PORT OF OAKLAND

March 22, 1993

STID 3900

Don Hwang
Hazardous Materials Specialist
Alameda County Health Services Agency
80 Swan Way, Rm. 200
Oakland, CA 94621

Dear Mr. Hwang:

SUBJECT: SOIL EXCAVATION REPORT AND PROPOSED WORK PLAN, FORMER POWERINE OIL COMPANY SITE, 2800 SEVENTH ST., OAKLAND

Enclosed please find a report on soil excavation activities at the Powerine/Berth 30 site, along with a proposed work plan for groundwater monitoring at the site.

As we have discussed previously, the Port is proposing to install three monitoring wells to determine whether petroleum hydrocarbons from the Powerine site or from the three removed underground storage tanks in the old Kaiser Yard (2801 7th St.) have impacted groundwater.

Please review the enclosed report. The Port intends to implement the Work Plan when we have received County approval and when construction activities at the site have been completed.

If you have any questions, feel free to contact me at (510) 272-1220.

Sincerely

Dan Schoenholz

Dan Schoenholz
Associate Environmental Scientist

ds

11/3 - 11/20 1992

Enclosure

cc(w/enclosure): Rich Hiett, RWQCB
Frank Lobedan
(w/o enclosure): Neil Werner

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GEOMATRIX

18 March 1993
Project 2026.10

Mr. Dan Schoenholz
Port of Oakland
530 Water Street
Oakland, California 94607

Subject: Soil Excavation Report and Proposed Work Plan
Former Powerine Oil Company Site
2800 Seventh Street
Port of Oakland
Oakland, California

Dear Mr. Schoenholz:

Enclosed is the subject report. If you have any questions about this report, please contact either of the undersigned. We appreciate the opportunity to work with you on this project and look forward to working with you in the future.

Sincerely yours,

GEOMATRIX CONSULTANTS, INC.

Elizabeth K. Wells

Elizabeth K. Wells, P.E.
Project Engineer

Sally E. Goodin

Sally E. Goodin, R.G.
Senior Geologist

EKW/SEG/lam
202610PS.LTR

Enclosure

GEOMATRIX

SOIL EXCAVATION REPORT AND PROPOSED WORK PLAN

Former Powerine Oil Company Site
2800 Seventh Street
Port of Oakland
Oakland, California

Prepared for

Port of Oakland
530 Water Street
Oakland, California 94607

March 1993
Project No. 2026.10

Geomatrix Consultants

GEOMATRIX

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

GEOMATRIX

TABLE OF CONTENTS
(concluded)

LIST OF APPENDICES

GEOMATRIX

SOIL EXCAVATION REPORT AND PROPOSED WORK PLAN

Former Powerine Oil Company Site
2800 Seventh Street
Port of Oakland, California

1.0 INTRODUCTION

This report presents results of soil excavation and sampling that Geomatrix Consultants, Inc. (Geomatrix), conducted at the former Powerine Oil Company (Powerine) site at 2800 Seventh Street at the Port of Oakland (Port), California (Figure 1). The work was performed at the request of the Port and under direction of the Alameda County Department of Environmental Health. This report describes background information, excavation and soil sampling activities, pipe removal activities, analytical laboratory results, conclusions, and a proposed work plan for additional work at the site.

2.0 BACKGROUND

During construction activities associated with the realignment of Seventh Street in Oakland, the contractor (Obayashi) encountered abandoned pipes and noted petroleum hydrocarbon odors in soil beneath a concrete pad that was being removed. A review of historical information by the Port indicated that the pipes were fuel supply lines at the former Powerine site and that an underground fuel storage tank was formerly located adjacent to the concrete pad.

In September 1992, Geomatrix collected three soil samples from beneath the former concrete pad that were composited into one sample, and one discrete soil sample from outside the pad area for chemical analysis. The results indicated total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were present in the soil samples at concentrations up to 110, 0.67, 3.9, 4.8, and

27.3 mg/kg, respectively. Details of the shallow sampling are presented in Geomatrix's 28 October 1992 letter to the Port (Appendix A).

Based on the analytical results of the shallow soil samples, the Port retained RESNA of Fremont, California, to excavate soil from the affected area. Approximately 100 cubic yards of soil was excavated from beneath the former slab area and stockpiled on site on 13 October 1992. Excavation activities and analytical results of soil samples from the excavation indicated that the petroleum hydrocarbons were not confined to immediately beneath the former concrete slab. Therefore, excavation was discontinued, and Geomatrix was retained to conduct a soil boring program to evaluate the lateral and vertical extent of petroleum hydrocarbons in soil near the excavation.

In October 1992, Geomatrix drilled 12 soil borings to a maximum depth of 11.5 feet below ground surface (bgs) in the vicinity of the excavation. Soil samples for chemical analysis were collected generally in the top 1 to 2.5 feet of the borehole, immediately above the soil-groundwater interface, and approximately 5 feet below the groundwater interface in each borehole. TPH as diesel was reported in two of the 30 soil samples at concentrations of 2 and 210 milligrams per kilogram (mg/kg). TPH as gasoline was reported in 11 of the 30 soil samples at concentrations ranging from 0.4 to 490 mg/kg. Clayton Environmental Consultants, Inc. (Clayton), of Pleasanton, California, a state-certified analytical laboratory, characterized the TPH as gasoline as weathered gasoline, or as a combination of weathered gasoline and heavier hydrocarbons. BTEX were detected at maximum concentrations of 0.5, 8.3, 2.7, and 41 mg/kg, respectively. Details of the soil boring program are discussed in Geomatrix's 28 October 1992 letter to the Port (Appendix A).

3.0 FIELD ACTIVITIES

This section summarizes excavation, soil sampling, and pipe removal activities conducted at the site between 3 and 20 November 1992.

3.1 SOIL EXCAVATION

Between 3 and 20 November 1992, RESNA and Trumpp Brothers, Inc. (Trumpp), of San Jose, California, excavated petroleum hydrocarbon-containing soil from the area shown on Figure 2. Geomatrix observed excavation activities and used a photoionization detector (PID) and thin layer chromatography to field-monitor petroleum hydrocarbons and BTEX in the soil. Geomatrix collected soil samples from the excavation to document chemical concentrations following soil removal. Chromalab, Inc. (Chromalab), of San Ramon, California, a state-certified analytical laboratory, analyzed the soil samples collected from the excavation sidewalls and bottom in their on-site mobile laboratory and at their off-site laboratory. Stockpile samples were analyzed by Clayton.

The maximum depth of the excavation was approximately 11 feet bgs. Soil was excavated until laboratory analytical results indicated that the concentrations of TPH as diesel and as gasoline were less than 100 mg/kg each or until further excavation was blocked by physical obstructions. **Approximately 2300 cubic yards (ex-situ) of soil was excavated and stockpiled on plastic sheeting.**

To confirm removal of the affected soil, Geomatrix collected soil samples from both the bottom and sidewalls of the excavation. Sampling locations are shown on Figure 3. Sampling was performed by removing the upper 3 to 6 inches of soil and driving a clean, thin-walled brass tube into either the excavation wall or the soil in the bucket of the excavator. The tubes were sealed at each end with aluminum foil, plastic end caps, and duct tape; each tube was labeled and placed in an ice-cooled chest. The samples were delivered to Chromalab under Geomatrix chain-of-custody procedures for analysis for TPH as diesel by U.S. Environmental Protection Agency (EPA) Method 8015; TPH as gasoline by modified EPA Method 8015; and BTEX by EPA Method 8020. Chain-of-custody records are included in Appendix B.

A total of 47 soil samples were collected from the excavation bottom and sidewalls. In accessible areas where analytical results indicated TPH as diesel or gasoline greater than 100 mg/kg, additional soil was excavated until analytical results were less than 100 mg/kg TPH as diesel and as gasoline. Analytical laboratory reports are included in Appendix B.

The analytical results for the final 41 sidewall and bottom samples are summarized in Table 1; soil samples contained less than 100 mg/kg TPH as diesel and TPH as gasoline at all except four locations. In the western area of the excavation (Figure 3), two sidewall samples (EX-3 and EX-5) contained TPH as diesel at concentrations of 6500 and 5000 mg/kg, respectively, and TPH as gasoline at concentrations of 2800 and 1600 mg/kg, respectively. One bottom sample (EX-24; Figure 3) contained TPH as diesel at a concentration of 120 mg/kg; TPH as gasoline was not detected in this sample. One sidewall sample from the southern area of the excavation (EX-26; Figure 3) contained TPH as diesel at a concentration of 250 mg/kg.

The excavation was backfilled under the direction of the Port of Oakland. Geomatrix did not observe backfilling.

3.2 STOCKPILED SOIL

Approximately 2300 cubic yards of excavated soil was stockpiled on plastic sheeting. Geomatrix collected four samples from each 100 cubic yards of soil; these were composited by the laboratory into a total of 23 soil samples. The upper 6 to 18 inches of material was removed from the sampling location, and a clean, thin-walled brass tube was driven into the newly exposed soil. The tube was removed; sealed at each end with aluminum foil, plastic caps, and duct tape; then labeled and placed in an ice-cooled chest for delivery to Clayton under Geomatrix chain-of-custody procedures. The samples were analyzed for compounds that RESNA uses as the basis for acceptance at the Port's bioremediation facility. These include TPH as diesel by EPA Method 8015; TPH as gasoline by modified EPA Method 8015; halogenated volatile organic compounds (VOCs) by EPA Method 8240; semivolatile

organic compounds by EPA Method 8270; and seventeen Title 22 metals by EPA Methods 6010 and 7471. One soil sample also was collected for an aquatic toxicity test to confirm that the soil is not a hazardous waste and for characterization for bioremediation; the test was conducted by GeoAnalytical Laboratories, Inc., of Modesto, California. The chain-of-custody records and analytical laboratory reports are included in Appendix B.

The analytical results are summarized in Tables 2 and 3. TPH as diesel and as gasoline were detected at concentrations up to 1400 and 5600 mg/kg, respectively. BTEX were detected at maximum concentrations of 4, 21, 60, and 280 mg/kg, respectively. Semivolatile compounds detected included naphthalene, 2-methyl naphthalene, phenanthrene, fluoranthene, and fluorene, at a maximum concentration of 18 mg/kg. Total metals detected were below the Total Threshold Limit Concentrations (TTLCs; California Code of Regulations, Title 22, Section 66261.24). The results of the aquatic toxicity indicated 100 percent survival of the fish. Based on these results and Title 22 (of the California Code of Regulations) criteria, the stockpiled soil did not constitute a hazardous waste.

After the analytical results were received, RESNA transported the stockpiled soil to the Port's bioremediation facility where it is currently awaiting treatment. Geomatrix did not observe loading or transporting.

3.3 PIPE REMOVAL

On 10 November 1992, Geomatrix observed Timec of Martinez, California, remove the five abandoned pipes from the excavation. Timec drained approximately 250 gallons of fluid from the pipes and placed the fluid in 55-gallon drums for temporary storage. After the fluid was removed, each pipe was cut at the edge of the excavation and sealed with a cement plug. Timec disposed of the pipes at Levin Metals Corporation in Richmond, California.

Geomatrix collected a sample of the fluid from the drums to characterize it for disposal. The sample was delivered under Geomatrix chain-of-custody procedure to Clayton to be analyzed for TPH as diesel by EPA Method 8015; TPH as gasoline by modified EPA Method 8015; and BTEX by EPA Method 8020. The results indicated that the fluid contained TPH as diesel at 13 milligrams per liter (mg/l); TPH as gasoline at 11 mg/l; and BTEX at 0.13, 0.95, 0.27, 1.77 mg/l, respectively. A copy of the chain-of-custody record and analytical laboratory report are included in Appendix C. The Port retained Decon Environmental Services of Hayward, California, to dispose of the fluid. They transported the fluid and drums to their facility in Hayward. The water was subsequently recycled by PRC in Patterson, California, and the drums were recycled by Myers in Richmond, California.

4.0 CONCLUSIONS

Analytical results indicate that soil in the western part of the excavation contains elevated concentrations of petroleum hydrocarbons. Soil containing total petroleum hydrocarbons at more than 1000 mg/kg at the west end of the excavation could not be removed because of physical obstructions. The analytical results for soil samples from northern, eastern, and southern areas of the excavation indicate that soil containing petroleum hydrocarbons at more than 100 mg/kg has been removed, except at two locations where soil containing TPH as diesel at 120 and 250 mg/kg was left in place.

5.0 PROPOSED WORK PLAN

Our proposed scope of work to evaluate the impact of the petroleum hydrocarbons in soil includes drilling soil borings, collecting soil samples for chemical analysis, installing three monitoring wells, and sampling groundwater. All field activities will be performed in accordance with Geomatrix protocols (Appendix D).

5.1 SOIL SAMPLING

Geomatrix will conduct a limited soil boring program at the site to collect soil samples for chemical analysis. Based on analytical results of the excavation soil samples, we propose to drill as many as six soil borings, two of which will be converted to monitoring wells; proposed boring locations are shown on Figure 4. Before work begins, Geomatrix will obtain a soil boring permit from the Alameda County Flood Control and Water Conservation District (ACFCWCD) and will arrange for a utility check to screen the proposed boring locations for underground utilities.

Soil borings will be drilled to a maximum depth of 15 feet using 8-inch-diameter hollow-stem augers. The borings will be continuously cored using a 5-foot dry core sampler, and lithologic logs will be developed for the boreholes. All drilling equipment will be steam-cleaned before each use. Soil samples for chemical analysis will be collected: one sample in the top 3 feet, corresponding to approximately 1 foot below grade before construction activities began; from immediately above the water table; and at 5 feet below the water table; additional samples may be collected based on field observations. Soil samples for chemical analysis will be collected directly from the sampler in clean, thin-walled brass tubes. The tubes will be sealed, cooled, and delivered to a state-certified analytical laboratory under Geomatrix chain-of-custody procedures. Soil samples will be analyzed for the compounds that were detected at elevated concentrations in the tank excavation: TPH as gasoline by modified EPA Method 8015; TPH as diesel by EPA Method 8015; and BTEX by EPA Method 8020.

Soil cuttings from the borings will be placed in 55-gallon drums for temporary storage at a designated on-site location pending appropriate final disposition. Soil borings will be backfilled with a cement/bentonite grout to within a few inches of ground surface. Asphalt patch will be applied at the surface to match current grade.

5.2 INSTALLATION OF MONITORING WELLS

Based on discussions with the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA), the Port proposes to install a network of monitoring wells to evaluate the direction of groundwater flow and to monitor the potential migration of constituents from the excavation at the former Powerine site and the location of former underground storage tanks in the Kaiser Yard (Figure 5). Details regarding tank removal and sampling activities at the Kaiser Yard are included in Geomatrix's June 1992 report entitled "Removal of Underground Storage Tanks, Kaiser Yard, 2801 Seventh Street, Oakland, California." The monitoring wells will be installed under permit from the ACFCWCD.

For this work plan, we assumed that groundwater flows in a northerly direction toward San Francisco Bay. A total of three monitoring wells are proposed: one monitoring well will be installed in the assumed upgradient direction of the Powerine excavation; one well will be installed in the assumed downgradient direction of the Powerine excavation; and one well will be installed in the assumed downgradient direction of the former Kaiser Yard tank excavation. The monitoring wells will be installed within 10 feet of the perimeter of the affected area based on field observations made during drilling and sampling. The proposed well locations are shown on Figure 5. The final locations of the wells will be determined following completion of construction of the container terminal yard; monitoring wells likely will be placed in aisleways in the yard.

The monitoring wells will be screened across the water table to a maximum depth of 10 feet below the water table; the well screens will not extend across the Bay Mud. The wells will be constructed using 2-inch-diameter, flush-threaded, schedule-40 polyvinyl chloride (PVC) pipe, and will be screened using 0.01-inch slot size factory-slotted PVC pipe. The well annulus will be backfilled with a filter pack of quartz sand to one foot above the 10-foot-long slotted screen section. A bentonite seal will be placed above the filter pack, and the remaining annulus will be backfilled with a bentonite-cement seal to protect against

surface water runoff. A locking cap and traffic-rated cover will be placed over the monitoring well at the ground surface.

After allowing the well seal to set (approximately 24 hours), each monitoring well will be developed to remove fines from the casing, stabilize the filter pack, and establish hydraulic communication between the well and the surrounding water-yielding zone.

Soil cuttings from the well boreholes and purged groundwater from well development will be placed in 55-gallon drums for temporary storage at a designated on-site location pending appropriate final disposition.

Following well completion, the well casings will be surveyed to establish their elevations.

5.3 GROUNDWATER SAMPLING

One year of quarterly groundwater monitoring typically is required at sites where leakage is suspected to have occurred from an underground storage tank. Therefore, Geomatrix proposes to initiate a quarterly monitoring program at the subject site after the wells are installed.

A groundwater sample will be collected from each newly installed monitoring well for chemical analysis for TPH as diesel, TPH as gasoline, and BTEX. Groundwater samples will be analyzed using the methods listed in Section 5.1. In addition, the first sample collected from each well will be analyzed for total dissolved solids to assess the general quality of the groundwater. The groundwater samples will be delivered under Geomatrix chain-of-custody procedures to a state-certified analytical laboratory. During subsequent quarters of groundwater sampling, samples will be analyzed only for constituents reported in the first round of sampling.

Paul, I dint agree w/ this. BC

Groundwater generated during sampling will be stored temporarily on site in 55-gallon drums at a designated on-site location pending appropriate final disposition.

5.4 REPORTING

Geomatrix will describe the soil sampling and well installation activities in a report to the Port of Oakland. The report will include lithologic logs of the boreholes, well construction diagrams, water-level elevations, and a summary of the analytical results for soil samples and groundwater samples from the first quarterly sampling event. The extent of affected soil and recommendations for further action also will be discussed.

Groundwater sampling and results from subsequent quarterly sampling events will be described in quarterly reports. The fourth quarterly report will evaluate the need for further groundwater monitoring based on the analytical data from the first year of sampling.

5.5 SCHEDULE

Field activities proposed in this work plan can be initiated as soon as we receive approval from the ACHCSA and the Port, and after construction activities are completed at the site. We anticipate that field activities, including the soil boring program, installation of monitoring wells, well development, and first sampling event, can be completed within three weeks. We anticipate that the final report summarizing these activities and presenting analytical results will be submitted to the Port of Oakland and ACHCSA within six weeks of the groundwater sampling event.

GEOMATRIX

TABLE 1

Analytical Data for Excavation Soil Samples

Page 1

Former Powerine Site
2800 Seventh Street
Oakland, California
(concentrations in mg/kg)

Sample No.	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl-Benzene	Total Xylenes
EX-01	(10.00)	(1.00)	.023	.014	(.005)	.011
EX-02	(10.00)	2.30	1.000	(.010)	(.010)	(.010)
EX-03	6500.00	2800.00	4.000	49.000	35.000	240.000
EX-04	(10.00)	5.00	.390	.012	.018	.013
EX-05	5000.00	1600.00	.480	1.000	8.600	55.000
EX-06	99.00	48.00	(.015)	.061	.280	1.600
EX-07	20.00	3.20	.110	.270	.068	.410
EX-08	63.00	1.00	.390	.009	(.005)	.007
EX-09*	10000.00	7600.00	24.000	320.000	140.000	840.000 ← sp excavated
EX-10	(10.00)	1.50	.910	.008	(.005)	.016
EX-11	(10.00)	6.60	2.900	.047	.082	.360
EX-12*	1514.00	360.00	4.900	8.800	8.500	44.000
EX-13	(10.00)	(1.00)	.012	(.005)	(.005)	(.005)
EX-14	(10.00)	(1.00)	.075	(.005)	(.005)	(.005)
EX-15	(10.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-16	(10.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-17	(10.00)	2.00	1.500	.008	.028	.046
EX-18	(10.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-19	(10.00)	(1.00)	.110	(.005)	(.005)	(.005)
EX-20	(10.00)	3.10	2.000	(.005)	.028	.068
EX-21	(10.00)	1.60	.860	.010	.050	.020
EX-22	(10.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-23	75.00	8.80	(.005)	(.005)	.024	.054
EX-24	120.00	(1.00)	.022	(.005)	(.005)	.008
EX-25	(10.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-26	250.00	96.00	4.100	(.005)	4.500	.420
EX-27	(1.00)	(1.00)	.018	(.005)	.015	.085
EX-28	(1.00)	(1.00)	.110	(.005)	(.005)	(.005)
EX-29	64.00	3.50	.200	.008	.036	(.005)
EX-30	(1.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-31	(1.00)	6.80	2.400	.038	.051	.170
EX-32	32.00	21.00	.033	.016	.220	.190
EX-33*	54.00	1400.00	7.000	12.000	43.000	130.000
EX-34*	810.00	71000.00	270.000	1000.000	680.000	9600.000
EX-35*	150.00	4700.00	11.000	7.600	100.000	480.000
EX-36*	59.00	750.00	(.100)	.150	4.000	8.300
EX-37	15.00	96.00	(.200)	(.005)	.580	3.000
EX-38	(1.00)	(1.00)	(.005)	(.005)	(.005)	(5.000)
EX-39	(1.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-40	(1.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-41	(1.00)	(1.00)	(.005)	(.005)	.067	.022
EX-42	(1.00)	(1.00)	.016	(.005)	(.005)	(.005)
EX-43	(1.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-44	(1.00)	(1.00)	(.005)	(.005)	(.005)	(.005)
EX-45	(1.00)	(1.00)	.022	(.005)	(.005)	(.005)
EX-46	(1.00)	5.10	.820	(.005)	.058	.052
EX-47	(1.00)	(1.00)	(.005)	(.005)	(.005)	(.005)

TABLE 1

GEOMATRIX

Analytical Data for Excavation Soil Samples
Former Powerine Site
2800 Seventh Street
Oakland, California
(concentrations in mg/kg)

Notes:

1. Samples analyzed by Chromalab, Inc., of San Ramon, California, by EPA Methods 8015 and 8020.

2. ( ) indicates compound not detected above the laboratory detection limit shown.

3. * indicates sample excavated.

GEOMATRIX

TABLE 2

Analytical Data for Stockpile Soil Samples
Former Powerine Site
2800 Seventh Street
Oakland, California
(concentrations in mg/kg)

Sample No.	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Naph-thalene	2-methyl naph-thalene	Phenan-threne
SP-01A-D	430.00	460.00	(.100)	1.700	2.900	20.000	8.00	14.00	1.00
SP-02A-D	280.00	1700.00	(.100)	11.000	12.000	124.000	15.00	14.00	(1.00)
SP-03A-D	220.00	950.00	(.100)	3.100	8.800	65.000	16.00	18.00	1.00
SP-04A-D	290.00	5600.00	(10.000)	(10.000)	60.000	280.000	11.00	12.00	5.00
SP-05A-D	92.00	1900.00	(1.000)	4.000	3.000	86.000	12.00	13.00	(2.00)
SP-06A-D	99.00	870.00	(1.000)	4.000	2.000	48.000	5.00	6.00	(2.00)
SP-07A-D	(50.00)	180.00	(.300)	1.000	.800	11.100	2.00	4.00	(2.00)
SP-08A-D	26.00	380.00	(1.000)	2.000	2.000	30.000	6.00	7.00	(2.00)
SP-09A-D	(20.00)	7.90	(.010)	(.010)	(.010)	.010	(2.00)	(2.00)	(2.00)
SP-10A-D	57.00	1200.00	(3.000)	(3.000)	9.000	72.000	4.00	5.00	(2.00)
SP-11A-D	330.00	2800.00	4.000	21.000	28.000	176.000	6.00	6.00	(2.00)
SP-12A-D	1400.00	3000.00	.700	1.200	4.000	30.000	7.00	9.00	(2.00)
SP-13A-D	440.00	190.00	(.500)	(.500)	2.400	2.600	1.50	2.20	.20
SP-14A-D	180.00	64.00	(.030)	(.030)	(.030)	.580	.40	1.40	.20
SP-15A-D	200.00	40.00	(.030)	(.030)	(.030)	.200	.30	.90	.20
SP-16A-D	600.00	330.00	(.500)	(.500)	1.200	19.500	10.00	12.00	(2.00)
SP-17A-D	250.00	220.00	(.500)	(.500)	(.500)	20.300	7.30	8.70	.40
SP-18A-D	150.00	230.00	(.500)	(.500)	(.500)	6.100	8.90	9.00	.30
SP-19A-D	(10.00)	42.00	(.030)	(.030)	(.030)	.840	(2.00)	(2.00)	(2.00)
SP-20A-D	(1.00)	23.00	(.030)	(.030)	(.030)	.050	(2.00)	(2.00)	(2.00)
SP-21A-D	(10.00)	23.00	(.030)	(.030)	(.030)	.270	(2.00)	(2.00)	(2.00)
SP-22A-D	(6.00)	27.00	(.030)	(.030)	.060	.200	.80	.70	(.20)
SP-23A-D	(10.00)	110.00	(.030)	(.030)	.120	1.750	1.50	1.20	(.20)

Notes:

1. Samples analyzed by Clayton Environmental Consultants of Pleasanton, California, by EPA Methods 8015, 8240, and 8270.

2. ( ) indicates compound not detected above the laboratory detection limit shown.

3. Samples SP-4A-D also contained flouranthene and pyrene at concentrations of 4 mg/kg each.
   Samples SP-13A-D also contained flourene at a concentration of 0.2 mg/kg.
   Samples SP-17A-D also contained flouranthene and flourene at concentrations of 0.2 mg/kg each.
   Samples SP-18A-D also contained Freon 113 at a concentration of 16 mg/kg.

TABLE 3

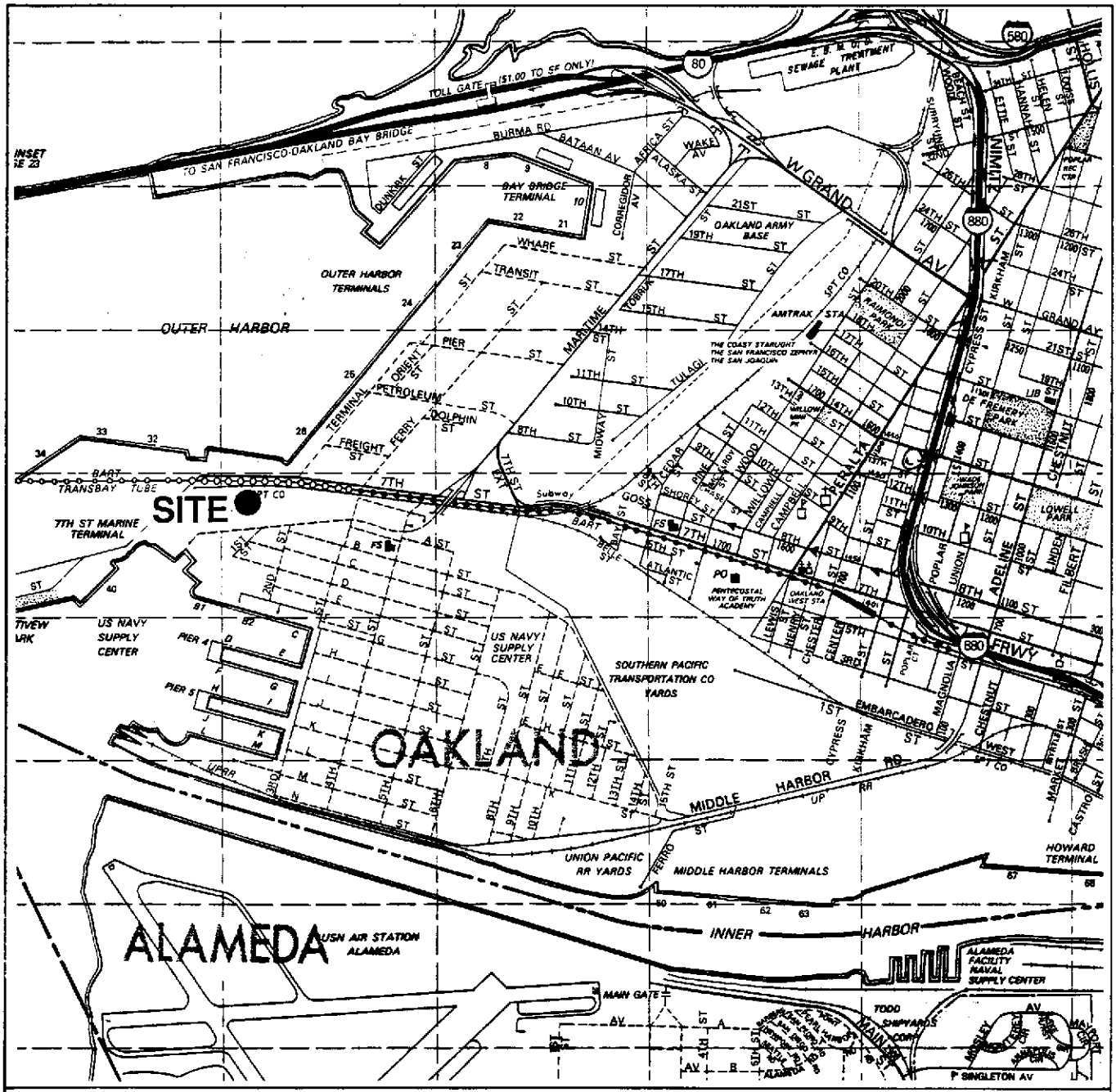
Metals Data for Stockpile Soil Samples
Former Powerine Site
2800 Seventh Street
Oakland, California
(concentrations in mg/kg)

Sample No.	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
SP-01A-D	1.00	6.00	53.00	(.10)	.20	18.00	4.00	25.00	75.00	.10	(1.00)	22.00	2.00	(.50)	(1.00)	17.00	51.00
SP-02A-D	(1.00)	3.00	38.00	(.10)	.30	17.00	4.00	18.00	42.00	(.10)	(1.00)	18.00	2.00	(.50)	(1.00)	14.00	37.00
SP-03A-D	(1.00)	4.00	35.00	(.10)	.20	19.00	4.00	20.00	22.00	(.10)	(1.00)	19.00	1.00	(.50)	(1.00)	13.00	31.00
SP-04A-D	2.00	6.00	39.00	.10	.20	24.00	4.00	17.00	28.00	(.10)	(1.00)	20.00	(1.00)	(.50)	(7.00)	20.00	29.00
SP-05A-D	(1.00)	4.00	29.00	(.10)	.10	21.00	4.00	11.00	25.00	(.10)	(1.00)	18.00	(1.00)	(.50)	6.00	17.00	28.00
SP-06A-D	2.00	8.00	30.00	(.10)	(.10)	20.00	4.00	17.00	43.00	(.10)	(1.00)	20.00	(1.00)	(.50)	6.00	17.00	32.00
SP-07A-D	1.00	3.00	40.00	(.10)	.10	26.00	4.00	11.00	14.00	(.10)	(1.00)	23.00	(1.00)	(.50)	5.00	18.00	23.00
SP-08A-D	1.00	3.00	42.00	(.10)	(.10)	26.00	6.00	14.00	21.00	(.10)	(1.00)	24.00	(1.00)	(.50)	6.00	20.00	32.00
SP-09A-D	2.00	5.00	35.00	.10	.10	23.00	5.00	19.00	38.00	(.10)	(1.00)	21.00	(1.00)	(.50)	8.00	20.00	37.00
SP-10A-D	1.00	4.00	25.00	(.10)	(.10)	20.00	5.00	15.00	57.00	(.10)	(1.00)	20.00	(1.00)	(.50)	5.00	18.00	29.00
SP-11A-D	(1.00)	4.00	26.00	(.10)	(.10)	22.00	5.00	9.00	17.00	(.10)	(1.00)	20.00	(1.00)	(.50)	4.00	16.00	22.00
SP-12A-D	(1.00)	2.00	24.00	(.10)	(.10)	18.00	5.00	16.00	14.00	(.10)	(1.00)	20.00	1.00	(.50)	2.00	14.00	22.00
SP-13A-D	1.00	7.00	33.00	(.10)	.10	22.00	6.00	19.00	45.00	(.10)	(1.00)	22.00	(1.00)	(.50)	2.00	20.00	38.00
SP-14A-D	1.00	8.00	34.00	(.10)	(.10)	22.00	6.00	22.00	48.00	.10	(1.00)	22.00	(1.00)	(.50)	4.00	22.00	39.00
SP-15A-D	2.00	6.00	30.00	(.10)	(.10)	24.00	6.00	15.00	42.00	(.10)	(1.00)	23.00	(1.00)	(.50)	5.00	21.00	33.00
SP-16A-D	1.00	5.00	37.00	(.10)	(.10)	23.00	6.00	18.00	43.00	(.10)	(1.00)	21.00	1.00	(.50)	3.00	22.00	36.00
SP-17A-D	2.00	5.00	37.00	(.10)	(.10)	24.00	5.00	16.00	34.00	(.10)	(1.00)	22.00	(1.00)	(.50)	3.00	20.00	36.00
SP-18A-D	(1.00)	4.00	30.00	(.10)	(.10)	23.00	5.00	10.00	20.00	(.10)	(1.00)	21.00	1.00	(.50)	3.00	20.00	27.00
SP-19A-D	2.00	11.00	27.00	(.10)	(.10)	19.00	5.00	17.00	16.00	(.10)	(1.00)	18.00	(1.00)	(.50)	2.00	16.00	24.00
SP-20A-D	1.00	9.00	36.00	(.10)	(.10)	24.00	5.00	16.00	19.00	(.10)	(1.00)	23.00	(1.00)	(.50)	4.00	21.00	30.00
SP-21A-D	1.00	7.00	55.00	.10	.20	23.00	7.00	34.00	50.00	(.10)	(1.00)	25.00	(1.00)	(.50)	6.00	25.00	54.00
SP-22A-D	(1.00)	4.00	39.00	(.10)	(.10)	26.00	6.00	17.00	110.00	(.10)	(1.00)	25.00	(1.00)	(.50)	3.00	23.00	48.00
SP-23A-D	(1.00)	2.00	37.00	(.10)	(.10)	24.00	6.00	19.00	44.00	(.10)	(1.00)	24.00	(1.00)	(.50)	(1.00)	20.00	35.00

Notes:

1. Samples analyzed by Clayton Environmental Consultants of Pleasanton, California, by EPA Methods 6010 and 7471.

2. ( ) indicates compound not detected above the laboratory detection limit shown.

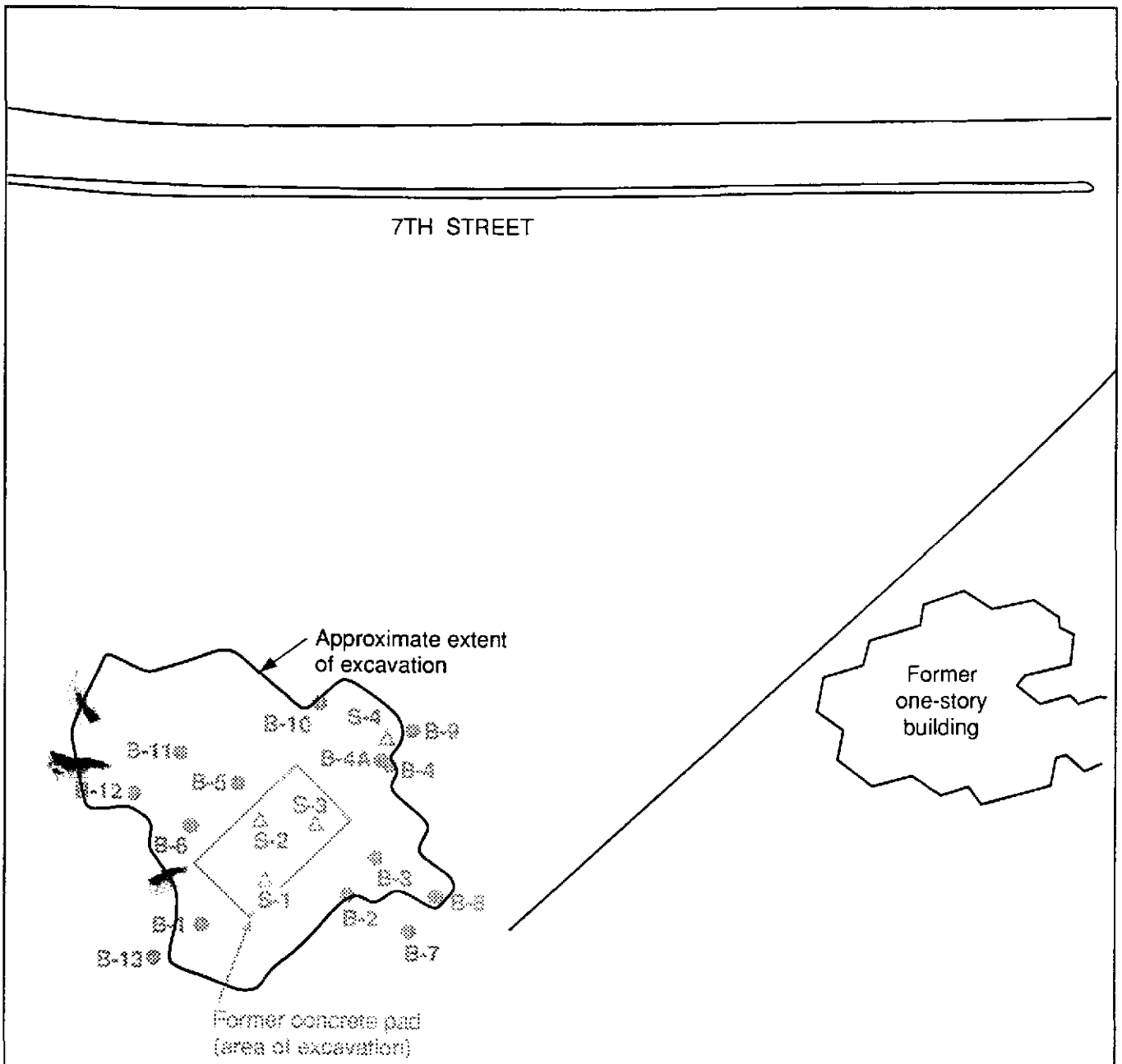


GEOMATRIX

SITE LOCATION MAP
Former Powerine Oil Company Site
Port of Oakland
Oakland, California

Figure
1

Project No.
2026.10



EXPLANATION

B-1 ⊕ Approximate location of soil boring, 10/92

S-1 △ Approximate location of shallow soil sample, 9/92

N

0 60 Feet

Note

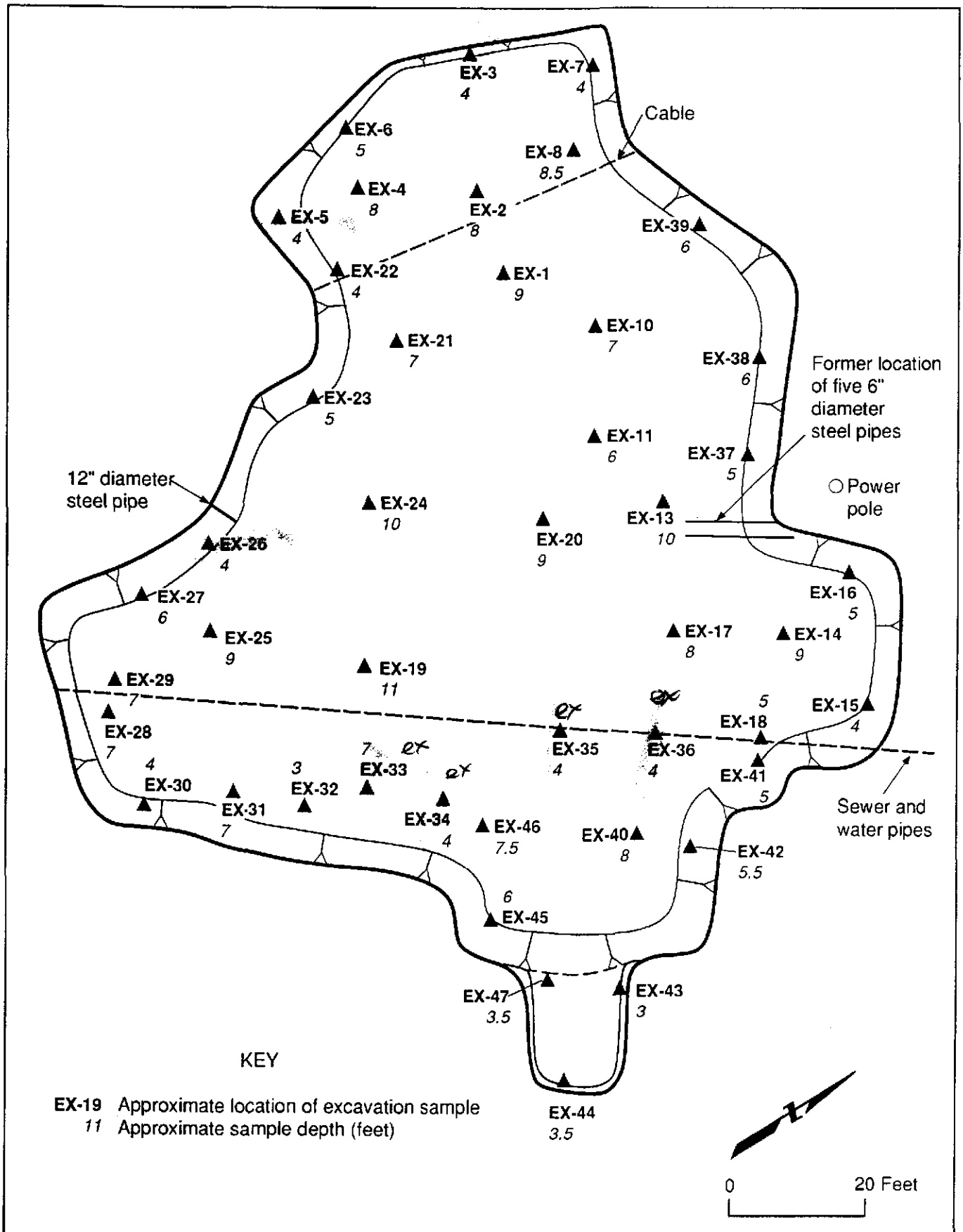
Based on map generated by Ronald Greenwell & Associates, Inc. of Antioch, California.

GEOMATRIX

SITE PLAN
Former Powerine Oil Company Site
Port of Oakland
Oakland, California

Figure 2

Project No. 2026.10

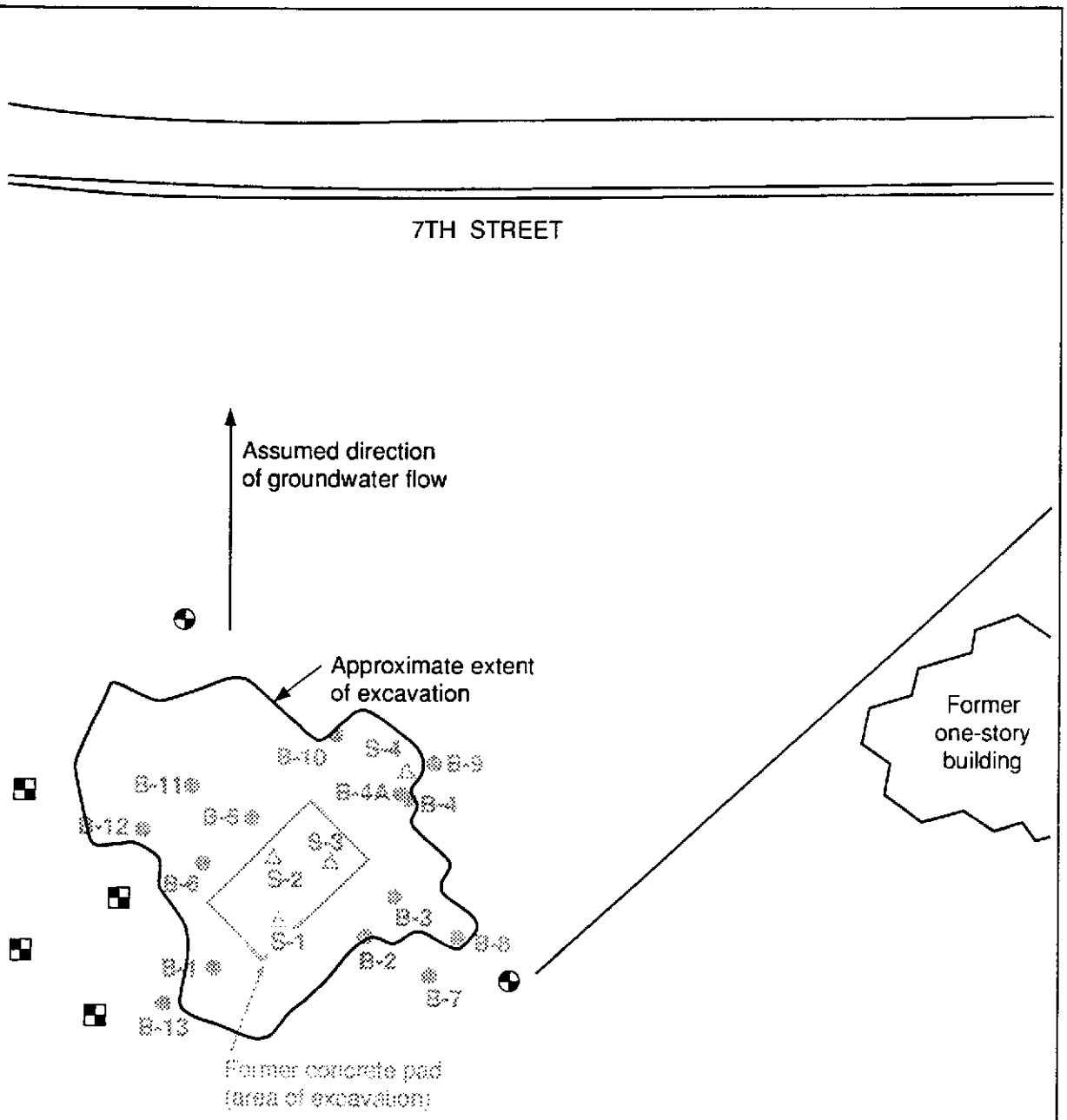


GEOMATRIX

EXCAVATION SAMPLE LOCATIONS
Former Powerine Oil Company Site
Port of Okland
Oakland, California

Figure
3

Project No.
2026.10



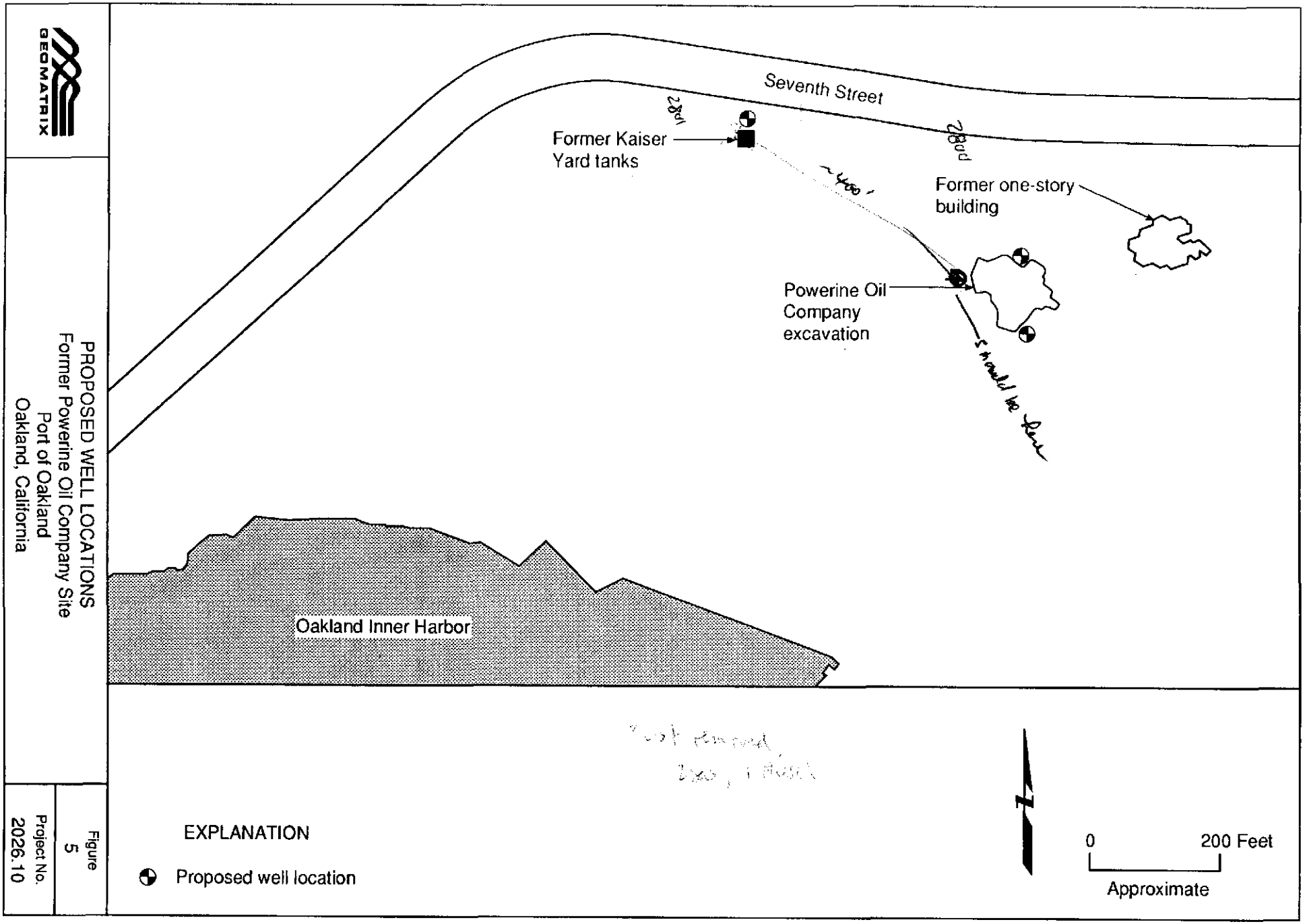
Note
Based on map generated by Ronald Greenwell & Associates, Inc. of Antioch, California.

GEOMATRIX

PROPOSED SOIL BORING AND MONITORING WELL LOCATIONS
Former Powerine Oil Company Site
Port of Oakland
Oakland, California

Figure
4

Project No.
2026.10


GEOMATRIX
PROPOSED WELL LOCATIONS
Former Powerine Oil Company Site
Port of Oakland
Oakland, California
Seventh Street
28th
28th
Former Kaiser
Yard tanks
Former one-story
building
Powerine Oil
Company
excavation
Oakland Inner Harbor
EXPLANATION
Proposed well location
0
200 Feet
Approximate
Figure
5
Project No.
2026.10

GEOMATRIX

APPENDIX A

FORMER POWERINE SITE
28 OCTOBER 1992
GEOMATRIX CONSULTANTS, INC.

100 Pine Street, 10th Floor
San Francisco, CA 94111
(415) 434-9400 • FAX (415) 434-1365

GEOMATRIX

28 October 1992
Project 2026.10

Mr. Dan Schoenholz
Port of Oakland
530 Water Street
Oakland, California 94607

Subject: Former Powerine Site
Port of Oakland
Oakland, California

Dear Mr. Schoenholz:

At the request of the Port of Oakland (Port), Geomatrix Consultants, Inc. (Geomatrix), directed drilling and sampling of 12 soil borings at the former Powerine site in Oakland, California (Figure 1). The work was conducted on 21 and 22 October 1992. Soil samples from the borings were collected for chemical analysis. This work was performed under verbal approval to proceed and in accordance with Geomatrix's 26 October 1992 scope of services to the Port. Site background, drilling and soil sampling activities, and our recommendations are discussed below.

BACKGROUND

During construction activities associated with the realignment of Seventh Street, the contractor at the site (Obayashi) noted petroleum hydrocarbon odors in soil beneath a concrete pad being removed (Figure 2). Abandoned pipelines encountered during slab removal are believed to have been supply lines for fuel at the former Powerine site. Construction activities were halted and the Port requested that Geomatrix collect soil samples from the area to assess the level of petroleum hydrocarbons in the soil. Geomatrix collected three shallow soil samples (S-1 through S-3) from beneath the former pad that were composited into one sample for analysis; and one discrete shallow soil sample (S-4) from outside the former pad area where Obayashi noted an odor. Soil sample locations are shown on Figure 2. Samples were collected on 25 September 1992 in accordance with Geomatrix protocols and were delivered to Clayton Environmental Consultants (Clayton) of Pleasanton, California, a state-certified analytical laboratory contracted by the Port, for chemical analysis. The composite soil sample contained 110 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, ethylbenzene, and total xylenes (BTEX) at concentrations of 0.67, 3.9, 4.5, and 27.3 mg/kg, respectively. The discrete soil sample (S-4) contained TPH as gasoline, toluene, ethylbenzene, and total xylenes at concentrations of 110, 2.2, 4.8, and

13.0 mg/kg, respectively. Benzene was not reported in the discrete soil sample above the laboratory detection limit of 0.1 mg/kg. A copy of the analytical laboratory report is included in Attachment A.

Based on the analytical results of the soil samples collected by Geomatrix, the Port notified the Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH). The Port subsequently retained RESNA of Fremont, California to excavate soil from the affected area. Approximately 100 cubic yards of soil were excavated from beneath the former slab area and stockpiled on site on 13 October 1992. Excavation activities indicated that the petroleum hydrocarbons were not limited to immediately beneath the former concrete slab. Therefore, excavation activities were discontinued; RESNA collected three soil samples from the excavation to evaluate the concentration of petroleum hydrocarbons in the soil. TPH as gasoline and TPH as diesel were detected at maximum concentrations of 9500 and 9900 mg/kg, respectively. BTEX were reported at maximum concentrations of 39, 150, 150, and 1110 mg/kg, respectively.

DRILLING AND SOIL SAMPLING

Based on the analytical results of the samples collected by RESNA and observations made during excavation activities, the Port requested that Geomatrix conduct a soil boring program to evaluate the lateral and vertical extent of petroleum hydrocarbons in the soil in the vicinity of the excavation. A description of field activities is presented below.

Before drilling, Geomatrix obtained a soil boring permit from the Alameda County Flood Control and Water Conservation District (ACFCWCD), Zone 7. A copy of the permit is included in Attachment B. Cruz Brothers of Milpitas, California, a private utility locator, cleared boring locations of underground utilities before field activities began.

West Hazmat Drilling Corporation of Hayward, California, was contracted to perform the drilling under the observation of a Geomatrix field engineer. Drilling was performed using a CME 75 drill rig outfitted with 6-inch outside diameter augers and a Soil Master 50 drill rig outfitted with 6-inch outside diameter augers. Down-hole equipment was steam cleaned or washed with a laboratory grade detergent (Alconox) before use.

Twelve soil borings were drilled to a maximum depth of 11.5 feet below ground surface to assess the vertical and lateral extent of petroleum hydrocarbons in the vicinity of the excavation. Continuous drive samples were collected from each boring using a 1.5-foot-long, 2.5-inch outside diameter split spoon sampler. Soil samples for chemical analysis

were generally collected in the top 1-2.5 feet of the borehole, immediately above the soil-groundwater interface, and approximately 5 feet below the groundwater interface in each borehole. The samples were collected in clean, thin-walled brass tubes driven into the soil in the sampler at the desired depths. The brass tubes were sealed with aluminum foil, plastic end caps, and duct tape, and labeled and stored in an ice-cooled chest. The soil samples were delivered under Geomatrix chain-of-custody procedures to Clayton. Copies of the chain-of-custody records are included in Attachment C.

Lithologic logs were developed in the field for each of the borings. Soil classification was based on soil collected in the samplers, cuttings, and noticeable changes in ease of drilling. Copies of the lithologic logs are presented in Attachment D.

Following completion of drilling, the soil borings were backfilled to grade with either concrete or neat cement grout. Soil cuttings collected during drilling activities were placed in a stockpile in the vicinity of the excavation. Wash water used to clean the augers and sampling equipment was placed in 55-gallon capacity drums for temporary storage.

ANALYTICAL METHODS

The soil samples from the borings were analyzed by Clayton for total petroleum hydrocarbons (TPH) as diesel by U.S. Environmental Protection Agency (EPA) Method 8015; TPH as gasoline by modified EPA Method 8015; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020. Analytical results are summarized in Table 1 (attached). Copies of the analytical laboratory reports are included in Attachment C.

RESULTS

The logs of borings drilled at the site indicate the area is underlain by sand, silty sand, and clayey sand; this material is interpreted to be dredged material placed as fill at the site. Groundwater was encountered at depths of 5 to 7 feet below ground surface during drilling.

TPH as diesel was reported in 2 of the 30 soil samples at concentrations of 2 and 210 milligrams per kilogram (mg/kg). The 210 mg/kg concentration of was detected in the soil sample from 10 feet below ground surface from boring B-3; this sample was collected

from approximately 5 feet below the groundwater interface. TPH as gasoline was reported in 11 of the 30 soil samples at concentrations ranging from 0.4 to 490 mg/kg. Clayton characterized the TPH as gasoline as weathered gasoline, or as a combination of weathered gasoline and heavier hydrocarbons. TPH as gasoline was detected at concentrations greater than 100 mg/kg in shallow samples from borings B-5 (3.5 feet below ground surface) and B-8 (1.0 feet below ground surface); and in the samples at the groundwater interface and 5 feet below the groundwater interface in boring B-12 (5.5 and 10.0 feet below ground surface, respectively). BTEX were detected at maximum concentrations of 0.5, 8.3, 2.7, and 41 mg/kg, respectively.

CONCLUSIONS AND RECOMMENDATIONS

Petroleum hydrocarbons, characterized as diesel and gasoline, and BTEX were detected in soil samples collected during the soil boring program conducted in October 1992 in the vicinity of the excavation on site. The analytical results indicate petroleum hydrocarbons do not extend beyond the soil borings drilled to the north and south of the excavation. The extent of petroleum hydrocarbons to the east and west has not been completely defined, based on the results of the samples collected from borings B-8 and B-12. It appears that the affected soil is generally limited to above the groundwater table, with the exception of TPH as gasoline in boring B-12 and TPH as diesel in boring B-3, which extend to at least 5 feet beneath the groundwater.

Based on the soil analytical data, it appears that approximately 1200 to 1600 cubic yards of soil in the vicinity of the excavation contains petroleum hydrocarbons at concentrations greater than 100 mg/kg. We recommend that this soil be excavated; the actual volume of soil to be removed may be different based on conditions encountered during excavation activities.

The preliminary extent of the excavation is based on the analytical data of the soil samples collected from the soil borings; the proposed extent of excavation is shown on Figure 3. A mobile laboratory will be onsite to analyze samples from the excavation to confirm that soil in excess of 100 mg/kg TPH has been removed. Excavated soil should be stockpiled on site and sampled for characterization for treatment and/or disposal.

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

Sincerely,

GEOMATRIX CONSULTANTS, INC.

Elizabeth K. Wells, P.E.
Project Engineer

Sally E. Goodin, R.G.
Senior Geologist

EKW/SEG/lcm
CONTR\2026-10.TXT

Attachments

TABLE 1

SOIL ANALYTICAL RESULTS[1]

Old Powerine Site
Port of Oakland
Oakland, California

Concentrations in milligrams per kilogram (mg/kg)

Boring No.	Depth (ft)	TPH as diesel	TPH as gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes[2]
B-1	1.0	<5	<0.3	<0.005	<0.005	<0.005	<0.01
	5.0	<20	13	0.086	0.094	0.014	0.076
	10.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
B-2	2.5	<1	25	0.074	0.082	0.081	0.145
	5.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
	10.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
B-3	1.5	<100	82	<0.005	0.036	0.17	0.034
	5.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
	10.0	210	<3.0	<0.005	<0.005	<0.005	<0.01
B-4	1.5	<1	0.8	<0.005	0.01	0.005	0.018
and	7.0	<1	3.5	0.016	0.02	<0.005	0.019
B-4A	11.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
B-5	3.5	<40	490	<0.005	2.2	0.68	41
	7.0	<1	0.7	0.057	0.005	<0.005	0.008
B-6	3.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
	6.5	2	1.8	0.062	0.017	<0.005	0.009
	11.5	<1	<0.3	<0.005	<0.005	<0.005	<0.01

TABLE 1

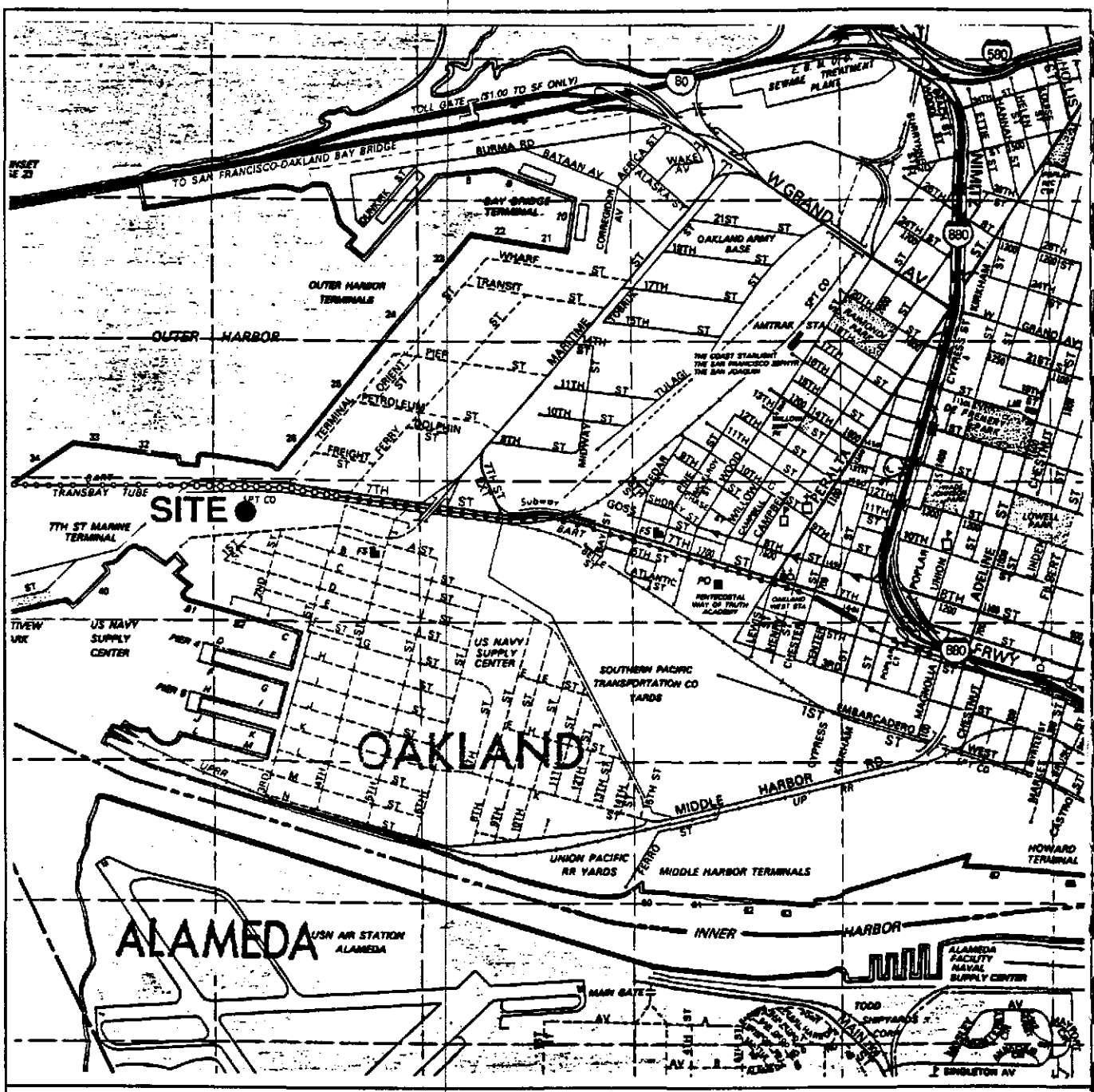
SOIL ANALYTICAL RESULTS

Concentrations in milligrams per kilogram (mg/kg)

Boring No.	Depth (ft)	TPH as diesel	TPH as gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes[2]
B-7	5.5	<1	<0.3	<0.005	<0.005	<0.005	<0.01
B-8	1.0	<200	200	<0.005	0.044	0.015	0.051
	5.5	<1	0.4	<0.005	<0.005	<0.005	0.005
	10.0	<1	0.4	<0.005	<0.005	<0.005	<0.01
B-9	6.5	<1	<0.3	<0.005	<0.005	<0.005	<0.01
B-10	1.0	<1	<0.3	<0.005	<0.005	<0.005	<0.01
	5.5	<1	1	0.088	0.01	0.029	0.101
B-11	5.5	<1	0.6	0.075	<0.005	<0.005	<0.01
B-12	1.0	<60	18	<0.1	0.1	<0.1	0.4
	5.5	<400	230	0.52	8.3	2.7	20.4
	10.0	<50	120	0.38	3.8	1.9	11.8
B-13	2.5	<20	1.7	0.010	0.020	<0.005	0.021
	7.0	<5	<0.3	<0.005	<0.005	<0.005	<0.01

[1] Soil samples collected by Geomatrix Consultants, Inc. on 21 and 22 October 1992 and analyzed by Clayton Environmental Consultants of Pleasanton, California for total petroleum hydrocarbons (TPH) as diesel by EPA Method 8015, TPH as gasoline by EPA Method 8015, and benzene, ethylbenzene, and xylenes by EPA Method 8020.

[2] Total xylenes reported as the sum of p,m-xylene and o-xylene; detection limits also reported as the sum of p,m-xylene and o-xylene detection limits.

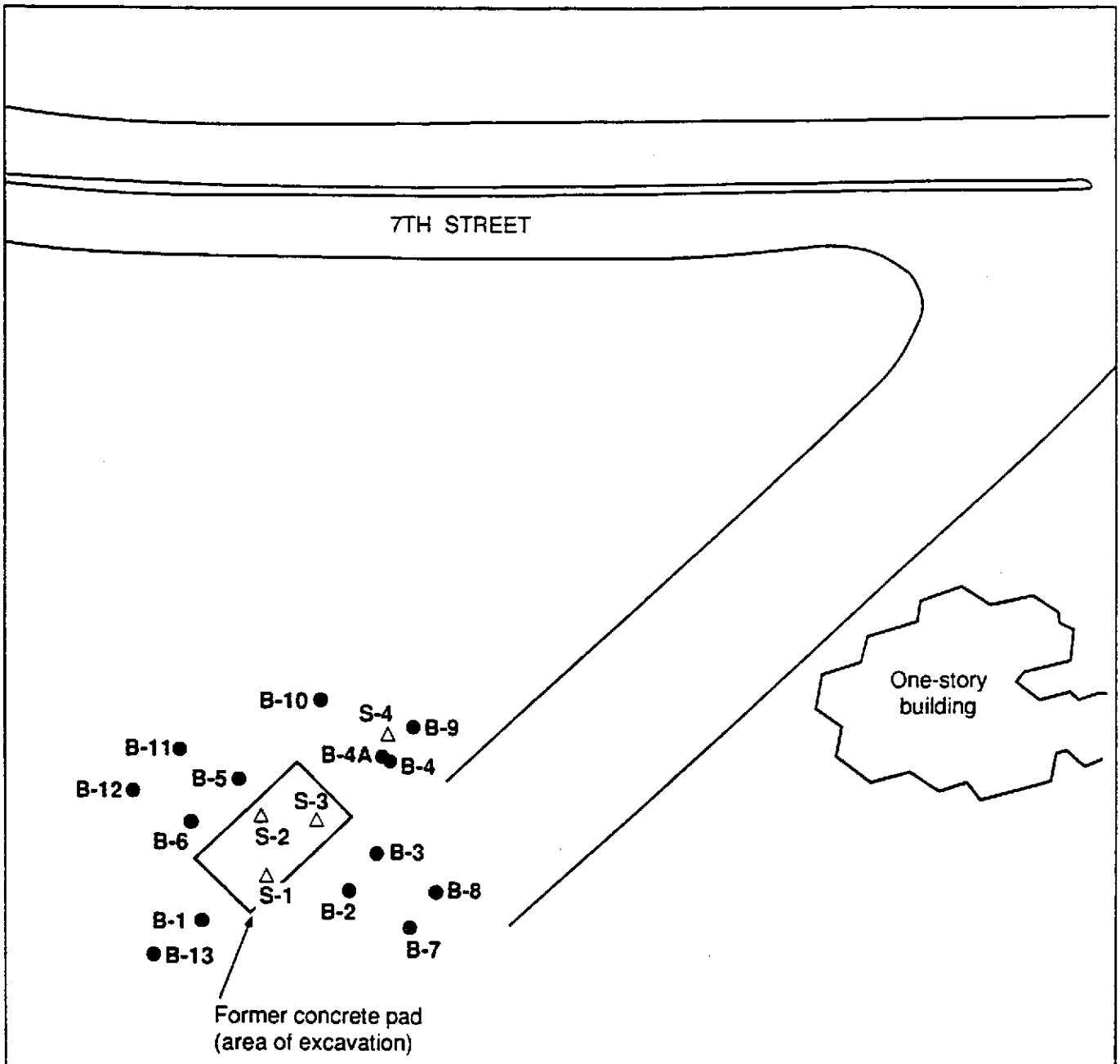


GEOMATRIX

SITE LOCATION MAP
Former Powerine Site
Port of Oakland
Oakland, California

Figure
1

Project No.
2026.10



EXPLANATION

B-1 ● Approximate location of soil boring, 10/92

S-1 △ Approximate location of shallow soil sample, 9/92

Note

Based on map generated by Ronald Greenwell & Associates, Inc. of Antioch, California.

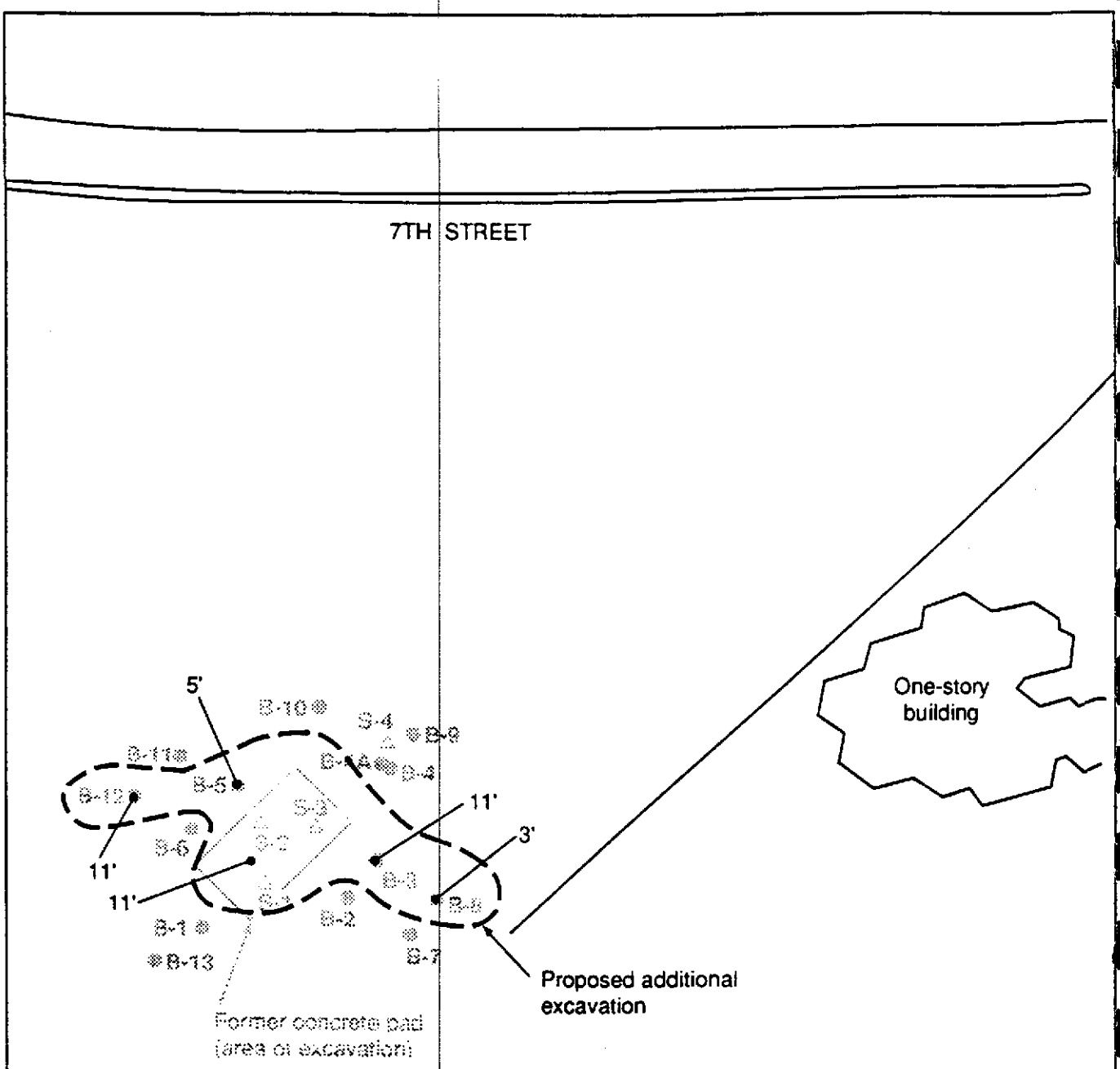
0 60 Feet

GEOMATRIX

SHALLOW SOIL SAMPLE AND SOIL BORING LOCATION MAP
Former Powerine Site
Port of Oakland
Oakland, California

Figure 2

Project No. 2026.10



EXPLANATION

B-1 Approximate location of soil boring, 10/92

S-1 △ Approximate location of shallow soil sample, 9/92

3' Proposed depth of excavation (feet)

Note

Based on map generated by Ronald Greenwell & Associates, Inc. of Antioch, California.

0 60 Feet

GEOMATRIX

PROPOSED ADDITIONAL EXCAVATION
Former Powerine Site
Port of Oakland
Oakland, California

Figure 3

Project No. 2026.10

ATTACHMENT A

CHAIN-OF-CUSTODY RECORD AND ANALTYICAL LABORATORY REPORT FOR SHALLOW SOIL SAMPLES

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.06
Clayton Project No. 92092.94

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015

Date Received: 09/25/92
Date Prepared: 09/28/92
Date Analyzed: 09/28/92

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
04A	COMP. S-1,S-2,S-3	09/25/92	430	1
05A	S-4	09/25/92	ND	200a
06A	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

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

Chain-of-Custody Record

№ 1440

Date: 9-25-92

Page 1 of 1

Project No.: 2026.06

Samplers (Signatures): [signature]

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers	Additional comments
9/25	930	S-1					X	X	X	X	S	N	1	composite S-1, S-2, S-3 for one analyses
9/25	935	S-2					X	X	X	X	S	N	1	
9/25	940	S-3					X	X	X	X	S	N	1	
9/25	945	S-4					X	X	X	X	S	N	1	

One week turnaround time

Turnaround time: 1 WEEK STANDARD

Results to: Sally Goodin

Total No. of containers: 4

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Signature: [signature]	9/25/92	Signature: David Oehler [signature]		Signature:		Lab Courier
Printed name: MIKE KEITH		Printed name: D KOEHLER		Printed name:		Laboratory comments and Log No.: 9209234
Company: GEOMATRIX		Company: Clayton		Company:		Rec'd SM BC.
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**	[signature]
Signature: David K. Oehler [signature]	1055	Signature: Terry Salvo [signature]	11:34 AM	Signature:		
Printed name: David K Oehler		Printed name: Terry Salvo		Printed name:		
Company: Clayton		Company: Clayton Envir. 9/25/92 11:34 AM		Company:		

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

ATTACHMENT B

SOIL BORING PERMIT

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

LOCATION OF PROJECT 2801 7th Street
Oakland, CA.

CLIENT
Name Port of Oakland
Address 530 Water St. Phone (510) 444-272-1184
City Oakland Zip 94604

APPLICANT
Name James M. Ajita
Geomatrix Consultants, Inc.
Address 100 Pine St. 10th Fl. Phone (415) 434-9400
City San Francisco Zip 94111

TYPE OF PROJECT
Well Construction
— Cathodic Protection ___
Water Supply ___
Monitoring ___
Geotechnical Investigation
General ___
Contamination ✓
Well Destruction ___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger ✓
Cable ___ Other ___

DRILLER'S LICENSE NO. 554979

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

GEOTECHNICAL PROJECTS
Number of Borings 10-15 Maximum
Hole Diameter 6-8 in. Depth 10 ft.

ESTIMATED STARTING DATE 10/20/92
ESTIMATED COMPLETION DATE 10/21/92

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

APPLICANT'S SIGNATURE [signature] Date 10/16/92

FOR OFFICE USE

PERMIT NUMBER 92520
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

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 work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

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

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

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

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 16 Oct
Wyman Hong

ATTACHMENT C

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

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

October 23, 1992

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

Client Ref. 2026.10
Clayton Project No. 92102.15

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on October 20, 1992. 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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-1-1.0	Date Sampled:	10/20/92
Lab Number:	9210215-04A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	105	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-1-5.0	Date Sampled:	10/20/92
Lab Number:	9210215-05A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.086	0.005
Toluene	108-88-3	0.094	0.005
Ethylbenzene	100-41-4	0.014	0.005
p,m-Xylenes	---	0.056	0.005
o-Xylene	95-47-6	0.020	0.005
Gasoline	---	13 [a]	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	120	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 Purgeable hydrocarbons quantitated as gasoline do not match typical gasoline pattern

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-1-10	Date Sampled:	10/20/92
Lab Number:	9210215-06A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	104	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-3-1.5	Date Sampled:	10/20/92
Lab Number:	9210215-01A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	0.036	0.005
Ethylbenzene	100-41-4	0.17	0.005
p,m-Xylenes	---	0.014	0.005
o-Xylene	95-47-6	0.020	0.005
Gasoline	---	82 a	0.3
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	135	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 Purgeable hydrocarbons quantitated as gasoline do not match typical gasoline pattern

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-3-5.0	Date Sampled:	10/20/92
Lab Number:	9210215-03A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	108	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-3-10	Date Sampled:	10/20/92
Lab Number:	9210215-02A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	3a
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	105	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 Detection limit increased due to presence of heavier hydrocarbons

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-4-1.5	Date Sampled:	10/20/92
Lab Number:	9210215-08A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	0.010	0.005
Ethylbenzene	100-41-4	0.005	0.005
p,m-Xylenes	---	0.008	0.005
o-Xylene	95-47-6	0.010	0.005
Gasoline	---	0.8[a]	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	108	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] Purgeable hydrocarbons quantitated as gasoline do not match typical gasoline pattern

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-4A-7.0	Date Sampled:	10/20/92
Lab Number:	9210215-07A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.016	0.005
Toluene	108-88-3	0.020	0.005
Ethylbenzene	100-41-4	ND	0.005
p,m-Xylenes	---	0.014	0.005
o-Xylene	95-47-6	0.005	0.005
Gasoline	---	3.5 a	0.3
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	105	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 Purgeable hydrocarbons quantitated as gasoline do not match typical gasoline pattern

Clayton
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Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: B-4-11.5
Lab Number: 9210215-09A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: 10/20/92
Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

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	105	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-6-3	Date Sampled:	10/20/92
Lab Number:	9210215-10A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	104	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-6-6.5	Date Sampled:	10/20/92
Lab Number:	9210215-11A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.062	0.005
Toluene	108-88-3	0.017	0.005
Ethylbenzene	100-41-4	ND	0.005
p,m-Xylenes	---	0.009	0.005
o-Xylene	95-47-6	ND	0.005
Gasoline	---	1.8	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	118	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: B-6-11.5
Lab Number: 9210215-12A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: 10/20/92
Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

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	105	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: B-9-6.5
Lab Number: 9210215-15A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: 10/20/92
Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

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	107	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: B-2-2.5
Lab Number: 9210215-16A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: 10/20/92
Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.074	0.005
Toluene	108-88-3	0.082	0.005
Ethylbenzene	100-41-4	0.081	0.005
p,m-Xylenes	---	0.067	0.005
o-Xylene	95-47-6	0.078	0.005
Gasoline	---	25	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	117	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: B-2-5.0
Lab Number: 9210215-17A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: 10/20/92
Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

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	106	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-2-10.0	Date Sampled:	10/20/92
Lab Number:	9210215-18A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
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	105	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: B-5-3.5
Lab Number: 9210215-19A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: 10/20/92
Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.05
Toluene	108-88-3	2.2	0.05
Ethylbenzene	100-41-4	0.68	0.05
p,m-Xylenes	---	27	0.05
o-Xylene	95-47-6	14	0.05
Gasoline	---	490a	3
Surrogates		**Recovery (%)**	**QC Limits (%) LCL UCL**
a,a,a-Trifluorotoluene	98-08-8	94	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-5-7.0	Date Sampled:	10/20/92
Lab Number:	9210215-20A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.057	0.005
Toluene	108-88-3	0.005	0.005
Ethylbenzene	100-41-4	ND	0.005
p,m-Xylenes	---	0.008	0.005
o-Xylene	95-47-6	ND	0.005
Gasoline	---	0.7	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-10-1.0	Date Sampled:	10/20/92
Lab Number:	9210215-21A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
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	106	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

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification:	B-10-5.5	Date Sampled:	10/20/92
Lab Number:	9210215-22A	Date Received:	10/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/20/92
Preparation Method:	EPA 5030	Date Analyzed:	10/21/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.088	0.005
Toluene	108-88-3	0.010	0.005
Ethylbenzene	100-41-4	0.029	0.005
p,m-Xylenes	---	0.071	0.005
o-Xylene	95-47-6	0.030	0.005
Gasoline	---	1.0	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	110	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Identification: METHOD BLANK
Lab Number: 9210215-23A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8015/8020

Date Sampled: --
Date Received: --
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

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	112	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.15

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015

Date Received: 10/20/92
Date Prepared: 10/20/92
Date Analyzed: 10/21/92

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
)1A	B-3-1.5	10/20/92	ND*	100a
)2A	B-3-10	10/20/92	210b *	1
)3A	B-3-5.0	10/20/92	ND*	1
)4A	B-1-1.0	10/20/92	ND*	5a
)5A	B-1-5.0	10/20/92	ND*	20a
)6A	B-1-10	10/20/92	ND*	1
)7A	B-4A-7.0	10/20/92	ND	1
)8A	B-4-1.5	10/20/92	ND	1
)9A	B-4-11.5	10/20/92	ND	1
.0A	B-6-3	10/20/92	ND*	1
.1A	B-6-6.5	10/20/92	2*	1
2A	B-6-11.5	10/20/92	ND	1
5A	B-9-6.5	10/20/92	ND	1
6A	B-2-2.5	10/20/92	ND*	1
7A	B-2-5.0	10/20/92	ND*	1
8A	B-2-10.0	10/20/92	ND*	1
9A	B-5-3.5	10/20/92	ND	40c
0A	B-5-7.0	10/20/92	ND	1
1A	B-10-1.0	10/20/92	ND*	1
2A	B-10-5.5	10/20/92	ND	1
3A	METHOD BLANK	--	ND	1

D Not detected at or above limit of detection
Not detected at or above limit of detection
- Information not available or not applicable
' Heavier hydrocarbons present
esults are reported on a wet weight basis, as received
Detection limit increased due to presence of heavier hydrocarbons
The hydrocarbons detected in this sample appears to be intermediate between diesel and motor oil: quantitation was based on diesel standards
Detection limit increased due to presence of gasoline

Chain-of-Custody Record

Nº 3215

Date: 10/20/92

Page 1 of 2

Project No.: 2026.10

Samplers (Signatures): [signature]

	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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
01A	10/20/92	11:00	B-3-1.5					X	X	X				
02	10/20/92	11:25	B-3-10					X	X	X	X	S		1
03	10/20/92	11:10	B-3-5.0					X	X	X	X	S		1
04	10/20/92	13:20	B-1-1.0					X	X	X	X	S		1
05	10/20/92	13:10	B-1-5.0					X	X	X	X	S		1
06	10/20/92	13:30	B-1-10					X	X	X	X	S		1
07	10/20/92	10:00	B-4A-7.0					X	X	X	X	S		1
08	10/20/92	9:25	B-4-1.5					X	X	X	X	S		1
09	10/20/92	9:40	B-4-11.5					X	X	X	X	S		1
10	10/20/92	13:40	B-6-3					X	X	X	X	S		1
11	10/20/92	13:45	B-6-6.5					X	X	X	X	S		1
12	10/20/92	14:10	B-6-11.5					X	X	X	X	S		1
											X	S		1

REMARKS

Additional comments:

Bill Port of Oakland Directly

Turnaround time: 48 hrs

Results to: Elizabeth K. Wells

Total No. of containers: 12

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
James [signature]	10/20/92	Jim Mitchell	10/20/92		
Signature: [signature]		Signature: JIM MITCHELL		Signature:	
Printed name:		Printed name: CLAYTON ENV.		Printed name:	
Company: Geomatrix		Company:		Company:	
Received by: Jim Mitchell	Time: 11:00	Received by: [signature]	Time: 5:00pm	Received by:	Time:
Signature: JIM MITCHELL		Signature: [signature]		Signature:	
Printed name: CLAYTON ENV.		Printed name: TRACY B. BULLOCK		Printed name:	
Company:		Company: CLAYTON ENV. CON		Company:	

Method of shipment: Pickup at site

Laboratory comments and Log No.:

9210193

Rec'd 2x4 AC for each sample

Geomatrix Consultants
100 Pine St 10th Floor
San Francisco, CA 94111
(415) 434 9400

Chain-of-Custody Record

Nº 3212

Date: 10/20/92 | Page 2 of 2

Project No.: 2026.10

Samplers (Signatures): [signature]

	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	Hold	Cooled	Soil (S) or water (W)	Acidified	Number of containers
13A	10/20/92	10:20	B-9-2.5					~~X~~	~~X~~	~~X~~	X	X	S		1
14	10/20/92	10:50	B-9-11.5					~~X~~	~~X~~	~~X~~	X	X	S		1
15	10/20/92	10:30	B-9-6.5					X	X	X		X	S		1
16	10/20/92	11:40	B-2-2.5					X	X	X		X	S		1
17	10/20/92	11:50	B-2-5.0					X	X	X		X	S		1
18	10/20/92	12:05	B-2-10.0					X	X	X		X	S		1
19	↓	1330	B-5-3.5					X	X	X		X	S		1
20		1450	B-5-7.0					X	X	X		X	S		1
21		1510	B-10-1.0					X	X	X		X	S		1
22		1530	B-10-5.5					X	X	X		X	S		1

REMARKS — Additional comments: Bill Port of Oakland directly

Turnaround time: 48 hrs

Results to: Elizabeth K Wells

Total No. of containers: 10

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Signature: [signature]	10/20/92	Signature: [signature] Jim Mitchell	10/20/92	Signature:	
Printed name: James Albe		Printed name: JIM MITCHELL		Printed name:	
Company: Geomatrix		Company: CLAYTON ENV.		Company:	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Signature: [signature] Jim Mitchell	1600	Signature: [signature]	5:00 pm	Signature:	
Printed name: JIM MITCHELL		Printed name: TRACY B. BUNCK		Printed name:	
Company: CLAYTON		Company: Clayton Env. Co.		Company:	

Method of shipment: Pick up

Laboratory comments and Log No.: ok

Rec'd 2 KYBL for 24 samples

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA 94111
(415) 434-9400

ENVIRONMENTAL CONSULTANTS
A Marsh & McLennan Company

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Project No.
Batch No. 9210151
Ind. Code | W.P.
Date Logged In 10/14/92 By JS

REPORT RESULTS TO
Name Bob Hackman Title Plant Mgr.
Company Kaiser Sand & Gravel Dept. Clayton
Mailing Address P.O. Box 279
City, State, Zip Clayton Ca 94566
Telephone No. 672-4955 Telefax No. 672-2640

Purchase Order No. 25265 Client Job No.

SEND INVOICE TO
Name Accounts Payable
Company Kaiser Sand & Gravel Dept.
Address P.O. Box 580
City, State, Zip Pleasanton Ca 94566

Date Results Req.: Rush Charges Authorized? ☐ Yes ☒ No Phone / Fax Results ☐ ☒

Samples are: (check if applicable) ☐ Drinking Water ☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative: HCl + HNO_3

ANALYSIS REQUESTED (Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	8240	8270	TTLC Metals	HOLD MS							FOR LAB USE ONLY
Sample #1		water	*	5	Xp	X	Xp								01AB,C,D,E
Trip Blank 0092592-HCl		water	40ml	1				Xp							02A

CHAIN OF CUSTODY
Collected by: (print)
Collector's Signature:
Relinquished by: Date/Time
Received by: Date/Time
Relinquished by: Josh Sandoval Date/Time 10-14-92 2:23 P.M.
Received at Lab by: [signature] Date/Time 10/14/92 2:23 P
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)
*2x of 40ml (HCl) 8240
2x of 1L - 8270
1x of 500mL (HNO_3) - TTLC

Authorized by: [signature] Date 10-13-92
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

2/92

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

October 26, 1992

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

Client Ref. 2026.10
Clayton Project No. 92102.34

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on October 21, 1992. 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,

Michael Lynch for

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/caa
Attachments

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-11-5.5	Date Sampled:	10/21/92
Lab Number:	9210234-03A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.075	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	---	0.6[a]	0.3
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	108	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-13-2.5	Date Sampled:	10/21/92
Lab Number:	9210234-05A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.010	0.005
Toluene	108-88-3	0.020	0.005
Ethylbenzene	100-41-4	ND	0.005
p,m-Xylenes	---	0.012	0.005
o-Xylene	95-47-6	0.009	0.005
Gasoline	---	1.7a	0.3
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	119	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-13-7	Date Sampled:	10/21/92
Lab Number:	9210234-06A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
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	107	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-8-1	Date Sampled:	10/21/92
Lab Number:	9210234-07A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/23/92
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	0.044	0.005
Ethylbenzene	100-41-4	0.015	0.005
p,m-Xylenes	---	0.023	0.005
o-Xylene	95-47-6	0.028	0.005
Gasoline	---	200a	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	107	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-8-5.5	Date Sampled:	10/21/92
Lab Number:	9210234-08A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/23/92
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	---	0.005	0.005
o-Xylene	95-47-6	ND	0.005
Gasoline	---	0.4a	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	101	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-8-10	Date Sampled:	10/21/92
Lab Number:	9210234-09A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
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	---	0.4[a]	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	104	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-7-5.5	Date Sampled:	10/21/92
Lab Number:	9210234-11A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
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	106	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-12-1	Date Sampled:	10/21/92
Lab Number:	9210234-13A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.1
Toluene	108-88-3	0.1	0.1
Ethylbenzene	100-41-4	ND	0.1
p,m-Xylenes	---	0.2	0.1
o-Xylene	95-47-6	0.2	0.1
Gasoline	---	18[a]	6
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	104	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 be weathered gasoline
Note: Detection limits increased due to dilution necessary for quantitation

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-12-5.5	Date Sampled:	10/21/92
Lab Number:	9210234-14A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.52	0.005
Toluene	108-88-3	8.3	0.005
Ethylbenzene	100-41-4	2.7	0.005
p,m-Xylenes	---	14	0.005
o-Xylene	95-47-6	6.4	0.005
Gasoline	---	230 [a]	0.3
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
a,a,a-Trifluorotoluene	98-08-8	144	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 be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	B-12-10	Date Sampled:	10/21/92
Lab Number:	9210234-15A	Date Received:	10/21/92
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/23/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	0.38	0.005
Toluene	108-88-3	3.8	0.005
Ethylbenzene	100-41-4	1.9	0.005
p,m-Xylenes	---	8.3	0.005
o-Xylene	95-47-6	3.5	0.005
Gasoline	---	120a	0.3

Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
a,a,a-Trifluorotoluene	98-08-8	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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9210234-16A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	10/22/92
Preparation Method:	EPA 5030	Date Analyzed:	10/22/92
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	105	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92102.34

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015

Date Received: 10/21/92
Date Prepared: 10/22/92
Date Analyzed: 10/22/92

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
03A	B-11-5.5	10/21/92	ND	1
05A	B-13-2.5	10/21/92	ND*	20b
06A	B-13-7	10/21/92	ND*	5b
07A	B-8-1	10/21/92	ND	200a
08A	B-8-5.5	10/21/92	ND	1
09A	B-8-10	10/21/92	ND	1
11A	B-7-5.5	10/21/92	ND	1
13A	B-12-1	10/21/92	ND	60b
14A	B-12-5.5	10/21/92	ND	400a
15A	B-12-10	10/21/92	ND*	50b
16A	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

Results are reported on a wet weight basis, as received
a Detection limit increased due to presence of lighter hydrocarbons
b Detection limit increased due to presence of heavier hydrocarbons
* Sample was analyzed on 10/23/92

Chain-of-Custody Record

№ 3209 | Date: 10/21/92 | Page 1 of 2

Project No.: 2-26.10

Samplers (Signatures): [signature]

	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	HOLD	Cooled	Soil (S) or water (W)	Acidified	Number of containers	Additional comments
1	10/22	1610	B-10-10								X	X	S		1	Bill Port of Oakland directly
2A	10/21	850	B-11-2.5								X	X	S		1	
3		920	B-11-5.5					X	X	X		X	S		1	
4		950	B-11-10								X	X	S		1	→ B-11-10 [initials] [illegible]
5		1030	B-13-2.5					X	X	X		X	S		1	
6		1120	B-13-7					X	X	X		X	S		1	
7		1215	B-8-1					X	X	X		X	S		1	
8		1245	B-8-5.5					X	X	X		X	S		1	
9		1320	B-8-10					X	X	X		X	S		1	
10		1350	B-7-10								X	X	S		1	→ B-7-[illegible]
11		1420	B-7-5.5					X	X	X		X	S		1	
12	↓	1450	B-7-10								X	X	S		1	→ B-7-10 [initials]

Turnaround time: 48 hrs

Results to: Elizabeth K. Wells

Total No. of containers: 12

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment
James M. Abide	10/21/92	Jim Mitchell	10/21/92			Lab Pickup
Signature: [signature]		Signature: JIM MITCHELL		Signature:		Laboratory comments and Log No.:
Printed name:		Printed name: CLAYTON		Printed name:		Rec'd 1x 2x4 BC for ea. Sample
Company: GEOMATRIX		Company:		Company:		Ok

Received by:	Time:	Received by:	Time:	Received by:	Time:
Jim Mitchell	1610	[signature]	5:00 pm		
Signature: JIM MITCHELL		Signature: Tracy B. Bullock		Signature	
Printed name: CLAYTON		Printed name: Tracy B Bullock		Printed name:	
Company:		Company: CLAYTON		Company:	

Geomatrix Consultants
100 Pine St 10th Floor
San Francisco, CA 94111
(415) 434 9400

Chain-of-Custody Record

№ 3210

Date: 10/21/92

Page 2 of 2

Project No.: 2026.10

Samplers (Signatures): [signature]

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		HOLD	Cooled	Soil (S) or water (W)	Acidified	Number of containers
10/21	1510	B-12-1					X	X	X			X	S		1
↓	1525	B-12-5.5					X	X	X			X	S		1
	1540	B-12-10					X	X	X			X	S		1

REMARKS — Additional comments: Bill Port of Oakland directly

Turnaround time: 48 hrs

Results to: Elizabeth K Wells

Total No. of containers: 3

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Signature: James K. Aitk [signature]	10/21/92	Signature: Jim Mitchell [signature]	10/21/92	Signature:	
Printed name: GEOMATRIX		Printed name: JIM MITCHELL		Printed name:	
Company:		Company: CLAYTON		Company:	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Signature: Jim Mitchell [signature]	1610	Signature: [signature]	5:00 pm	Signature:	
Printed name: JIM MITCHELL		Printed name: TRACY B. BULLOCK		Printed name:	
Company: CLAYTON		Company: CLAYTON		Company:	

Method of shipment: Lab pickup

Laboratory comments and Log No.: Rec'd OK 92480 for samples [initials]

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA 94111
(415) 434-9400

ATTACHMENT D

LITHOLOGIC LOGS

PROJECT: FORMER POWERINE SITE Port of Oakland		**Boring Log Explanation**			
BORING LOCATION:		ELEVATION AND DATUM:			
DRILLING CONTRACTOR:		DATE STARTED:		DATE FINISHED:	
DRILLING METHOD:		TOTAL DEPTH:		MEASURING POINT:	
DRILLING EQUIPMENT:		DEPTH TO WATER	FIRST	COMPL.	24 HRS.
SAMPLING METHOD:		LOGGED BY:			
HAMMER WEIGHT:	DROP:				

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					Sample collected for chemical analysis	
2						
3					Sample collected for lithologic logging	
4						
5					No sample recovered	
6						
7					ATD ▽	Depth to first water
8						
9						
10						
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-1

BORING LOCATION: ---

ELEVATION AND DATUM: ---

DRILLING CONTRACTOR: West Hazmat *Drilling Corporation*

DATE STARTED: 10/20/92 | DATE FINISHED: 10/20/92

DRILLING METHOD: Hollow stem auger

TOTAL DEPTH: 10.0' | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: CME 75 - 6" O.D. auger

DEPTH TO WATER | FIRST 5.0' | COMPL. 5'7" | 24 HRS. ---

SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon

LOGGED BY: J. M. Abitz

HAMMER WEIGHT: 140 lbs. | DROP: 30"

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
					Asphalt and base rock	
1	B-1 1				SAND (SP) Grayish brown (10YR 5/2), moist, 95% medium sand, 5% fines, trace gravel [FILL]	
2			33			
3				49.9	CLAYEY SAND with GRAVEL (SC) Very dark gray (2.5Y 3/0), moist, 50% fine to coarse sand, 30% fine to coarse gravel, 20% fines [FILL]	
4			34			
5	B-1 5		12	23.9	ATD ▽	
6						
7			11	7.7		
8			19	1.5		Stone in shoe
9			7	8.3	SAND (SC) Dark olive gray (5Y 3/2), wet, 95% medium sand, 5% fines, shell fragments [FILL]	
10	B-1 10				Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants | Project No. 2026.10 | Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland				**Log of Boring No. B-2**
BORING LOCATION: ---			ELEVATION AND DATUM: ---	
DRILLING CONTRACTOR: West Hazmat Drilling Corporation			DATE STARTED: 10/20/92	DATE FINISHED: 10/20/92
DRILLING METHOD: Hollow stem auger			TOTAL DEPTH: 10.0'	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: CME 75 - 6" O.D. auger			DEPTH TO WATER: FIRST 5.5'	COMPL. 5'2" / 24 HRS. ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon			LOGGED BY: J. M. Abitz	
HAMMER WEIGHT: 140 lbs.	DROP: 30"			

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					Asphalt and base rock	
2					SAND (SP) Grayish brown (10YR 5/2), moist, 95% medium sand, 5% fines [FILL]	
3	B-2 2.5		17	25.7		
4					Shell fragments	
5	B-2 5		19	62.4	ATD ▽	
6			12	0.9	Sand with silt, dark gray (2.5Y 4/0), wet, 70% medium sand, 30% fines	
7				0.9		
8			10			
9				0.9	CLAY (CL) Dark gray (2.5 4/0), wet, 95 - 100% fines, 0 - 5% fine sand, low plasticity, very soft [FILL]	
10	B-2 10		13		Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-3

BORING LOCATION: ---		ELEVATION AND DATUM: ---	
DRILLING CONTRACTOR: West Hazmat Drilling Corporation		DATE STARTED: 10/20/92	DATE FINISHED: 10/20/92
DRILLING METHOD: Hollow stem auger		TOTAL DEPTH: 10.0'	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: CME 75 - 6" O.D. auger		DEPTH TO WATER: FIRST 5.5'	COMPL. 5'2" / 24 HRS. ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon		LOGGED BY: J. M. Abitz	
HAMMER WEIGHT: 140 lbs.	DROP: 30"		

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
					Asphalt and base rock	
1			90	10.2	SAND (SP) Grayish brown (2.5Y 5/2), moist, 95% medium sand, 5% fines [FILL]	
2					Color change to olive	
3	B-3 1.5		20	35.7		
4					Clay (CH), olive brown (2.5Y 4/4), moist, 100% fines, high plasticity, firm	
				2.1	Shell frgaments	
5	B-3 5		12		ATD ▽	
6			6	0.3		
7			4	0.3	SILT with SAND (ML) Dark gray (2.5Y 4/0), wet, 85% fines, 15% medium sand, low plasticity, firm, shell fragments [FILL]	
8						
9			5		CLAY (CL) Dark gray (2.5 4/0), wet, 95 - 100% fines, 0 - 5% fine sand, low plasticity, very soft [FILL]	
10	B-3 10				Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland				**Log of Boring No. B-4**
BORING LOCATION: ---			ELEVATION AND DATUM: ---	
DRILLING CONTRACTOR: West Hazmat Drilling Corporation			DATE STARTED: 10/20/92	DATE FINISHED: 10/20/92
DRILLING METHOD: Hollow stem auger			TOTAL DEPTH: 11.5'	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: CME 75 - 6" O.D. auger		DEPTH TO WATER	FIRST 7.0'	COMPL. 4'10" / 24 HRS. ---
SAMPLING METHOD: 5-foot continuous core			LOGGED BY: J. M. Abitz	
HAMMER WEIGHT: 140 lbs.	DROP: 30"			

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
0					Asphalt and base rock	
1	B-4 1.5				SAND (SP) Brown (10YR 5/3), moist, 95% medium sand, 5% fines, trace coarse gravel [FILL]	
2				5.2	Color change to olive (5Y 4/3)	
3					Shell fragments	
4						
5					SILTY SAND (SM) Dark olive gray (5Y 3/1), wet, 80% fine to medium sand, 20% fines, shells [FILL]	
6						
7					ATD ▽	
8						
9						
10						
11	B-4 11.5			3.4		
12					Bottom of boring at 11.5 feet	
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-4A

BORING LOCATION: ---

ELEVATION AND DATUM: ---

DRILLING CONTRACTOR: West Hazmat Drilling Corporation

DATE STARTED: 10/20/92 | DATE FINISHED: 10/20/92

DRILLING METHOD: Hollow stem auger

TOTAL DEPTH: 7.5' | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: CME 75 - 6" O.D. auger

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	7.0'	4'10"	---

SAMPLING METHOD: 18" x 2 1/2" O.D. split spoon

LOGGED BY: J. M. Abitz

HAMMER WEIGHT: 140 lbs. | DROP: 30"

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID (ppm)	DESCRIPTION (NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.)	REMARKS
					Surface Elevation:	
					Asphalt and base rock	
1					SAND (SP) Olive (5Y 4/3), moist, 95% medium sand, 5% fines, shells [FILL]	
2						
3						
4						
5						
6						
7	B-4A 7		9	4.0	Color change to dark olive gray (5Y 3/2) ATD ▽	
					Bottom of boring at 7.5 feet	
8						
9						
10						
11						
12						
13						
14						

8-1-89/Modified

Geomatrix Consultants | Project No. 2026.10 | Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland				**Log of Boring No. B-5**
BORING LOCATION: ---			ELEVATION AND DATUM: ---	
DRILLING CONTRACTOR: West Hazmat Drilling Corporation			DATE STARTED: 10/20/92	DATE FINISHED: 10/20/92
DRILLING METHOD: Hollow stem auger			TOTAL DEPTH: 7.0'	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: CME 75 - 6" O.D. auger			DEPTH TO WATER FIRST 7.0'	COMPL. 5'10" / 24 HRS. ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon			LOGGED BY: J. M. Abitz	
HAMMER WEIGHT: 140 lbs.	DROP: 30"			

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					SAND with SILT and GRAVEL (SW - SM) Very dark brown (10YR 2/2), moist, 70% fine to coarse sand, 20% fine to coarse gravel, 10% fines [FILL]	
2			70			
3	B-5 3.5		50	918	SAND (SP) Olive (5Y 4/4), moist, 80% medium sand, 15% coarse gravel, 5% fines [FILL]	
4						
5			18	69.4	Color change to dark gray (5Y 4/1)	
6						
7	B-5 7		19	139.5	ATD ▽ Bottom of boring at 7.0 feet	
8						
9						
10						
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-6

BORING LOCATION: ---

ELEVATION AND DATUM: ---

DRILLING CONTRACTOR: West Hazmat Drilling Corporation

DATE STARTED: 10/20/92 | DATE FINISHED: 10/20/92

DRILLING METHOD: Hollow stem auger

TOTAL DEPTH: 11.5' | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: CME 75 - 6" O.D. auger

DEPTH TO WATER: FIRST 7.0' | COMPL. 5'8" | 24 HRS. ---

SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon

LOGGED BY: J. M. Abitz

HAMMER WEIGHT: 140 lbs. | DROP: 30"

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1					SAND with SILT and GRAVEL (SW - SM) Very dark brown (10YR 2/2), moist, 70% fine to coarse sand, 20% fine to coarse gravel, 10% fines [FILL]	
2			27			
3	B-6 3		74	0.9		
4					SAND (SP) Light olive brown (2.5Y 5/4), moist, 95% medium sand, 5% fines [FILL]	
5			27	10.8	Color change to olive (5Y 4/4)	
6	B-6 6.5		12	6.7	Color change to dark gray (5Y 4/1), shell fragments	
7					ATD ▽	
8			12	5.2		
9			12	1.5		
10			6		SILTY SAND (SM) Dark gray (5Y 4/1), 70% fine sand, 30% fines [FILL]	
11	B-6 11.5			2.6		
12					Bottom of boring at 11.5 feet	
13						
14						

B-1-89/Modified

Geomatrix Consultants | Project No. 2026.10 | Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland	**Log of Boring No. B-7**
BORING LOCATION: ---	ELEVATION AND DATUM: ---
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 10/21/92 / DATE FINISHED: 10/21/92
DRILLING METHOD: Hollow stem auger	TOTAL DEPTH: 10.0' / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Soil Master 50 6"-O.D. auger	DEPTH TO WATER: FIRST 5.5' / COMPL. 4'10" / 24 HRS. ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon	LOGGED BY: J. M. Abitz
HAMMER WEIGHT: 140 lbs. / DROP: 30"	

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1	B-7 1				CLAYEY SAND with GRAVEL (SC) Dark gray (5Y 4/1), moist, 60% fine to medium sand, 25% fine gravel, 15% fines [FILL]	
2			50/1"			
3			22	1.0		Rock in sampler shoe
4						
5	B-7 5.5		6	0.3	SAND (SP) Olive (5Y 4/4), moist to wet, 95% medium sand, 5% fines, shell fragments [FILL] ATD ▽	
6				0.3		
7			12	0.3	Color change to dark gray (5Y 4/1), no shell fragments	
8			3	0.3	SILTY SAND (SM) Dark gray (5Y 4/1), wet, 80% fine sand, 20% fines [FILL]	
9						
10	B-7 10		5		Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-8

BORING LOCATION: ---

ELEVATION AND DATUM: ---

DRILLING CONTRACTOR: West Hazmat Drilling Corporation

DATE STARTED: 10/21/92 | DATE FINISHED: 10/21/92

DRILLING METHOD: Hollow stem auger

TOTAL DEPTH: 10.0' | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: Soil Master 50 6"-O.D. auger

DEPTH TO WATER | FIRST: 5.5' | COMPL.: 4'9" | 24 HRS.: ---

SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon

LOGGED BY: J. M. Abitz

HAMMER WEIGHT: 140 lbs. | DROP: 30"

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1	B-7 1			193	CLAYEY SAND (SC) Dark gray (2.5Y 4/0), moist, 80% medium sand, 20% fines [FILL]	
2			14			
3				225	SAND (SP) Dark gray (2.5Y 4/0), moist, 95% medium sand, 5% fines [FILL]	
4			11	8.5	CLAYEY SAND (SC) Olive (5Y 4/4), moist, 80% medium sand, 20% fines, shell fragments [FILL]	
5			3			
6	B-8 5.5			7.8	SAND (SP) Dark gray (2.5Y 4/0), wet, 95 - 100% fine sand, 0 - 5% fines [FILL] ▽	
7			10	3.5		
8				1.5	Shell fragments	
9			2			
10	B-8 10		3		Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants | Project No. 2026.10 | Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland			**Log of Boring No. B-9**
BORING LOCATION: ---		ELEVATION AND DATUM: ---	
DRILLING CONTRACTOR: West Hazmat Drilling Corporation		DATE STARTED: 10/20/92	DATE FINISHED: 10/20/92
DRILLING METHOD: Hollow stem auger		TOTAL DEPTH: 11.5'	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: CME 75 - 6" O.D. auger		DEPTH TO WATER: FIRST 6.5'	COMPL. 4'10" / 24 HRS. ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon		LOGGED BY: J. M. Abitz	
HAMMER WEIGHT: 140 lbs.	DROP: 30"		

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1					SAND (SP) Brown (10YR 5/3), moist, 95% medium sand, 5% fines, shells [FILL]	
2						
3	B-9 2.5		44	0.3		
4						
5			24	2.1	SAND (SP) Dark olive gray (5Y 3/2), wet, 95% medium sand, 5% fines, shells [FILL]	
6	B-9 6.5		18	0.3	SILT with SAND (ML) Dark olive gray (5Y 3/2), wet, 85% fines, 15% fine sand, low plasticity, soft, shells [FILL] ATD ▽	
7						
8			9	0.3	Sand (SP), dark olive gray (5Y 3/2), wet, 95% medium sand, 5% fines, shells	
9						
10				0.3	Sand (SP) seams	
11	B-9 11.5		12			
12					Bottom of boring at 11.5 feet	
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-10

BORING LOCATION: ---

ELEVATION AND DATUM: ---

DRILLING CONTRACTOR: West Hazmat Drilling Corporation

DATE STARTED: 10/20/92 | DATE FINISHED: 10/20/92

DRILLING METHOD: Hollow stem auger

TOTAL DEPTH: 10.0' | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: Soil Master 50 6"-O.D. auger

DEPTH TO WATER: FIRST 5.5' | COMPL. 5'7" | 24 HRS. ---

SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon

LOGGED BY: J. M. Abitz

HAMMER WEIGHT: 140 lbs. | DROP: 30"

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID (ppm)	DESCRIPTION	REMARKS
					Surface Elevation:	
1	B-10 1		34	0.9	SAND with SILT and GRAVEL (SW - SM) Very dark gray (5Y 3/2), moist, 70% fine to coarse sand, 20% fine to coarse gravel, 10% fines [FILL]	
2						
3			50	11.4	SAND (SP) Light olive brown (2.5Y 5/4), moist, 95% medium sand, 5% fines [FILL] Color change to dark olive gray (5Y 3/2), shell fragments	
4						
5	B-0 5.5		6	10.2	ATD ▽	
6						
7			9	14.5	SILTY SAND (SM) Dark olive gray (5Y 3/2), wet, 80% fine to medium sand, 20% fines [FILL]	
8			7			
9			3		CLAY (CL) Dark olive gray (5Y 3/2), wet, 95 - 100% fines, 0 - 5% fine sand, low plasticity, very soft [FILL]	
10	B-10 10				Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants | Project No. 2026.10 | Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland	**Log of Boring No. B-11**
BORING LOCATION: ---	ELEVATION AND DATUM: ---
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 10/21/92 / DATE FINISHED: 10/21/92
DRILLING METHOD: Hollow stem auger	TOTAL DEPTH: 10.0' / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Soil Master 50 6"-O.D. auger	DEPTH TO WATER — FIRST: 6.0' / COMPL.: 5'5" / 24 HRS.: ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon	LOGGED BY: J. M. Abitz
HAMMER WEIGHT: 140 lbs. / DROP: 30"	

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					SILTY SAND with GRAVEL (SM) Light brownish gray (10YR 6/2), moist, 60% fine to coarse sand, 20% fine gravel, 20% fines [FILL]	
				0.3		
2			36			
	B-11 2.5					
3			20		SAND (SP) Light olive brown (2.5Y 5/4), moist, 95% medium sand, 5% fines [FILL]	
4				19.2	Color change to dark gray (2.5Y 4/0)	
					Clay (CL), dark gray (2.5Y 4/0), moist, 95% fines, 5% fine sand, low plasticity, soft	
5			14			
				5.4		
	B-11 5.5				ATD ▽	
6						
7			10			
				1.0		
8			6		SILTY SAND (SM) Dark gray (2.5Y 4/0), wet, 75% fine to medium sand, 25% fines [FILL]	
9						
			6	1.0		
10	B-11 10				Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

PROJECT: FORMER POWERINE SITE
Port of Oakland

Log of Boring No. B-12

BORING LOCATION: ---

ELEVATION AND DATUM: ---

DRILLING CONTRACTOR: West Hazmat Drilling Corporation

DATE STARTED: 10/21/92 | DATE FINISHED: 10/21/92

DRILLING METHOD: Hollow stem auger

TOTAL DEPTH: 10' | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: Soil Master 50 6"-O.D. auger

DEPTH TO WATER | FIRST: 5.5' | COMPL.: --- | 24 HRS.: ---

SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon

LOGGED BY: J. M. Abitz

HAMMER WEIGHT: 140 lbs. | DROP: 30"

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1	B-12 1		7		CLAYEY SAND with GRAVEL (SC) Dark olive gray (5Y 3/2), moist, 60% fine to coarse sand, 25% fine to coarse gravel, 15% fines [FILL]	
2						
3						
4						
5	B-6 5.5			713	ATD ▽	
6			18		SAND (SP) Dark gray (5Y 4/1), wet, 95% sand, 5% fines [FILL]	
7						
8						
9			2	420		
10	B-12 10				Bottom of boring at 10.0 feet	
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants | Project No. 2026.10 | Figure #

PROJECT: FORMER POWERINE SITE Port of Oakland				**Log of Boring No. B-13**
BORING LOCATION: ---			ELEVATION AND DATUM: ---	
DRILLING CONTRACTOR: West Hazmat Drilling Corporation			DATE STARTED: 10/21/92	DATE FINISHED: 10/21/92
DRILLING METHOD: Hollow stem auger			TOTAL DEPTH: 7.5'	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Soil Master 50 - 6"-O.D. auger			DEPTH TO WATER FIRST 7.0'	COMPL. dry / 24 HRS. ---
SAMPLING METHOD: 18" x 2 1/2" O. D. split spoon			LOGGED BY: J. M. Abitz	
HAMMER WEIGHT: 140 lbs.	DROP: 30"			

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1					CLAYEY SAND with GRAVEL (SC) Very dark gray (2.5Y 3/0), moist, 60% fine to coarse sand, 25% coarse gravel, 15% fines [FILL]	Very difficult drilling - cobbles, rocks, metal, and assorted junk fill
2	B-13 2.5			16.3		
3			14			
4						
5			11	2.5	SAND (SP) Dark gray (2.5Y 4/0), moist, 95% medium sand, 5% fines [FILL]	
6			15	0.3	CLAYEY SAND (SC) dark gray (2.5Y 4/0), moist, 80% medium sand, 20% fines [FILL] Decreasing fines	
7	B-13 7			1.0	ATD ▽	Very hard drilling - bent sample rod while pounding spoon
8			50/1/2"		Refusal at 7.5 feet	
9						
10						
11						
12						
13						
14						

B-1-89/Modified

Geomatrix Consultants	Project No. 2026.10	Figure #

GEOMATRIX

APPENDIX B

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

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 5, 1992 ChromaLab File No.: 1192018

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: Thirteen soil samples for Gasoline and BTEX analysis

Project Name:
Project Number: 2026.10
Date Sampled: November 3-4, 1992 Date Submitted: November 4, 1992
Date Analyzed: November 4, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-1	N.D.	23	14	N.D.	11
EX-2	2.3	1000	N.D.*	N.D.*	N.D.*
EX-3	2800	4000	49000	35000	240000
EX-4	5.0	390	12	18	13
EX-5	1600	480	1000	8600	55000
EX-6	48	N.D.**	61	280	1600
EX-7	3.2	110	270	68	410
EX-8	1.0	390	8.5	N.D.	7.1
EX-9	7600	24000	320000	140000	840000
EX-10	1.5	910	7.6	N.D.	16
EX-11	6.6	2900	47	82	360
EX-12	360	4900	8800	8500	44000
EX-13	N.D.	12	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	115%	95%	107%	92%	94%
DUP SPIKE RECOVERY	----	92%	104%	90%	92%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

* Detection Limit = 10 µg/Kg due to dilution needed.
**Detection Limit = 15 µg/Kg due to dilution needed.

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

cc

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 24, 1992

ChromaLab File No.: 1192018

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: Twenty-five soil samples for Diesel analysis

Project Name: N/A
Project Number: 2026.10
Date Sampled: Nov. 3-4, 1992
Date Submitted: Nov. 4, 1992
Date Analyzed: November 4-6, 1992

RESULTS:

Sample I.D.	Diesel (mg/Kg)
EX-1	N.D.
EX-2	N.D.
EX-3	6500
EX-4	N.D.
EX-5	5000
EX-6	99
EX-7	20
EX-8	63
EX-9	10000
EX-10	N.D.
EX-11	N.D.
EX-12	1514
EX-13	N.D.
EX-14	N.D.
EX-15	N.D.
EX-16	N.D.
EX-17	N.D.
EX-18	N.D.
EX-19	N.D.
EX-20	N.D.
EX-21	N.D.
EX-22	N.D.
EX-23	75
EX-24	120
EX-25	N.D.
BLANK	N.D.
SPIKE RECOVERY	92%
DUP SPIKE RECOVERY	92%
DETECTION LIMIT	10
METHOD OF ANALYSIS	3550/8015

ChromaLab, Inc.

Eric Costa
Analytical Chemist

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 6, 1992 ChromaLab File No.: 1192030

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: Four soil samples for Gasoline and BTEX analyses

Project Name: N/A
Project Number: 2026.10 I
Date Sampled: November 4, 1992 Date Submitted: November 5, 1992
Date Analyzed: November 5, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-14	N.D.	75	N.D.	N.D.	N.D.
EX-15	N.D.	N.D.	N.D.	N.D.	N.D.
EX-16	N.D.	N.D.	N.D.	N.D.	N.D.
EX-17	2.0	1500	8.1	28	46
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	96%	96%	96%	95%	95%
DUP SPIKE RECOVERY	---	96%	96%	95%	90%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

do

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 6, 1992

ChromaLab File No.: 1192031

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: Seven soil samples for Gasoline and BTEX analyses

Project Name: N/A
Project Number: 2026.10
Date Sampled: November 5, 1992
Date Submitted: November 5, 1992
Date Analyzed: November 5, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-18	N.D.	N.D.	N.D.	N.D.	N.D.
EX-19	N.D.	110	N.D.	N.D.	N.D.
EX-20	3.1	2000	N.D.	28	6.8
EX-21	1.6	860	10	50	20
EX-22	N.D.	N.D.	N.D.	N.D.	N.D.
EX-23	8.8	N.D.	N.D.	24	5.4
EX-24	N.D.	22	N.D.	N.D.	8.0
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	96%	96%	96%	95%	95%
DUP SPIKE RECOVERY	---	96%	96%	95%	90%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

do

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 9, 1992 ChromaLab File No.: 1192046

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: One soil sample for Gasoline and BTEX analysis

Project Name: N/A
Project Number: 2026.10I
Date Sampled: Nov. 6, 1992 Date Submitted: Nov. 6, 1992
Date Analyzed: November 6, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-25	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	93%	93%	101%	93%	92%
DUP SPIKE RECOVERY	----	88%	93%	83%	85%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

cc

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 11, 1992

ChromaLab File No.: 1192046

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: One soil sample for Gasoline, Diesel and BTEX analysis

Project Name: N/A
Project Number: 2026.10I
Date Sampled: Nov. 6, 1992
Date Extracted: Nov. 10, 1992

Date Submitted: Nov. 6, 1992
Date Analyzed: Nov. 10, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-26	96	250	4100	N.D.	4500	420
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC	113%	96%	88%	94%	93%	95%
DUP SPIKE REC	----	104%	101%	107%	101%	100%
DET LIMIT	1.0	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/ 8015	3550/ 8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 9, 1992 ChromaLab File No.: 1192050

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: Thirteen soil samples for Gasoline, Diesel and BTEX analyses

Project Name: N/A
Project Number: 2026.10
Date Sampled: Nov. 6, 1992 Date Submitted: Nov. 6, 1992
Date Extracted: Nov. 8, 1992 Date Analyzed: Nov. 6-9, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-27	N.D.	N.D.	18	N.D.	15	8.5
EX-28	N.D.	N.D.	110	N.D.	N.D.	N.D.
EX-29	3.5	64	200	8.3	36	N.D.
EX-30	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
EX-31	6.8	N.D.	2400	38	51	170
EX-32	21	32	33	16	220	190
EX-33	1400	54	7800	12000	43000	130000
EX-34	71000	810	270000	1000000	680000	9600000
EX-35	4700	150	11000	7600	100000	480000
EX-36	750	59	N.D.*	150	4000	8300
EX-37	96	15	N.D.**	N.D.	580	3000
EX-38	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
EX-39	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC	114%	101%	94%	94%	93%	91%
DUP SPIKE REC	----	105%	94%	95%	92%	93%
DET LIMIT	1.0	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/ 8015	3550/ 8015	8020	8020	8020	8020

* Detection Limit = 100 µg/Kg due to dilution needed.
**Detection Limit = 200 µg/Kg due to dilution needed.

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

cc

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CHROMALAB FILE # 1192018
ORDER # 8387

Chain-of-Custody Record

1741 | Date: 4 November 1992 | Page 1 of 2

Project No.: ~~1741~~ 2026.10

Samplers (Signatures): Elizabeth K. Wells

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/3/92	11:00	EX-1					X	X	X	X	S		1
	12:45	EX-2					X	X	X	X	S		1
	13:20	EX-3					X	X	X	X	S		1
	14:15	EX-4					X	X	X	X	S		1
	14:20	EX-5					X	X	X	X	S		1
	14:25	EX-6					X	X	X	X	S		1
	15:15	EX-7					X	X	X	X	S		1
	15:20	EX-8					X	X	X	X	S		1
	16:05	EX-9					X	X	X	X	S		1
11/3/92	16:10	EX-10					X	X	X	X	S		1
11/4/92	9:00	EX-11					X	X	X	X	S		1
11/4/92	9:10	EX-12					X	X	X	X	S		1

ANALYSES

REMARKS

Additional comments: Hold samples after analyses.

Turnaround time:

Results to: Elizabeth Wells

Total No. of containers: 12

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Elizabeth Wells	11/4/92	Eric Costa	11/4/92			On site lab
Signature: Elizabeth Wells		Signature: Eric Costa		Signature:		Laboratory comments and Log No.:
Printed name: Geomatrix		Printed name:		Printed name:		
Company:		Company: Chromalab		Company:		
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**	
Eric Costa	11:58					
Signature: Eric Costa		Signature:		Signature:		
Printed name:		Printed name:	13:47	Printed name:		
Company: Chromalab		Company:		Company:		

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

1192018

Chain-of-Custody Record

No 2872 | Date: 11/4/92 | Page 2 of 2

Project No.: 2026.10

Samplers (Signatures): Elizabeth Wells

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/4/92	9:45	EX-13					X	X	X	X	S		1

ANALYSES

REMARKS

Additional comments

See p. 1

Turnaround time:

Results to: Elizabeth Wells

Total No. of containers: 1

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Elizabeth Wells	11/4/92	Eric Costa	11/4/92			Mobile Lab
Signature: Elizabeth Wells		Signature: Eric Costa		Signature:		Laboratory comments and Log No.:
Printed name: Geomatrix		Printed name:		Printed name:		
Company:		Company: Chromalab		Company:		
Received by: Eric Costa	Time:	Received by:	Time:	Received by:	Time:	
Signature: Eric Costa		Signature: ERIC TOM	11/4/92	Signature:		
Printed name: Eric Costa		Printed name: CHROMALAB	13:45	Printed name:		
Company: Chromalab		Company:		Company:		

Geomatrix Consultants
100 Pine St. 10th Floor
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CHROMALAB FILE # 1192030
ORDER # 8402

Chain-of-Custody Record

No 2874

Date: 11/4/92

Page 1 of 1

Project No.: 2026.10 I

Samplers (Signatures):

Charlie Cooke

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/4	1445	EX-14								✓	S		1
11/4	1325	EX-15								✓	S		1
11/4	1550	EX-16								✓	S		1
11/4	1625	EX-17								✓	S		1

ANALYSES

REMARKS

Additional comments

Turnaround time: ASAP

Results to: Elizabeth Wells

Total No. of containers: 4

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Charlie Cooke		Eric Costa				Drop off
Signature: Charlie Cooke	11/4/92	Signature: Eric Costa	11/5/92	Signature: Sunny Duncan	11/5/92	Laboratory comments and Log No.:
Printed name:		Printed name: Eric Costa		Printed name: SUNNY DUNCAN		
Company: Geomatrix		Company: Chromalab		Company: CCX		
Received by: Eric Costa	Time:	Received by: SUNNY DUNCAN	Time:	Received by: Gary Cook	Time:	
Signature: Eric Costa	1630	Signature: Sunny Duncan	1:59 PM	Signature: Gary Cook	2:33	
Printed name: Eric Costa		Printed name: SUNNY DUNCAN		Printed name: Chromalab		
Company: Chromalab		Company: CCX		Company:		

Geomatrix Consultants
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San Francisco, CA. 94111
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CHROMALAB FILE # 1192031
ORDER # 8403

Chain-of-Custody Record

No 2873 | Date: 11/5/92 | Page 1 of

Project No.: 2026.10

Samplers (Signatures): Elizabeth Wells

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/5/92	1020	EX-18					X	X	X	X	S		1
11/5/92	1030	EX-19					X	X	X	X	S		1
11/5/92	1110	EX-20					X	X	X	X	S		1
11/5	1245	EX-21					X	X	X	X	S		1
11/5	1250	EX-22					X	X	X	X	S		1
11/5	1255	EX-23					X	X	X	X	S		1
11/5	1350	EX-24					X	X	X	X	S		1

ANALYSES

REMARKS

Additional comments

Turnaround time: ASAP

Results to: Elizabeth Wells

Total No. of containers: 7

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Signature: Charlie Crocker	11/5/92	Signature: Eric Costa	11/5/92	Signature: Sunny Duncan	11/5/92
Printed name: Charlie Crocker		Printed name: Eric Costa		Printed name: Sunny Duncan	
Company: Geomatrix		Company: ChromaLab		Company: CCX	
Received by: Eric Costa	Time: 1355 PM	Received by: Sunny Duncan	Time: 1:59 PM	Received by: Gary Cook	Time: 2:33
Signature: Eric Costa		Signature: Sunny Duncan		Signature: Gary Cook	
Printed name: Eric Costa		Printed name: Sunny Duncan		Printed name: ChromaLab	
Company: ChromaLab		Company: CCX		Company:	

Method of shipment: Mobile Lab

Laboratory comments and Log No.:

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

CHROMALAB FILE # 1192046
ORDER #

8425

Chain-of-Custody Record

№ 2875

Date: 11/6/92

Page 1 of

Project No.: 2026.10 I

Samplers (Signatures):

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/6	0840	EX-25					X	X	X	✓	S		1
11/6	0930	EX-26					X	X	X	✓	S		1

ANALYSES

REMARKS

Additional comments

EX-26 to be sent back to lab for all analyses

Turnaround time: ASAP

Results to: Elizabeth Wells

Total No. of containers: 2

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Charlie Crocker	11/6/92				
Signature:		Signature:		Signature:	
Printed name:		Printed name:		Printed name:	
Company: Geomatrix		Company:		Company:	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Eric Costa	10:00				
Signature:		Signature:		Signature:	
Printed name: Eric Costa		Printed name:		Printed name:	
Company: Chroma Lab.		Company:		Company:	

Method of shipment: Drop Off

Laboratory comments and Log No.:

EX-25 needs TPH Gas/BTEX Diesel analysis completed in Mobile Laboratory E.C.

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

CHROMALAB FILE # 1192050
ORDER # 8430

Chain-of-Custody Record

No 2881

Date: 11/6/96

Page 1 of 2

Project No.: 2026-10

Samplers (Signatures):

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/6	1305	EX-27					X	X	X	L	S		1
	1310	EX-28					X	X	X	L	S		1
	1312	EX-29					X	X	X	✓	S		1
	1500	EX-30					X	X	X	✓	S		1
	1515	EX-31					X	X	X	✓	S		1
	1550	EX-32					X	X	X	✓	S		1
	1600	EX-33					X	X	X	✓	S		1
	1640	EX-34					X	X	X	✓	S		1
	1650	EX-35					X	X	X	✓	S		1
	1700	EX-36					X	X	X	✓	S		1
	1715	EX-37					X	X	X	✓	S		1
	1725	EX-38					X	X	X	✓	S		1

ANALYSES

REMARKS

Additional comments

Turnaround time: ASAP

Results to: Elizabeth Wells

Total No. of containers: 12 ← see next page

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Charlie Crocker	11/6/96					Lab Pick up
Signature:		Signature:		Signature:		Laboratory comments and Log No.:
Printed name:		Printed name:		Printed name:		
Company: Geomatrix		Company:		Company:		
Received by:	Time:	Received by:	Time:	Received by:	Time:	
Signature:	1800	Signature:		Signature:		
Printed name: SEAN HANSEY		Printed name:		Printed name:		
Company: CL		Company:		Company:		

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

Chain-of-Custody Record

№ 2882

Date: 11/6/92

Page 2 of 2

Project No.: 2020-10

Samplers (Signatures): Charlie Crocker

Date	Time	Sample Number
11/6	1730	EX-39

ANALYSES

EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH as BTEX	Cooled	Soil (S) or water (W)	Acidified	Number of containers
				X	X	X	✓	S		1

REMARKS

Additional comments

Turnaround time: ASAP

Results to: Elizabeth Wells

Total No. of containers: 13

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Charlie Crocker	11/6/92				
Signature:		Signature:		Signature:	
Printed name:		Printed name:		Printed name:	
Company: Geomatrix		Company:		Company:	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Signature:	1800	Signature:		Signature:	
Printed name: SEAN HALSEY		Printed name:		Printed name:	
Company: CL		Company:		Company:	

Method of shipment: Lab pick up

Laboratory comments and Log No.:

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

November 23, 1992 ChromaLab File No.: 1192196

GEOMATRIX CONSULTANTS

Attn: Elizabeth Wells

RE: Eight soil samples for Gasoline, Diesel and BTEX analyses

Project Number: 2.26.10
Date Sampled: N/A Date Submitted: Nov. 20, 1992
Date Extracted: Nov. 20, 1992 Date Analyzed: Nov. 20, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
EX-40	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
EX-41	N.D.	N.D.*	N.D.	N.D.	6.7	22
EX-42	N.D.	N.D.	16	N.D.	N.D.	N.D.
EX-43	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
EX-44	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
EX-45	N.D.	N.D.	22	N.D.	N.D.	N.D.
EX-46	5.1	N.D.	820	N.D.	58	52
EX-47	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC	89%	102%	93%	92%	93%	93%
DUP SPIKE REC	----	113%	93%	92%	94%	93%
DET LIMIT	1.0	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/ 8015	3550/ 8015	8020	8020	8020	8020

*Unknown hydrocarbon found in kerosene range. Conc. = 3.0 ppm.

ChromaLab Inc.,

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

cc

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB FILE # 1192196
ORDER # 8610

Chain-of-Custody Record

№ 3225 | Date: 11/20/92 | Page 1 of 1

Project No.: 2.22.10

Samplers (Signatures): Elizabeth Wells

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
	1315	EX-40					X	X	X	X	S		1
	1345	EX-41					X	X	X	X	S		1
	1348	EX-42					X	X	X	X	S		1
	1350	EX-43					X	X	X	X	S		1
	1352	EX-44					X	X	X	X	S		1
	1355	EX-45					X	X	X	X	S		1
	1~~400~~	EX-46					X	X	X	X	S		1
	1410	EX-47					X	X	X	X	S		1

REMARKS — Additional comments:

~~Bill Pork & Oakland~~ ~~Duality~~ EKW

~~Results by Monday morning @ 8:00 am.~~ EKW

Results Saturday faxed to Geomatrix

Turnaround time: 24 hr

Results to: Elizabeth K. Wells

Total No. of containers: 8

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
James M. Ap... (signature)	11/20/92					Lab Pickup
Signature:		Signature:		Signature:		Laboratory comments and Log No.:
Printed name:		Printed name:		Printed name:		
Company: Geomatrix		Company:		Company:		

Received by:	Time:	Received by:	Time:	Received by:	Time:
B. Morrow (signature)	1420				
Signature: Brett Morrow		Signature:		Signature:	
Printed name:		Printed name:		Printed name:	
Company: Chromalab		Company:		Company:	

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA 94111
(415) 434-9400

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

November 17, 1992

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

Client Ref. 2026.10
Clayton Project No. 92111.20

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on November 10, 1992. 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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 13A-13D
Lab Number: 9211120-01E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.5
Bromomethane	74-83-9	ND	0.5
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,1-Dichloroethane	75-35-3	ND	0.5
Trans-1,2-Dichloroethene	156-60-5	ND	0.5
Cis-1,2-Dichloroethene	156-59-2	ND	0.5
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
Carbon tetrachloride	56-23-5	ND	0.5
Bromodichloromethane	75-27-4	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
Cis-1,3-Dichloropropene	10061-01-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Benzene	71-43-2	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 13A-13D	Date Sampled:	11/09/92
Lab Number:	9211120-01E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trans-1,3-Dichloropropene	10061-02-6	ND	0.5
2-Chloroethylvinylether	110-75-8	ND	0.5
Bromoform	75-25-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
Toluene	108-88-3	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Ethylbenzene	100-41-4	2.4	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Freon 113	76-13-1	ND	0.5
p,m-Xylenes	--	2.6	0.5
o-Xylene	95-47-6	ND	0.5
Acetone	67-64-1	ND	2
2-Butanone	78-93-3	ND	2
4-Methyl-2-pentanone	108-10-1	ND	2
2-Hexanone	591-78-6	ND	2
Vinyl acetate	108-05-4	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 13A-13D
Lab Number: 9211120-01E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.5
Styrene	100-42-5	ND	0.5
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	99	70 - 121
Toluene-d8	2037-26-5	96	81 - 117
Bromofluorobenzene	460-00-4	120	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 14A-14D	Date Sampled:	11/09/92
Lab Number:	9211120-02E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 14A-14D
Lab Number: 9211120-02E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/13/92
Date Analyzed: 11/13/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	0.12	0.03
o-Xylene	95-47-6	0.46	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 14A-14D	Date Sampled:	11/09/92
Lab Number:	9211120-02E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	89	70 - 121
Toluene-d8	2037-26-5	90	81 - 117
Bromofluorobenzene	460-00-4	106	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 15A-15D
Lab Number: 9211120-03E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/14/92
Date Analyzed: 11/14/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 15A-15D	Date Sampled:	11/09/92
Lab Number:	9211120-03E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/14/92
Preparation Method:	EPA 5030	Date Analyzed:	11/14/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	ND	0.03
o-Xylene	95-47-6	0.20	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 15A-15D	Date Sampled:	11/09/92
Lab Number:	9211120-03E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/14/92
Preparation Method:	EPA 5030	Date Analyzed:	11/14/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	94	70 - 121
Toluene-d8	2037-26-5	95	81 - 117
Bromofluorobenzene	460-00-4	110	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 16A-16D	Date Sampled:	11/09/92
Lab Number:	9211120-04E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.5
Bromomethane	74-83-9	ND	0.5
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,1-Dichloroethane	75-35-3	ND	0.5
Trans-1,2-Dichloroethene	156-60-5	ND	0.5
Cis-1,2-Dichloroethene	156-59-2	ND	0.5
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
Carbon tetrachloride	56-23-5	ND	0.5
Bromodichloromethane	75-27-4	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
Cis-1,3-Dichloropropene	10061-01-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Benzene	71-43-2	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 16A-16D	Date Sampled:	11/09/92
Lab Number:	9211120-04E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trans-1,3-Dichloropropene	10061-02-6	ND	0.5
2-Chloroethylvinylether	110-75-8	ND	0.5
Bromoform	75-25-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
Toluene	108-88-3	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Ethylbenzene	100-41-4	1.2	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Freon 113	76-13-1	ND	0.5
p,m-Xylenes	--	14	0.5
o-Xylene	95-47-6	5.5	0.5
Acetone	67-64-1	ND	2
2-Butanone	78-93-3	ND	2
4-Methyl-2-pentanone	108-10-1	ND	2
2-Hexanone	591-78-6	ND	2
Vinyl acetate	108-05-4	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 16A-16D	Date Sampled:	11/09/92
Lab Number:	9211120-04E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.5
Styrene	100-42-5	ND	0.5
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	98	70 - 121
Toluene-d8	2037-26-5	95	81 - 117
Bromofluorobenzene	460-00-4	104	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 17A-17D
Lab Number: 9211120-05E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.5
Bromomethane	74-83-9	ND	0.5
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,1-Dichloroethane	75-35-3	ND	0.5
Trans-1,2-Dichloroethene	156-60-5	ND	0.5
Cis-1,2-Dichloroethene	156-59-2	ND	0.5
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
Carbon tetrachloride	56-23-5	ND	0.5
Bromodichloromethane	75-27-4	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
Cis-1,3-Dichloropropene	10061-01-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Benzene	71-43-2	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 17A-17D	Date Sampled:	11/09/92
Lab Number:	9211120-05E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trans-1,3-Dichloropropene	10061-02-6	ND	0.5
2-Chloroethylvinylether	110-75-8	ND	0.5
Bromoform	75-25-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
Toluene	108-88-3	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Freon 113	76-13-1	ND	0.5
p,m-Xylenes	--	14	0.5
o-Xylene	95-47-6	6.3	0.5
Acetone	67-64-1	ND	2
2-Butanone	78-93-3	ND	2
4-Methyl-2-pentanone	108-10-1	ND	2
2-Hexanone	591-78-6	ND	2
Vinyl acetate	108-05-4	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 17A-17D	Date Sampled:	11/09/92
Lab Number:	9211120-05E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.5
Styrene	100-42-5	ND	0.5
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	96	70 - 121
Toluene-d8	2037-26-5	95	81 - 117
Bromofluorobenzene	460-00-4	106	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 18A-18D
Lab Number: 9211120-06E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.5
Bromomethane	74-83-9	ND	0.5
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,1-Dichloroethane	75-35-3	ND	0.5
Trans-1,2-Dichloroethene	156-60-5	ND	0.5
Cis-1,2-Dichloroethene	156-59-2	ND	0.5
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
Carbon tetrachloride	56-23-5	ND	0.5
Bromodichloromethane	75-27-4	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
Cis-1,3-Dichloropropene	10061-01-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Benzene	71-43-2	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 18A-18D	Date Sampled:	11/09/92
Lab Number:	9211120-06E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trans-1,3-Dichloropropene	10061-02-6	ND	0.5
2-Chloroethylvinylether	110-75-8	ND	0.5
Bromoform	75-25-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
Toluene	108-88-3	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Freon 113	76-13-1	16	0.5
p,m-Xylenes	--	6.1	0.5
o-Xylene	95-47-6	ND	0.5
Acetone	67-64-1	ND	2
2-Butanone	78-93-3	ND	2
4-Methyl-2-pentanone	108-10-1	ND	2
2-Hexanone	591-78-6	ND	2
Vinyl acetate	108-05-4	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 18A-18D	Date Sampled:	11/09/92
Lab Number:	9211120-06E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/11/92
Preparation Method:	EPA 5030	Date Analyzed:	11/12/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.5
Styrene	100-42-5	ND	0.5
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	97	70 - 121
Toluene-d8	2037-26-5	94	81 - 117
Bromofluorobenzene	460-00-4	104	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	0.21	0.03
o-Xylene	95-47-6	0.63	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	98	70 - 121
Toluene-d8	2037-26-5	100	81 - 117
Bromofluorobenzene	460-00-4	108	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 20A-20D	Date Sampled:	11/09/92
Lab Number:	9211120-08E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 20A-20D	Date Sampled:	11/09/92
Lab Number:	9211120-08E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	ND	0.03
o-Xylene	95-47-6	0.05	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 20A-20D	Date Sampled:	11/09/92
Lab Number:	9211120-08E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	103	70 - 121
Toluene-d8	2037-26-5	107	81 - 117
Bromofluorobenzene	460-00-4	116	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 21A-21D	Date Sampled:	11/09/92
Lab Number:	9211120-09E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 21A-21D	Date Sampled:	11/09/92
Lab Number:	9211120-09E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/13/92
Preparation Method:	EPA 5030	Date Analyzed:	11/13/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	0.05	0.03
o-Xylene	95-47-6	0.22	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 21A-21D
Lab Number: 9211120-09E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Prepared: 11/13/92
Date Analyzed: 11/13/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	94	70 - 121
Toluene-d8	2037-26-5	89	81 - 117
Bromofluorobenzene	460-00-4	112	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211120-10A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/14/92
Preparation Method:	EPA 5030	Date Analyzed:	11/14/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.005
Bromomethane	74-83-9	ND	0.005
Vinyl chloride	75-01-4	ND	0.005
Chloroethane	75-00-3	ND	0.005
Methylene chloride	75-09-2	ND	0.005
Trichlorofluoromethane	75-69-4	ND	0.005
1,1-Dichloroethene	75-35-4	ND	0.005
1,1-Dichloroethane	75-35-3	ND	0.005
Trans-1,2-Dichloroethene	156-60-5	ND	0.005
Cis-1,2-Dichloroethene	156-59-2	ND	0.005
Chloroform	67-66-3	ND	0.005
1,2-Dichloroethane	107-06-2	ND	0.005
1,1,1-Trichloroethane	71-55-6	ND	0.005
Carbon tetrachloride	56-23-5	ND	0.005
Bromodichloromethane	75-27-4	ND	0.005
1,2-Dichloropropane	78-87-5	ND	0.005
Cis-1,3-Dichloropropene	10061-01-5	ND	0.005
Trichloroethene	79-01-6	ND	0.005
Benzene	71-43-2	ND	0.005
Dibromochloromethane	124-48-1	ND	0.005

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: METHOD BLANK
Lab Number: 9211120-10A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: --
Date Received: --
Date Prepared: 11/14/92
Date Analyzed: 11/14/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trans-1,3-Dichloropropene	10061-02-6	ND	0.005
2-Chloroethylvinylether	110-75-8	ND	0.005
Bromoform	75-25-2	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
1,3-Dichlorobenzene	541-73-7	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Freon 113	76-13-1	ND	0.005
p,m-Xylenes	--	ND	0.005
o-Xylene	95-47-6	ND	0.005
Acetone	67-64-1	ND	0.02
2-Butanone	78-93-3	ND	0.02
4-Methyl-2-pentanone	108-10-1	ND	0.02
2-Hexanone	591-78-6	ND	0.02
Vinyl acetate	108-05-4	ND	0.01

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: METHOD BLANK
Lab Number: 9211120-10A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: --
Date Received: --
Date Prepared: 11/14/92
Date Analyzed: 11/14/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.005
Styrene	100-42-5	ND	0.005
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	99	70 - 121
Toluene-d8	2037-26-5	104	81 - 117
Bromofluorobenzene	460-00-4	112	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 13A-13D	Date Sampled:	11/09/92
Lab Number:	9211120-01E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 13A-13D
Lab Number: 9211120-01E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	1.5	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	2.2	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 13A-13D	Date Sampled:	11/09/92
Lab Number:	9211120-01E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.2	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	0.2	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 13A-13D	Date Sampled:	11/09/92
Lab Number:	9211120-01E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	55	25	121
Phenol-d6	13127-88-3	71	24	113
Nitrobenzene-d5	4165-60-0	65	23	120
2-Fluorobiphenyl	321-60-8	77	30	115
2,4,6-Tribromophenol	118-79-6	117	19	122
Terphenyl-d14	98904-43-9	56	18	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 14A-14D	Date Sampled:	11/09/92
Lab Number:	9211120-02E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 14A-14D
Lab Number: 9211120-02E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.4	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	1.4	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 14A-14D	Date Sampled:	11/09/92
Lab Number:	9211120-02E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.2	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 14A-14D	Date Sampled:	11/09/92
Lab Number:	9211120-02E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	47	25 -	121
Phenol-d6	13127-88-3	59	24 -	113
Nitrobenzene-d5	4165-60-0	55	23 -	120
2-Fluorobiphenyl	321-60-8	59	30 -	115
2,4,6-Tribromophenol	118-79-6	117	19 -	122
Terphenyl-d14	98904-43-9	61	18 -	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 15A-15D	Date Sampled:	11/09/92
Lab Number:	9211120-03E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 15A-15D	Date Sampled:	11/09/92
Lab Number:	9211120-03E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.3	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	0.9	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 15A-15D	Date Sampled:	11/09/92
Lab Number:	9211120-03E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.2	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 15A-15D
Lab Number: 9211120-03E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	55	25 -	121
Phenol-d6	13127-88-3	68	24 -	113
Nitrobenzene-d5	4165-60-0	68	23 -	120
2-Fluorobiphenyl	321-60-8	68	30 -	115
2,4,6-Tribromophenol	118-79-6	118	19 -	122
Terphenyl-d14	98904-43-9	57	18 -	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 16A-16D
Lab Number: 9211120-04E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/13/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	10
Pentachlorophenol	87-86-5	ND	10
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 16A-16D	Date Sampled:	11/09/92
Lab Number:	9211120-04E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/13/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	10	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	12	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 16A-16D	Date Sampled:	11/09/92
Lab Number:	9211120-04E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/13/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 16A-16D	Date Sampled:	11/09/92
Lab Number:	9211120-04E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/13/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	74	25	121
Phenol-d6	13127-88-3	94	24	113
Nitrobenzene-d5	4165-60-0	84	23	120
2-Fluorobiphenyl	321-60-8	114	30	115
2,4,6-Tribromophenol	118-79-6	119	19	122
Terphenyl-d14	98904-43-9	101	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 17A-17D	Date Sampled:	11/09/92
Lab Number:	9211120-05B	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 17A-17D	Date Sampled:	11/09/92
Lab Number:	9211120-05E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	7.3	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	8.7	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 17A-17D	Date Sampled:	11/09/92
Lab Number:	9211120-05E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.2	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	0.4	0.2
Anthracene	120-12-7	ND	0.2
Di-n-butylphthalate	84-74-2	ND	0.2
Fluoranthene	206-44-2	0.2	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 17A-17D	Date Sampled:	11/09/92
Lab Number:	9211120-05E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	59	25 -	121
Phenol-d6	13127-88-3	71	24 -	113
Nitrobenzene-d5	4165-60-0	45	23 -	120
2-Fluorobiphenyl	321-60-8	69	30 -	115
2,4,6-Tribromophenol	118-79-6	122	19 -	122
Terphenyl-d14	98904-43-9	72	18 -	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 18A-18D
Lab Number: 9211120-06E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 18A-18D
Lab Number: 9211120-06E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	8.9	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	9.0	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 18A-18D
Lab Number: 9211120-06E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.3	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 18A-18D	Date Sampled:	11/09/92
Lab Number:	9211120-06E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	59	25	121
Phenol-d6	13127-88-3	73	24	113
Nitrobenzene-d5	4165-60-0	62	23	120
2-Fluorobiphenyl	321-60-8	66	30	115
2,4,6-Tribromophenol	118-79-6	117	19	122
Terphenyl-d14	98904-43-9	63	18	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	10
Pentachlorophenol	87-86-5	ND	10
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	ND	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	ND	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 19A-19D	Date Sampled:	11/09/92
Lab Number:	9211120-07E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	77	25	121
Phenol-d6	13127-88-3	80	24	113
Nitrobenzene-d5	4165-60-0	76	23	120
2-Fluorobiphenyl	321-60-8	103	30	115
2,4,6-Tribromophenol	118-79-6	110	19	122
Terphenyl-d14	98904-43-9	91	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 20A-20D
Lab Number: 9211120-08E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	10
Pentachlorophenol	87-86-5	ND	10
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 20A-20D
Lab Number: 9211120-08E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	ND	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	ND	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 20A-20D	Date Sampled:	11/09/92
Lab Number:	9211120-08E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 20A-20D	Date Sampled:	11/09/92
Lab Number:	9211120-08E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	82	25 -	121
Phenol-d6	13127-88-3	77	24 -	113
Nitrobenzene-d5	4165-60-0	81	23 -	120
2-Fluorobiphenyl	321-60-8	96	30 -	115
2,4,6-Tribromophenol	118-79-6	89	19 -	122
Terphenyl-d14	98904-43-9	90	18 -	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 21A-21D	Date Sampled:	11/09/92
Lab Number:	9211120-09E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	10
Pentachlorophenol	87-86-5	ND	10
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 21A-21D	Date Sampled:	11/09/92
Lab Number:	9211120-09E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	ND	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	ND	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 21A-21D
Lab Number: 9211120-09E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/09/92
Date Received: 11/10/92
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	COMP. SP 21A-21D	Date Sampled:	11/09/92
Lab Number:	9211120-09E	Date Received:	11/10/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	83	25	121
Phenol-d6	13127-88-3	78	24	113
Nitrobenzene-d5	4165-60-0	80	23	120
2-Fluorobiphenyl	321-60-8	104	30	115
2,4,6-Tribromophenol	118-79-6	95	19	122
Terphenyl-d14	98904-43-9	92	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: METHOD BLANK
Lab Number: 9211120-10A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211120-10A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: METHOD BLANK
Lab Number: 9211120-10A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/11/92
Date Analyzed: 11/12/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211120-10A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/11/92
Extraction Method:	EPA 3550	Date Analyzed:	11/12/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	52	25 -	121
Phenol-d6	13127-88-3	60	24 -	113
Nitrobenzene-d5	4165-60-0	54	23 -	120
2-Fluorobiphenyl	321-60-8	54	30 -	115
2,4,6-Tribromophenol	118-79-6	53	19 -	122
Terphenyl-d14	98904-43-9	65	18 -	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 13A-13D
Lab Number: 9211120-01
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	7	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	33	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	19	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	440	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	190 a	0.3	mg/kg	11/11/92	11/13/92	EPA 5030	EPA 8015
Lead	45	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	2	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	38	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 14A-14D
Lab Number: 9211120-02
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	8	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	34	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	180	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	64 a	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	48	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	4	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	39	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 15A-15D
Lab Number: 9211120-03
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	2	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	6	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	30	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	24	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	15	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	200	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	40 a	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	42	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	23	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	21	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	33	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 16A-16D
Lab Number: 9211120-04
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	37	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	23	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	18	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	600	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	330 a	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	43	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	21	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	3	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	36	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 17A-17D
Lab Number: 9211120-05
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	2	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	37	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	24	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	16	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	250	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	220 a	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	34	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	22	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	3	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	36	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 18A-18D
Lab Number: 9211120-06
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	4	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	30	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	23	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	10	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	150	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	230a	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	20	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	21	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	3	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	27	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 19A-19D
Lab Number: 9211120-07
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	2	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	11	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	27	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	19	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	17	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	ND	10b	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	42a	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	16	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	18	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	2	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	16	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	24	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline
b Detection limit increased due to presence of heavier hydrocarbons

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 20A-20D
Lab Number: 9211120-08
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	9	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	36	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	24	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	16	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	ND	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	23 a	0.3	mg/kg	11/11/92	11/13/92	EPA 5030	EPA 8015
Lead	19	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	23	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	4	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	21	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	30	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: COMP. SP 21A-21D
Lab Number: 9211120-09
Sample Matrix/Media: SOIL

Date Sampled: 11/09/92
Date Received: 11/10/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	7	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	55	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	0.2	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	23	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	7	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	34	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	ND	10b	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	23 a	0.3	mg/kg	11/11/92	11/13/92	EPA 5030	EPA 8015
Lead	50	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	25	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	6	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	25	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	54	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

a Sample appears to be weathered gasoline
b Detection limit increased due to presence of heavier hydrocarbons

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92111.20

Sample Identification: METHOD BLANK
Lab Number: 9211120-10
Sample Matrix/Media: SOIL

Date Sampled: --
Date Received: --

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Arsenic	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Barium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Beryllium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Chromium	<	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Cobalt	<0.1	0.1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Copper	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Diesel	ND	1	mg/kg	11/12/92	11/13/92	EPA 3550	EPA 8015
Gasoline	ND	0.3	mg/kg	11/11/92	11/12/92	EPA 5030	EPA 8015
Lead	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/12/92	11/12/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Nickel	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Vanadium	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010
Zinc	<1	1	mg/kg	11/13/92	11/16/92	EPA 3050	EPA 6010

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

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

November 9, 1992

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

Client Ref. 2026.10
Clayton Project No. 92110.41

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on November 4, 1992. Results were sent by facsimile on November 5 & 6, 1992. 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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/04/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.1
Bromomethane	74-83-9	ND	0.1
Vinyl chloride	75-01-4	ND	0.1
Chloroethane	75-00-3	ND	0.1
Methylene chloride	75-09-2	ND	0.1
Trichlorofluoromethane	75-69-4	ND	0.1
1,1-Dichloroethene	75-35-4	ND	0.1
1,1-Dichloroethane	75-35-3	ND	0.1
Trans-1,2-Dichloroethene	156-60-5	ND	0.1
Cis-1,2-Dichloroethene	156-59-2	ND	0.1
Chloroform	67-66-3	ND	0.1
1,2-Dichloroethane	107-06-2	ND	0.1
1,1,1-Trichloroethane	71-55-6	ND	0.1
Carbon tetrachloride	56-23-5	ND	0.1
Bromodichloromethane	75-27-4	ND	0.1
1,2-Dichloropropane	78-87-5	ND	0.1
Cis-1,3-Dichloropropene	10061-01-5	ND	0.1
Trichloroethene	79-01-6	ND	0.1
Benzene	71-43-2	ND	0.1
Dibromochloromethane	124-48-1	ND	0.1

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/04/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.1
Trans-1,3-Dichloropropene	10061-02-6	ND	0.1
2-Chloroethylvinylether	110-75-8	ND	0.1
Bromoform	75-25-2	ND	0.1
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.1
Tetrachloroethene	127-18-4	ND	0.1
Toluene	108-88-3	1.7	0.1
Chlorobenzene	108-90-7	ND	0.1
Ethylbenzene	100-41-4	2.9	0.1
1,3-Dichlorobenzene	541-73-7	ND	0.1
1,2-Dichlorobenzene	95-50-1	ND	0.1
1,4-Dichlorobenzene	106-46-7	ND	0.1
Freon 113	76-13-1	ND	0.1
p,m-Xylenes	---	12	0.1
o-Xylene	95-47-6	8.0	0.1
Acetone	67-64-1	ND	0.5
2-Butanone	78-93-3	ND	0.5
4-Methyl-2-pentanone	108-10-1	ND	0.5
2-Hexanone	591-78-6	ND	0.5
Vinyl acetate	108-05-4	ND	0.3

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/04/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.1
Styrene	100-42-5	ND	0.1
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	110	70 - 121
Toluene-d8	2037-26-5	101	81 - 117
Bromofluorobenzene	460-00-4	106	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-2A to 2D	Date Sampled:	11/04/92
Lab Number:	9211041-02E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/05/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.1
Bromomethane	74-83-9	ND	0.1
Vinyl chloride	75-01-4	ND	0.1
Chloroethane	75-00-3	ND	0.1
Methylene chloride	75-09-2	ND	0.1
Trichlorofluoromethane	75-69-4	ND	0.1
1,1-Dichloroethene	75-35-4	ND	0.1
1,1-Dichloroethane	75-35-3	ND	0.1
Trans-1,2-Dichloroethene	156-60-5	ND	0.1
Cis-1,2-Dichloroethene	156-59-2	ND	0.1
Chloroform	67-66-3	ND	0.1
1,2-Dichloroethane	107-06-2	ND	0.1
1,1,1-Trichloroethane	71-55-6	ND	0.1
Carbon tetrachloride	56-23-5	ND	0.1
Bromodichloromethane	75-27-4	ND	0.1
1,2-Dichloropropane	78-87-5	ND	0.1
Cis-1,3-Dichloropropene	10061-01-5	ND	0.1
Trichloroethene	79-01-6	ND	0.1
Benzene	71-43-2	ND	0.1
Dibromochloromethane	124-48-1	ND	0.1

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-2A to 2D	Date Sampled:	11/04/92
Lab Number:	9211041-02E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/05/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.1
Trans-1,3-Dichloropropene	10061-02-6	ND	0.1
2-Chloroethylvinylether	110-75-8	ND	0.1
Bromoform	75-25-2	ND	0.1
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.1
Tetrachloroethene	127-18-4	ND	0.1
Toluene	108-88-3	11	0.1
Chlorobenzene	108-90-7	ND	0.1
Ethylbenzene	100-41-4	12	0.1
1,3-Dichlorobenzene	541-73-7	ND	0.1
1,2-Dichlorobenzene	95-50-1	ND	0.1
1,4-Dichlorobenzene	106-46-7	ND	0.1
Freon 113	76-13-1	ND	0.1
p,m-Xylenes	---	83	0.1
o-Xylene	95-47-6	41	0.1
Acetone	67-64-1	ND	0.5
2-Butanone	78-93-3	ND	0.5
4-Methyl-2-pentanone	108-10-1	ND	0.5
2-Hexanone	591-78-6	ND	0.5
Vinyl acetate	108-05-4	ND	0.3

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-2A to 2D	Date Sampled:	11/04/92
Lab Number:	9211041-02E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/05/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.1
Styrene	100-42-5	ND	0.1
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	112	70 - 121
Toluene-d8	2037-26-5	102	81 - 117
Bromofluorobenzene	460-00-4	112	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: SP-3A to 3D
Lab Number: 9211041-03E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/04/92
Date Received: 11/04/92
Date Prepared: 11/04/92
Date Analyzed: 11/05/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.1
Bromomethane	74-83-9	ND	0.1
Vinyl chloride	75-01-4	ND	0.1
Chloroethane	75-00-3	ND	0.1
Methylene chloride	75-09-2	ND	0.1
Trichlorofluoromethane	75-69-4	ND	0.1
1,1-Dichloroethene	75-35-4	ND	0.1
1,1-Dichloroethane	75-35-3	ND	0.1
Trans-1,2-Dichloroethene	156-60-5	ND	0.1
Cis-1,2-Dichloroethene	156-59-2	ND	0.1
Chloroform	67-66-3	ND	0.1
1,2-Dichloroethane	107-06-2	ND	0.1
1,1,1-Trichloroethane	71-55-6	ND	0.1
Carbon tetrachloride	56-23-5	ND	0.1
Bromodichloromethane	75-27-4	ND	0.1
1,2-Dichloropropane	78-87-5	ND	0.1
Cis-1,3-Dichloropropene	10061-01-5	ND	0.1
Trichloroethene	79-01-6	ND	0.1
Benzene	71-43-2	ND	0.1
Dibromochloromethane	124-48-1	ND	0.1

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-3A to 3D	Date Sampled:	11/04/92
Lab Number:	9211041-03E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/05/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.1
Trans-1,3-Dichloropropene	10061-02-6	ND	0.1
2-Chloroethylvinylether	110-75-8	ND	0.1
Bromoform	75-25-2	ND	0.1
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.1
Tetrachloroethene	127-18-4	ND	0.1
Toluene	108-88-3	3.1	0.1
Chlorobenzene	108-90-7	ND	0.1
Ethylbenzene	100-41-4	8.8	0.1
1,3-Dichlorobenzene	541-73-7	ND	0.1
1,2-Dichlorobenzene	95-50-1	ND	0.1
1,4-Dichlorobenzene	106-46-7	ND	0.1
Freon 113	76-13-1	ND	0.1
p,m-Xylenes	---	48	0.1
o-Xylene	95-47-6	17	0.1
Acetone	67-64-1	ND	0.5
2-Butanone	78-93-3	ND	0.5
4-Methyl-2-pentanone	108-10-1	ND	0.5
2-Hexanone	591-78-6	ND	0.5
Vinyl acetate	108-05-4	ND	0.3

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-3A to 3D	Date Sampled:	11/04/92
Lab Number:	9211041-03E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/05/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.1
Styrene	100-42-5	ND	0.1
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	114	70 - 121
Toluene-d8	2037-26-5	102	81 - 117
Bromofluorobenzene	460-00-4	104	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211041-04A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/04/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.1
Bromomethane	74-83-9	ND	0.1
Vinyl chloride	75-01-4	ND	0.1
Chloroethane	75-00-3	ND	0.1
Methylene chloride	75-09-2	ND	0.1
Trichlorofluoromethane	75-69-4	ND	0.1
1,1-Dichloroethene	75-35-4	ND	0.1
1,1-Dichloroethane	75-35-3	ND	0.1
Trans-1,2-Dichloroethene	156-60-5	ND	0.1
Cis-1,2-Dichloroethene	156-59-2	ND	0.1
Chloroform	67-66-3	ND	0.1
1,2-Dichloroethane	107-06-2	ND	0.1
1,1,1-Trichloroethane	71-55-6	ND	0.1
Carbon tetrachloride	56-23-5	ND	0.1
Bromodichloromethane	75-27-4	ND	0.1
1,2-Dichloropropane	78-87-5	ND	0.1
Cis-1,3-Dichloropropene	10061-01-5	ND	0.1
Trichloroethene	79-01-6	ND	0.1
Benzene	71-43-2	ND	0.1
Dibromochloromethane	124-48-1	ND	0.1

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: METHOD BLANK
Lab Number: 9211041-04A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: --
Date Received: --
Date Prepared: 11/04/92
Date Analyzed: 11/04/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.1
Trans-1,3-Dichloropropene	10061-02-6	ND	0.1
2-Chloroethylvinylether	110-75-8	ND	0.1
Bromoform	75-25-2	ND	0.1
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.1
Tetrachloroethene	127-18-4	ND	0.1
Toluene	108-88-3	ND	0.1
Chlorobenzene	108-90-7	ND	0.1
Ethylbenzene	100-41-4	ND	0.1
1,3-Dichlorobenzene	541-73-7	ND	0.1
1,2-Dichlorobenzene	95-50-1	ND	0.1
1,4-Dichlorobenzene	106-46-7	ND	0.1
Freon 113	76-13-1	ND	0.1
p,m-Xylenes	---	ND	0.1
o-Xylene	95-47-6	ND	0.1
Acetone	67-64-1	ND	0.5
2-Butanone	78-93-3	ND	0.5
4-Methyl-2-pentanone	108-10-1	ND	0.5
2-Hexanone	591-78-6	ND	0.5
Vinyl acetate	108-05-4	ND	0.3

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211041-04A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/04/92
Preparation Method:	EPA 5030	Date Analyzed:	11/04/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.1
Styrene	100-42-5	ND	0.1
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	106	70 - 121
Toluene-d8	2037-26-5	98	81 - 117
Bromofluorobenzene	460-00-4	86	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

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

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	1
Hexachloroethane	67-72-1	ND	1
Nitrobenzene	98-95-3	ND	1
Isophorone	78-59-1	ND	1
Benzoic acid	65-85-0	ND	4
Bis-(2-chloroethoxy)methane	111-91-1	ND	1
1,2,4-trichlorobenzene	120-82-1	ND	1
Naphthalene	91-20-3	8	1
Hexachlorobutadiene	87-68-3	ND	1
2-chloronaphthalene	91-58-7	ND	1
2-methyl naphthalene	91-57-6	14	1
4-chloroaniline	106-47-8	ND	5
2-nitroaniline	88-74-4	ND	5
3-nitroaniline	99-09-2	ND	5
4-nitroaniline	100-01-6	ND	5
Hexachlorocyclopentadiene	77-47-4	ND	10
Dimethyl phthalate	131-11-3	ND	1
Acenaphthylene	208-96-8	ND	1
Acenaphthene	83-32-9	ND	1
Dibenzofuran	132-64-9	ND	1

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	1
2,6-dinitrotoluene	606-20-2	ND	1
Diethyl phthalate	84-66-2	ND	1
4-chlorophenylphenylether	7005-72-3	ND	1
Fluorene	86-73-7	ND	1
N-nitrosodiphenylamine	86-30-6	ND	1
4-bromophenylphenylether	101-55-3	ND	1
Hexachlorobenzene	118-74-1	ND	1
Phenanthrene	85-01-8	1	1
Anthracene	120-12-7	ND	1
Di-n-butylphthalate	84-74-2	ND	1
Fluoranthene	206-44-2	ND	1
Benzidine	92-87-5	ND	30
Pyrene	129-00-0	ND	1
Benzylbutylphthalate	85-68-7	ND	1
3,3'-dichlorobenzidine	91-94-1	ND	30
Benzo(a)anthracene	56-55-3	ND	1
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	10
Chrysene	218-01-9	ND	1
Di-n-octylphthalate	117-84-0	ND	1

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-1A to 1D	Date Sampled:	11/04/92
Lab Number:	9211041-01E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
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	1
Benzo(k)fluoranthene	207-08-9	ND	1
Benzo(a)pyrene	50-32-8	ND	1
Indeno(1,2,3-cd)pyrene	193-39-5	ND	1
Dibenzo(a,h)anthracene	53-70-3	ND	1
Benzo(ghi)perylene	191-24-2	ND	1

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	97	25	121
Phenol-d6	13127-88-3	96	24	113
Nitrobenzene-d5	4165-60-0	97	23	120
2-Fluorobiphenyl	321-60-8	124*	30	115
2,4,6-Tribromophenol	118-79-6	125*	19	122
Terphenyl-d14	--	88	18	137

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-2A to 2D	Date Sampled:	11/04/92
Lab Number:	9211041-02E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	1
2,6-dinitrotoluene	606-20-2	ND	1
Diethyl phthalate	84-66-2	ND	1
4-chlorophenylphenylether	7005-72-3	ND	1
Fluorene	86-73-7	ND	1
N-nitrosodiphenylamine	86-30-6	ND	1
4-bromophenylphenylether	101-55-3	ND	1
Hexachlorobenzene	118-74-1	ND	1
Phenanthrene	85-01-8	ND	1
Anthracene	120-12-7	ND	1
Di-n-butylphthalate	84-74-2	ND	1
Fluoranthene	206-44-2	ND	1
Benzidine	92-87-5	ND	30
Pyrene	129-00-0	ND	1
Benzylbutylphthalate	85-68-7	ND	1
3,3'-dichlorobenzidine	91-94-1	ND	30
Benzo(a)anthracene	56-55-3	ND	1
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	10
Chrysene	218-01-9	ND	1
Di-n-octylphthalate	117-84-0	ND	1

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-2A to 2D	Date Sampled:	11/04/92
Lab Number:	9211041-02E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
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	1
Benzo(k)fluoranthene	207-08-9	ND	1
Benzo(a)pyrene	50-32-8	ND	1
Indeno(1,2,3-cd)pyrene	193-39-5	ND	1
Dibenzo(a,h)anthracene	53-70-3	ND	1
Benzo(ghi)perylene	191-24-2	ND	1

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	94	25 -	121
Phenol-d6	13127-88-3	88	24 -	113
Nitrobenzene-d5	4165-60-0	80	23 -	120
2-Fluorobiphenyl	321-60-8	117*	30 -	115
2,4,6-Tribromophenol	118-79-6	109	19 -	122
Terphenyl-d14	--	92	18 -	137

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-3A to 3D	Date Sampled:	11/04/92
Lab Number:	9211041-03E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

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

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-3A to 3D	Date Sampled:	11/04/92
Lab Number:	9211041-03E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	1
Hexachloroethane	67-72-1	ND	1
Nitrobenzene	98-95-3	ND	1
Isophorone	78-59-1	ND	1
Benzoic acid	65-85-0	ND	4
Bis-(2-chloroethoxy)methane	111-91-1	ND	1
1,2,4-trichlorobenzene	120-82-1	ND	1
Naphthalene	91-20-3	16	1
Hexachlorobutadiene	87-68-3	ND	1
2-chloronaphthalene	91-58-7	ND	1
2-methyl naphthalene	91-57-6	18	1
4-chloroaniline	106-47-8	ND	5
2-nitroaniline	88-74-4	ND	5
3-nitroaniline	99-09-2	ND	5
4-nitroaniline	100-01-6	ND	5
Hexachlorocyclopentadiene	77-47-4	ND	10
Dimethyl phthalate	131-11-3	ND	1
Acenaphthylene	208-96-8	ND	1
Acenaphthene	83-32-9	ND	1
Dibenzofuran	132-64-9	ND	1

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-3A to 3D	Date Sampled:	11/04/92
Lab Number:	9211041-03E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	1
2,6-dinitrotoluene	606-20-2	ND	1
Diethyl phthalate	84-66-2	ND	1
4-chlorophenylphenylether	7005-72-3	ND	1
Fluorene	86-73-7	ND	1
N-nitrosodiphenylamine	86-30-6	ND	1
4-bromophenylphenylether	101-55-3	ND	1
Hexachlorobenzene	118-74-1	ND	1
Phenanthrene	85-01-8	1	1
Anthracene	120-12-7	ND	1
Di-n-butylphthalate	84-74-2	ND	1
Fluoranthene	206-44-2	ND	1
Benzidine	92-87-5	ND	30
Pyrene	129-00-0	ND	1
Benzylbutylphthalate	85-68-7	ND	1
3,3'-dichlorobenzidine	91-94-1	ND	30
Benzo(a)anthracene	56-55-3	ND	1
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	10
Chrysene	218-01-9	ND	1
Di-n-octylphthalate	117-84-0	ND	1

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	SP-3A to 3D	Date Sampled:	11/04/92
Lab Number:	9211041-03E	Date Received:	11/04/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
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	1
Benzo(k)fluoranthene	207-08-9	ND	1
Benzo(a)pyrene	50-32-8	ND	1
Indeno(1,2,3-cd)pyrene	193-39-5	ND	1
Dibenzo(a,h)anthracene	53-70-3	ND	1
Benzo(ghi)perylene	191-24-2	ND	1

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	110	25 -	121
Phenol-d6	13127-88-3	101	24 -	113
Nitrobenzene-d5	4165-60-0	98	23 -	120
2-Fluorobiphenyl	321-60-8	149*	30 -	115
2,4,6-Tribromophenol	118-79-6	140*	19 -	122
Terphenyl-d14	--	109	18 -	137

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

Note: Detection limits increased due to matrix interference
* Surrogate out of control limits due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: METHOD BLANK
Lab Number: 9211041-04A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/04/92
Date Analyzed: 11/05/92

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	0.2
Pentachlorophenol	87-86-5	ND	0.2
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: METHOD BLANK
Lab Number: 9211041-04A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/04/92
Date Analyzed: 11/05/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211041-04A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211041-04A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/04/92
Extraction Method:	EPA 3550	Date Analyzed:	11/05/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	55	25	121
Phenol-d6	13127-88-3	76	24	113
Nitrobenzene-d5	4165-60-0	75	23	120
2-Fluorobiphenyl	321-60-8	75	30	115
2,4,6-Tribromophenol	118-79-6	78	19	122
Terphenyl-d14	--	63	18	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: SP-1A to 1D
Lab Number: 9211041-01
Sample Matrix/Media: SOIL

Date Sampled: 11/04/92
Date Received: 11/04/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Arsenic	6	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Barium	53	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cadmium	0.2	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Chromium	18	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Copper	25	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Diesel	430	1	mg/kg	11/05/92	11/05/92	EPA 3550	EPA 8015
Gasoline	460	5	mg/kg	11/04/92	11/05/92	EPA 5030	EPA 8240
Lead	75	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Mercury	0.1	0.1	mg/kg	11/04/92	11/04/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Nickel	22	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Selenium	2	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Vanadium	17	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Zinc	51	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010

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 basis, as received

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: SP-2A to 2D
Lab Number: 9211041-02
Sample Matrix/Media: SOIL

Date Sampled: 11/04/92
Date Received: 11/04/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Arsenic	3	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Barium	38	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cadmium	0.3	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Chromium	17	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Copper	18	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Diesel	280a	1	mg/kg	11/05/92	11/05/92	EPA 3550	EPA 8015
Gasoline	1,700	5	mg/kg	11/04/92	11/05/92	EPA 5030	EPA 8240
Lead	42	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/04/92	11/04/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Nickel	18	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Selenium	2	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Vanadium	14	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Zinc	37	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010

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 basis, as received

a Extractable hydrocarbons quantitated as diesel maybe due to lighter petroleum product

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: SP-3A to 3D
Lab Number: 9211041-03
Sample Matrix/Media: SOIL

Date Sampled: 11/04/92
Date Received: 11/04/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Arsenic	4	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Barium	35	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cadmium	0.2	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Chromium	19	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Copper	20	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Diesel	220a	1	mg/kg	11/05/92	11/05/92	EPA 3550	EPA 8015
Gasoline	950	5	mg/kg	11/04/92	11/05/92	EPA 5030	EPA 8240
Lead	22	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/04/92	11/04/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Nickel	19	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Selenium	1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Vanadium	13	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Zinc	31	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010

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 basis, as received

[a] Extractable hydrocarbons quantitated as diesel maybe due to a lighter petroleum product

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.41

Sample Identification: METHOD BLANK
Lab Number: 9211041-04
Sample Matrix/Media: SOIL

Date Sampled: --
Date Received: --

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Arsenic	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Barium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Chromium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Cobalt	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Copper	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Diesel	ND	1	mg/kg	11/05/92	11/05/92	EPA 3550	EPA 8015
Gasoline	ND	5	mg/kg	11/04/92	11/05/92	EPA 5030	EPA 8240
Lead	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/04/92	11/04/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Nickel	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Vanadium	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010
Zinc	<1	1	mg/kg	11/04/92	11/05/92	EPA 3050	EPA 6010

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 basis, as received

9211041

Chain-of-Custody Record

1742

Date: 4 Nov. 1992

Page 1 of 1

Project No.: ~~174~~ 2026.10

Samplers (Signatures): Elizabeth Wells

ANALYSES

Date	Time	Sample Number	EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	~~Total~~ BTEX	Total Title 22 CAM + 17 metals	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/4/92	1500	SP-1A to 1D			X	X	X	X		X	X	S		4
11/4/92	1510	SP-2A to 2D			X	X	X	X		X	X	S		4
11/4/92	1530	SP-3A to 3D			X	X	X	X		X	X	S		4

REMARKS

Additional comments

Composite before analysis

Bill Port of Oakland directly.

Send copy of results to Dan Schoenholz at Port of Oakland

Turnaround time: 24 hour

Results to: Elizabeth Wells

Total No. of containers: 12

	Date		Date		Date	
Relinquished by: Elizabeth Wells	11/4/92	Relinquished by: Jim Mitchell	11/4/92	Relinquished by:		Method of shipment: Lab pickup
Signature: Elizabeth Wells		Signature: JIM MITCHELL		Signature:		Laboratory comments and Log No.: Rec'd 2x4 BC from Simple — Ez
Printed name: Geomatrix		Printed name: CLAYTON ENV.		Printed name:		9211041
Company:		Company:		Company:		OK
Received by: Jim Mitchell	Time: 16:35	Received by: Tracy Bullock	Time: 1705	Received by:	Time:	
Signature: JIM MITCHELL		Signature: TRACY BULLOCK		Signature:		
Printed name: CLAYTON ENV.		Printed name: CLAYTON ENV		Printed name:		
Company:		Company:		Company:		

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

November 12, 1992

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

Client Ref. 2026.10
Clayton Project No. 92110.75

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on November 6, 1992. All results except metals were faxed to Dan Schoenholz and you on November 9, 1992. 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

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/caa
Attachments

cc: Mr. Dan Schoenholz (Port of Oakland)

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.6
Bromomethane	74-83-9	ND	0.6
Vinyl chloride	75-01-4	ND	0.6
Chloroethane	75-00-3	ND	0.6
Methylene chloride	75-09-2	ND	0.6
Trichlorofluoromethane	75-69-4	ND	0.6
1,1-Dichloroethene	75-35-4	ND	0.6
1,1-Dichloroethane	75-35-3	ND	0.6
Trans-1,2-Dichloroethene	156-60-5	ND	0.6
Cis-1,2-Dichloroethene	156-59-2	ND	0.6
Chloroform	67-66-3	ND	0.6
1,2-Dichloroethane	107-06-2	ND	0.6
1,1,1-Trichloroethane	71-55-6	ND	0.6
Carbon tetrachloride	56-23-5	ND	0.6
Bromodichloromethane	75-27-4	ND	0.6
1,2-Dichloropropane	78-87-5	ND	0.6
Cis-1,3-Dichloropropene	10061-01-5	ND	0.6
Trichloroethene	79-01-6	ND	0.6
Benzene	71-43-2	0.7	0.6
Dibromochloromethane	124-48-1	ND	0.6

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.6
Trans-1,3-Dichloropropene	10061-02-6	ND	0.6
2-Chloroethylvinylether	110-75-8	ND	0.6
Bromoform	75-25-2	ND	0.6
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.6
Tetrachloroethene	127-18-4	ND	0.6
Toluene	108-88-3	1.2	0.6
Chlorobenzene	108-90-7	ND	0.6
Ethylbenzene	100-41-4	4.0	0.6
1,3-Dichlorobenzene	541-73-7	ND	0.6
1,2-Dichlorobenzene	95-50-1	ND	0.6
1,4-Dichlorobenzene	106-46-7	ND	0.6
Freon 113	76-13-1	ND	0.6
p,m-Xylenes	---	23	0.6
o-Xylene	95-47-6	7.0	0.6
Acetone	67-64-1	ND	3
2-Butanone	78-93-3	ND	3
4-Methyl-2-pentanone	108-10-1	ND	3
2-Hexanone	591-78-6	ND	3
Vinyl acetate	108-05-4	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.6
Styrene	100-42-5	ND	0.6
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	106	70 - 121
Toluene-d8	2037-26-5	100	81 - 117
Bromofluorobenzene	460-00-4	102	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211075-02A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.005
Bromomethane	74-83-9	ND	0.005
Vinyl chloride	75-01-4	ND	0.005
Chloroethane	75-00-3	ND	0.005
Methylene chloride	75-09-2	ND	0.005
Trichlorofluoromethane	75-69-4	ND	0.005
1,1-Dichloroethene	75-35-4	ND	0.005
1,1-Dichloroethane	75-35-3	ND	0.005
Trans-1,2-Dichloroethene	156-60-5	ND	0.005
Cis-1,2-Dichloroethene	156-59-2	ND	0.005
Chloroform	67-66-3	ND	0.005
1,2-Dichloroethane	107-06-2	ND	0.005
1,1,1-Trichloroethane	71-55-6	ND	0.005
Carbon tetrachloride	56-23-5	ND	0.005
Bromodichloromethane	75-27-4	ND	0.005
1,2-Dichloropropane	78-87-5	ND	0.005
Cis-1,3-Dichloropropene	10061-01-5	ND	0.005
Trichloroethene	79-01-6	ND	0.005
Benzene	71-43-2	ND	0.005
Dibromochloromethane	124-48-1	ND	0.005

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211075-02A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trans-1,3-Dichloropropene	10061-02-6	ND	0.005
2-Chloroethylvinylether	110-75-8	ND	0.005
Bromoform	75-25-2	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
1,3-Dichlorobenzene	541-73-7	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Freon 113	76-13-1	ND	0.005
p,m-Xylenes	---	ND	0.005
o-Xylene	95-47-6	ND	0.005
Acetone	67-64-1	ND	0.02
2-Butanone	78-93-3	ND	0.02
4-Methyl-2-pentanone	108-10-1	ND	0.02
2-Hexanone	591-78-6	ND	0.02
Vinyl acetate	108-05-4	ND	0.01

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211075-02A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.005
Styrene	100-42-5	ND	0.005
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	104	70 - 121
Toluene-d8	2037-26-5	100	81 - 117
Bromofluorobenzene	460-00-4	90	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/09/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/09/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	7	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	9	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/09/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	COMP.SP12 A,B,C,D	Date Sampled:	11/06/92
Lab Number:	9211075-01E	Date Received:	11/06/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/09/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	79	25	121
Phenol-d6	13127-88-3	76	24	113
Nitrobenzene-d5	4165-60-0	86	23	120
2-Fluorobiphenyl	321-60-8	114	30	115
2,4,6-Tribromophenol	118-79-6	50	19	122
Terphenyl-d14	--	81	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification: METHOD BLANK
Lab Number: 9211075-02A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

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	0.2
Pentachlorophenol	87-86-5	ND	0.2
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211075-02A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification: METHOD BLANK
Lab Number: 9211075-02A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211075-02A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	56	25	121
Phenol-d6	13127-88-3	62	24	113
Nitrobenzene-d5	4165-60-0	69	23	120
2-Fluorobiphenyl	321-60-8	71	30	115
2,4,6-Tribromophenol	118-79-6	84	19	122
Terphenyl-d14	--	64	18	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification: COMP.SP12 A,B,C,D
Lab Number: 9211075-01
Sample Matrix/Media: SOIL

Date Sampled: 11/06/92
Date Received: 11/06/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Arsenic	2	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Barium	24	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Chromium	18	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Copper	16	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Diesel	1,400	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	3,000	0.3	mg/kg	11/06/92	11/09/92	EPA 5030	EPA 8015
Lead	14	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/09/92	11/09/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Nickel	20	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Selenium	1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Thallium	2	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Vanadium	14	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Zinc	22	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010

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 basis, as received

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.75

Sample Identification: METHOD BLANK
Lab Number: 9211075-02
Sample Matrix/Media: SOIL

Date Sampled: —
Date Received: —

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Arsenic	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Barium	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Chromium	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Cobalt	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Copper	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Diesel	ND	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	ND	0.3	mg/kg	11/06/92	11/09/92	EPA 5030	EPA 8015
Lead	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/09/92	11/09/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Nickel	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Vanadium	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010
Zinc	<1	1	mg/kg	11/09/92	11/10/92	EPA 3050	EPA 6010

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 basis, as received

Chain-of-Custody Record

No 3222

Date: 11/6/92

Page 1 of 1

Project No.: 2026.10

Samplers (Signatures):

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	7 out of 17 metals	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/6	930	SP12 A-D			X	X	X	X		X	X	S		4

ANALYSES

REMARKS

Additional comments

Bill Port of Oakland directly

Copy of results to Dan Schoenholtz @ Port of Oakland.

Composite A-D before analysis.

Turnaround time: 24 hrs

Results to: Elizabeth E. Wells

Total No. of containers: 4

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Signature:	11/6/92	Signature:	11/7/92	Signature: Jim Mitchell	11/6/92
Printed name: James M. Abitz		Printed name: Charlie Crocker		Printed name: JIM MITCHELL	
Company: Geomatrix		Company: Geomatrix		Company: CLAYTON ENV.	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Signature:		Signature: Jim Mitchell	1508	Signature: Terry Salo	1600
Printed name: Charlie Crocker		Printed name: JIM MITCHELL		Printed name: TERRY SALO	11/6/92
Company: Geomatrix		Company: CLAYTON ENV.		Company: CLAYTON ENVIR	4:08pm

Method of shipment: Lab Pickup

Laboratory comments and Log No.: 9211075

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

November 24, 1992

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

Client Ref. 2026.10
Clayton Project No. 92110.56

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on November 5, 1992. Results were sent to you by facsimile on November 9 and 16, 1992. Results for Aquatic Toxicity analyzed by GeoAnalytical Laboratories are also enclosed. 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

cc: Dan Schoenholz
Port of Oakland

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-4A to SP-4D
Lab Number: 9211056-01E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Prepared: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	10
Bromomethane	74-83-9	ND	10
Vinyl chloride	75-01-4	ND	10
Chloroethane	75-00-3	ND	10
Methylene chloride	75-09-2	ND	10
Trichlorofluoromethane	75-69-4	ND	10
1,1-Dichloroethene	75-35-4	ND	10
1,1-Dichloroethane	75-35-3	ND	10
Trans-1,2-Dichloroethene	156-60-5	ND	10
Cis-1,2-Dichloroethene	156-59-2	ND	10
Chloroform	67-66-3	ND	10
1,2-Dichloroethane	107-06-2	ND	10
1,1,1-Trichloroethane	71-55-6	ND	10
Carbon tetrachloride	56-23-5	ND	10
Bromodichloromethane	75-27-4	ND	10
1,2-Dichloropropane	78-87-5	ND	10
Cis-1,3-Dichloropropene	10061-01-5	ND	10
Trichloroethene	79-01-6	ND	10
Benzene	71-43-2	ND	10
Dibromochloromethane	124-48-1	ND	10

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-4A to SP-4D	Date Sampled:	11/05/92
Lab Number:	9211056-01E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	10
Trans-1,3-Dichloropropene	10061-02-6	ND	10
2-Chloroethylvinylether	110-75-8	ND	10
Bromoform	75-25-2	ND	10
1,1,2,2-Tetrachloroethane	79-34-5	ND	10
Tetrachloroethene	127-18-4	ND	10
Toluene	108-88-3	ND	10
Chlorobenzene	108-90-7	ND	10
Ethylbenzene	100-41-4	60	10
1,3-Dichlorobenzene	541-73-7	ND	10
1,2-Dichlorobenzene	95-50-1	ND	10
1,4-Dichlorobenzene	106-46-7	ND	10
Freon 113	76-13-1	ND	10
p,m-Xylenes	--	260	10
o-Xylene	95-47-6	20	10
Acetone	67-64-1	ND	50
2-Butanone	78-93-3	ND	50
4-Methyl-2-pentanone	108-10-1	ND	50
2-Hexanone	591-78-6	ND	50
Vinyl acetate	108-05-4	ND	30

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-4A to SP-4D	Date Sampled:	11/05/92
Lab Number:	9211056-01E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	10
Styrene	100-42-5	ND	10
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	103	70 - 121
Toluene-d8	2037-26-5	104	81 - 117
Bromofluorobenzene	460-00-4	99	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	1
Bromomethane	74-83-9	ND	1
Vinyl chloride	75-01-4	ND	1
Chloroethane	75-00-3	ND	1
Methylene chloride	75-09-2	ND	1
Trichlorofluoromethane	75-69-4	ND	1
1,1-Dichloroethene	75-35-4	ND	1
1,1-Dichloroethane	75-35-3	ND	1
Trans-1,2-Dichloroethene	156-60-5	ND	1
Cis-1,2-Dichloroethene	156-59-2	ND	1
Chloroform	67-66-3	ND	1
1,2-Dichloroethane	107-06-2	ND	1
1,1,1-Trichloroethane	71-55-6	ND	1
Carbon tetrachloride	56-23-5	ND	1
Bromodichloromethane	75-27-4	ND	1
1,2-Dichloropropane	78-87-5	ND	1
Cis-1,3-Dichloropropene	10061-01-5	ND	1
Trichloroethene	79-01-6	ND	1
Benzene	71-43-2	ND	1
Dibromochloromethane	124-48-1	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	1
Trans-1,3-Dichloropropene	10061-02-6	ND	1
2-Chloroethylvinylether	110-75-8	ND	1
Bromoform	75-25-2	ND	1
1,1,2,2-Tetrachloroethane	79-34-5	ND	1
Tetrachloroethene	127-18-4	ND	1
Toluene	108-88-3	4	1
Chlorobenzene	108-90-7	ND	1
Ethylbenzene	100-41-4	3	1
1,3-Dichlorobenzene	541-73-7	ND	1
1,2-Dichlorobenzene	95-50-1	ND	1
1,4-Dichlorobenzene	106-46-7	ND	1
Freon 113	76-13-1	ND	1
p,m-Xylenes	--	61	1
o-Xylene	95-47-6	25	1
Acetone	67-64-1	ND	5
2-Butanone	78-93-3	ND	5
4-Methyl-2-pentanone	108-10-1	ND	5
2-Hexanone	591-78-6	ND	5
Vinyl acetate	108-05-4	ND	3

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	1
Styrene	100-42-5	ND	1
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	102	70 - 121
Toluene-d8	2037-26-5	100	81 - 117
Bromofluorobenzene	460-00-4	97	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-6A to SP-6D	Date Sampled:	11/05/92
Lab Number:	9211056-03E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	1
Bromomethane	74-83-9	ND	1
Vinyl chloride	75-01-4	ND	1
Chloroethane	75-00-3	ND	1
Methylene chloride	75-09-2	ND	1
Trichlorofluoromethane	75-69-4	ND	1
1,1-Dichloroethene	75-35-4	ND	1
1,1-Dichloroethane	75-35-3	ND	1
Trans-1,2-Dichloroethene	156-60-5	ND	1
Cis-1,2-Dichloroethene	156-59-2	ND	1
Chloroform	67-66-3	ND	1
1,2-Dichloroethane	107-06-2	ND	1
1,1,1-Trichloroethane	71-55-6	ND	1
Carbon tetrachloride	56-23-5	ND	1
Bromodichloromethane	75-27-4	ND	1
1,2-Dichloropropane	78-87-5	ND	1
Cis-1,3-Dichloropropene	10061-01-5	ND	1
Trichloroethene	79-01-6	ND	1
Benzene	71-43-2	ND	1
Dibromochloromethane	124-48-1	ND	1

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-6A to SP-6D	Date Sampled:	11/05/92
Lab Number:	9211056-03E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	1
Trans-1,3-Dichloropropene	10061-02-6	ND	1
2-Chloroethylvinylether	110-75-8	ND	1
Bromoform	75-25-2	ND	1
1,1,2,2-Tetrachloroethane	79-34-5	ND	1
Tetrachloroethene	127-18-4	ND	1
Toluene	108-88-3	4	1
Chlorobenzene	108-90-7	ND	1
Ethylbenzene	100-41-4	2	1
1,3-Dichlorobenzene	541-73-7	ND	1
1,2-Dichlorobenzene	95-50-1	ND	1
1,4-Dichlorobenzene	106-46-7	ND	1
Freon 113	76-13-1	ND	1
p,m-Xylenes	--	32	1
o-Xylene	95-47-6	16	1
Acetone	67-64-1	ND	5
2-Butanone	78-93-3	ND	5
4-Methyl-2-pentanone	108-10-1	ND	5
2-Hexanone	591-78-6	ND	5
Vinyl acetate	108-05-4	ND	3

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-6A to SP-6D
Lab Number: 9211056-03E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Prepared: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	1
Styrene	100-42-5	ND	1
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	102	70 - 121
Toluene-d8	2037-26-5	102	81 - 117
Bromofluorobenzene	460-00-4	96	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-7A to SP-7D	Date Sampled:	11/05/92
Lab Number:	9211056-04E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.3
Bromomethane	74-83-9	ND	0.3
Vinyl chloride	75-01-4	ND	0.3
Chloroethane	75-00-3	ND	0.3
Methylene chloride	75-09-2	ND	0.3
Trichlorofluoromethane	75-69-4	ND	0.3
1,1-Dichloroethene	75-35-4	ND	0.3
1,1-Dichloroethane	75-35-3	ND	0.3
Trans-1,2-Dichloroethene	156-60-5	ND	0.3
Cis-1,2-Dichloroethene	156-59-2	ND	0.3
Chloroform	67-66-3	ND	0.3
1,2-Dichloroethane	107-06-2	ND	0.3
1,1,1-Trichloroethane	71-55-6	ND	0.3
Carbon tetrachloride	56-23-5	ND	0.3
Bromodichloromethane	75-27-4	ND	0.3
1,2-Dichloropropane	78-87-5	ND	0.3
Cis-1,3-Dichloropropene	10061-01-5	ND	0.3
Trichloroethene	79-01-6	ND	0.3
Benzene	71-43-2	ND	0.3
Dibromochloromethane	124-48-1	ND	0.3

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-7A to SP-7D
Lab Number: 9211056-04E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Prepared: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.3
Trans-1,3-Dichloropropene	10061-02-6	ND	0.3
2-Chloroethylvinylether	110-75-8	ND	0.3
Bromoform	75-25-2	ND	0.3
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.3
Tetrachloroethene	127-18-4	ND	0.3
Toluene	108-88-3	1.0	0.3
Chlorobenzene	108-90-7	ND	0.3
Ethylbenzene	100-41-4	0.8	0.3
1,3-Dichlorobenzene	541-73-7	ND	0.3
1,2-Dichlorobenzene	95-50-1	ND	0.3
1,4-Dichlorobenzene	106-46-7	ND	0.3
Freon 113	76-13-1	ND	0.3
p,m-Xylenes	--	7.1	0.3
o-Xylene	95-47-6	4.0	0.3
Acetone	67-64-1	ND	1
2-Butanone	78-93-3	ND	1
4-Methyl-2-pentanone	108-10-1	ND	1
2-Hexanone	591-78-6	ND	1
Vinyl acetate	108-05-4	ND	0.5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-7A to SP-7D	Date Sampled:	11/05/92
Lab Number:	9211056-04E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.3
Styrene	100-42-5	ND	0.3
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	103	70 - 121
Toluene-d8	2037-26-5	101	81 - 117
Bromofluorobenzene	460-00-4	94	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-9A to SP-9D
Lab Number: 9211056-06E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Prepared: 11/06/92
Date Analyzed: 11/10/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trans-1,3-Dichloropropene	10061-02-6	ND	0.005
2-Chloroethylvinylether	110-75-8	ND	0.005
Bromoform	75-25-2	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
1,3-Dichlorobenzene	541-73-7	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Freon 113	76-13-1	ND	0.005
p,m-Xylenes	--	ND	0.005
o-Xylene	95-47-6	0.008	0.005
Acetone	67-64-1	ND	0.02
2-Butanone	78-93-3	ND	0.02
4-Methyl-2-pentanone	108-10-1	ND	0.02
2-Hexanone	591-78-6	ND	0.02
Vinyl acetate	108-05-4	ND	0.01

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-9A to SP-9D	Date Sampled:	11/05/92
Lab Number:	9211056-06E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/10/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.005
Styrene	100-42-5	ND	0.005

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
1,2-Dichloroethane-d4	17060-07-0	112	70 -	121
Toluene-d8	2037-26-5	85	81 -	117
Bromofluorobenzene	460-00-4	109	74 -	121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-10A to SP-10D
Lab Number: 9211056-07E
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Prepared: 11/06/92
Date Analyzed: 11/09/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	3
Bromomethane	74-83-9	ND	3
Vinyl chloride	75-01-4	ND	3
Chloroethane	75-00-3	ND	3
Methylene chloride	75-09-2	ND	3
Trichlorofluoromethane	75-69-4	ND	3
1,1-Dichloroethene	75-35-4	ND	3
1,1-Dichloroethane	75-35-3	ND	3
Trans-1,2-Dichloroethene	156-60-5	ND	3
Cis-1,2-Dichloroethene	156-59-2	ND	3
Chloroform	67-66-3	ND	3
1,2-Dichloroethane	107-06-2	ND	3
1,1,1-Trichloroethane	71-55-6	ND	3
Carbon tetrachloride	56-23-5	ND	3
Bromodichloromethane	75-27-4	ND	3
1,2-Dichloropropane	78-87-5	ND	3
Cis-1,3-Dichloropropene	10061-01-5	ND	3
Trichloroethene	79-01-6	ND	3
Benzene	71-43-2	ND	3
Dibromochloromethane	124-48-1	ND	3

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-10A to SP-10D	Date Sampled:	11/05/92
Lab Number:	9211056-07E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/09/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	3
Trans-1,3-Dichloropropene	10061-02-6	ND	3
2-Chloroethylvinylether	110-75-8	ND	3
Bromoform	75-25-2	ND	3
1,1,2,2-Tetrachloroethane	79-34-5	ND	3
Tetrachloroethene	127-18-4	ND	3
Toluene	108-88-3	ND	3
Chlorobenzene	108-90-7	ND	3
Ethylbenzene	100-41-4	9	3
1,3-Dichlorobenzene	541-73-7	ND	3
1,2-Dichlorobenzene	95-50-1	ND	3
1,4-Dichlorobenzene	106-46-7	ND	3
Freon 113	76-13-1	ND	3
p,m-Xylenes	--	56	3
o-Xylene	95-47-6	16	3
Acetone	67-64-1	ND	10
2-Butanone	78-93-3	ND	10
4-Methyl-2-pentanone	108-10-1	ND	10
2-Hexanone	591-78-6	ND	10
Vinyl acetate	108-05-4	ND	5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-10A to SP-10D	Date Sampled:	11/05/92
Lab Number:	9211056-07E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/09/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	3
Styrene	100-42-5	ND	3
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	105	70 - 121
Toluene-d8	2037-26-5	102	81 - 117
Bromofluorobenzene	460-00-4	99	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-11A to SP-11D	Date Sampled:	11/05/92
Lab Number:	9211056-08E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/09/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	3
Bromomethane	74-83-9	ND	3
Vinyl chloride	75-01-4	ND	3
Chloroethane	75-00-3	ND	3
Methylene chloride	75-09-2	ND	3
Trichlorofluoromethane	75-69-4	ND	3
1,1-Dichloroethene	75-35-4	ND	3
1,1-Dichloroethane	75-35-3	ND	3
Trans-1,2-Dichloroethene	156-60-5	ND	3
Cis-1,2-Dichloroethene	156-59-2	ND	3
Chloroform	67-66-3	ND	3
1,2-Dichloroethane	107-06-2	ND	3
1,1,1-Trichloroethane	71-55-6	ND	3
Carbon tetrachloride	56-23-5	ND	3
Bromodichloromethane	75-27-4	ND	3
1,2-Dichloropropane	78-87-5	ND	3
Cis-1,3-Dichloropropene	10061-01-5	ND	3
Trichloroethene	79-01-6	ND	3
Benzene	71-43-2	4	3
Dibromochloromethane	124-48-1	ND	3

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-11A to SP-11D	Date Sampled:	11/05/92
Lab Number:	9211056-08E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/09/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	3
Trans-1,3-Dichloropropene	10061-02-6	ND	3
2-Chloroethylvinylether	110-75-8	ND	3
Bromoform	75-25-2	ND	3
1,1,2,2-Tetrachloroethane	79-34-5	ND	3
Tetrachloroethene	127-18-4	ND	3
Toluene	108-88-3	21	3
Chlorobenzene	108-90-7	ND	3
Ethylbenzene	100-41-4	28	3
1,3-Dichlorobenzene	541-73-7	ND	3
1,2-Dichlorobenzene	95-50-1	ND	3
1,4-Dichlorobenzene	106-46-7	ND	3
Freon 113	76-13-1	ND	3
p,m-Xylenes	--	130	3
o-Xylene	95-47-6	46	3
Acetone	67-64-1	ND	10
2-Butanone	78-93-3	ND	10
4-Methyl-2-pentanone	108-10-1	ND	10
2-Hexanone	591-78-6	ND	10
Vinyl acetate	108-05-4	ND	5

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-11A to SP-11D	Date Sampled:	11/05/92
Lab Number:	9211056-08E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/09/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	3
Styrene	100-42-5	ND	3
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	106	70 - 121
Toluene-d8	2037-26-5	100	81 - 117
Bromofluorobenzene	460-00-4	102	74 - 121

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211056-09A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.005
Bromomethane	74-83-9	ND	0.005
Vinyl chloride	75-01-4	ND	0.005
Chloroethane	75-00-3	ND	0.005
Methylene chloride	75-09-2	ND	0.005
Trichlorofluoromethane	75-69-4	ND	0.005
1,1-Dichloroethene	75-35-4	ND	0.005
1,1-Dichloroethane	75-35-3	ND	0.005
Trans-1,2-Dichloroethene	156-60-5	ND	0.005
Cis-1,2-Dichloroethene	156-59-2	ND	0.005
Chloroform	67-66-3	ND	0.005
1,2-Dichloroethane	107-06-2	ND	0.005
1,1,1-Trichloroethane	71-55-6	ND	0.005
Carbon tetrachloride	56-23-5	ND	0.005
Bromodichloromethane	75-27-4	ND	0.005
1,2-Dichloropropane	78-87-5	ND	0.005
Cis-1,3-Dichloropropene	10061-01-5	ND	0.005
Trichloroethene	79-01-6	ND	0.005
Benzene	71-43-2	ND	0.005
Dibromochloromethane	124-48-1	ND	0.005

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211056-09A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/06/92
Preparation Method:	EPA 5030	Date Analyzed:	11/06/92
Analytical Method:	EPA 8240 (Low Level)		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trans-1,3-Dichloropropene	10061-02-6	ND	0.005
2-Chloroethylvinylether	110-75-8	ND	0.005
Bromoform	75-25-2	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
1,3-Dichlorobenzene	541-73-7	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Freon 113	76-13-1	ND	0.005
p,m-Xylenes	--	ND	0.005
o-Xylene	95-47-6	ND	0.005
Acetone	67-64-1	ND	0.02
2-Butanone	78-93-3	ND	0.02
4-Methyl-2-pentanone	108-10-1	ND	0.02
2-Hexanone	591-78-6	ND	0.02
Vinyl acetate	108-05-4	ND	0.01

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: METHOD BLANK
Lab Number: 9211056-09A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240 (Low Level)

Date Sampled: --
Date Received: --
Date Prepared: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.005
Styrene	100-42-5	ND	0.005
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	94	70 - 121
Toluene-d8	2037-26-5	102	81 - 117
Bromofluorobenzene	460-00-4	91	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-4A to SP-4D	Date Sampled:	11/05/92
Lab Number:	9211056-01E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-4A to SP-4D	Date Sampled:	11/05/92
Lab Number:	9211056-01E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	11	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	12	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-4A to SP-4D	Date Sampled:	11/05/92
Lab Number:	9211056-01E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	5	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	4	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	4	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-4A to SP-4D	Date Sampled:	11/05/92
Lab Number:	9211056-01E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	66	25	121
Phenol-d6	13127-88-3	73	24	113
Nitrobenzene-d5	4165-60-0	63	23	120
2-Fluorobiphenyl	321-60-8	87	30	115
2,4,6-Tribromophenol	118-79-6	71	19	122
Terphenyl-d14	98904-43-9	90	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	12	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	13	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-5A to SP-5D	Date Sampled:	11/05/92
Lab Number:	9211056-02E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	64	25	121
Phenol-d6	13127-88-3	73	24	113
Nitrobenzene-d5	4165-60-0	62	23	120
2-Fluorobiphenyl	321-60-8	87	30	115
2,4,6-Tribromophenol	118-79-6	69	19	122
Terphenyl-d14	98904-43-9	83	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-6A to SP-6D	Date Sampled:	11/05/92
Lab Number:	9211056-03E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-6A to SP-6D
Lab Number: 9211056-03E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	5	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	6	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-6A to SP-6D	Date Sampled:	11/05/92
Lab Number:	9211056-03E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-6A to SP-6D
Lab Number: 9211056-03E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	58	25	121
Phenol-d6	13127-88-3	61	24	113
Nitrobenzene-d5	4165-60-0	53	23	120
2-Fluorobiphenyl	321-60-8	74	30	115
2,4,6-Tribromophenol	118-79-6	57	19	122
Terphenyl-d14	98904-43-9	67	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-7A to SP-7D	Date Sampled:	11/05/92
Lab Number:	9211056-04E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-7A to SP-7D
Lab Number: 9211056-04E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	2	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	4	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-7A to SP-7D	Date Sampled:	11/05/92
Lab Number:	9211056-04E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-7A to SP-7D
Lab Number: 9211056-04E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	77	25	121
Phenol-d6	13127-88-3	78	24	113
Nitrobenzene-d5	4165-60-0	75	23	120
2-Fluorobiphenyl	321-60-8	87	30	115
2,4,6-Tribromophenol	118-79-6	62	19	122
Terphenyl-d14	98904-43-9	87	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-8A to SP-8D	Date Sampled:	11/05/92
Lab Number:	9211056-05E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-8A to SP-8D
Lab Number: 9211056-05E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	6	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	7	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-8A to SP-8D	Date Sampled:	11/05/92
Lab Number:	9211056-05E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-8A to SP-8D
Lab Number: 9211056-05E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
2-Fluorophenol	367-12-4	66	25 - 121
Phenol-d6	13127-88-3	78	24 - 113
Nitrobenzene-d5	4165-60-0	72	23 - 120
2-Fluorobiphenyl	321-60-8	94	30 - 115
2,4,6-Tribromophenol	118-79-6	75	19 - 122
Terphenyl-d14	98904-43-9	133	18 - 137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-9A to SP-9D	Date Sampled:	11/05/92
Lab Number:	9211056-06E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-9A to SP-9D	Date Sampled:	11/05/92
Lab Number:	9211056-06E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	ND	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	ND	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-9A to SP-9D	Date Sampled:	11/05/92
Lab Number:	9211056-06E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-9A to SP-9D	Date Sampled:	11/05/92
Lab Number:	9211056-06E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	49	25 -	121
Phenol-d6	13127-88-3	50	24 -	113
Nitrobenzene-d5	4165-60-0	45	23 -	120
2-Fluorobiphenyl	321-60-8	60	30 -	115
2,4,6-Tribromophenol	118-79-6	37	19 -	122
Terphenyl-d14	98904-43-9	79	18 -	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-10A to SP-10D
Lab Number: 9211056-07E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-10A to SP-10D	Date Sampled:	11/05/92
Lab Number:	9211056-07E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	4	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	5	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-10A to SP-10D	Date Sampled:	11/05/92
Lab Number:	9211056-07E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-10A to SP-10D	Date Sampled:	11/05/92
Lab Number:	9211056-07E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
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	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	64	25	121
Phenol-d6	13127-88-3	75	24	113
Nitrobenzene-d5	4165-60-0	67	23	120
2-Fluorobiphenyl	321-60-8	93	30	115
2,4,6-Tribromophenol	118-79-6	66	19	122
Terphenyl-d14	98904-43-9	130	18	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-11A to SP-11D	Date Sampled:	11/05/92
Lab Number:	9211056-08E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Acid Extractables			
Phenol	108-95-2	ND	2
2-chlorophenol	95-57-8	ND	2
2-methyl phenol	95-48-7	ND	2
4-methyl phenol	106-44-5	ND	2
2-nitrophenol	88-75-5	ND	2
2,4-dimethylphenol	105-67-9	ND	2
2,4-dichlorophenol	120-83-2	ND	2
4-chloro-3-methylphenol	59-50-7	ND	2
2,4,5-trichlorophenol	95-95-4	ND	2
2,4,6-trichlorophenol	88-06-2	ND	2
2,4-dinitrophenol	51-28-5	ND	10
4-nitrophenol	100-02-7	ND	10
2-methyl-4,6-dinitrophenol	534-52-1	ND	2
Pentachlorophenol	87-86-5	ND	2
Base/Neutral Extractables			
Bis(2-chloroethyl)ether	111-44-4	ND	2
1,3-dichlorobenzene	541-73-7	ND	2
1,4-dichlorobenzene	106-46-7	ND	2
Benzyl alcohol	100-51-6	ND	4
1,2-dichlorobenzene	95-50-1	ND	2
Bis-(2-chloroisopropyl)ether	108-60-1	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-11A to SP-11D	Date Sampled:	11/05/92
Lab Number:	9211056-08E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
N-nitrosodi-n-propylamine	621-64-7	ND	2
Hexachloroethane	67-72-1	ND	2
Nitrobenzene	98-95-3	ND	2
Isophorone	78-59-1	ND	2
Benzoic acid	65-85-0	ND	8
Bis-(2-chloroethoxy)methane	111-91-1	ND	2
1,2,4-trichlorobenzene	120-82-1	ND	2
Naphthalene	91-20-3	6	2
Hexachlorobutadiene	87-68-3	ND	2
2-chloronaphthalene	91-58-7	ND	2
2-methyl naphthalene	91-57-6	6	2
4-chloroaniline	106-47-8	ND	10
2-nitroaniline	88-74-4	ND	10
3-nitroaniline	99-09-2	ND	10
4-nitroaniline	100-01-6	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	20
Dimethyl phthalate	131-11-3	ND	2
Acenaphthylene	208-96-8	ND	2
Acenaphthene	83-32-9	ND	2
Dibenzofuran	132-64-9	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	COMP. SP-11A to SP-11D	Date Sampled:	11/05/92
Lab Number:	9211056-08E	Date Received:	11/05/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
2,4-dinitrotoluene	121-14-2	ND	2
2,6-dinitrotoluene	606-20-2	ND	2
Diethyl phthalate	84-66-2	ND	2
4-chlorophenylphenylether	7005-72-3	ND	2
Fluorene	86-73-7	ND	2
N-nitrosodiphenylamine	86-30-6	ND	2
4-bromophenylphenylether	101-55-3	ND	2
Hexachlorobenzene	118-74-1	ND	2
Phenanthrene	85-01-8	ND	2
Anthracene	120-12-7	ND	2
Di-n-butylphthalate	84-74-2	ND	2
Fluoranthene	206-44-2	ND	2
Benzidine	92-87-5	ND	50
Pyrene	129-00-0	ND	2
Benzylbutylphthalate	85-68-7	ND	2
3,3'-dichlorobenzidine	91-94-1	ND	50
Benzo(a)anthracene	56-55-3	ND	2
Bis-(2-ethylhexyl)phthalate	117-81-7	ND	20
Chrysene	218-01-9	ND	2
Di-n-octylphthalate	117-84-0	ND	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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-11A to SP-11D
Lab Number: 9211056-08E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/05/92
Date Received: 11/05/92
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Benzo(ghi)perylene	191-24-2	ND	2

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	52	25 -	121
Phenol-d6	13127-88-3	60	24 -	113
Nitrobenzene-d5	4165-60-0	55	23 -	120
2-Fluorobiphenyl	321-60-8	76	30 -	115
2,4,6-Tribromophenol	118-79-6	50	19 -	122
Terphenyl-d14	98904-43-9	94	18 -	137

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

Note: Detection limits increased due to matrix interference

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: METHOD BLANK
Lab Number: 9211056-09A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

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	0.2
Pentachlorophenol	87-86-5	ND	0.2
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: METHOD BLANK
Lab Number: 9211056-09A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: METHOD BLANK
Lab Number: 9211056-09A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/06/92
Date Analyzed: 11/06/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211056-09A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/06/92
Extraction Method:	EPA 3550	Date Analyzed:	11/06/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	56	25	121
Phenol-d6	13127-88-3	62	24	113
Nitrobenzene-d5	4165-60-0	69	23	120
2-Fluorobiphenyl	321-60-8	71	30	115
2,4,6-Tribromophenol	118-79-6	84	19	122
Terphenyl-d14	98904-43-9	64	18	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-4A to SP-4D
Lab Number: 9211056-01
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	2	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	6	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	39	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	0.2	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	24	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	17	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	290	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	5,600 a	0.3	mg/kg	11/06/92	11/06/92	EPA 5030	EPA 8015
Lead	28	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	7	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	29	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-5A to SP-5D
Lab Number: 9211056-02
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	29	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	21	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	11	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	92	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	1,900 a	0.3	mg/kg	11/06/92	11/06/92	EPA 5030	EPA 8015
Lead	25	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	18	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	6	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	17	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	28	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-6A to SP-6D
Lab Number: 9211056-03
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	2	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	8	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	30	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	17	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	99	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	870	0.3	mg/kg	11/06/92	11/06/92	EPA 5030	EPA 8015
Lead	43	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	6	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	17	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	32	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-7A to SP-7D
Lab Number: 9211056-04
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	3	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	40	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	26	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	11	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	ND	50b	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	180 a	0.3	mg/kg	11/06/92	11/06/92	EPA 5030	EPA 8015
Lead	14	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	23	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	5	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	18	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	23	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline
b Detection limit increased due to presence of gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-8A to SP-8D
Lab Number: 9211056-05
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	3	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	42	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	26	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	14	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	26	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	380	0.3	mg/kg	11/06/92	11/06/92	EPA 5030	EPA 8015
Lead	21	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	24	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	6	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	32	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-9A to SP-9D
Lab Number: 9211056-06
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	2	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	5	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	35	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	23	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	19	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	ND	20b	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	7.9 [a]	0.3	mg/kg	11/06/92	11/09/92	EPA 5030	EPA 8015
Lead	38	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	21	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	8	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	37	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline
b Detection limit increased due to presence of gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-10A to SP-10D
Lab Number: 9211056-07
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	1	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Arsenic	4	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Barium	25	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Chromium	20	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Copper	15	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Diesel	57	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	1,200 a	0.3	mg/kg	11/06/92	11/09/92	EPA 5030	EPA 8015
Lead	20	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Nickel	20	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Thallium	5	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Vanadium	18	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010
Zinc	29	1	mg/kg	11/06/92	11/09/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: COMP. SP-11A to SP-11D
Lab Number: 9211056-08
Sample Matrix/Media: SOIL

Date Sampled: 11/05/92
Date Received: 11/05/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	26	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	22	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	5	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	9	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	330	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	2,800 a	0.3	mg/kg	11/06/92	11/09/92	EPA 5030	EPA 8015
Ignitability	NI	--	Degrees F	--	11/06/92	--	SW 7.1.2
Lead	17	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	20	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
pH	7.8	--	S.U.	--	11/05/92	--	EPA 9045
Reactive Cyanide	<0.3	0.3	mg/kg	--	11/06/92	--	EPA 9010
Reactive Sulfide	<10	10	mg/kg	--	11/09/92	--	SW 7.3.4.2
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	4	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	16	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	22	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received
a Sample appears to be weathered gasoline
NI = Not Ignitable

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92110.56

Sample Identification: METHOD BLANK
Lab Number: 9211056-09
Sample Matrix/Media: SOIL

Date Sampled: --
Date Received: --

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Arsenic	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Barium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Chromium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Cobalt	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Copper	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Diesel	ND	1	mg/kg	11/06/92	11/06/92	EPA 3550	EPA 8015
Gasoline	ND	0.3	mg/kg	11/06/92	11/06/92	EPA 5030	EPA 8015
Lead	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/06/92	11/06/92	EPA 7741	EPA 7471
Molybdenum	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Nickel	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Reactive Cyanide	<0.3	0.3	mg/kg	--	11/06/92	--	EPA 9010
Reactive Sulfide	<10	10	mg/kg	--	11/09/92	--	SW 7.3.4.2
Selenium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Vanadium	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010
Zinc	<1	1	mg/kg	11/06/92	11/06/92	EPA 3050	EPA 6010

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 basis, as received

GeoAnalytical Laboratories, Inc

1031 Kansas Ave.
Modesto, California 95351

Phone (209) 572-0900
Fax # (209) 572-0916

REPORT

Report# D315-06

Date: 11/16/92

Clayton Environmental Consultants
P.O. Box 9019
Pleasanton, CA 94566

Date Received: 11/10/92
Date Started: 11/10/92
Date Completed: 11/14/92

P.O.# Project Name: 9211056

Sample ID: 9211056-088
Lab ID: D22956

Aquatic Toxicity

Species: Pimephales Promelas
Common Name: Fathead Minnow
Supplier: Thomas Fish Farm
Dead in Acclimation Tank: <1%
Average Length: 27 mm
Average Weight: 0.22 g

Test Type: 96-Hour Screening Bioassay
Dilution Water: Holding Tank Water
Number per Tank: 20
Tank Volume: 10 L

Initial Control Hardness: 48 mg/L

Final Control Hardness: 56 mg/L

Results/ Notes:

1. There were no mortalities observed in this test. LC50 > 500 mg/L.

Report : D315-06

Sample ID: 9211056-088
Lab ID: D22956

BioAssay Report

		Control	250 mg/L	500 mg/L	750 mg/L
Initial 11/10/92					
	pH	7.13	7.03	7.11	7.08
	D.O.	7.80	7.58	8.37	8.01
	Temp.*	21	21	21	21
24 Hrs. 11/11/92					
	pH	7.24	7.07	7.13	7.18
	D.O.	7.49	6.88	7.40	7.64
	Temp.	21	21	21	21
Mortalities:		0	0	0	0
48 Hrs. 11/12/92					
	pH	7.05	7.01	7.03	7.25
	D.O.	7.99	7.17	7.77	7.58
	Temp.	20	20	20	20
Mortalities:		0	0	0	0
72 Hrs. 11/13/92					
	pH	7.10	7.08	7.19	7.31
	D.O.	8.07	7.39	7.41	7.60
	Temp.	20	20	20	20
Mortalities:		0	0	0	0
96 Hrs. 11/14/92					
	pH	7.19	7.17	7.00	7.22
	D.O.	7.82	7.56	7.56	7.49
	Temp.	20	20	20	20
Mortalities:		0	0	0	0
Total Mortalities:		0	0	0	0

* Note: all temperature readings are recorded in degrees Celsius.

Julia Sedlock
Julia Sedlock
Bacteriological Dept. Head

Donna Allsup
Donna Allsup
Laboratory Director

Certification # E757

Chain-of-Custody Record

No. 3213

Date: 11/5/92

Page 1 of 1

Project No.: 2.26.10

Samplers (Signatures):

	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	RCI	Total CAM 17 Metals	Aquatic Toxicity	Cooled	Soil (S) or water (W)	Acidified	Number of containers
01	11/5	930	SP-4A-D			X	X	X	X			X		X	S		4
02		950	SP-5A-D			X	X	X	X			X		X	S		4
03		1010	SP-6A-D			X	X	X	X			X		X	S		4
04		1030	SP-7A-D			X	X	X	X			X		X	S		4
05		1050	SP-8A-D			X	X	X	X			X		X	S		4
06		1110	SP-9A-D			X	X	X	X			X		X	S		4
07		1130	SP-10A-D			X	X	X	X			X		X	S		4
08		1150	SP-11A-D			X	X	X	X		X	X	X	X	S		4

ANALYSES

REMARKS

Additional comments

Bill Port of Oakland directly

Composite A-D before analysis.

Also send copy of results to Dan Schuenholz at Port of Oakland

Turnaround time: 24 hrs.

Results to: Elizabeth K. Wells

Total No. of containers: 32

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:
Signature:	11/5/92	Signature: Charlie Crocker	11/5/92	Signature:
Printed name: James M. Abitz		Printed name:		Printed name: TAMMI R ALTON
Company: Geomatrix		Company: Geomatrix		Company: CLAYTON
Received by:	Time: 1200	Received by:	Time: 1425	Received by:
Signature: Charlie Crocker		Signature:		Signature: Tammy B Bullock
Printed name: Charlie Crocker		Printed name: T. ALTON @ 4:27pm 11/5/92		Printed name: C. ALTON
Company: GEOMATRIX		Company: CLAYTON		Company:

Date: 11-5-92 Time: 1525

Method of shipment: Lab Pickup

Laboratory comments and Log No.:

2x4 8C

9211056

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA 94111
(415) 434-9400

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

December 2, 1992

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

Client Ref. 2026.10
Clayton Project No. 92112.55

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on November 20, 1992. 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

cc: Dan Schoenholz (Port of Oakland)

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-01E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-01E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	0.06	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	0.20	0.03
o-Xylene	95-47-6	ND	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

ND Not detected at or above limit of detection
-- Information not available or not applicable
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Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
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Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
1,2-Dichloroethane-d4	17060-07-0	106	70 - 121
Toluene-d8	2037-26-5	98	81 - 117
Bromofluorobenzene	460-00-4	101	74 - 121

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

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-23A,B,C,D	Date Sampled:	11/20/92
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Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.03
Bromomethane	74-83-9	ND	0.03
Vinyl chloride	75-01-4	ND	0.03
Chloroethane	75-00-3	ND	0.03
Methylene chloride	75-09-2	ND	0.03
Trichlorofluoromethane	75-69-4	ND	0.03
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.03
Trans-1,2-Dichloroethene	156-60-5	ND	0.03
Cis-1,2-Dichloroethene	156-59-2	ND	0.03
Chloroform	67-66-3	ND	0.03
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.03
Carbon tetrachloride	56-23-5	ND	0.03
Bromodichloromethane	75-27-4	ND	0.03
1,2-Dichloropropane	78-87-5	ND	0.03
Cis-1,3-Dichloropropene	10061-01-5	ND	0.03
Trichloroethene	79-01-6	ND	0.03
Benzene	71-43-2	ND	0.03
Dibromochloromethane	124-48-1	ND	0.03

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

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-23A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-02E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.03
Trans-1,3-Dichloropropene	10061-02-6	ND	0.03
2-Chloroethylvinylether	110-75-8	ND	0.03
Bromoform	75-25-2	ND	0.03
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.03
Tetrachloroethene	127-18-4	ND	0.03
Toluene	108-88-3	ND	0.03
Chlorobenzene	108-90-7	ND	0.03
Ethylbenzene	100-41-4	0.12	0.03
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.03
Freon 113	76-13-1	ND	0.03
p,m-Xylenes	--	1.3	0.03
o-Xylene	95-47-6	0.45	0.03
Acetone	67-64-1	ND	0.1
2-Butanone	78-93-3	ND	0.1
4-Methyl-2-pentanone	108-10-1	ND	0.1
2-Hexanone	591-78-6	ND	0.1
Vinyl acetate	108-05-4	ND	0.05

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

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-23A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-02E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.03
Styrene	100-42-5	ND	0.03
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	100	70 - 121
Toluene-d8	2037-26-5	91	81 - 117
Bromofluorobenzene	460-00-4	108	74 - 121

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

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211255-03A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics			
Chloromethane	74-87-3	ND	0.005
Bromomethane	74-83-9	ND	0.005
Vinyl chloride	75-01-4	ND	0.005
Chloroethane	75-00-3	ND	0.005
Methylene chloride	75-09-2	ND	0.005
Trichlorofluoromethane	75-69-4	ND	0.005
1,1-Dichloroethene	75-35-4	ND	0.005
1,1-Dichloroethane	75-35-3	ND	0.005
Trans-1,2-Dichloroethene	156-60-5	ND	0.005
Cis-1,2-Dichloroethene	156-59-2	ND	0.005
Chloroform	67-66-3	ND	0.005
1,2-Dichloroethane	107-06-2	ND	0.005
1,1,1-Trichloroethane	71-55-6	ND	0.005
Carbon tetrachloride	56-23-5	ND	0.005
Bromodichloromethane	75-27-4	ND	0.005
1,2-Dichloropropane	78-87-5	ND	0.005
Cis-1,3-Dichloropropene	10061-01-5	ND	0.005
Trichloroethene	79-01-6	ND	0.005
Benzene	71-43-2	ND	0.005
Dibromochloromethane	124-48-1	ND	0.005

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211255-03A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	11/23/92
Preparation Method:	EPA 5030	Date Analyzed:	11/23/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trans-1,3-Dichloropropene	10061-02-6	ND	0.005
2-Chloroethylvinylether	110-75-8	ND	0.005
Bromoform	75-25-2	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
1,3-Dichlorobenzene	541-73-7	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Freon 113	76-13-1	ND	0.005
p,m-Xylenes	--	ND	0.005
o-Xylene	95-47-6	ND	0.005
Acetone	67-64-1	ND	0.02
2-Butanone	78-93-3	ND	0.02
4-Methyl-2-pentanone	108-10-1	ND	0.02
2-Hexanone	591-78-6	ND	0.02
Vinyl acetate	108-05-4	ND	0.01

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: METHOD BLANK
Lab Number: 9211255-03A
Sample Matrix/Media: SOIL
Preparation Method: EPA 5030
Analytical Method: EPA 8240

Date Sampled: --
Date Received: --
Date Prepared: 11/23/92
Date Analyzed: 11/23/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	0.005
Styrene	100-42-5	ND	0.005
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	108	70 - 121
Toluene-d8	2037-26-5	96	81 - 117
Bromofluorobenzene	460-00-4	100	74 - 121

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-01E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-01E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	0.8	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	0.7	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-01E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

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Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-22A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-01E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	67	25	121
Phenol-d6	13127-88-3	79	24	113
Nitrobenzene-d5	4165-60-0	94	23	120
2-Fluorobiphenyl	321-60-8	89	30	115
2,4,6-Tribromophenol	118-79-6	93	19	122
Terphenyl-d14	98904-43-9	86	18	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-23A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-02E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-23A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-02E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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	1.5	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
2-chloronaphthalene	91-58-7	ND	0.2
2-methyl naphthalene	91-57-6	1.2	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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	COMP. SP-23A,B,C,D	Date Sampled:	11/20/92
Lab Number:	9211255-02E	Date Received:	11/20/92
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/28/92
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: COMP. SP-23A,B,C,D
Lab Number: 9211255-02E
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: 11/20/92
Date Received: 11/20/92
Date Extracted: 11/23/92
Date Analyzed: 11/28/92

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
Surrogates		Recovery (%)	QC Limits (%) LCL - UCL
2-Fluorophenol	367-12-4	40	25 - 121
Phenol-d6	13127-88-3	45	24 - 113
Nitrobenzene-d5	4165-60-0	44	23 - 120
2-Fluorobiphenyl	321-60-8	53	30 - 115
2,4,6-Tribromophenol	118-79-6	50	19 - 122
Terphenyl-d14	98904-43-9	44	18 - 137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211255-03A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/25/92
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

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: METHOD BLANK
Lab Number: 9211255-03A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/23/92
Date Analyzed: 11/25/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: METHOD BLANK
Lab Number: 9211255-03A
Sample Matrix/Media: SOIL
Extraction Method: EPA 3550
Analytical Method: EPA 8270

Date Sampled: --
Date Received: --
Date Extracted: 11/23/92
Date Analyzed: 11/25/92

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Base/Neutral Extractables (continued)			
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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211255-03A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/23/92
Extraction Method:	EPA 3550	Date Analyzed:	11/25/92
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

Surrogates		Recovery (%)	QC Limits (%) LCL	UCL
2-Fluorophenol	367-12-4	67	25 -	121
Phenol-d6	13127-88-3	77	24 -	113
Nitrobenzene-d5	4165-60-0	80	23 -	120
2-Fluorobiphenyl	321-60-8	96	30 -	115
2,4,6-Tribromophenol	118-79-6	69	19 -	122
Terphenyl-d14	98904-43-9	75	18 -	137

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: COMP. SP-22A,B,C,D
Lab Number: 9211255-01
Sample Matrix/Media: SOIL

Date Sampled: 11/20/92
Date Received: 11/20/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Arsenic	4	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Barium	39	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Chromium	26	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Copper	17	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Diesel	ND	6a	mg/kg	11/23/92	11/24/92	EPA 3550	EPA 8015
Gasoline	27	0.3	mg/kg	11/23/92	11/23/92	EPA 5030	EPA 8015
Lead	110	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/24/92	11/24/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Nickel	25	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Thallium	3	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Vanadium	23	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Zinc	48	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010

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
a Detection limit increased due to presence of heavier hydrocarbons

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: COMP. SP-23A,B,C,D
Lab Number: 9211255-02
Sample Matrix/Media: SOIL

Date Sampled: 11/20/92
Date Received: 11/20/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Arsenic	2	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Barium	37	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Chromium	24	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Cobalt	6	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Copper	19	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Diesel	ND**	10a	mg/kg	11/23/92	11/24/92	EPA 3550	EPA 8015
Gasoline	110	0.3	mg/kg	11/23/92	11/23/92	EPA 5030	EPA 8015
Lead	44	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/24/92	11/24/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Nickel	24	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Vanadium	20	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Zinc	35	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010

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
a Detection limit increased due to presence of gasoline
** Heavier hydrocarbons present

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.55

Sample Identification: METHOD BLANK
Lab Number: 9211255-03
Sample Matrix/Media: SOIL

Date Sampled: —
Date Received: —

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Antimony	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Arsenic	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Barium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Beryllium	<0.1	0.1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Cadmium	<0.1	0.1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Chromium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Cobalt	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Copper	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Diesel	ND	1	mg/kg	11/23/92	11/24/92	EPA 3550	EPA 8015
Gasoline	ND	0.3	mg/kg	11/23/92	11/23/92	EPA 5030	EPA 8015
Lead	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Mercury	<0.1	0.1	mg/kg	11/24/92	11/24/92	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Nickel	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Selenium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Silver	<0.5	0.5	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Thallium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Vanadium	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010
Zinc	<1	1	mg/kg	11/23/92	11/25/92	EPA 3050	EPA 6010

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

Chain-of-Custody Record

No 3226 | Date: 11/20/92 | Page 1 of 1

Project No.: 2026.10

Samplers (Signatures):

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	Tot. 17 metals	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/20	1515	SP-22A-D			X	X	X	X		X	X	S		4
11/20	1535	SP-23A-D			X	X	X	X		X	X	S		4

ANALYSES

REMARKS

Additional comments

Bill Port of Oakland directly.

Copy of results to Dan Schoenholz, Port of Oakland

Turnaround time: 1 week.

Results to: Elizabeth K. Wells

Total No. of containers: 8

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Signature:	11/20/92	Signature:	11/20/92	Signature:		Lab Pickup
Printed name: James M. Abitz		Printed name: Clayton		Printed name:		Laboratory comments and Log No.:
Company: Geomatrix		Company:		Company:		9211255 2x40c
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**	
Signature: Jim Mitchell	1545	Signature: Tracy B. Bullock	5:00 PM	Signature:		
Printed name: Clayton		Printed name: Tracy B. Bullock		Printed name:		
Company:		Company: Clayton		Company:		

Relinquished by: Jim Mitchell
Signature: Jim Mitchell
Printed name: Clayton
Company:

Geometrix Consultants
100 Pine St. 10th Floor
San Francisco, CA 94111
(415) 434-9400

GEOMATRIX

APPENDIX C

CHAIN-OF-CUSTODY RECORDS AND ANALYTICAL LABORATORY REPORTS PIPE FLUID SAMPLE

Western Operations

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

Clayton
ENVIRONMENTAL
CONSULTANTS

December 1, 1992

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

Client Ref. 2026.10
Clayton Project No. 92112.57

Dear Ms. Wells:

Attached is our analytical laboratory report for the samples received on November 20, 1992. 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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.57

Sample Identification:	H2O	Date Sampled:	11/19/92
Lab Number:	9211257-01A	Date Received:	11/20/92
Sample Matrix/Media:	WATER	Date Prepared:	11/24/92
Preparation Method:	EPA 5030	Date Analyzed:	11/24/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	130	0.4
Toluene	108-88-3	950	0.3
Ethylbenzene	100-41-4	270	0.3
p,m-Xylenes	---	1,200	0.4
o-Xylene	95-47-6	570	0.4
Gasoline	---	11,000	50
SURROGATE		RECOVERY (%)	LIMITS (%)
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.57

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9211257-02A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	11/24/92
Preparation Method:	EPA 5030	Date Analyzed:	11/24/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
p,m-Xylenes	---	ND	0.4
o-Xylene	95-47-6	ND	0.4
Gasoline	---	ND	50
SURROGATE		RECOVERY (%)	LIMITS (%)
a,a,a-Trifluorotoluene	98-08-8	107	50 - 150

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

Results of Analysis
for
Geomatrix Consultants/ Port of Oakland

Client Reference: 2026.10
Clayton Project No. 92112.57

Sample Matrix/Media: WATER
Preparation Method: EPA 3510
Analysis Method: EPA 8015

Date Received: 11/20/92
Date Prepared: 11/23/92
Date Analyzed: 11/24/92

Lab Number	Sample Identification	Date Sampled	Diesel (ug/L)	Detection Limit (ug/L)
01E	H2O	11/19/92	13,000 a**	50
02A	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

[a] Unidentified hydrocarbons present in diesel range; quantitation based on diesel

** Heavier hydrocarbons present

Chain-of-Custody Record

№ 3224

Date: 11/19/92

Page 1 of 1

Project No.: 2026.10

Samplers (Signatures): [signature]

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	Cooled	Soil (S) or water (W)	Acidified	Number of containers
11/19	1030	H2O					X	X		X	W	X	6

JBF (handwritten beside the first sample row)

REMARKS

Additional comments: Bill Port at Oakland directly

9211257

Turnaround time: 1 week

Results to: Elizabeth K. Wells

Total No. of containers: 6

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Signature: [signature]	11/20/92	Signature: Jim Mitchell	11/20/92	Signature:	
Printed name: James M. Abita		Printed name: JIM MITCHELL		Printed name:	
Company: Geomatrix		Company: CLAYTON		Company:	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Signature: Jim Mitchell	1545	Signature: Tracy B Bullock	5:00 PM	Signature:	
Printed name: JIM MITCHELL		Printed name: TRACY B BULLOCK		Printed name:	
Company: CLAYTON		Company: CLAYTON		Company:	

Method of shipment: Lab Pickup

Laboratory comments and Log No.: Pres'd w/ 1L +4 @ -4oml. Cond. OK

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA 94111
(415) 434-9400

GEOMATRIX

APPENDIX D

PROTOCOLS

PROTOCOL

DRILLING AND DESTRUCTION OF SOIL BORINGS

1.0 INTRODUCTION

This protocol describes the procedures to be followed during the drilling and logging of soil borings. The information gathered from the exploratory borings will provide information about geologic conditions, soil engineering properties and/or soil quality. If the soil boring is utilized for well installation, the well will be installed in accordance with the protocol INSTALLATION OF WELLS.

The procedures presented herein are intended to be of a general use. As the work progresses and, if warranted, appropriate revisions will be made by the project manager. Detailed procedures in this protocol may be superceded by applicable regulatory requirements.

2.0 DRILLING

If required, permits for the drilling of soil borings will be acquired from the appropriate agency before drilling is initiated and an underground utility check will be conducted. The soil borings will be drilled using a rotary, hollow stem auger, or other appropriate method. In mud rotary borings, appropriate drilling fluid additives, such as bentonite, will be used to maintain an open hole and to carry cuttings to the surface. However, no organic drilling fluid additives will be used. The drilling mud will be circulated into a settling tank or basin located near the boring. Viscosity of the drilling fluid will be assessed periodically by the driller and will be controlled throughout the drilling operation to achieve the required results (hole stability, sample return, and minimum mud cake along boring wall). Only potable water will be used as makeup water for drilling fluid. Exploratory borings drilled

using the hollow stem auger generally do not require the use of drilling fluid. If required, potable water from a municipal supply will be used to maintain boring stability.

The specific depth of each soil boring will be determined by the Geomatrix project manager before drilling. The Geomatrix field geologist/engineer will specify to the drill rig operator the depth of soil sample collection, method of sample retrieval, and other matters pertaining to the satisfactory completion of the borings. Drill cuttings, unused soil samples, and drilling fluids generated during drilling of soil borings will be stored for future disposal by the client in accordance with legal requirements.

The drill rods, augers, hoses, drive samplers, bits, and other components which fluids and cuttings contact will be thoroughly steam cleaned on-site before drilling each boring, including at the beginning of each project and at the completion of field activities. Only potable water from a municipal supply will be used for decontamination of drilling equipment. All decontamination rinsate will be collected and stored for future disposal by the client in accordance with legal requirements.

3.0 SAMPLING AND LOGGING

3.1 OBTAINING SAMPLES

Borings will be continuously cored, or sampled at depth intervals specified by the project manager based on the intended use of the boring. Samples and/or cuttings will be obtained for logging purposes at least every five feet for all borings. Drive samples will be used to log hollow stem borings, if continuous core is not collected. The samples and/or drill cuttings will be collected and described. A lithologic log of these samples will be made. Grain-size (sieve) analyses may be performed on selected samples in potential well completion zones and in other zones. These analyses will be summarized on standard grain-size analysis sheets. Other physical testing may also be performed on soil samples to

evaluate additional physical properties. Samples for chemical analysis will be collected in accordance with the protocol SOIL SAMPLING FOR CHEMICAL ANALYSIS.

3.1.1 Coring and/or Discrete Sampling

Continuous cores from mud rotary borings will be collected, with a split-barrel sampler using a wire-line method of sampler operation. Continuous cores from the auger borings will be collected with a split-barrel sampler. The core diameter will be a minimum of 1.5 inches. In general, the split-barrel sampler will be opened for observation and logging of the retrieved core.

For discrete sampling of mud rotary or auger borings, sampling will be accomplished by driving or pushing a split-barrel sampler. The field geologist/engineer will record information pertaining to the sampling, such as rate of penetration, hydraulic ram pressure or drive-hammer blow count, coring smoothness and sample recovery on the BORING LOG.

At selected depth intervals, the split-barrel sampler may be fitted with brass or stainless steel liners for collection of soil samples for possible subsequent chemical or physical testing. Samples may be retained for future review and/or preserved for chemical or physical testing, as specified by the project manager. The samples will be stored and labeled to show project number, boring number, and cored interval denoted either by depth or sequential numbering system. Procedures for the preservation and transport of soil samples retained for chemical analysis are presented in the protocol SOIL SAMPLING FOR CHEMICAL ANALYSIS.

3.1.2 Collecting Drill Cuttings

The field geologist/engineer will observe drill cuttings from the drilling return for every 5-foot increment of the rotary borings that are not continuously cored. Sampling and logging will be done by adherence to the following procedures:

A. The height of the drilling table above ground surface, lengths of the drill bit, sub and drill collars, and length of drill rods should be taken into account in calculating the depth of penetration.

B. In mud rotary drilling, a small diameter, fine mesh, hand screen will be used to obtain a sample of the cuttings from the borings by holding the screen directly in the flow of the drill fluid return line. In air rotary drilling, cuttings will be collected after discharge from the cyclone.

C. In rotary drilling, a composite sample may be obtained from the return line by leaving the screen in place during the time it takes the driller to advance the boring to any preselected depth.

D. In rotary drilling, the travel time for cuttings to reach the surface may be estimated each time the driller adds a new length of drill rod by timing the first arrival of cuttings after circulation is resumed. This travel time will be used along with the depth of penetration to estimate the start and finish of each 5-foot sampling interval.

3.2 LOGGING OF EXPLORATORY BORINGS

The observations of the field geologist/engineer will be recorded on a BORING LOG OR WELL LOG at the time of drilling. The drill rig operator and the field geologist/engineer will discuss significant changes in material penetrated by the drill, changes in drilling conditions, hydraulic pressure, drilling action, and drilling fluid circulation rate. The field geologist/engineer will be present during drilling of soil borings and will observe and record such changes by time and depth.

Drill cuttings and core samples will be observed in the field. A lithologic description will be recorded on the log using the Unified Soil Classification System (USCS) as described in ASTM D 2488-90. This description will include the USCS soil type, grain sizes and estimated percentages of each, moisture content, color according to the Munsell color charts (Kollmorgen Instruments Corp.), plasticity for fine-grained materials, consistency or

density, and any other pertinent information, such as degree of induration, calcareous content, presence of fossils and other distinctive materials.

The original field logs will be sent or delivered to the Geomatrix office for review by the Registered Geologist or Engineer and the project manager and for storage in the project files.

4.0 GEOPHYSICAL LOGS

Following completion of drilling, downhole geophysical logs may be performed immediately after the drilling fluid has been circulated to remove all of the cuttings. Geophysical methods and equipment will be selected to provide stratigraphic or hydrogeologic data appropriate for the project. Geophysical logging will be done as quickly and efficiently as possible, while the boring side wall is still in stable condition, to minimize the possibility of interference with the down-hole probes. Instruments on the logging unit will be adjusted to give the maximum definition of strata boundaries. All down-hole geophysical equipment will be cleaned before and after entering each borehole.

5.0 FIELD SCREENING

Soil samples at the boring locations may be screened using a portable meter such as a photoionization detector (PID), a flame ionization detector (FID), or a lower explosion limit (LEL) meter, or other organic vapor meter. The meter may be used to assess the presence of VOCs or other gases in soil samples. Additional field screening techniques for chemical characterization of soils may include x-ray fluorescence (XRF) and thin layer chromatography (TLC). Procedures for field screening are described in the protocol SOIL SAMPLING FOR CHEMICAL ANALYSIS.

5.2 CHAIN-OF-CUSTODY PROCEDURES

After samples have been collected and labeled, they will be maintained under chain-of-custody procedures. These procedures document the transfer of custody of samples from the field to the laboratory.

A CHAIN-OF-CUSTODY RECORD will be filled out for each sample sent to the laboratory for analysis. Information contained on the triplicate carbonless form will include:

- Name of sampler.
- Date and time sampled.
- Sample I.D.
- Number of sample bottles.
- Sample Matrix (soil, water, or other).
- Analyses required.
- Remarks, including any preservatives, special conditions, or specific quality control measures.
- Turnaround time and person to receive lab report.
- Project number.
- Signatures of all people assuming custody.
- Signatures of field sampler at top of chain-of-custody.
- Condition of samples when received by lab.

Blank spaces on the chain-of-custody record will be crossed out between last sample number listed and signatures at the bottom of the sheet.

The field sampler will sign the chain-of-custody record and will record the time and the date at the time of transfer to the laboratory or an intermediate person. A set of signatures is required for each relinquished/received transfer, including transfer within Geomatrix. The original imprint of the chain-of-custody record will accompany the sample containers. A duplicate copy will be placed in the Geomatrix project file.

6.0 EQUIPMENT CLEANING

The sampler, brass or stainless steel liners, spatula, and any tools used in the assembly and disassembly of the sampler will be thoroughly cleaned before and after each use. All soil will be removed from the tools and parts and the tools will be steam-cleaned or washed in laboratory-grade detergent water with a brush followed by rinsing in potable water. Decontamination rinsate will be contained and stored for future disposal by the client in accordance with legal requirements.

PROTOCOL

INSTALLATION AND DESTRUCTION OF WELLS

1.0 INTRODUCTION

This protocol describes procedures to be followed during the installation or destruction of monitoring, groundwater extraction, and vapor extraction wells. The procedures presented herein are intended to be of general use. As the work progresses, and if warranted, appropriate revisions will be made and approved by the project manager. Detailed procedures in this protocol may be superceded by applicable regulatory requirements.

2.0 WELL INSTALLATION

If required, permits for the installation of wells will be acquired from the appropriate regulatory agency before drilling is initiated. After well installation, well completion report(s) will be completed and filed with the California State Department of Water Resources or the appropriate agency.

Each groundwater monitoring well will be designed to enable measurement of the potentiometric surface and to permit water sampling of a specific water-bearing zone. Each vapor monitoring well will be designed to enable measurement of pressure conditions and permit sampling of a specific zone. The field geologist/engineer, in consultation with the project Geologist or Engineer who will be registered with the State of California if required, will specify the screened interval using the lithologic log and geophysical log (if performed) and will select the well materials and techniques for well completion to be compatible with the formations and the intended use of the well. Drilling and logging of the borings for the wells will be in conformance with the protocol DRILLING OF SOIL BORINGS.

Construction of all wells will be in conformance with the following provisions. A TYPICAL MONITORING WELL CONSTRUCTION DIAGRAM is attached.

2.1 WELL SCREEN AND CASING

The well casing will generally consist of threaded stainless steel or polyvinyl chloride (PVC) schedule 40 (minimum) casing. The inside diameter of the casing will be large enough to permit easy passage of an appropriate water level probe and equipment for purging wells and water sample collection.

The well screen will generally consist of machine-slotted or wire-wrapped PVC or stainless steel screen. The slot sizes will be compatible in size with the selected filter material. The screened sections will provide flow between the target zone and the well, allowing efficiency in well development and collection of representative samples.

2.2 FILTER MATERIAL

Filter material will be well graded, clean sand with less than 2 percent by weight passing a No. 200 sieve and less than 5 percent by weight of calcareous material. The filter material will be either a standard sand gradation designed for a range of anticipated soil types or a sand gradation specifically designed to fit the soils collected from anticipated well completion zones.

2.3 SETTING SCREENS AND RISER CASING

Upon completion of drilling and/or geophysical logging, the boring will be sounded to verify the total depth, and the well casing will be assembled and lowered into the boring. Well casing materials will be measured to the nearest 0.01 foot and steam cleaned before being lowered into the borehole. The casing and screen will be suspended a few inches above the bottom of the boring. The well assembly will be designed so that the well screen is opposite the target zone. The bottom of the screen will typically be flush with the bottom of the well and will be fitted with a secure bottom cap. The PVC casing and well screen joints will be flush coupled. No PVC cement or other solvents will be used to

fasten the joints of casing or well screen. When installing wells in an open borehole, stainless steel centralizers will be used immediately above and below the well screen and approximately every thirty (30) to fifty (50) feet along the length of the casing. Centralizers need not be placed on well assemblies installed within augers or drill casings because the auger or drill casing will adequately center the well casing and screen in the borehole.

For borings drilled by the mud rotary method, potable water may be added to the drill mud fluid and circulated in the borehole after completion of the boring. Circulation will continue until the suspended sediment in the return fluid has been thinned. If borehole conditions are relatively stable, the mud will be thinned before the casing assembly is lowered to the specified depth. This is preferred because it minimizes clogging of the well screen with thick mud. Conversely, if borehole conditions are relatively unstable, the mud will be thinned after the casing is placed at the specified depth but prior to installation of annular fill materials. After installation of the well assembly, a slurry of filter sand and potable water will then be tremied into the annular space. For borings drilled using the hollow stem auger method, the filter sand will be placed after the well assembly has been lowered to the specific depth through the augers. The augers will be incrementally raised as the filter sand is placed by free fall through the augers. The depth to the top of the filter pack will be measured after each increment to detect possible bridging. If bridging occurs, it will be broken by washing the filter materials into proper place with potable water, or by repeatedly raising and lowering the augers slightly. The filter sand will be placed in a calculated quantity sufficient to fill the annular space to a level of about 1 to 2 feet above the top of the well screen for monitoring wells. For extraction wells the level of filter sand above the well screen will be based on site-specific conditions. The depth to the top of the filter pack will be verified by measuring, using a tremie pipe or a weighted tape. Groundwater extraction wells or monitoring wells may be surged before placement of the transition seal to promote filter pack settlement, as specified by the project manager.

Once the depth to the top of the filter pack has been verified, bentonite or fine sand may be placed in the annular space as a transition seal between the filter sand and the grout. If bentonite is to be placed below standing water, a high solids bentonite grout will be pumped through a tremie pipe, or pellets may be poured through the annulus. If bentonite is to be placed above standing water, a high solids bentonite grout should be used or pellets may be placed in three-inch lifts. Each lift should be hydrated using approximately one gallon of potable water per 3-inch lift of pellets. A sufficient quantity of bentonite will be poured to fill the annular space to a level of about 2 feet above the top of the filter pack. The completed bentonite transition seal will be allowed to hydrate for at least 30 minutes prior to placing the grout. If a layer of fine sand is placed as the transition seal, the fine sand will be mixed with potable water and placed as a slurry through the tremie pipe or poured dry through the annulus. The depth to the top of the transition seal will be verified by measuring, using the tremie pipe or a weighted tape.

A neat cement grout, cement/sand grout, or cement/bentonite grout seal will be placed from the top of the transition seal to the ground surface. The grout seal will be placed by pumping through a tremie pipe lowered to within five feet of the top of the transition seal in mud rotary borings. The grout seal will be placed in hollow stem auger borings by free fall through the augers as they are incrementally raised or by pumping through flexible hose lowered to near the bottom of the zone to be grouted. The grout must be tremied if there is any standing water in the augers above the transition seal. Grout/additive/water mixtures will be determined on a site-specific basis. Typical specifications of grout mixtures include: a) neat cement/bentonite grout, a mixture of one sack (94 pounds) portland cement, approximately 2 to 5 percent by weight (of cement) powdered bentonite, and approximately 6 to 8 gallons of water; b) neat cement grout consisting of one sack of portland cement and approximately 5 to 6 gallons of water; and c) cement/sand grout consisting of no more than two parts sand to 1 part cement and approximately 7 gallons of water. Only potable water will be used to prepare the grout. After grouting, no work will be done on the monitoring well until the grout has set a minimum of 24 hours.

2.4 DEVELOPMENT OF GROUNDWATER MONITORING OR EXTRACTION WELLS

When the well installation is complete, the well will be developed by surging, bailing, and/or pumping or other appropriate method as specified by the project manager. The objectives of well development are to remove sediment that may have accumulated during well installation, to consolidate the filter pack around the well screen, and to enhance the hydraulic connection between the target zone and the well. A minimum of 24 hours must pass between completion of grouting and development, to allow sufficient curing of the grout. In most instances, a bailer will be used to remove sediment and turbid water from the bottom of the well. A surge block then used within the entire screened interval to flush the filter pack of fine sediment. Surging will be conducted slowly to minimize disruption to the filter pack and screen. The well will be bailed again to remove sediment drawn in by the surging process until suspended sediment is minimized. Following the bailing and surging the well will be further developed using air-lift or pumping methods. A bailer may be used for low-yield wells. The well will be developed at a higher pumping rate than the anticipated rate of future purging, if possible. During development, the turbidity of the water will be monitored and the pH, specific conductance, and temperature of the return water will be measured. Drawdown and recovery will be measured during and at the end of the development process, respectively, using an electric sounder. Well development will proceed until the return water is of sufficient clarity, in the judgment of the Geomatrix field personnel. If the screened interval is too long to be developed adequately in one stage, additional stages will be employed, in which the end of the pump intake will be raised or lowered to various depths, as required.

2.5 SURFACE COMPLETION

Upon completion of the well, a suitable slip-on cap, threaded end cap, or waterproof cap will be fitted on the top of the riser casing to prevent the entry of surface runoff or foreign matter. A steel protective well cover (e.g., stovepipe) will be completed either above the ground surface, or a vault with a traffic rated cover will be completed at the ground

surface. All wells will be locked for security, and will be designed to limit surface water infiltration.

2.6 DOCUMENTATION

A well construction diagram for each well will be completed in the field on the MONITORING WELL LOG by the field geologist/engineer and submitted to the project geologist or engineer upon completion of each well. Well installation and construction data will be summarized on the FIELD WELL CONSTRUCTION SUMMARY. Well development notes and field measurements of water quality parameters will be summarized on a MONITORING WELL SAMPLING RECORD. A DAILY FIELD RECORD and the well development record will also be submitted to the project geologist or engineer upon completion of each monitoring well.

3.0 CLEANING OF DRILLING EQUIPMENT

Cleaning of the drill rig and associated drilling equipment will follow the procedures discussed in Section 2 of the protocol DRILLING AND DESTRUCTION OF SOIL BORINGS.

All well casing materials will be cleaned thoroughly before they are installed. Well development equipment will be cleaned thoroughly before use. The following cleaning procedure has been found to be effective and will be used or adapted as appropriate for general conditions of materials or equipment to be cleaned.

1. Swab surfaces, inside and out, with a laboratory grade detergent-potable water solution or steam clean with a detergent-potable water solution.

2. Steam rinse with potable water or rinse in deionized or organic-free water.

3. Cover with clean plastic to protect materials and equipment from contact with chemical products, dust, or other contaminants.

Alternatively, well casing materials that have been steam-cleaned and sealed in individual airtight plastic bags by the factory can be used.

Decontamination rinsate will be collected and stored for future disposal by the client in accordance with legal requirements.

4.0 WELL DESTRUCTION

Destruction of wells will be completed in accordance with applicable state and local requirements. If required, permits for destruction will be obtained from the appropriate regulatory agency. As part of destruction design and implementation, care will be taken to seal groundwater pathways between multiple aquifers, and limit surface water infiltration through the destroyed borehole.

If possible, the well casing will be removed from the borehole. For shallow wells, and if the well has been completed in the uppermost aquifer, the casing may be pulled from the borehole before auger entry. Alternatively, and if the well has been completed below the uppermost aquifer, the annular fill may be drilled out with hollow-stem augers and the casing removed from the borehole through the augers. If the well casing is PVC or other similar material and cannot be removed as described above, it may be removed by drilling out the casing and annular fill using a tricone or drag bit and a rotary drilling method. The borehole will be redrilled to the same or slightly larger diameter than the original borehole. The redrilled borehole will be plumb and adequately centered, and all the well casing will be removed. The borehole will be filled with a neat cement, cement/sand or cement/bentonite grout. A high-solids bentonite grout may be used in the saturated zone. The grout will be placed in one continuous pour before its initial set from the bottom of the boring to the ground surface. The grout will be emplaced by pumping through a tremie pipe or flexible hose which is initially lowered to the bottom of the borehole. and raised incrementally as emplacement proceeds. The augers should be raised incrementally as emplacement proceeds, but not to exceed increments of 20 feet or greater than allowed by

borehole stability. Boreholes that are terminated above the water table and are not greater than 20 feet deep may be grouted by a continuous pour originating at the ground surface.

If the well casing cannot be removed, grout may be tremied into the casing as described above. If the filter pack interconnects multiple distinct water-yielding zones, the casing must be cut opposite the aquifer to be sealed as well as through the intervening aquitard before grout is emplaced. This will allow the grout to seal the filter pack area, thereby prohibiting vertical movement of groundwater between the zones. Grout should be placed opposite the aquifer and for a vertical distance of at least ten feet above (and below the aquifer, if applicable). If the aquifer is confined and the head pressure is great, the grout may need to be emplaced under pressure.

The volume of sealing material used will be calculated and compared to the casing or borehole volume to ensure bridging has not taken place during well destruction. If the well is in an urban area and if the casing remains in the borehole, a hole will be excavated around the well to a depth of five feet, and the casing will be removed to the bottom of the excavation. The sealing material will be allowed to spill over into the excavation to form a cap. The remainder of the excavation will be backfilled with either native material, grout, or concrete.

PROTOCOL

WATER LEVEL, WELL DEPTH, AND FREE PRODUCT MEASUREMENTS

1.0 INTRODUCTION

This protocol describes procedures to be followed during water level, well depth, and free product measurements. The procedures presented herein are intended to be of a general nature and, as the investigation progresses and when warranted, appropriate revisions may be made by the project manager.

2.0 WATER LEVEL AND WELL DEPTH MEASUREMENTS

Water level measurements at a site will be taken as quickly as possible, to best represent the potentiometric surface across the site at a single time. If pressure is suspected or has developed inside the well casing, the well will be allowed to stand without a cap for a few minutes before taking the water-level measurement. Water-level measurements will be recorded to the nearest hundredth foot, and well depth measurements will be noted to the nearest half foot. Equipment placed in the wells for water level and well depth measurements will be cleaned prior to reuse, as discussed in Section 5. Care will be taken to not drop any foreign objects into the wells and to not allow the tape or sounding device to touch the ground around the well during monitoring.

2.1 WATER LEVEL MEASUREMENTS

Water level measurements will be performed by one of the following methods:

A. Wetted-tape Method

A steel surveyor's tape will be prepared by coating several feet of the lower end of the tape with chalk or water-finding paste. A lead weight is attached to the lower end of the steel tape to keep it taut. The tape is lowered into the well until a foot or two of the chalked portion is submerged.

Tape without weight can be used if the well opening or pump casing clearance is too small and restricts the passage of weight. The proper length to lower the tape may have to be determined experimentally. Measurement will be done as follows:

1. Lower and hold the tape at an even foot mark at the Measuring Point (MP) and note this tape reading.

2. Remove the steel tape from the well. Add or subtract the wetted length from the even foot mark noted in Step 1 as appropriate for your tape, and record this as water level below MP on the WATER LEVEL MONITORING RECORD.

B. Electric Sounder Method

An electric sounder consists of a contact electrode that is suspended by an insulated electric cable from a reel that has an ammeter, a buzzer, a light, or other closed circuit indicator attached. The indicator shows a closed circuit and flow of current when the electrode touches the water surface. Electric sounders will be calibrated by measuring each interval and remarking them where necessary.

The procedure for measuring water levels with an electric sounder is as follows:

1. Switch on.

2. Lower the electric sounder cable into the well until the ammeter or buzzer indicates a closed circuit. Raise and lower the electric cable slightly until the shortest length of cable that gives the maximum response on the indicator is found.

3. With the cable in this fixed position, note the length of cable at the MP.

4. Since the electric cable is graduated in intervals, use a pocket steel tape measure (graduated in hundredths of a foot) to interpolate between consecutive marks. Care must be taken that the tape measurements are subtracted from graduated mark footage value when the water level hold point (determined in Step 3) is below the graduated mark and added when above the mark. Record the resulting value as water level below MP on the WATER LEVEL MONITORING RECORD.

2.2 WELL DEPTH MEASUREMENT

Depth of a well will be measured by sounding with a weighted steel surveying tape or an electric sounding line, weighted when possible. Procedures to be followed are described below.

A. Measure the distance between the zero mark on the end of the measuring line and the bottom of the weight.

B. Lower the weighted measuring line into the well until the line becomes slack or there is noticeable decrease in weight, which indicates the bottom of the well. Raise the line slowly until it becomes taut (this may have to be done several times to determine that taut point) and, with the line in this fixed position, note the reading at the MP. Add the distance described in Step A to this reading, and record the resulting value as well depth. This procedure will be performed before and after initial well development or as necessary to determine well casing depth.

C. Record the well depth value on a MONITORING WELL SAMPLING RECORD.

4.0 FLOATING FREE PRODUCT MEASUREMENT

Floating free product level/thickness measurements will be measured using a Flexidip interface probe (or other similar interface probe) or using an electric sounder and a bailer. The electric sounder and bailer method is limited to measuring product thickness less than the length of the bailer. Alternatively, if the free product is to be measured is hydrocarbon product, the thickness is greater than the length of the bailer, and a Flexidip is not available, a steel surveyor's tape and gasoline or oil finding paste in combination with water finding paste may be used. All floating free product level measurements shall be recorded to the nearest hundredth foot. All equipment placed in the wells for free product level measurement will be cleaned prior to reuse, as discussed in Section 5.0. Care will be taken to not drop any foreign objects into the wells and to not allow the measuring device to touch the ground around the well during monitoring.

4.1 FLEXIDIP INTERFACE PROBE METHOD

The Flexidip free product-water interface probe consists of a contract electrode that is suspended by a graduated tape from a reel that has a light and two-toned audible signals. Audible and visual signals occur when the electrode touches the free product surface and then the water surface.

The procedure for measuring free product levels using the Flexidip is as follows:

1. Turn the probe on. A short chirp every 5 seconds signals that the probe is on.
2. Lower the steel probe cover into the well until the cover sits on well casing near the measuring point. Make sure the WIPER switch is off.
3. Unlock the reel using the lock screw and lower tape and probe down into well using reel.
4. When the probe reaches the free product level, the audible signal will be a continuous tone, and the yellow OIL light will be illuminated.
5. Lock reel using lock screw, lift up, and read the level from the tape-viewing window on the side of the steel probe cover.
6. Unlock the reel and slowly lower probe to find the interface level.
7. When the probe reaches the interface, the audible signal changes from a continuous tone to an interrupted tone, and the red INTERFACE light flashes.
8. Lock reel and read level.
9. Turn on WIPER switch and reel up. Always thoroughly clean off any free product before reeling the tape and probe in.
10. Turn probe off and store in case after cleaning.
11. Replace battery when a continuous chirping sound is heard after turning on power with the probe in air. Always replace battery in a gas-free atmosphere.

4.2 ELECTRIC SOUNDER AND BAILER METHOD

The procedure for measuring free product using an electric sounder and an acrylic bailer are as follows:

A. Measure the water level with the electric sounder as described in Section 2.1

B. Suspend a clean acrylic bailer on a line and slowly lower the bailer into the well until it partially intersects the groundwater surface

C. Slowly pull the bailer to the surface

D. Let the bailer stand for several minutes

E. Measure the thickness of the product in the bailer to the nearest 0.01 foot and record the value on the sampling record. If the product is less than 0.01 foot thick the amount should be recorded as less than 0.01 foot. If only a shean is observed, or no free product is seen, these observations should be recorded.

4.3 STEEL TAPE AND PASTE METHOD

A. Measure the water level with an electric sounder as described in Section 2.1.

B. Spread a thin layer of gasoline or oil finding paste on one side of a steel surveyor's tape beginning at the zero foot mark and extending up the tape about one-foot more than the anticipated thickness of the free product.

C. Spread a thin film of water finding paste on the opposite side of the tape beginning at the zero foot mark and extending up the tape about one-foot.

D. Slowly lower the tape into the well until the zero foot mark is located about six inches below the water level (the tape reading at the measuring point should be six inches greater than the actual depth to water). Take care not touch the sides of the well with the tape.

E. Slowly remove the tape from the well. The pastes will have changed color upon contact with the water or the free product. The product thickness is the difference between the tape reading at the point where water finding paste indicates the water level to be and the point where the gasoline or oil finding paste indicates the top of the free product to be.

5.0 EQUIPMENT CLEANING

Steel tapes, electric well sounders, and acrylic bailers will be cleaned after measurements in each well. Cleaning procedures will be as follows:

A. Wipe free product off with disposable towels. Rinse probe or portion of instrument that was immersed in well water with a solution of laboratory-grade detergent and potable water.

B. Rinse with potable water.

C. Dry with a clean paper towel.

D. The Flexidip may also be cleaned with acetone at this stage.

Solutions resulting from cleaning procedures will be collected and stored for future disposal by the client in accordance with legal requirements.

PROTOCOL

SAMPLING OF GROUNDWATER MONITORING WELLS AND WATER SUPPLY WELLS

1.0 INTRODUCTION

This protocol describes procedures to be followed during collection of field water quality measurements and groundwater samples for laboratory chemical analysis from monitoring wells and water supply wells. The procedures presented herein are intended to be of general use. As the work progresses, and if warranted, appropriate revisions will be made by the Geomatrix project manager.

2.0 SAMPLING

2.1 SAMPLE COLLECTION

A. Monitoring Wells - For wells completed without dedicated sampling pumps, at least four well casing volumes or one saturated borehole volume, whichever is greater, will be removed to purge the well prior to collection of groundwater samples. The saturated borehole volume is the volume of water in the well casing plus the volume of water in the filterpack. Periodic observations of turbidity and measurements of temperature, pH, and specific conductance will be made with field equipment during purging to evaluate whether the water samples are representative of the target zone. Samples will be collected only when: 1) a minimum of four sets of parameter readings have been taken, and 2) the temperature, pH, and specific conductance reach relatively constant values, and the turbidity has stabilized.

Wells that recharge very slowly may be purged dry once, allowed to recharge, and then sampled as soon as sufficient water is available. In this case, at least two parameter readings of field water quality should be taken; one initially and one after recharge.

A submersible pump, diaphragm pump, positive displacement pump which may contain a bladder, or a bailer will be used for evacuating (purging) the monitoring well casing. Generally, purging will begin with the pump inlet at the midscreen interval and the pump will be raised through the water column as

purging progresses, ending just below the water table in order to remove stagnant water from the well casing. The majority of the purge volume will be taken from the mid-screen interval. Purging will progress at a rate intended to minimize differential drawdown between the interior of the wellscreen and the filter sand, to limit cascading water along the inside of the well casing.

Clean latex or solvex gloves will be worn by the sampler before beginning sampling. A Teflon bailer or a stainless steel positive displacement Teflon® bladder pump with Teflon® tubing will be used to collect the water samples for laboratory chemical analysis. The sample will be taken from the midscreen interval and the depth will be recorded.

Each sampling episode will begin with the well having the least suspected concentrations of target compounds. Successive wells will be sampled in sequence of increasing suspected concentration.

B. Water Supply Wells - Water supply wells, designated by the project manager, will be sampled by purging the wells for a period of time adequate to purge the pump riser pipe. If the well is currently pumping, the sample can be taken without purging the well. Water samples will then be collected from the discharge point nearest the well head. Samples will be collected directly in laboratory-prepared bottles.

C. Extraction Wells - Extraction wells will be sampled while extraction is occurring, from an in-line sampling port after purging the sampling line. Samples will be collected directly in laboratory-prepared bottles.

A MONITORING WELL SAMPLING RECORD will be used to record the following information:

- Sample I.D.
- Duplicate I.D., if applicable
- Date and time sampled.
- Name of sample collector.
- Well designation (State well numbering system for water supply wells, and unique sequential number for other wells).
- Owner's name, or other common designation for water supply wells.
- Well diameter
- Depth to water on day sampled
- Casing volume on day sampled
- Method of purging (bailing, pumping, etc.).
- Amount of water purged.
- Extraordinary circumstances (if any).

- Results of instrument calibration/standardization and field measurements (temperature, pH, specific electrical conductance) and observed relative turbidity.
- Depth from which sample was obtained.
- Number and type of sample container(s).
- Purging pump intake depth.
- Times and volumes corresponding to water quality measurement.
- Purge rate.

2.2 SAMPLE CONTAINERS AND PRESERVATION

Appropriate sample containers and preservatives for the analyses to be performed will be obtained from the subcontracted analytical laboratory. Frequently requested analyses and sample handling requirements are listed in Table 1.

2.3 SAMPLE LABELING

Sample containers will be labeled with self-adhesive tags having the following information written in waterproof ink:

A. Geomatrix
B. Project number.
C. Sample number.
D. Date and time sample was collected.
E. Initials of sample collector.

2.4 QUALITY CONTROL SAMPLES

In order to evaluate the precision and accuracy of analytical data, quality control samples such as duplicates and blanks will be periodically employed. These samples will be collected, or prepared and analyzed by the laboratory, as specified in the project Quality Assurance Project Plan or by the project manager.

2.5 HANDLING, STORAGE, AND TRANSPORTATION

Efforts will be made to handle, store, and transport supplies and samples safely. Exposure to dust, direct sunlight, high temperature, adverse weather conditions, and possible

contamination will be avoided. Samples will be placed in a clean chest, which contains ice or blue ice if cooling is required, immediately following collection and will be transported to the subcontracted laboratory as soon as possible.

3.0 FIELD MEASUREMENTS

Field measurements of temperature, pH, and specific conductance will be performed on groundwater samples. Data obtained from field water quality measurements will be recorded on the MONITORING WELL SAMPLING RECORD. Field measurements will be made on aliquots of groundwater that will not be submitted for laboratory analysis.

3.1 TEMPERATURE MEASUREMENT

Temperature measurements will be made with a mercury filled thermometer or an electronic thermistor, and all measurements will be recorded in degrees Celsius.

3.2 PH MEASUREMENT

The pH measurement will be made as soon as possible after collection of the sample, generally within a few minutes.

The pH meter will be calibrated at the beginning and once during each sampling day and whenever appropriate in accordance with the equipment manufacturer's specifications as outlined in the instruction manual for the specific pH meter used. Two buffers (either pH-4 and pH-7, or pH-7 and pH-10, whichever most closely bracket the anticipated range of groundwater conditions) will be used for instrument calibration.

3.3 SPECIFIC CONDUCTANCE MEASUREMENT

Specific conductance will be measured by immersing the conductivity probe directly in the water source or into a sample. The probes used should automatically compensate for the temperature of the sample. Measurements will be reported in units of micromhos per centimeter at 25 degrees Celsius.

The specific conductance meter will be calibrated at the beginning and once during each sampling day in accordance with the equipment manufacturer's specifications as outlined in the instruction manual for the specific conductivity meter used. The conductivity meter will be calibrated with a standardized potassium chloride (KCl) solution.

4.0 DOCUMENTATION

4.1 FIELD DATA SHEETS

A MONITORING WELL SAMPLING RECORD will be used to record the information collected during water quality sampling. Following completion of sampling and review by the project manager or task leader, the original data sheets will be placed in the project file.

4.2 CHAIN-OF-CUSTODY PROCEDURES

After samples have been collected and labeled, they will be maintained under chain-of-custody procedures. These procedures document the transfer of custody of samples from the field to a designated laboratory.

A CHAIN-OF-CUSTODY RECORD will be filled out for each shipment of samples to be sent to the laboratory for analysis. Each sample will be entered on the Chain-of-Custody form after it is collected and labeled. Information contained on the triplicate carbonless form will include the following:

- Name of sampler.
- Date and time sampled.
- Sample I.D.
- Number of sample bottles.
- Sample Matrix (soil, water, or other).
- Analyses required.
- Remarks, including any preservatives, special conditions, or specific quality control measures.
- Turnaround time and person to receive lab report.
- Project number.
- Signatures of all people assuming custody.

- Signatures of field sampler at top of chain-of-custody.
- Condition of samples when received by lab.

Blank spaces on the CHAIN-OF-CUSTODY RECORD will be crossed out between last sample number listed and signatures at the bottom of the sheet.

The field sampler will sign the and record the time and the date at the time of transfer to the laboratory or to an intermediate person. A set of signatures is required for each relinquished/reserved transfer including transfer within Geomatrix. The original imprint of the chain-of-custody record will accompany the sample containers. Following review by the project manager or task leader, a duplicate copy will be placed in the project file.

5.0 EQUIPMENT CLEANING

Bailers, sampling pumps, purge pumps, and any other purging or sampling apparatus will be cleaned before and after sampling of each well. Factory new and sealed disposable bailers may be used for sampling, but may not be reused. Thermometers, pH electrodes, and conductivity probes that will be used repeatedly will be cleaned before and after sampling each well and at any time during sampling if the object comes in contact with foreign matter.

Purged waters and solutions resulting from cleaning of purging or sampling equipment will be collected stored for future disposal by the client in accordance with legal requirements. Disposal of purged water will be arranged following receipt of laboratory analyses for groundwater samples.

Cleaning of reusable equipment which is not dedicated to a particular well will consist of the following:

- Bailers - the inside and outside of bailers will be cleaned in a solution of laboratory grade detergent and potable water, followed by a thorough rinse with

deionized (DI) water. They may also be steam cleaned, followed by a DI rinse. If metals samples are to be collected, the bailer should be rinsed with a pH2 nitric acid solution before the final DI rinse.

- Purge Pumps - All downhole, reusable portions of purge pumps will be steam cleaned on the outside. If the pump does not have a backflow check valve, the inside of the pump and tubing should also be steam cleaned. For purge pump with a backflow check valve, the interior of the pump and tubing may be cleaned by pumping a laboratory-grade detergent and potable water solution through the system followed by a potable water rinse, or by steam-cleaning.

- Water Quality Meters - All meters will be cleaned by rinsing the probe portions in DI water and allowing to air-dry.

- Bailer Tripod - The tripod cable will be steam cleaned or rinsed with DI water.

Sample bottles and bottle caps will be cleaned by the subcontracted laboratory using standard EPA-approved protocols. Sample bottles and bottle caps will be protected from contact with solvents, dust, or other contamination between time of receipt by Geomatrix Consultants and time of actual usage at the sampling site. Sample bottles will not be reused.

TABLE 1

WATER AND SOIL ANALYTICAL METHODS AND SAMPLE HANDLING

Parameter	Method	Containers[1]	Preservation[1]	Maximum Holding Time[1]
Total Petroleum Hydrocarbons:				
as diesel	GCFID (3550)[2]	2 - 1 liter amber glass	cool on ice	14 days
as gasoline	GCFID (5030)[2]	2 - 40 ml VOA glass	HCL to pH2: cool on ice	14 days
Benzene, Toluene, Xylene, and Ethylbenzene	EPA 8020 (soil) EPA 602 (water)	2 - 40 ml VOA glass	HCL to pH2: cool on ice	14 days
Oil and Grease	5520 D & E (soil) 5520 A & E (water)	2 - 1 liter amber glass	H_2SO_4 to pH<2: cool on ice	28 days
Volatile Organics	EPA 8010	2 - 40 ml VOA glass	cool on ice[3]	14 days
	EPA 8240[4]	2 - 40 ml VOA glass	HCL to pH 2: cool on ice	14 days
Semi-volatile Organics	EPA 8270	2 - 1 liter amber glass	cool on ice	7 days for extraction 40 days for analysis
Metals (dissolved)	EPA 7000 series for specific metal	1 - 500 ml plastic	Field filtration (0.45 micron filter): field acidify to pH 2 with HNO_3 except: Cr^{+6} - Cool on ice	6 months, except: Hg - 28 day Cr^{+6} - 24 hrs

Notes:

[1] All soil should be collected in full, clean brass liners, capped with foil and plastic caps, and sealed with tape. If soil samples are to be analyzed for metals they may be placed in clean glass jars. Soil should be cooled as indicated under "preservation" and maximum holding times apply to both soil and water.
[2] DHS recommended procedure as presented in LUFT manual using gas chromatography with a flame ionization detector.
[3] If EPA methods 8010 and 8020 are to be run in sequence, HCL may be added. Check with the project manager before adding acid.
[4] Chloroethylvinylether may be detected at concentrations below 50 parts per billion due to degradation of HCL.

References:

U.S. EPA, 1986, Test Methods for Evaluating Solid Waste - Physical/Chemical Methods - SW-846, Third Edition, July, and final amendments.
State Water Resources Control Board, 1989, Leaking Underground Fuel Tank (LUFT) Field Manual, Tables 3-3 and 3-4, October.
Regional Water Quality Control Boards, North Coast, San Francisco Bay, and Central Valley Regions, 1990, Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, 10 August .

PROJECT:	Log of Boring No.	
BORING LOCATION:	ELEVATION AND DATUM:	
DRILLING CONTRACTOR:	DATE STARTED:	DATE FINISHED:
DRILLING METHOD:	TOTAL DEPTH:	MEASURING POINT:
DRILLING EQUIPMENT:	DEPTH TO WATER / FIRST	COMPL. / 24 HRS.
SAMPLING METHOD:	LOGGED BY:	
HAMMER WEIGHT: / DROP:	RESPONSIBLE PROFESSIONAL:	REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample	Blows/ Foot	OVM Reading	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	

B-1 (11/92)

Geomatrix Consultants	Project No. #	Figure ---

PROJECT:

Log of Boring No.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS

B-2 (11/92)

Geomatrix Consultants	Project No. #	Figure ---

Chain-of-Custody Record

No

Date:

Page of

Project No.:

Samplers (Signatures):

ANALYSES

REMARKS

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												Cooled	Soil (S) or water (W)	Acidified	Number of containers	Additional comments

Turnaround time:

Results to:

Total No. of containers:

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:	Method of shipment:
Signature:		Signature:		Signature:		Laboratory comments and Log No.:
Printed name:		Printed name:		Printed name:		
Company:		Company:		Company:		
Received by:	Time:	Received by:	Time:	Received by:	Time:	
Signature:		Signature:		Signature:		
Printed name:		Printed name:		Printed name:		
Company:		Company:		Company:		

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San Francisco, CA. 94111
(415) 434-9400

DAILY FIELD RECORD

Page 1 of _____

Project Number:	Date:
Project Name:	Time of Job am pm To am pm
Location:	Field Rep.:
Weather:	Wind: / Temp.:

PERSONNEL: Name	Company	Time In	Time Out

Continue on back if necessary →

PERSONAL SAFETY CHECKLIST

	Rubber Boots		Hard Hat		Tyvek Coveralls
	Rubber Gloves		Safety Goggles		1/2-Mask Respirator

Notes:

DRUM I.D.	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION

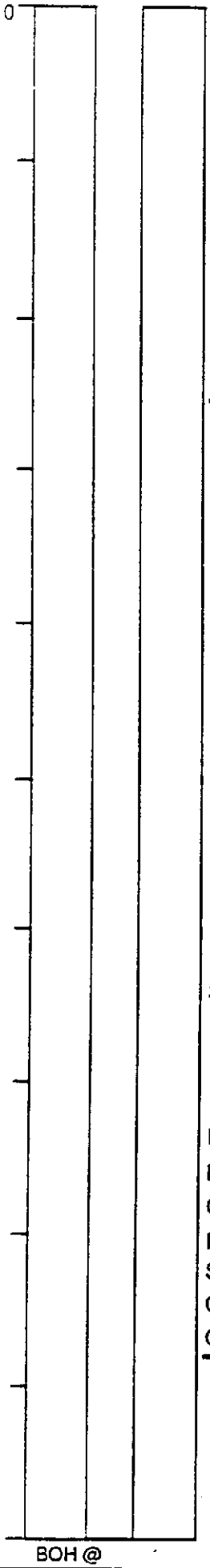
DAILY FIELD RECORD - CONTINUED

Page ______ of ______

Project Number: ____________________ Date: ____________________

Time	Location of Work / Work Performed / Field Equipment Used / Etc.

FIELD WELL CONSTRUCTION SUMMARY



Well: _____ Project: _____

Location: _____

Personnel: _____

Boring and Well Casing Depth Measurements:

Total Depth BGS of Pilot Boring : _____ Diameter: _____

Total Depth BGS of Reamed Boring: _____ Diameter: _____

Total Depth BGS of Well Casing: _____

Total Depth of Well Below Top of Casing: _____

Depth of Perforated Interval Below Top of Casing: _____

Well Design:

Geologic Log _____ Geophysical Log _____

C=Casing S=Screen F=Filter
B=Bentonite Plug G=Grout M=Fill

Feet	BGS	Code	Feet	BGS	Code

Casing:
C1 _____
C_ _____
C_ _____
C_ _____

Screen:
S1 _____
S_ _____
S_ _____

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling:				
Geophys.:				
Casing:				
Filter:				
Bent.:				
Grout:				
Other:				

Filter Material: _____

Bentonite Plug: _____

Grout: _____

Fill Material: _____

Surface Finish: _____

Centralizers: _____

Other: _____

Drilling Summary:

Drilling Agency: _____ Driller: _____

Drilling Method: _____

Drilling Equipment: _____

Drilling Fluid: _____

Drilling Bits: _____

FIELD WELL CONSTRUCTION SUMMARY NOTES

Well: _____ Project: _____

WATER LEVEL MONITORING RECORD

GEOMATRIX

Project _____ Project No. _____

Date _____ Recorded By _____ Instrument Used _____

Note: For your convenience, the following abbreviations may be used.

P = pumping I = inaccessible D = dedicated pump
ST = steel tape ES = electric sounder MP = measuring point WL = water level

Well No.	Time	MP Elevation (feet)	Water Level Below MP (feet)	Water Level Elevation (feet)	Previous Water Level Below MP	Remarks

Page ____ of ____

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MONITORING WELL SAMPLING RECORD AND WELL DEVELOPMENT DATA

Well ID: _____ Initial Depth to Water: _____

Sample ID.: _____ Duplicate ID.: _____ Depth to Water after Purging: _____

Sample Depth: _____ Total Depth of Well: _____

Project No: _____ Well Diameter: _____

Project Name: _____ 1 Casing Volume = _____

Date: _____ 4 Casing Volumes = _____

Sampled By: _____ Method of Purging: _____

Method of Sampling: _____

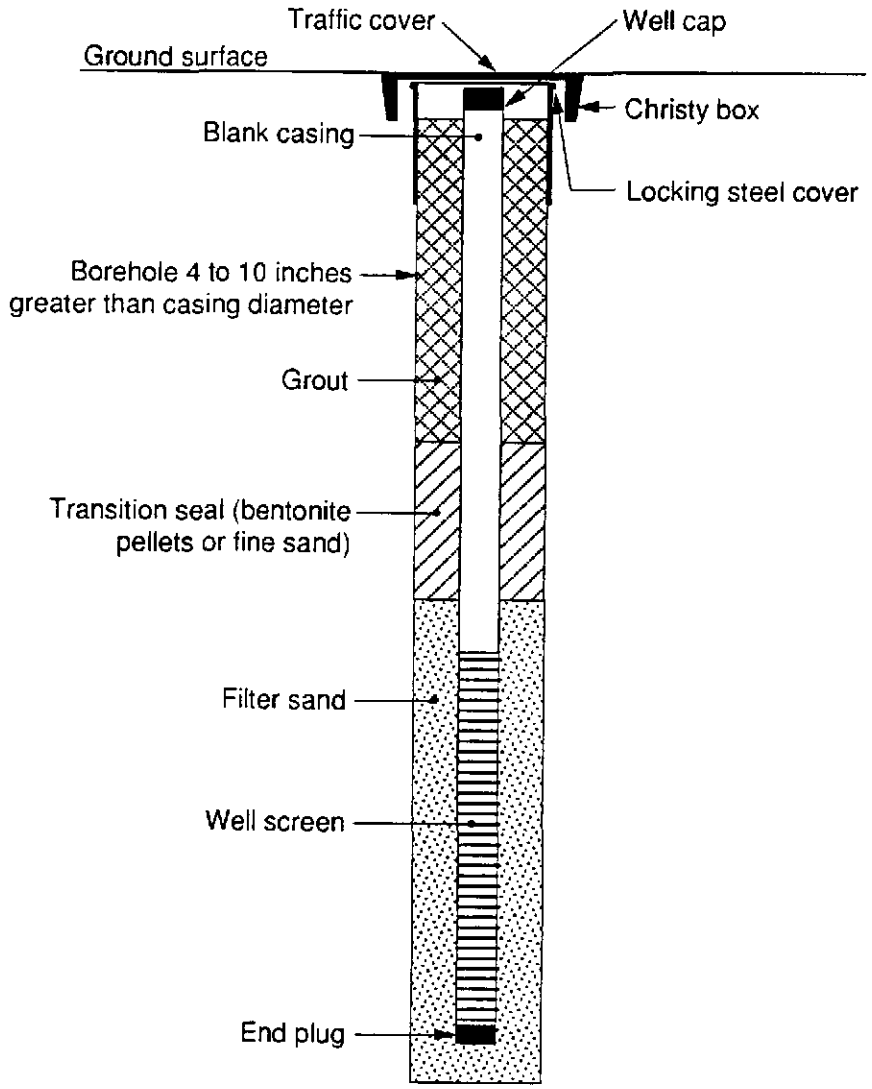
TIME	INTAKE DEPTH	RATE (gpm)	CUM. VOL. (gal)	TEMP. (°C)	pH (units)	CONDUCTIVITY (µmhos/cm)	REMARKS (color, turbidity & sediment)

Ph CALIBRATION (choose two)					Model or Unit No.:
Buffer Solution	pH 4.0	pH 7.0	pH 10.0		
Temp. °C					
Instrument Reading					

SPECIFIC CONDUCTANCE - CALIBRATION (choose one)						Model or Unit No.:
KCL Solution (µmhos/cm at 20°C	1409	12856				
Temp. °C						
Instrument Reading						

Notes _____

revised 6/91



Not to scale

GEOMATRIX	TYPICAL WELL CONSTRUCTION DIAGRAM	Figure
		Project No.

PROJECT:	Log of Well No.	
BORING LOCATION:	ELEVATION AND DATUM:	
DRILLING CONTRACTOR:	DATE STARTED:	DATE FINISHED:
DRILLING METHOD:	TOTAL DEPTH:	SCREEN INTERVAL:
DRILLING EQUIPMENT:	DEPTH TO WATER ATD:	CASING:
SAMPLING METHOD:	LOGGED BY:	
HAMMER WEIGHT: / DROP:	RESPONSIBLE PROFESSIONAL:	REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist., % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

W-1 (11/92)

Geomatrix Consultants	Project No.	Figure

PROJECT:

Log of Well No.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

W-2 (11/92)

Geomatrix Consultants	Project No. #	Figure ---