenes | | 0.060 | 0.005 |
| o-Xylene | 95-47-6 | 0.050 | 0.005 |
| Gasoline | | 11a | 0.3 |
| | | | QC_Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 80 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable Results are reported on a wet weight basis, as received

a Sample appears to weathered gasoline



Page 5 of 63

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-4-4

Lab Number: 9301174-04A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/25/93

Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|---------------------------------------|
| BTEX/Gasoline | | | · · · · · · · · · · · · · · · · · · · |
| Benzene | 71-43-2 | 0.14 | 0.005 |
| Toluene | 108-88-3 | 2.9 | 0.005 |
| Ethylbenzene | 100-41-4 | 4.8 | 0.005 |
| p,m-Xylenes | | 15 | 0.005 |
| o-Xylene | 95-47-6 | 7.0 | 0.005 |
| Gasoline | | 480 a | 0.3 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 79 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

a Sample appears to weathered gasoline



Page 6 of 63

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-4-10.5

Lab Number: 9301174-05A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/25/93

Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | 1 |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | 0.5 | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 68 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-2-4 | Date Sampled: 01/18/93 |
|------------------------|---------------|-------------------------|
| Lab Number: | 9301174-06A | Date Received: 01/20/93 |
| Sample Matrix/Media: | SOIL | Date Prepared: 01/22/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: 01/25/93 |
| Analytical Method: | EPA 8015/8020 | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.03 |
| Toluene | 108-88-3 | 0.08 | 0.03 |
| Ethylbenzene | 100-41-4 | 0.06 | 0.03 |
| p,m-Xylenes | | 0.11 | 0.03 |
| o-Xylene | 95-47-6 | 0.05 | 0.03 |
| Gasoline | | 8 a | 2 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 78 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

a Sample appears to weathered gasoline
Note: Detection limits increased due to dilution necessary for
quantitation



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-2-9
Lab Number: 9301174-07A
Date Received: 01/20/93
Sample Matrix/Media: SOIL
Date Prepared: 01/22/93
Preparation Method: EPA 5030
Date Analyzed: 01/25/93

Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 64 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-3-4

Lab Number: 9301174-08A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/22/93

Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | 0.007 | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | 0.006 | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | 1.4 | 0.3 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 87 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-3-10.5 | Date Sampled: | 01/18/93 |
|------------------------|---------------|----------------|----------|
| Lab Number: | 9301174-09A | Date Received: | • • |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/22/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/25/93 |
| Analytical Method: | EPA 8015/8020 | - | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | 0.007 | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 72 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-1-4 01/19/93 Date Sampled: Lab Number: 9301174-10A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/25/93 Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | 0.011 | 0.005 |
| p,m-Xylenes | | 0.008 | 0.005 |
| o-Xylene | 95-47-6 | 0.005 | 0.005 |
| Gasoline | | 1.6 | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 71 | 50 - 150 |



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QC Limits (%)

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-8-6 Date Sampled: 01/19/93 Lab Number: 9301174-11A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/22/93 Analytical Method: EPA 8015/8020

Analyte CAS # (mg/kg) Limit of Detection (mg/kg)

BTEX/Gasoline

| Benzene | 71-43-2 | ND | 0.005 |
|--------------|-------------|----|-------|
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |

| <u>Surrogates</u> | | Recovery (%) | LCL UCL |
|------------------------|---------|--------------|----------|
| a,a,a-Trifluorotoluene | 98-08-8 | 76 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-8A-11 | Date Sampled: | 01/19/93 |
|------------------------|---------------|----------------|----------|
| Lab Number: | 9301174-12A | Date Received: | |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/22/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/25/93 |
| Analytical Method: | EPA 8015/8020 | - | • |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 73 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Cammia Talamet Et al II | | | |
|-------------------------|---------------|----------------|----------|
| Sample Identification: | B-5-6.5 | Date Sampled: | 01/19/93 |
| Lab Number: | 9301174-13A | Date Received: | 01/20/93 |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/26/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/26/93 |
| Analytical Method: | EPA 8015/8020 | _ | • • |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 64 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-5-11.5 Date Sampled: 01/19/93 Lab Number: 9301174-14A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/26/93 Preparation Method: EPA 5030 Date Analyzed: 01/26/93 Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|-------------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 62 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-10-5.5 Date Sampled: 01/20/93 Lab Number: 9301174-15A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/26/93 Preparation Method: EPA 5030 Date Analyzed: 01/26/93 Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | | ND | 0.3 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 60 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301174-16A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/22/93
Preparation Method: EPA 5030 Date Analyzed: 01/22/93

Analytical Method: EPA 8015/8020

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------|----------|-----------------------|----------------------------------|
| BTEX/Gasoline | | | |
| Benzene | 71-43-2 | ND | 0.005 |
| Toluene | 108-88-3 | ND | 0.005 |
| Ethylbenzene | 100-41-4 | ND | 0.005 |
| p,m-Xylenes | | ND | 0.005 |
| o-Xylene | 95-47-6 | ND | 0.005 |
| Gasoline | - | ND | 0.3 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| a,a,a-Trifluorotoluene | 98-08-8 | 85 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-7-3.5 Date Sampled: 01/18/93 Lab Number: 9301174-01A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-7-3.5 | Date Sampled: | 01/18/93 |
|------------------------|-------------|----------------|----------|
| Lab Number: | 9301174-01A | Date Received: | 01/20/93 |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/22/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/27/93 |
| Analytical Method: | EPA 8010 | _ | • • |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 97 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-7-12 Date Sampled: 01/18/93 Lab Number: 9301174-02A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | NĎ | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0,2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ИD | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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01/18/93

Date Sampled:

Date Received: 01/20/93

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

9301174-02A

| Sample Matrix/Media: Preparation Method: Analytical Method: | SOIL EPA 5030 EPA 8010 | | | pared: 01/22/93 lyzed: 01/27/93 |
|---|------------------------------|----------|-------------------------|------------------------------------|
| Analyte | | CAS # | Concentratio (mg/kg) | Limit of n Detection (mg/kg) |
| Purgeable Halocarbons | (continue | eđ) | | |
| 2-Chloroethylvinylet | her | 110-75-8 | ND | 0.1 |
| Bromoform | | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroe | thane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | | 106-46-7 | ND | 0.4 |
| Dichlorodifluorometh | | 75-71-8 | ND | 0.1 |
| Trichlorofluorometha | ne | 75-69-4 | ND | 0.04 |
| Freon 113 | | 76-13-1 | ND | 0.06 |
| | | | | QC Limits (%) |
| Surrogates | | | Recovery (%) | LCL UCL |
| Bromochloromethane | | 74-97-5 | 97 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Sample Identification: B-7-12

Lab Number:



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-6-4 01/18/93 Date Sampled: Lab Number: 9301174-03A Date Received: 01/20/93 Sample Matrix/Media: SOIL 01/22/93 Date Prepared: Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: **EPA 8010**

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-6-4 Date Sampled: 01/18/93 Lab Number: 9301174-03A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|-------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 97 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/18/93 Sample Identification: B-4-4 Date Sampled: 01/20/93 Date Received: Lab Number: 9301174-04A Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Date Analyzed: 01/27/93 Preparation Method: EPA 5030 Analytical Method: EPA 8010

Limit of Detection Concentration CAS # (mg/kg) (mg/kg) Analyte Purgeable Halocarbons 0.06 Chloromethane 74-87-3 ND Bromomethane 74-83-9 ND 0.07 0.05 Vinyl chloride 75-01-4 ND 0.05 Chloroethane 75-00-3 ND 0.2 ND Methylene chloride 75-09-2 0.03 1,1-Dichloroethene 75-35-4 ND 1,1-Dichloroethane 0.04 75-35-3 ND 0.04 Trans-1,2-Dichloroethene ND 156-60-5 0.04 Cis-1,2-Dichloroethene ND 156-59-2 0.05 67-66-3 Chloroform ND 0.03 1,2-Dichloroethane 107-06-2 ND 0.05 1,1,1-Trichloroethane 71-55-6 ND 0.06 Carbon tetrachloride 56-23-5 ND 0.07 Bromodichloromethane 75-27-4 ND 0.05 ND 1,2-Dichloropropane 78-87-5 0.05 Cis-1,3-Dichloropropene 10061-01-5 ND 0.03 Trichloroethene ND 79-01-6 0.06 Dibromochloromethane ND 124-48-1 0.06 1,1,2-Trichloroethane ND 79-00-5 0.06 Trans-1,3-Dichloropropene ND 10061-02-6

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-4-4 | Date Sampled: | 01/18/93 |
|------------------------|-------------|----------------|----------|
| Lab Number: | 9301174-04A | Date Received: | 01/20/93 |
| Sample Matrix/Media: | SOIL | Date Prepared: | 01/22/93 |
| Preparation Method: | EPA 5030 | Date Analyzed: | 01/27/93 |
| Analytical Method: | EPA 8010 | • | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|-------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 98 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-4-10.5 01/18/93 Date Sampled: Lab Number: 9301174-05A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/26/93 EPA 8010 Analytical Method:

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection -- Information not available or not applicable Results are reported on a wet weight basis, as received

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Date Sampled: 01/18/93 Sample Identification: B-4-10.5 Date Received: 01/20/93 Lab Number: 9301174-05A SOIL Date Prepared: 01/22/93 Sample Matrix/Media: Date Analyzed: 01/26/93 Preparation Method: EPA 5030 Analytical Method: **EPA 8010**

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ıed) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 121 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-2-4

Lab Number: 9301174-06A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/26/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|---------------------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 7 5 -2 7 -4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/18/93 Sample Identification: B-2-4 Date Sampled: 01/20/93 Lab Number: 9301174-06A Date Received: Sample Matrix/Media: Date Prepared: 01/22/93 SOIL Preparation Method: EPA 5030 Date Analyzed: 01/26/93 Analytical Method: **EPA** 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 109 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/18/93 Date Sampled: Sample Identification: B-2-9 01/20/93 Date Received: Lab Number: 9301174-07A 01/22/93 Date Prepared: Sample Matrix/Media: SOIL Date Analyzed: 01/26/93 Preparation Method: **EPA** 5030 **EPA 8010** Analytical Method:

Limit of Detection Concentration (mg/kg) Analyte CAS # (mq/kq) Purgeable Halocarbons 0.06 74-87-3 Chloromethane ND 0.07 74-83-9 ND Bromomethane 0.05 ND Vinyl chloride 75-01-4 0.05 75-00-3 ND Chloroethane 0.2 ND 75-09-2 Methylene chloride 0.03 1,1-Dichloroethene 75-35-4 ND 0.04 ND 1,1-Dichloroethane 75-35-3 0.04 ND Trans-1,2-Dichloroethene 156-60-5 0.04 Cis-1,2-Dichloroethene 156-59-2 ND 0.05 ND Chloroform 67-66-3 0.03 ND 1,2-Dichloroethane 107-06-2 0.05 1,1,1-Trichloroethane 71-55-6 ND 0.06 ND Carbon tetrachloride 56-23-5 0.07 Bromodichloromethane 75-27-4 ND 0.05 1,2-Dichloropropane ND 78-87-5 0.05 ND 10061-01-5 Cis-1,3-Dichloropropene 0.03 Trichloroethene 79-01-6 ND ND 0.06 Dibromochloromethane 124-48-1 0.06 1,1,2-Trichloroethane 79-00-5 ND 0.06 Trans-1,3-Dichloropropene 10061-02-6 ND



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-2-9 | Date | Sampled: | 01/18/93 |
|------------------------|----------|------|-----------|----------|
| Lab Number: | | Date | Received: | 01/20/93 |
| Sample Matrix/Media: | | | Prepared: | |
| Preparation Method: | EPA 5030 | Date | Analyzed: | 01/26/93 |
| Analytical Method: | EPA 8010 | | | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|-------------------------------|------------------|-----------------------|----------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90 -7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71 - 8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 97 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable Results are reported on a wet weight basis, as received

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Date Sampled: 01/18/93 Sample Identification: B-3-4 Date Received: 01/20/93 Lab Number: 9301174-08A Date Prepared: 01/22/93 Sample Matrix/Media: SOIL 01/26/93 Preparation Method: **EPA** 5030 Date Analyzed: Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: | B-3-4 | Date | Sampled: | 01/18/93 |
|------------------------|-------------|------|-----------|----------|
| Lab Number: | 9301174-08A | Date | Received: | 01/20/93 |
| Sample Matrix/Media: | SOIL | Date | Prepared: | 01/22/93 |
| Preparation Method: | EPA 5030 | Date | Analyzed: | 01/26/93 |
| Analytical Method: | EPA 8010 | | | |
| | | | | Limit of |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (conting | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 111 | 50 - 150 |

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Results of Analysis for Geomatrix Consultants/ Port of Cakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-3-10.5

Lab Number: 9301174-09A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/26/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|--|-----------------------|----------------------------------|
| Purgeable Halocarbons | ************************************** | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75 - 35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: B-3-1 Lab Number: 93011 Sample Matrix/Media: SOIL Preparation Method: EPA 5 Analytical Method: EPA 8 | 74-09 A 030 | Date Sampled Date Received Date Prepared Date Analyzed | d: 01/20/93 d: 01/22/93 |
|---|-----------------------|---|----------------------------------|
| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
| Purgeable Halocarbons (conti | nued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 113 | 50 - 150 |

Not detected at or above limit of detection Information not available or not applicable Results are reported on a wet weight basis, as received

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification:B-1-4Date Sampled:01/19/93Lab Number:9301174-10ADate Received:01/20/93Sample Matrix/Media:SOILDate Prepared:01/22/93Preparation Method:EPA 5030Date Analyzed:01/26/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ИD | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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01/19/93

Date Sampled:

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Matrix/Media: SOII Preparation Method: EPA | 174-10A 5030 8010 | Date Receive Date Prepare Date Analyze | ed: 01/20/93 ed: 01/22/93 |
|--|-------------------------|--|----------------------------------|
| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
| Purgeable Halocarbons (cont | cinued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%)LCL UCL |
| Bromochloromethane | 74-97-5 | 99 | 50 - 150 |

Not detected at or above limit of detection Information not available or not applicable Results are reported on a wet weight basis, as received

Sample Identification: B-1-4



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Date Sampled: 01/19/93 Sample Identification: B-8-6 Date Received: Lab Number: 9301174-11A 01/20/93 Sample Matrix/Media: Date Prepared: 01/22/93 SOIL Date Analyzed: 01/26/93 Preparation Method: EPA 5030 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | , |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67 - 66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78 - 87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/19/93 Sample Identification: B-8-6 Date Sampled: 01/20/93 Lab Number: 9301174-11A Date Received: Date Prepared: Sample Matrix/Media: 01/22/93 SOIL 01/26/93 Preparation Method: Date Analyzed: EPA 5030 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | ıed) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 109 | 50 - 150 |

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/19/93 Sample Identification: B-8A-11 Date Sampled: 9301174-12A Date Received: 01/20/93 Lab Number: Sample Matrix/Media: SOIL Date Prepared: 01/22/93 01/27/93 **EPA** 5030 Date Analyzed: Preparation Method: Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ЙD | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

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01/19/93

Date Sampled:

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Lab Number: 93011 Sample Matrix/Media: SOIL Preparation Method: EPA 5 Analytical Method: EPA 5 | .74-12 A 5030 | Date Receive Date Prepare Date Analyze | ed: 01/20/93 ed: 01/22/93 |
|--|-------------------------|--|----------------------------------|
| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
| Purgeable Halocarbons (conti | nued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 95 | 50 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

Sample Identification: B-8A-11

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/19/93 Date Sampled: Sample Identification: B-5-6.5 Date Received: 01/20/93 Lab Number: 9301174-13A 01/22/93 Date Prepared: Sample Matrix/Media: SOIL Date Analyzed: 01/27/93 Preparation Method: EPA 5030 Analytical Method: EPA 8010

Limit of Concentration Detection CAS # (mg/kg) Analyte (mg/kg) Purgeable Halocarbons 0.06 ND Chloromethane 74-87-3 0.07 ND Bromomethane 74-83-9 0.05 Vinyl chloride 75-01-4 ND 0.05 75-00-3 ND Chloroethane 0.2 75-09-2 ND Methylene chloride 0.03 1,1-Dichloroethene 75-35-4 ND 0.04 ND 1,1-Dichloroethane 75-35-3 0.04 Trans-1,2-Dichloroethene 156-60-5 ND 0.04 ND Cis-1,2-Dichloroethene 156-59-2 0.05 ND 67-66-3 Chloroform 0.03 1,2-Dichloroethane 107-06-2 ND 0.05 ND 1,1,1-Trichloroethane 71-55-6 0.06 Carbon tetrachloride 56-23-5 ND ND 0.07 Bromodichloromethane 75-27-4 0.05 1,2-Dichloropropane 78-87-5 ND 0.05 ND 10061-01-5 Cis-1,3-Dichloropropene 0.03 Trichloroethene 79-01-6 ND ND 0.06 Dibromochloromethane 124-48-1 0.06 79-00-5 ND 1,1,2-Trichloroethane ND 0.06 10061-02-6 Trans-1,3-Dichloropropene

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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01/19/93

Date Sampled:

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Matrix/Media: S | 9301174-13A BOIL EPA 5030 EPA 8010 | Date Receive Date Prepare Date Analyze | |
|-------------------------|---|--|----------------------------------|
| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
| Purgeable Halocarbons (| continued) | | |
| 2-Chloroethylvinylethe | er 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroeth | nane 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethan | ne 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | a 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| Surrogates | | Recovery (%) | QC Limits (%) LCL UCL |
| Bromochloromethane | 74-97-5 | 114 | 50 - 150 |

ND Not detected at or above limit of detection Information not available or not applicable Results are reported on a wet weight basis, as received

Sample Identification: B-5-6.5

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-5-11.5

Lab Number: 9301174-14A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/19/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/27/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27 - 4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

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01/19/93

50 - 150

Date Sampled:

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| nambre recutificactour n | | Date bamprou. | 01/10/00 | |
|---|---|----------------------------|----------------------------------|--|
| | 301174-14A | Date Received: | | |
| Sample Matrix/Media: S | OIL | Date Prepared: | | |
| Preparation Method: E | PA 5030 | Date Analyzed: | 01/27/93 | |
| Analytical Method: E | PA 8010 | | | |
| | | | Limit of | |
| | | Concentration | Detection | |
| Analyte | CAS # | (mg/kg) | (mg/kg) | |
| Purgeable Halocarbons (c | ontinued) | | | |
| 2-Chloroethylvinylethe | r 110-75-8 | ND | 0.1 | |
| Bromoform | 7 5- 25-2 | ND | 0.07 | |
| Tetrachloroethene | 127-18-4 | ND | 0.05 | |
| 1,1,2,2-Tetrachloroeth | ane 79-34-5 | ND | 0.05 | |
| Chlorobenzene | 108-90-7 | MD | ^ ^ 7 | |
| CHIOLODelizene | 100-30-7 | ND | 0.07 | |
| | 541-73-7 | ND ND | 0.07 | |
| 1,3-Dichlorobenzene | | | | |
| 1,3-Dichlorobenzene 1,2-Dichlorobenzene | 541-73-7 | ND | 0.2 | |
| 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene | 541-73-7 95-50-1 106-46-7 | ND ND ND | 0.2 0.4 | |
| 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethan | 541-73-7 95-50-1 106-46-7 e 75-71-8 | ND ND | 0.2 0.4 0.4 | |
| 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene | 541-73-7 95-50-1 106-46-7 e 75-71-8 | ND ND ND ND | 0.2 0.4 0.4 0.1 | |
| 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethan Trichlorofluoromethane | 541-73-7 95-50-1 106-46-7 e 75-71-8 75-69-4 | ND ND ND ND ND | 0.2 0.4 0.4 0.1 0.04 | |

74-97-5

110

Sample Identification: B-5-11.5

Bromochloromethane

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-10-5.5

Lab Number: 9301174-15A

Sample Matrix/Media: SOIL

Preparation Method: EPA 5030

Date Sampled: 01/20/93

Date Received: 01/20/93

Date Prepared: 01/22/93

Date Analyzed: 01/27/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ND | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |
| | | | |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Date Sampled: 01/20/93 Sample Identification: B-10-5.5 Date Received: Lab Number: 9301174-15A 01/20/93 Date Prepared: 01/22/93 Sample Matrix/Media: SOIL Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (continu | | | |
| | <u></u> | | 0.1 |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (% |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 113 | 50 - 150 |

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301174-16A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/27/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|------------|-----------------------|----------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.06 |
| Bromomethane | 74-83-9 | ND | 0.07 |
| Vinyl chloride | 75-01-4 | ND | 0.05 |
| Chloroethane | 75-00-3 | ND | 0.05 |
| Methylene chloride | 75-09-2 | ND | 0.2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.03 |
| 1,1-Dichloroethane | 75-35-3 | NĎ | 0.04 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.04 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.04 |
| Chloroform | 67-66-3 | ИD | 0.05 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.03 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.05 |
| Carbon tetrachloride | 56-23-5 | ND | 0.06 |
| Bromodichloromethane | 75-27-4 | ND | 0.07 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.05 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.05 |
| Trichloroethene | 79-01-6 | ND | 0.03 |
| Dibromochloromethane | 124-48-1 | ND | 0.06 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.06 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.06 |

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301174-16A Date Received: --

Sample Matrix/Media: SOIL Date Prepared: 01/22/93 Preparation Method: EPA 5030 Date Analyzed: 01/27/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|-------------------------------|----------|-----------------------|----------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 0.1 |
| Bromoform | 75-25-2 | ND | 0.07 |
| Tetrachloroethene | 127-18-4 | ND | 0.05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.05 |
| Chlorobenzene | 108-90-7 | ND | 0.07 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 0.1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.04 |
| Freon 113 | 76-13-1 | ND | 0.06 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 116 | 50 - 150 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/18/93 Date Sampled: Sample Identification: B-3-4 Lab Number: 9301174-08A Date Received: 01/20/93 Date Extracted: 01/23/93 Sample Matrix/Media: SOIL Extraction Method: EPA 3550 Date Analyzed: 01/25/93 Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------------|-------------------|-----------------------|----------------------------------|
| Acid Extractables | | | |
| Phenol | 108-95-2 | ND | 0.2 |
| 2-chlorophenol | 95-57-8 | ND | 0.2 |
| 2-methyl phenol | 95-48-7 | ND | 0.2 |
| 4-methyl phenol | 106-44-5 | ND | 0.2 |
| 2-nitrophenol | 88-75-5 | ND | 0.2 |
| 2,4-dimethylphenol | 105-67-9 | ND | 0.2 |
| 2,4-dichlorophenol | 120-83-2 | ND | 0.2 |
| 4-chloro-3-methylphenol | 59-50-7 | ND | 0.2 |
| 2,4,5-trichlorophenol | 95-95-4 | ND | 0.2 |
| 2,4,6-trichlorophenol | 88-06-2 | ND | 0.2 |
| 2,4-dinitrophenol | 51-28-5 | ND | 1 |
| 4-nitrophenol | 100-02-7 | ND | 1 |
| 2-methyl-4,6-dinitrophenol | 534-52 - 1 | ND | 1 |
| Pentachlorophenol | 87-86-5 | ND | 1 |
| Base/Neutral Extractables | | | |
| Bis(2-chloroethyl)ether | 111-44-4 | ND | 0.2 |
| 1,3-dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,4-dichlorobenzene | 106-46-7 | ND | 0.2 |
| Benzyl alcohol | 100-51-6 | ND | 0.4 |
| 1,2-dichlorobenzene | 95-50-1 | ND | 0.2 |
| Bis-(2-chloroisopropyl)ether | 108-60-1 | ND | 0.2 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-3-4
Lab Number: 9301174-08A
Date Received: 01/20/93
Sample Matrix/Media: SOIL
Date Extracted: 01/23/93
Extraction Method: EPA 3550
Date Analyzed: 01/25/93

Analytical Method: EPA 8270

| nalyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| ase/Neutral Extractables (cont | tinued) | | |
| N-nitrosodi-n-propylamine | 621-64-7 | ND | 0.2 |
| Hexachloroethane | 67-72-1 | ND | 0.2 |
| Nitrobenzene | 98-95-3 | ND | 0.2 |
| Isophorone | 78-59-1 | ND | 0.2 |
| Benzoic acid | 65-85-0 | ND | 0.8 |
| Bis-(2-chloroethoxy)methane | 111-91-1 | ND | 0.2 |
| 1,2,4-trichlorobenzene | 120-82-1 | ND | 0.2 |
| Naphthalene | 91-20-3 | ND | 0.2 |
| Hexachlorobutadiene | 87-68-3 | ND | 0.2 |
| 2-chloronaphthalene | 91-58-7 | ND | 0.2 |
| 2-methyl naphthalene | 91-57-6 | ND | 0.2 |
| 4-chloroaniline | 106-47-8 | ND | 1 |
| 2-nitroaniline | 88-74-4 | ND | 1 |
| 3-nitroaniline | 99-09-2 | ND | 1 |
| 4-nitroaniline | 100-01-6 | ND | 1 2 |
| Hexachlorocyclopentadiene | 77-47-4 | ND | 2 |
| Dimethyl phthalate | 131-11-3 | ND | 0.2 |
| Acenaphthylene | 208-96-8 | ND | 0.2 |
| Acenaphthene | 83-32-9 | ND | 0.2 |
| Dibenzofuran | 132-64-9 | ND | 0.2 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification:B-3-4Date Sampled:01/18/93Lab Number:9301174-08ADate Received:01/20/93Sample Matrix/Media:SOILDate Extracted:01/23/93Extraction Method:EPA 3550Date Analyzed:01/25/93

Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|-----------|-----------------------|----------------------------------|
| Base/Neutral Extractables (con | tinued) | | |
| 2,4-dinitrotoluene | 121-14-2 | ND | 0.2 |
| 2,6-dinitrotoluene | 606-20-2 | ND | 0.2 |
| Diethyl phthalate | 84-66-2 | ND | 0.2 |
| 4-chlorophenylphenylether | 7005-72-3 | ND | 0.2 |
| Fluorene | 86-73-7 | ND | 0.2 |
| N-nitrosodiphenylamine | 86-30-6 | ND | 0.2 |
| 4-bromophenylphenylether | 101-55-3 | ND | 0.2 |
| Hexachlorobenzene | 118-74-1 | ND | 0.2 |
| Phenanthrene | 85-01-8 | ND | 0.2 |
| Anthracene | 120-12-7 | ND | 0.2 |
| Di-n-butylphthalate | 84-74-2 | ND | 0.2 |
| Fluoranthene | 206-44-2 | ND | 0.2 |
| Benzidine | 92-87-5 | ND | 5 |
| Pyrene | 129-00-0 | ND | 0.2 |
| Benzylbutylphthalate | 85-68-7 | ND | 0.2 |
| 3,3'-dichlorobenzidine | 91-94-1 | ND | 5 |
| Benzo(a)anthracene | 56-55-3 | ND | 0.2 |
| Bis-(2-ethylhexyl)phthalate | 117-81-7 | ND | 2 |
| Chrysene | 218-01-9 | ND | 0.2 |
| Di-n-octylphthalate | 117-84-0 | ND | 0.2 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-3-4

Lab Number: 9301174-08A

Sample Matrix/Media: SOIL

Extraction Method: EPA 3550

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Extracted: 01/23/93

Date Analyzed: 01/25/93

Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|-----------------------------|------------|-----------------------|----------------------------------|
| Base/Neutral Extractables (| continued) | | |
| Benzo(b)fluoranthene | 205-99-2 | ND | 0.2 |
| Benzo(k)fluoranthene | 207-08-9 | ND | 0.2 |
| Benzo(a)pyrene | 50-32-8 | ND | 0.2 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | ND | 0.2 |
| Dibenzo(a,h)anthracene | 53-70-3 | ND | 0.2 |
| Benzo(ghi)perylene | 191-24-2 | ND | 0.2 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| 2-Fluorophenol | 367-12-4 | 57 | 25 - 121 |
| Phenol-d6 | 13127-88-3 | 47 | 24 - 113 |
| Nitrobenzene-d5 | 4165-60-0 | 61 | 23 - 120 |
| 2-Fluorobiphenyl | 321-60-8 | 68 | 30 - 115 |
| 2,4,6-Tribromophenol | 118-79-6 | 40 | 19 - 122 |
| Terphenyl-d14 | 98904-43-9 | 88 | 18 - 137 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-3-10.5 Date Sampled: 01/18/93 Lab Number: 9301174-09A Date Received: 01/20/93 Sample Matrix/Media: SOIL Date Extracted: 01/23/93 Extraction Method: EPA 3550 Date Analyzed: 01/25/93 Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------------|----------|-----------------------|----------------------------------|
| Acid Extractables | | | |
| Phenol | 108-95-2 | ND | 0.2 |
| 2-chlorophenol | 95-57-8 | ND | 0.2 |
| 2-methyl phenol | 95-48-7 | ND | 0.2 |
| 4-methyl phenol | 106-44-5 | ND | 0.2 |
| 2-nitrophenol | 88-75-5 | ND | 0.2 |
| 2,4-dimethylphenol | 105-67-9 | ND | 0.2 |
| 2,4-dichlorophenol | 120-83-2 | ND | 0.2 |
| 4-chloro-3-methylphenol | 59-50-7 | ND | 0.2 |
| 2,4,5-trichlorophenol | 95-95-4 | ND | 0.2 |
| 2,4,6-trichlorophenol | 88-06-2 | ND | 0.2 |
| 2,4-dinitrophenol | 51-28-5 | ND | 1 |
| 4-nitrophenol | 100-02-7 | ND | 1 1 1 |
| 2-methyl-4,6-dinitrophenol | 534-52-1 | ND | 1 |
| Pentachlorophenol | 87-86-5 | ND | 1 |
| Base/Neutral Extractables | | | |
| Bis(2-chloroethyl)ether | 111-44-4 | ND | 0.2 |
| 1,3-dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,4-dichlorobenzene | 106-46-7 | ND | 0.2 |
| Benzyl alcohol | 100-51-6 | ND | 0.4 |
| 1,2-dichlorobenzene | 95-50-1 | ND | 0.2 |
| Bis-(2-chloroisopropyl)ether | 108-60-1 | ND | 0.2 |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: B-3-10.5

Lab Number: 9301174-09A

Sample Matrix/Media: SOIL

Extraction Method: EPA 3550

Date Sampled: 01/18/93

Date Received: 01/20/93

Date Extracted: 01/23/93

Date Analyzed: 01/25/93

Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detectior (mg/kg) |
|--------------------------------|----------|-----------------------|----------------------------------|
| Base/Neutral Extractables (con | tinued) | 4.64 | |
| N-nitrosodi-n-propylamine | 621-64-7 | ND | 0.2 |
| Hexachloroethane | 67-72-1 | ND | 0.2 |
| Nitrobenzene | 98-95-3 | ND | 0.2 |
| Isophorone | 78-59-1 | ND | 0.2 |
| Benzoic acid | 65-85-0 | ND | 0.8 |
| Bis-(2-chloroethoxy)methane | 111-91-1 | ND | 0.2 |
| 1,2,4-trichlorobenzene | 120-82-1 | ND | 0.2 |
| Naphthalene | 91-20-3 | ND | 0.2 |
| Hexachlorobutadiene | 87-68-3 | ND | 0.2 |
| 2-chloronaphthalene | 91-58-7 | ND | 0.2 |
| 2-methyl naphthalene | 91-57-6 | ND | 0.2 |
| 4-chloroaniline | 106-47-8 | ND | 1 |
| 2-nitroaniline | 88-74-4 | ND | 1 |
| 3-nitroaniline | 99-09-2 | ND | 1 |
| 4-nitroaniline | 100-01-6 | ND | 1 |
| Hexachlorocyclopentadiene | 77-47-4 | ND | 2 |
| Dimethyl phthalate | 131-11-3 | ND | 0.2 |
| Acenaphthylene | 208-96-8 | ND | 0.2 |
| Acenaphthene | 83-32-9 | ND | 0.2 |
| Dibenzofuran | 132-64-9 | ND | 0.2 |

ND Not detected at or above limit of detection

⁻⁻ Information not available or not applicable Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

01/18/93 Date Sampled: Sample Identification: B-3-10.5 Date Received: 01/20/93 9301174-09A Lab Number: Date Extracted: 01/23/93 Sample Matrix/Media: SOIL Date Analyzed: 01/25/93 Extraction Method: EPA 3550 Analytical Method: EPA 8270

Limit of Detection Concentration CAS # (mg/kg) (mg/kg) Analyte Base/Neutral Extractables (continued) 0.2 121-14-2 ND 2,4-dinitrotoluene 0.2 ND 606-20-2 2,6-dinitrotoluene 0.2 ND Diethyl phthalate 84-66-2 0.2 7005-72-3 ND 4-chlorophenylphenylether 0.2 86-73-7 ND Fluorene 0.2 N-nitrosodiphenylamine 86-30-6 ND 0.2 ND 4-bromophenylphenylether 101-55-3 0.2 Hexachlorobenzene 118-74-1 ND 0.2 Phenanthrene 85-01-8 ND 0.2 ND 120-12-7 Anthracene 0.2 Di-n-butylphthalate 84-74-2 ND 0.2 206-44-2 ND Fluoranthene 5 92-87-5 ND Benzidine 0.2 ND Pyrene 129-00-0 0.2 85-68-7 ND Benzylbutylphthalate 5 ND 3,3'-dichlorobenzidine 91 - 94 - 10.2 56-55-3 ND Benzo(a)anthracene 2 ND Bis-(2-ethylhexyl)phthalate 117-81-7 0.2 ND 218-01-9 Chrysene 0.2 ND Di-n-octylphthalate 117-84-0

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

| Sample Identification: Lab Number: Sample Matrix/Media: Extraction Method: | 9301174-09A SOIL EPA 3550 | Date Sampled: 01/18/93 Date Received: 01/20/93 Date Extracted: 01/23/93 Date Analyzed: 01/25/93 |
|--|---------------------------------|---|
| Analytical Method: | EPA 8270 | |

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------|-------------|-----------------------|----------------------------------|
| Base/Neutral Extractables | (continued) | | |
| Benzo(b)fluoranthene | 205-99-2 | ND | 0.2 |
| Benzo(k)fluoranthene | 207-08-9 | ND | 0.2 |
| Benzo(a)pyrene | 50-32-8 | ND | 0.2 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | ND | 0.2 |
| Dibenzo(a,h)anthracene | 53-70-3 | ND | 0.2 |
| Benzo(ghi)perylene | 191-24-2 | ND | 0.2 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| 2-Fluorophenol | 367-12-4 | 74 | 25 - 121 |
| Phenol-d6 | 13127-88-3 | 70 | 24 - 113 |
| Nitrobenzene-d5 | 4165-60-0 | 81 | 23 - 120 |
| 2-Fluorobiphenyl | 321-60-8 | 83 | 30 - 115 |
| 2,4,6-Tribromophenol | 118-79-6 | 76 | 19 - 122 |
| Terphenyl-d14 | 98904-43-9 | 111 | 18 - 137 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301174-16A Date Received: --

Sample Matrix/Media: SOIL Date Extracted: 01/23/93 Extraction Method: EPA 3550 Date Analyzed: 01/25/93

Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|------------------------------|---------------------------------------|-----------------------|----------------------------------|
| Acid Extractables | · · · · · · · · · · · · · · · · · · · | | |
| Phenol | 108-95-2 | ND | 0.2 |
| 2-chlorophenol | 95-57-8 | ND | 0.2 |
| 2-methyl phenol | 95-48-7 | ND | 0.2 |
| 4-methyl phenol | 106-44-5 | ND | 0.2 |
| 2-nitrophenol | 88-75-5 | ND | 0.2 |
| 2,4-dimethylphenol | 105-67-9 | ND | 0.2 |
| 2,4-dichlorophenol | 120-83-2 | ND | 0.2 |
| 4-chloro-3-methylphenol | 59-50-7 | ND | 0.2 |
| 2,4,5-trichlorophenol | 95-95-4 | ND | 0.2 |
| 2,4,6-trichlorophenol | 88-06-2 | ND | 0.2 |
| 2,4-dinitrophenol | 51-28-5 | ND | 1 |
| 4-nitrophenol | 100-02-7 | ND | 1 |
| 2-methyl-4,6-dinitrophenol | 534-52-1 | ND | 1 1 |
| Pentachlorophenol | 87-86-5 | ND | 1 |
| Base/Neutral Extractables | | | |
| Bis(2-chloroethyl)ether | 111-44-4 | ND | 0.2 |
| 1,3-dichlorobenzene | 541-73-7 | ND | 0.2 |
| 1,4-dichlorobenzene | 106-46-7 | ND | 0.2 |
| Benzyl alcohol | 100-51-6 | ND | 0.4 |
| 1,2-dichlorobenzene | 95-50-1 | ND | 0.2 |
| Bis-(2-chloroisopropyl)ether | 108-60-1 | ND | 0.2 |
| | | | |

ND Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301174-16A Date Received: --

Sample Matrix/Media: SOIL Date Extracted: 01/23/93 Extraction Method: EPA 3550 Date Analyzed: 01/25/93

Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|---------------------------------|----------|-----------------------|----------------------------------|
| Base/Neutral Extractables (con- | tinued) | | |
| N-nitrosodi-n-propylamine | 621-64-7 | ND | 0.2 |
| Hexachloroethane | 67-72-1 | ND | 0.2 |
| Nitrobenzene | 98-95-3 | ND | 0.2 |
| Isophorone | 78-59-1 | ND | 0.2 |
| Benzoic acid | 65-85-0 | ND | 0.8 |
| Bis-(2-chloroethoxy)methane | 111-91-1 | ND | 0.2 |
| 1,2,4-trichlorobenzene | 120-82-1 | ND | 0.2 |
| Naphthalene | 91-20-3 | ND | 0.2 |
| Hexachlorobutadiene | 87-68-3 | ND | 0.2 |
| 2-chloronaphthalene | 91-58-7 | ND | 0.2 |
| 2-methyl naphthalene | 91-57-6 | ND | 0.2 |
| 4-chloroaniline | 106-47-8 | NĎ | 1 |
| 2-nitroaniline | 88-74-4 | ND | 1 |
| 3-nitroaniline | 99-09-2 | ND | 1 1 2 |
| 4-nitroaniline | 100-01-6 | ND | 1 |
| Hexachlorocyclopentadiene | 77-47-4 | ND | |
| Dimethyl phthalate | 131-11-3 | ND | 0.2 |
| Acenaphthylene | 208-96-8 | ND | 0.2 |
| Acenaphthene | 83-32-9 | ND | 0.2 |
| Dibenzofuran | 132-64-9 | ND | 0.2 |

ND Not detected at or above limit of detection -- Information not available or not applicable Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9301174-16A

Date Received:

Sample Matrix/Media:

SOIL

Date Extracted: 01/23/93

Extraction Method: Analytical Method: EPA 3550 EPA 8270 Date Analyzed: 01/25/93

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|--------------------------------|-----------|-----------------------|----------------------------------|
| Base/Neutral Extractables (con | tinued) | | |
| 2,4-dinitrotoluene | 121-14-2 | ND | 0.2 |
| 2,6-dinitrotoluene | 606-20-2 | ND | 0.2 |
| Diethyl phthalate | 84-66-2 | ND | 0.2 |
| 4-chlorophenylphenylether | 7005-72-3 | ND | 0.2 |
| Fluorene | 86-73-7 | ND | 0.2 |
| N-nitrosodiphenylamine | 86-30-6 | ND | 0.2 |
| 4-bromophenylphenylether | 101-55-3 | NĎ | 0.2 |
| Hexachlorobenzene | 118-74-1 | ИD | 0.2 |
| Phenanthrene | 85-01-8 | ND | 0.2 |
| Anthracene | 120-12-7 | ND | 0.2 |
| Di-n-butylphthalate | 84-74-2 | ND | 0.2 |
| Fluoranthene | 206-44-2 | ND | 0.2 |
| Benzidine | 92-87-5 | ИD | 5 |
| Pyrene | 129-00-0 | ND | 0.2 |
| Benzylbutylphthalate | 85-68-7 | ND | 0.2 |
| 3,3'-dichlorobenzidine | 91-94-1 | ND | 5 |
| Benzo(a) anthracene | 56-55-3 | ND | 0.2 |
| Bis-(2-ethylhexyl)phthalate | 117-81-7 | ND | 2 |
| Chrysene | 218-01-9 | ND | 0.2 |
| Di-n-octylphthalate | 117-84-0 | ND | 0.2 |

Not detected at or above limit of detection Information not available or not applicable Results are reported on a wet weight basis, as received



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9301174-16A Date Received: --

Sample Matrix/Media: SOIL Date Extracted: 01/23/93 Extraction Method: EPA 3550 Date Analyzed: 01/25/93

Analytical Method: EPA 8270

| Analyte | CAS # | Concentration (mg/kg) | Limit of Detection (mg/kg) |
|-----------------------------|------------|-----------------------|----------------------------------|
| Base/Neutral Extractables (| continued) | | |
| Benzo(b)fluoranthene | 205-99-2 | ND | 0.2 |
| Benzo(k)fluoranthene | 207-08-9 | ND | 0.2 |
| Benzo(a)pyrene | 50-32-8 | ND | 0.2 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | ND | 0.2 |
| Dibenzo(a,h)anthracene | 53-70-3 | ND | 0.2 |
| Benzo(ghi)perylene | 191-24-2 | ND | 0.2 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| 2-Fluorophenol | 367-12-4 | 83 | 25 - 121 |
| Phenol-d6 | 13127-88-3 | 83 | 24 - 113 |
| Nitrobenzene-d5 | 4165-60-0 | 92 | 23 - 120 |
| 2-Fluorobiphenyl | 321-60-8 | 95 | 30 - 115 |
| 2,4,6-Tribromophenol | 118-79-6 | 84 | 19 - 122 |
| Terphenyl-d14 | 98904-43-9 | 113 | 18 - 137 |



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Matrix/Media: SOIL
Preparation Method: SM 5520E
Analysis Method: SM 5520F

Date Received: 01/20/93 Date Prepared: 01/21/93 Date Analyzed: 01/26/93

| Lab Number | Sample Identification | Date Sampled | Hydrocarbons (mg/kg) | Detection Limit (mg/kg) |
|---------------|--------------------------|-----------------|-------------------------|-------------------------------|
| 01A | B-7-3.5 | 01/18/93 | ND | 50 |
| 02A | B-7-12 | 01/18/93 | ND | 50 |
| 03A | B-6-4 | 01/18/93 | ND | 50 |
| 04A | B-4-4 | 01/18/93 | 1,400 | 50 |
| 05A | B-4-10.5 | 01/18/93 | 130 | 50 |
| 06A | B-2-4 | 01/18/93 | 710 | 50 |
| 07A | B-2-9 | 01/18/93 | ND | 50 |
| 08A | B-3-4 | 01/18/93 | ND | 50 |
| 09A | B-3-10.5 | 01/18/93 | 60 | 50 |
| 10A | B-1-4 | 01/19/93 | ND | 50 |
| 11A | B-8-6 | 01/19/93 | ND | 50 |
| 12A | B-8A-11 | 01/19/93 | ND | 50 |
| 13A | B-5-6.5 | 01/19/93 | ND | 50 |
| 14A | B-5-11.5 | 01/19/93 | ND | 50 |
| 15A | B-10-5.5 | 01/20/93 | 310 | 50 |
| 16A | METHOD BLANK | | ND | 50 |

ND Not detected at or above limit of detection

Results are reported on a wet weight basis, as received

Not detected at or above limit of detection

⁻⁻ Information not available or not applicable



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Matrix/Media:SOILDate Received:01/20/93Preparation Method:EPA 3550Date Prepared:01/25/93Analysis Method:EPA 8015Date Analyzed:01/27/93

| Lab Number | Sample Identification | Date Sampled | Diesel (mg/kg) | Detection Limit (mg/kg) |
|---------------|--------------------------|-----------------|-------------------|-------------------------------|
| 01A | B-7-3.5 | 01/18/93 | ND | 1 |
| 02A | B-7-12 | 01/18/93 | ND | 1 |
| 03A | B-6-4 | 01/18/93 | 10 | 1 |
| 04A | B-4-4 | 01/18/93 | 120 | 1 |
| 05A | B-4-10.5 | 01/18/93 | 12 | 1 |
| 06A | B-2-4 | 01/18/93 | 7 | 1 |
| 07A | B-2-9 | 01/18/93 | ND | 1 |
| 08A | B-3-4 | 01/18/93 | ND | 1 |
| 09A | B-3-10.5 | 01/18/93 | ND | 1 |
| 10A | B-1-4 | 01/19/93 | ND | 1 |
| 11A | B-8-6 | 01/19/93 | 25 | 1 |
| 12A | B-8A-11 | 01/19/93 | ND | 10 a |
| 13A | B-5-6.5 | 01/19/93 | ND | 10 a |
| 14A | B-5-11.5 | 01/19/93 | ND | 10 a |
| 15A | B-10-5.5 | 01/20/93 | ND | 10 a |
| 16A | METHOD BLANK | | ND | 1 |

ND Not detected at or above limit of detection

Results are reported on a wet weight basis, as received a Detection limit increased due to presence of heavier hydrocarbons

Not detected at or above limit of detection -- Information not available or not applicable

| Chain-of-Custody Record | | | | | | | | | | N |) | | 35 | 48 | } | | | Dat | te: | Ł | | В | 19 | 3 | Page | , 1 | of | | 2 |
|-------------------------|-------------------|-----------------|-----------------|---------------------|--|----------------------|-------------------------------|---|--------------|----------|-----------------|----------|-----------------------------|--------------|------------|----------|------------|----------|--------------|---------------|-----------|-----------|----------------------|----------------------|-----------------------------------|-------------|-------------|-------|-----|
| Project No.: | | | ANALYSES | | | | | | | | | • | | | REMARI | (S | _ <u>`</u> | | | | | | | | | | | | |
| Samplers (Signatures): | od 8010 | od 8020 | od 8240 | od 8270 | soline | sel | EX | 1 x year | | | | | | | | - | | | | | water (W) | | Number of containers | | itional co | | | | |
| | EPA Method 8010 | EPA Method 8020 | EPA Method 8240 | EPA Method 8270 | TPH as gasoline | TPH as diesel | ТРН аз ВТЕХ | 主工 | | | | | | | | | | | | Cooled | _ | Acidified | ımber of | Bill Por Directly | + . + | _ | Da 😜 | 41 | ۲, |
| Date Time Sample Number | 罚 | ш | <u> </u> | _ | 칫 | F | | | \dashv | | | | | | \dashv | \dashv | | | | _ | | ₹ | ž | | | | | _ | į |
| 1/18 1100 8.7-3.5 | | | | - | 긤 | $\frac{2}{3}$ | X . | · · | | \dashv | | | | - | | | | | | | <u>3</u> | | 7 | . بر ر | | . 1 | , , | | |
| 1125 B-7-12 | X | - | | \dashv | 쑀 | X | λ | X | - - | | | _ | | \dashv | \dashv | \dashv | \dashv | \dashv | | ` | | | 1 | 1. Stand. | ۸ ہے, د | ~~ | <i>ہے</i> ط | ! | |
| 1205 B-6-4 | X X | | | | | X | X | -+ | | | | | | \dashv | | | - | \dashv | _ } | 4 | 5 | | | 5372 | o E | 4 + | ~¥ I | | |
| | - - | | | 十 | X | | Χ | X | | - | | | | _ | \dashv | \dashv | _ | | | * | 5 | | - | | | | | | |
| 10 % o B-4 10.5 | X | _ | | \dashv | <u>Х</u> У | X | X | 4 | \dashv | | | | | | | - | | | -1 | | 5 | | 井 | | | | | | |
| 133- B-2-4 134 B-2-9 | X | \dashv | | \dashv | | \overrightarrow{X} | | X | | | + | | | <u></u> | | | | | | Χ | <u> </u> | | | | | | | | |
| 1415 B-3-4 | $\frac{ X }{ X }$ | - | | VI: | | | X | / | | \dashv | | | | \dashv | \dashv | | | | - | <u>/</u> | <u>^</u> | | 7 | | | | | | |
| V 1515 B-3-10.5 | X | | | 7 | | 쉿 | X X | <u> </u> | | | | | | \dashv | + | _ | | | | <u>`</u> | <u>§</u> | | \vdash | | | | | | |
| 119 1210 8-1-4 | H | | | \rightarrow | 幻 | 쉾 | $\hat{\mathbf{x}}$ | $\stackrel{\triangle}{\times}$ | | | \dashv | - | | | | -+ | 一 | \dashv | | | <u>\$</u> | | ' | | | | | | |
| 1400 B-8-6 | X | \dashv | | | X | Ĵ | X | $\stackrel{\wedge}{\times}$ | _ | | 1 | - | | \dashv | $-\dagger$ | \dashv | ᅥ | \dashv | — <i>?</i> | | 3 | | + | | | | | | |
| V 1515 B-8A-11 | 划 | \dashv | | _ | X | $ \hat{\chi} $ | $\hat{\overline{\mathbf{x}}}$ | | | | $\neg \uparrow$ | | | 十 | | | ᅦ | | - - | \mathcal{T} | <u>-</u> | | + | | | | | | |
| | | | nd tim | | <u> </u> | 1 | | \sim 1 | Res | sults | to: | | . 1 | | | | 7 | | | <u>^ </u> | | | <u> </u> | | | | | | |
| | <u> </u> | •— | · w | | | | FILE WOLLD | | | | | | Total No. of containers: 12 | | | | | | | | | | | | | | | | |
| Relinquished by: | Date: | Rel | linquis | hed I | by: | | | | | 0 | ate: | Re | elinqu | ished | by: | | | | | | Date | : M | letho | d of shipment: | , Pic | لحر | 0 | • | |
| Signature | | Sig | neilire | · 1/1 | , - 4 | 4 | 0 | 27 | | 1/ | 20/ | Sig | gnatu | re: | | | | | | \dashv | ٠. | L | abora | atory comments an | | | P | | |
| | , | | tion nted n | a// | <u>u</u> | 801 | ريدنا | Ψ | | - | , | Pri | inted | name | a · | | | | | \dashv | | | | 93014 | 74 | | | | |
| JAMES #31972 1 | (00g | | <u> </u> | m | \mathcal{W} | 117 | ZH | EL | | /. | 93 | | | - CHITE | | | | | | | | | | SAVAGE E | , . • | | | | |
| Company: | | Cor | mpany | 1: | , | | | | | | | Co | mpai | n y : | | | | | | | | | | | | | | | |
| | Time: | Rec | ceived | by: | | 2 | 1. | 1 | | T | ime: | Re | ceive | ed by | ; | | | | | + | Time | | | | A1/ | | | | |
| Signature - 11 . 1 . 1 | | Sio | hature | <u>ــا)اخ</u> :: | <u>. </u> | - | \mathcal{A} | tor | <u>~</u> | 1 | | Sir | nnatu | 70 | | | | | | - | | | | | ŌΚ | | | | |
| Signature Wallett | 10/91 | | 141 | IM | j Î | R. | A | 170 | ,,J | 6 | .10 | <u> </u> | g ratu | | | | | | | | | | | | | | | | |
| I Jim minited | - 1 - | Prir | nted n | ame: | | | | | _ | # | 1111 | Pri | inted | name | ÷: | | | | | | | | 2 | | matri: | | | ulta | nts |
| Company | | Cor | mpany | r EC | <u></u> | | **** | | | | | Co | mpar | ny: | | | | | | | | | | San F | ne St. 10 rancisco 134-9400 | , CA | | 11 | |

| Chain-of-Custody Record | | | | | | | | | | | | 1 | Λõ | _ | 35 | 54 | 9 | | | Dat | le: | ŧ | 19 | 9 | る | Page Z of 2 |
|-------------------------|------------------|----------------------|-----------------|-----------------|------------------|-------------------|----------------------------|--------------|-------------|-----------|----------|-----------|--------------|----------|--------|----------------|--------|-------------------|-----|-------|-------|--------|-----------------|-------------|--------------|---|
| Project N | lo.: | | Ť | | | | | | ! | | AN | ALYS | SES | | | | | | | | | | | _ | | REMARKS |
| Sampler | 297 (Signatur | | 010 | 020 | 240 | 270 | Jе | | | خطاوسه | | | | | | | | | | | | | water (W) | | containers | Additional comments |
| Date | Time | Sample Number | EPA Method 8010 | EPA Method 8020 | EPA Method 8240 | EPA Method 8270 | TPH as gasoline | TPH as diese | TPH as BTEX | 14 19 199 | | | | | | | | | | | | Cooled | Soil (S) or wat | Aciditied | Number of co | Bill Rd -1 Oakland Directly |
| 1/19 | 1645 | B-5-11.5 B-5-11.5 | X | | | | X | X X | X | X | | | | | | | | | | | | XXX | 200 | | 1 | 1. Standard Mothed 5520 E and F. |
| 1.1.= | | | | | | | | | | | | | | | | | | | | | | | | | _ | |
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| | | | | | | | | i | | | | | | | _ | | _ | | | | | | | | | |
| - | | | Tui | | und t | | c s | | | | R | | is to: | 4.4 | , K | | 시制 | l c | | Total | No. o | of co | ntaine | ers; | 3 | |
| Relinquis | shed by: | | Date | : R | lelinq | uishe | d by: | | | | !_ | | | | | uished | | | | | | Ī | Date | 9: | vietho | d of shipment: Lab Pickup |
| Signatur | <u>*</u> | | | s | ignat | (re: | 1/ |) ~ | 72 | 0.1 | V | | 20) | s | ignati | ure: | | | | | | | | l | abora | atory comments and Log No.: |
| Plinted in | ame: | ABITO | 1/20 | (1) | tipled | <u> </u> | <u>~ V V</u> ie: _/N | 170 | <u> </u> | Z | <u>4</u> | _/′ | 13: | - 1- | rinted | l nam | e: | · · · · · · · · · | • • | | | | | | | 9301174 |
| Compan | buβ- | | | Ĭ | | <u> ČE</u> | C. | | | | | | | | ompa | | | | | | | | | | | |
| Received | | D-12 121 | Time | | leceiv Signat | | ا: | | > 1 | 7 | | _ | Time | s | ignati | red by ure: | /: | | | | | | Time | 9: | | ok |
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| | PEC | | | | | | EC | • | | | | | | | | | | | | | | | | | | (415) 434-9400 |

Sei:

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106 Clayton

ENVIRONMENTAL
CONSULTANTS

February 12, 1993

Ms. Elizabeth Wells GEOMATRIX CONSULTANTS 100 Pine Street, 10th Floor San Francisco, CA 94111

> REVISED REPORT Client Ref. 2026 Clayton Project No. 93011.74

Dear Ms. Wells:

Attached is our revised analytical laboratory report for the samples received on January 20, 1993 and originally reported to you on January 29, 1993. On February 5, 1993 you requested additional silica gel cleanup on samples B-4-4, B-4-10.5, B-2-4 and B-10-5.5. Those results are presented in this report.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH

Director, Laboratory Services

Western Operations

RHP/tb

Attachments

cc: Patricia Murphy



Page 2 of 2

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026 Clayton Project No. 93011.74

Sample Matrix/Media: SOIL Preparation Method: SM 552

[L

Date Received: 0
Date Prepared: 0
Date Analyzed: 0

01/20/93 01/21/93 02/11/93

Preparation Method: SM 5520E Analysis Method: SM 5520F

| Lab Number | Sample Identification | Date Sampled | Hydrocarbons (mg/kg) | Detection Limit (mg/kg) | |
|---------------|--------------------------|-----------------|-------------------------|-------------------------------|--|
| 04B | B-4-4 | 01/18/93 | 710 | 50 | |
| 05B | B-4-10.5 | 01/18/93 | 110 | 50 | |
| 06B | B-2-4 | 01/18/93 | 310 | 50 | |
| 15B | B-10-5.5 | 01/20/93 | 140 | 50 | |
| 16B | METHOD BLANK | ' | ND | 50 | |

ND Not detected at or above limit of detection

Not detected at or above limit of detection

-- Information not available or not applicable

Results are reported on a wet weight basis, as received



APPENDIX D

ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS GROUNDWATER SAMPLES

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106 Clayton ENVIRONMENTAL CONSULTANTS

February 17, 1993

Ms. Elizabeth Wells GEOMATRIX CONSULTANTS 100 Pine Street, 10th Floor San Francisco, CA 94111

> Client Ref. 2026.06 Clayton Project No. 93020.91

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on February 5, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH

Director, Laboratory Services

Western Operations

RHP/caa Attachments



Page 2 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-1 Date Sampled: 02/05/93 Lab Number: 9302091-01A Date Received: 02/05/93 Sample Matrix/Media: WATER Date Prepared: 02/16/93 Preparation Method: EPA 5030 Date Analyzed: 02/16/93 Analytical Method: **EPA** 8010

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------------------------|------------|----------------------|---------------------------------|
| Purgeable Halocarbons | | | |
| Chloromethane | 74-87-3 | ND | 0.6 |
| Bromomethane | 74-83-9 | ND | 0.7 |
| Vinyl chloride | 75-01-4 | ND | 0.5 |
| Chloroethane | 75-00-3 | ND | 0.5 |
| Methylene chloride | 75-09-2 | ND | 2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.2 |
| 1,1-Dichloroethane | 75-35-3 | 0.8 | 0.4 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.4 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.4 |
| Chloroform | 67-66-3 | ND | 0.5 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.3 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.5 |
| Carbon tetrachloride | 56-23-5 | ND | 0.6 |
| Bromodichloromethane | 75-27-4 | ND | 0.7 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.5 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.5 |
| Trichloroethene | 79-01-6 | ND | 0.3 |
| Dibromochloromethane | 124-48-1 | ND | 0.6 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.6 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable

Page 3 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-1 Date Sampled: 02/05/93 Lab Number: 9302091-01A Date Received: 02/05/93 Sample Matrix/Media: Date Prepared: WATER 02/16/93 Preparation Method: EPA 5030 Date Analyzed: 02/16/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|-------------------------------|----------|----------------------|---------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 1 |
| Bromoform | 75-25-2 | ND | 0.7 |
| Tetrachloroethene | 127-18-4 | ND | 0.5 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.5 |
| Chlorobenzene | 108-90-7 | ND | 0.7 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.4 |
| Freon 113 | 76-13-1 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable



Page 4 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-1 Date Sampled: 02/05/93 Lab Number: 9302091-01A Date Received: 02/05/93 Sample Matrix/Media: WATER Date Prepared: 02/16/93 Preparation Method: EPA 5030 Date Analyzed: 02/16/93 EPA 8020 Analytical Method:

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------------------|----------|----------------------|---------------------------------|
| Purgeable Aromatics | | | • |
| Benzene | 71-43-2 | 9.2 | 0.4 |
| Chlorobenzene | 108-90-7 | ND | 0.3 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.5 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.3 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.5 |
| Ethylbenzene | 100-41-4 | 8.9 | 0.3 |
| Toluene | 108-88-3 | 1.6 | 0.3 |
| p,m-Xylenes | | 1.3 | 0.4 |
| o-Xylene | 95-47-6 | 1.4 | 0.4 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 100 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable



Page 5 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-2 02/05/93 Date Sampled: Lab Number: 9302091-02A Date Received: 02/05/93 Sample Matrix/Media: Date Prepared: 02/11/93 WATER Preparation Method: EPA 5030 Date Analyzed: 02/11/93 Analytical Method: **EPA 8010**

| analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------------------------|--------------|----------------------|---------------------------------|
| urgeable Halocarbons | , | | |
| Chloromethane | 74-87-3 | ND | 0.6 |
| Bromomethane | 74-83-9 | ND | 0.7 |
| Vinyl chloride | 75-01-4 | ND | 0.5 |
| Chloroethane | 75-00-3 | ND | 0.5 |
| Methylene chloride | 75-09-2 | ND | 2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.2 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.4 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.4 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.4 |
| Chloroform | 67-66-3 | ND | 0.5 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.3 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.5 |
| Carbon tetrachloride | 56-23-5 | ND | 0.6 |
| Bromodichloromethane | 75-27-4 | ND | 0.7 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.5 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.5 |
| Trichloroethene | 79-01-6 | ND | 0.3 |
| Dibromochloromethane | 124-48-1 | ND | 0.6 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.6 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-2 Date Sampled: 02/05/93 Lab Number: 9302091-02A Date Received: 02/05/93 Sample Matrix/Media: WATER Date Prepared: 02/11/93 Preparation Method: EPA 5030 Date Analyzed: 02/11/93 Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--------------------------------|----------|----------------------|---------------------------------|
| Purgeable Halocarbons (continu | ıed) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 1 |
| Bromoform | 75-25-2 | ND | 0.7 |
| Tetrachloroethene | 127-18-4 | ND | 0.5 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.5 |
| Chlorobenzene | 108-90-7 | ND | 0.7 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.4 |
| Freon 113 | 76-13-1 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

| Sample Identification: | MW-2 | Date | Sampled: | 02/05/93 |
|------------------------|-------------|------|-----------|----------|
| Lab Number: | 9302091-02A | Date | Received: | 02/05/93 |
| Sample Matrix/Media: | WATER | Date | Prepared: | 02/11/93 |
| Preparation Method: | EPA 5030 | Date | Analyzed: | 02/11/93 |
| Analytical Method: | EPA 8020 | | • | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------------------|----------|----------------------|---------------------------------|
| Purgeable Aromatics | | | |
| Benzene | 71-43-2 | ND | 0.4 |
| Chlorobenzene | 108-90-7 | ND | 0.3 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.5 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.3 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.5 |
| Ethylbenzene | 100-41-4 | ND | 0.3 |
| Toluene | 108-88-3 | ND | 0.3 |
| p,m-Xylenes | | ND | 0.4 |
| o-Xylene | 95-47-6 | ND | 0.4 |
| | | | QC Limits (%) |
| Surrogates | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 100 | 50 - 150 |
| 1,4-Difluorobenzene | 540-36-3 | 99 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable

Page 8 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

02/05/93 Sample Identification: MW-3 Date Sampled: Lab Number: Date Received: 9302091-03A 02/05/93 Sample Matrix/Media: WATER Date Prepared: 02/11/93 Preparation Method: EPA 5030 Date Analyzed: 02/11/93 Analytical Method: EPA 8010

Limit of Detection Concentration Analyte CAS # (ug/L) (ug/L) Purgeable Halocarbons 0.6 Chloromethane 74-87-3 ND 0.7 Bromomethane 74-83-9 ND Vinyl chloride 0.5 75-01-4 ND Chloroethane 0.5 75-00-3 ND 2 Methylene chloride 75-09-2 ND 1,1-Dichloroethene 0.2 75-35-4 ND 0.4 1,1-Dichloroethane 75-35-3 ND Trans-1,2-Dichloroethene ND 0.4 156-60-5 Cis-1,2-Dichloroethene 0.4 156-59-2 0.4 Chloroform 0.5 67-66-3 ND 1,2-Dichloroethane ND 0.3 107-06-2 0.5 1,1,1-Trichloroethane 71-55-6 ND Carbon tetrachloride 0.6 56-23-5 ND 0.7 Bromodichloromethane 75-27-4 ND 0.5 1,2-Dichloropropane 78-87-5 NĎ 0.5 10061-01-5 Cis-1,3-Dichloropropene ND 0.3 Trichloroethene 79-01-6 ND Dibromochloromethane 0.6 124-48-1 ND 0.6 1,1,2-Trichloroethane 79-00-5 ND Trans-1,3-Dichloropropene 0.6 10061-02-6 ND

ND Not detected at or above limit of detection -- Information not available or not applicable

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-3

Lab Number: 9302091-03A

Sample Matrix/Media: WATER

Preparation Method: EPA 5030

Date Sampled: 02/05/93

Date Received: 02/05/93

Date Prepared: 02/11/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|-------------------------------|----------|----------------------|---------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 1 |
| Bromoform | 75-25-2 | ND | 0.7 |
| Tetrachloroethene | 127-18-4 | ND | 0.5 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.5 |
| Chlorobenzene | 108-90-7 | ND | 0.7 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.4 |
| Freon 113 | 76-13-1 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: MW-3 Date Sampled: 02/05/93 Lab Number: 9302091-03A Date Received: 02/05/93 Sample Matrix/Media: WATER Date Prepared: 02/11/93 Preparation Method: **EPA** 5030 Date Analyzed: 02/11/93 Analytical Method: EPA 8020

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------------------|---------------------------------------|----------------------|---------------------------------|
| Purgeable Aromatics | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | |
| Benzene | 71-43-2 | 2.1 | 0.4 |
| Chlorobenzene | 108-90-7 | ND | 0.3 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 0.5 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 0.3 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 0.5 |
| Ethylbenzene | 100-41-4 | 1.7 | 0.3 |
| Toluene | 108-88-3 | 0.9 | 0.3 |
| p,m-Xylenes | | 1.2 | 0.4 |
| o-Xylene | 95-47-6 | 1.9 | 0.4 |
| | | - (0) | QC Limits (%) |
| <u>Surrogates</u> | | Recovery (%) | LCL UCL |
| Bromochloromethane | 74-97-5 | 90 | 50 - 150 |
| 1,4-Difluorobenzene | 540-36-3 | 79 | 50 - 150 |

ND Not detected at or above limit of detection -- Information not available or not applicable

Page 11 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9302091-04A Date Received: --

Sample Matrix/Media: WATER Date Prepared: 02/11/93 Preparation Method: EPA 5030 Date Analyzed: 02/11/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------------------------|------------|----------------------|---------------------------------|
| Purgeable Halocarbons | | 1 | |
| Chloromethane | 74-87-3 | ND | 0.6 |
| Bromomethane | 74-83-9 | ND | 0.7 |
| Vinyl chloride | 75-01-4 | ND | 0.5 |
| Chloroethane | 75-00-3 | ND | 0.5 |
| Methylene chloride | 75-09-2 | ND | 2 |
| 1,1-Dichloroethene | 75-35-4 | ND | 0.2 |
| 1,1-Dichloroethane | 75-35-3 | ND | 0.4 |
| Trans-1,2-Dichloroethene | 156-60-5 | ND | 0.4 |
| Cis-1,2-Dichloroethene | 156-59-2 | ND | 0.4 |
| Chloroform | 67-66-3 | ND | 0.5 |
| 1,2-Dichloroethane | 107-06-2 | ND | 0.3 |
| 1,1,1-Trichloroethane | 71-55-6 | ND | 0.5 |
| Carbon tetrachloride | 56-23-5 | ND | 0.6 |
| Bromodichloromethane | 75-27-4 | ND | 0.7 |
| 1,2-Dichloropropane | 78-87-5 | ND | 0.5 |
| Cis-1,3-Dichloropropene | 10061-01-5 | ND | 0.5 |
| Trichloroethene | 79-01-6 | ND | 0.3 |
| Dibromochloromethane | 124-48-1 | ИD | 0.6 |
| 1,1,2-Trichloroethane | 79-00-5 | ND | 0.6 |
| Trans-1,3-Dichloropropene | 10061-02-6 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9302091-04A Date Received: --

Sample Matrix/Media: WATER Date Prepared: 02/11/93
Preparation Method: EPA 5030 Date Analyzed: 02/11/93

Analytical Method: EPA 8010

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|-------------------------------|----------|----------------------|---------------------------------|
| Purgeable Halocarbons (contin | ued) | | |
| 2-Chloroethylvinylether | 110-75-8 | ND | 1 |
| Bromoform | 75-25-2 | ND | 0.7 |
| Tetrachloroethene | 127-18-4 | ND | 0.5 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ND | 0.5 |
| Chlorobenzene | 108-90-7 | ND | 0.7 |
| 1,3-Dichlorobenzene | 541-73-7 | ND | 2 |
| 1,2-Dichlorobenzene | 95-50-1 | ND | 4 |
| 1,4-Dichlorobenzene | 106-46-7 | ND | 4 |
| Dichlorodifluoromethane | 75-71-8 | ND | 1 |
| Trichlorofluoromethane | 75-69-4 | ND | 0.4 |
| Freon 113 | 7.6-13-1 | ND | 0.6 |

ND Not detected at or above limit of detection -- Information not available or not applicable

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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9302091-04A Date Received: --

EPA 8020

Sample Matrix/Media: WATER Date Received: -Preparation Method: EPA 5030 Date Analyzed: 02/11/93

Limit of Concentration Detection Analyte CAS # (ug/L) (ug/L) Purgeable Aromatics Benzene 71-43-2 ND 0.4 Chlorobenzene 0.3 108-90-7 ND 1,2-Dichlorobenzene 0.5 95-50-1 ND 1,3-Dichlorobenzene 541-73-7 0.3 ND 1,4-Dichlorobenzene 106-46-7 ND 0.5 Ethylbenzene 100-41-4 ND 0.3 Toluene 0.3 108-88-3 ND p,m-Xylenes ND 0.4 o-Xylene 95-47-6 ND 0.4 QC Limits (%) Surrogates LCLRecovery (%) UCL Bromochloromethane 100 50 - 150 74-97-5 1,4-Difluorobenzene 50 - 150 540-36-3 90

Analytical Method:

ND Not detected at or above limit of detection -- Information not available or not applicable



Page 14 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Matrix/Media: WATER

Analysis Method:

SM 5520F

Date Received:

02/05/93

Date Analyzed: 02/16/93

| Lab Number | Sample Identification | Date Sampled | Hydrocarbons (mg/L) | Detection Limit (mg/L) |
|---------------|--------------------------|-----------------|------------------------|------------------------------|
| 01H | MW-1 | 02/05/93 | 5 | 1 |
| 02H | MW-2 | 02/05/93 | 2 | 1 |
| 03H | MW-3 | 02/05/93 | 2 | 1 |
| 04A | METHOD BLANK | ' | ND | 1 |

ND Not detected at or above limit of detection

Not detected at or above limit of detection

⁻⁻ Information not available or not applicable



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Matrix/Media: WATER

Analysis Method:

EPA 160.1

Date Received:

02/05/93

Date Analyzed: 02/15/93

| Lab Number | Sample Identification | Date Sampled | Total Dissolved Solids (mg/L) | Detection Limit (mg/L) |
|---------------|--------------------------|-----------------|-------------------------------------|------------------------------|
| 01G | MW-1 | 02/05/93 | 3,000 | 10 |
| 02G | MW-2 | 02/05/93 | 23,000 | 10 |
| 03G | MW-3 | 02/05/93 | 1,600 | 10 |
| 04A | METHOD BLANK | | <10 | 10 |

ND Not detected at or above limit of detection < Not detected at or above limit of detection

-- Information not available or not applicable



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Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Matrix/Media: WATER Preparation Method: EPA 3510 Analysis Method: EPA 8015 Date Received: Date Prepared: Date Analyzed: 02/16/93

02/05/93 02/10/93

| Lab Number | Sample Identification | Date Sampled | Diesel (ug/L) | Detection Limit (ug/L) |
|---------------|--------------------------|-----------------|------------------|------------------------------|
| 01E | MW-1 | 02/05/93 | 4,700a | 50 |
| 02E | MW-2 | 02/05/93 | 840a | 50 |
| 03F | MW-3 | 02/05/93 | 3,400a | 50 |
| 04A | METHOD BLANK | ` | ND | 50a |

ND Not detected at or above limit of detection

Not detected at or above limit of detection Information not available or not applicable

a The hydrocarbons detected in these samples appear to be intermediate between diesel and motor oil: quantitation was based on diesel standards



Page 17 of 17

Results of Analysis for Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06 Clayton Project No. 93020.91

Sample Matrix/Media: WATER Preparation Method: EPA 50

Analysis Method:

EPA 5030 EPA 8015 Date Received: Date Prepared: 02/05/93

Date Analyzed:

02/11/93 02/11/93

| Lab Number | Sample Identification | Date Sampled | Gasoline (ug/L) | Detection Limit (ug/L) |
|---------------|--------------------------|-----------------|--------------------|------------------------------|
| 01C | MW-1 | 02/05/93 | 1,800 | 50 |
| 02C | MW-2 | 02/05/93 | ND | 50 |
| 03C | MW-3 | 02/05/93 | ND | 50 |
| 04A | METHOD BLANK | | ND | 50 |

ND Not detected at or above limit of detection

Not detected at or above limit of detection

⁻⁻ Information not available or not applicable

| Chain-of-Custod | ly F | lec | cor | d | | | | - | | N | 0 | • | 33 | 70 |) | | Da | ite: | 2 | - s | - [| 9- | 3 | Ī | Page | · J | 01 (| |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------------|-------------|------------|--------|---------------|-----|---------------|---------------|--------------|------|-------|-------|--------|-----------------------|-----------|----------------------|-----------------------|-------------|-------------|---------------|-------|-------------|
| Project No.: 2026 | | | | | | | | | AN. | ALYS | | | - 14 | - R | | | | | | | | | | VARKS | 3 | | ····· | |
| Samplers (Signatures): | - º | 8 | 9 | 0 <u>2</u> | | | | Solide | - 3 | | | | | | | | | | | (<u>w</u>) | | aners | | Additi | onal co | omment | 5 | |
| Date Time Sample Number | EPA Method 8010 | EPA Method 8020 | EPA Method 8240 | EPA Method 8270 | TPH as gasoline | TPH as diesel | TPH as BTEX | 415-6100 | 1 2 4 cose | , | | | | : | | | | | Cooled | Soil (S) or water (W) | Acidified | Number of containers | Bill Pa direct | ort. 14. | of. | Oak | land | Í |
| 2 5 100 MW-1 2 5 200 MW-2 2 5 315 MW-3 | X | X X X | ļ | | X X | X X | | X | X X | | | | | | | | | | XXX | 333 | | 0-0-0- | 1. Sta 552 Repo | nda | rd 1 C a | Meff ind [| d | j |
| | | | - | | | | | | | | | | | | _ | | | | | | | | Repo | 4 - | ۲ <u></u> | P | ost | ` |
| | ļ | | _ | - | | | | \setminus | V | | 1 | | | | _ | | | | | | | <u> </u> | ge! | res | ru -t | 5, | | |
| | | | | | | | | | | | $\frac{1}{2}$ | | \rightarrow | \Rightarrow | \downarrow | | | | | | | | | | | | | |
| | <u> </u> | | | | | | | | | | | | _ | | _ | | / | 1 | | | | | | | | | | |
| | Turr | | und ti | me: Je£ | k 5 | | | | R | esults | s to: | | We | 115 | |] | Total | No. o | of car | ntaine | | <u></u> | | | | | | |
| Relinquished by: | Date: | Re | elinqu | Jishe | d by: | | | | | ı | Date: | Re | elinqu | ished | by: | | | | | Date | e: f | Metho | d of shipment: Del | , | | | | |
| Signature | - 9 2 | Si | gnati | Jre: | | | | | * ***** | | | Siç | gnatu | ire: | | | | | | | { | abora | atory comment | ts and | Log No | o. 1 . | 302 | 2091 |
| Printedname: | 5/2 | _ | | nam | e: | | | | | | | Pri | inted | name |): | | | | | | | 9 | E | | | | | |
| Company: | 14 | Co | ompa | ıny: | | | | | | | | Cc | mpai | ny: | | | | | | | | | | | | | | |
| Received by: | Time: | | eceiv | ed by | r: | | | | | 1 | l'ime: | Re | eceive | ed by | : | | - | | 1 | Time | e: | | | | | | | |
| Signature Dulack | 0 | | gnati | | | | | | | | | Sig | gnalu | ire: | | | | | | | | | _ | | | | | |
| TRACY B B. HOCK | 2 | _ | | nam | e: | | | | | | | | | name | е: | | | | | | | 17 | | | | x Coi | | ants |
| CLAYTON | | Co | ompa | iny: | | | | | | | | Co | mpai | ny: | | | | | | | | | s | San Fra | | , CA. 9 | | |

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106 Clayton ENVIRONMENTAL CONSULTANTS

QUALITY ASSURANCE DATA PACKAGE
CLAYTON PROJECT NO. 93020.91

Clayton Lab Number: Ext./Prep. Method:

9302091-03A

Date:

1 1

Analyst:

V930118-02W

Std. Source: Sample Matrix/Media:

WATER

Analytical Method: EPA601_2/801020

Instrument ID:

02911

Date: Time: 02/11/93 14:00

Analyst: Units:

CB UG/L

| Analyte | | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL |
|---------------------|--------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|-----|
| 1, 1-DICHLOROETHENE | (HALL) | ND | 20.0 | 20.5 | 103 | 21. 5 | 108 | 105 | 65 | 131 | 4. 8 | 20 |
| CHLOROBENZENE | (HALL) | ND | 20.0 | 23.8 | 119 | 22.6 | 113 | 116 | 79 | 132 | 5. 2 | 20 |
| TRICHLOROETHENE | (HALL) | ND | 20. 0 | 23.5 | 118 | 21.8 | 109 | 113 | 69 | 133 | 7. 5 | 20 |

Clayton Lab Number: Ext./Prep. Method:

9302093-02B

Date:

1 1

Analyst:

Std. Source:

Sample Matrix/Media:

V930118-02W WATER

Analytical Method: EPA601_2/801020 Instrument 10:

02904

Date: Time:

02/11/93 14:57

Analyst: Units:

CB UG/L

| Analyte | | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------------------|--------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| 1, 1-DICHLOROETHENE | (HALL) | ND | 20. 0 | 18.8 | 94 | 18.8 | 94 | 94 | 65 | 131 | 0. 0 | 20 |
| CHLOROBENZENE | (HALL) | ND | 20. 0 | 22. 2 | 111 | 22.8 | 114 | 113 | 79 | 132 | 2. 7 | 20 |
| TRICHLOROETHENE | (HALL) | ND | 20. 0 | 25. 2 | 126 | 25. 3 | 127 | 126 | 69 | 133 | 0. 4 | 20 |

Clayton Lab Number: Ext./Prep. Method: 9302091-03D

Date:

1 1

Analyst:

Std. Source:

V920208-03W

Sample Matrix/Media:

WATER

Analytical Method: Instrument ID:

EPA8015 8020 05587

Date: Time: 02/11/93 21:46

Analyst: Units: GD UG/L

| Analyte | | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|----------|-------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|-------------|---------------|
| BENZENE | (PID) | ND | 5. 00 | 4.96 | 99 | 4. 85 | 97 | 98 | 81 | 118 | 2. 2 | 20 |
| GASOLINE | (FID) | ND | 200 | 165 | 83 | 172 | 86 | 84 | 80 | 150 | 4. 2 | 25 |
| TOLUENE | (PID) | ND | 15. 0 | 13.2 | 88 | 12.7 | 85 | 86 | 84 | 118 | 3. 9 | 20 |

UG/L

Quality Assurance Results Summary for Clayton Project No. 93020.91

Clayton Lab Number:

9302120-06B

Ext./Prep. Method:

11

Date: Analyst:

Std. Source:

Sample Matrix/Media:

V930118-02W WATER

Analytical Method: EPA601 2/801020 Instrument ID: 02904 Date: 02/16/93 Time: 18: 24 Analyst: CB

Units:

| Analyte | | Sample Result | Spike Lavel | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL | RPD (%) | UCL (%RPD) |
|---------------------|--------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|-----|------------|---------------|
| 1, 1-DICHLORDETHENE | (HALL) | ND | 20. 0 | 17. 9 | 90 | 19. 2 | 96 | 93 | 65 | 131 | 7. 0 | 20 |
| BENZENE | (PID) | ND | 20. 0 | 20.7 | 104 | 21. 4 | 107 | 105 | 76 | 134 | 3. 3 | 20 |
| CHLOROBENZENE | (PID) | ND | 20. 0 | 20.4 | 102 | 20, 8 | 104 | 103 | 75 | 127 | 1. 9 | 20 |
| CHLOROBENZENE | (HALL) | ND | 20. 0 | 22.8 | 114 | 23. 5 | 118 | 116 | 79 | 132 | 3. 0 | 20 |
| TOLUENE | (PID) | ND | 20. 0 | 20.8 | 104 | 21. 4 | 107 | 106 | 71 | 125 | 2.8 | 20 |
| TRICHLOROETHENE | (HALL) | ND | 20. 0 | 24.8 | 124 | 26. 3 | 132 | 128 | 69 | 133 | 5. 9 | 20 |

Clayton Lab Number: Ext./Prep. Method: 9302091-MB EPA3510 02/10/93

Date: Analyst:

WS

Std. Source:

G930125-01W

Sample Matrix/Media:

WATER

Analytical Method; Instrument ID; EPA8015 02883 02/16/93 18:51

Date: Time: Analyst: Units:

18: 51 AM UG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| DIESEL | ND | 1, 000 | 760 | 76 | 820 | 82 | 79 | 40 | 140 | 7. 6 | 40 |

Clayton Lab Number: Ext./Prep. Method:

9302091-MB SM5520C

Date: Analyst: 02/12/93 HYT

Std. Source: Sample Matrix/Media: E930209-02W

WATER

Analytical Method: Instrument ID: SM5520CF 07434

Date: Time: Analyst: 0/434 02/16/93 01: 01

Units:

AM MG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCE (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|------------------------------|---------------|-------------|------------------------|-----------------------|----------------------------------|------------------------|------------------------------|--------------|--------------|------------|---------------|
| TOTAL PETROLEUM HYDROCARBONS | ND | 7. 50 | 6. 20 | 83 | 6. 00 | 80 | 81 | 75 | 125 | 3. 3 | 25 |



Quality Assurance Results Summary for Port of Oakland/Geomatrix

Page 7 of 7

Client Reference: 2026 Clayton Project No. 93002.91

Lab Number: Analytical Method: 9302095-03A EPA 160.1

Date Analyzed: Sample Matrix/Media: Units:

02/15/93 Water

mg/L

| RPD (%) | Duplicate Sample | Sample Result | Analyte |
|---------|------------------|---------------|------------------------|
| 0 | 10 | 10 | Total Dissolved Solids |
| | 10 | 10 | Total Dissolved Solids |