BASELINE

COPY

CONCRETE CONTAINMENT STRUCTURE REMOVAL AND REMEDIATION OVERSIGHT

JANUARY 1997

SEABREEZE YACHT CENTER
280 Sixth Avenue
Oakland, California

For:

Port of Oakland
Oakland, California

S9171-C1

5900 Hollis Street, Suite D • Emeryville, CA 94608 • (510) 420-8686

PORT OF OAKLAND

January 28, 1997

Mr. Barney M. Chan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: **Transmittal of "Concrete Containment Structure Removal and Remediation Oversight" and "Quarterly Groundwater Monitoring" reports - Seabreeze Yacht Center 280 Sixth Avenue, Oakland**

Dear Mr. Chan:

Enclosed please find a copy of Baseline Environmental Consulting's "Concrete Containment Structure Removal and Remediation Oversight" report dated January 1997 which documents removal of the foundation for the former aboveground Bunker C tank located near Clinton Basin in Oakland. This work was conducted as required in your April 24, 1996 letter in which you stated that the "site poses a **high risk to surface waters** and that remediation should be expedited to reduce petroleum discharge to the estuary." You further stated that "the removal of the concrete containment structure and contaminated soils should be a priority." This work was conducted in accordance with the Port's schedule provided to you in our May 8, 1996 letter which showed project completion by the end of calendar year 1996. Also enclosed find a copy of Baseline Environmental Consulting's "Quarterly Groundwater Monitoring Report" dated January 22, 1997.

Concrete Containment Structure Removal and Remediation Oversight Report Summary

As described in the report, approximately 780 tons of soil were excavated from beneath and around the concrete containment structure and transported to the Forward Landfill in Stockton for disposal as Class II non-hazardous waste. Results from soil sampling conducted beneath the bottom of the excavation indicate that concentrations of total lead and copper remaining in the soil are less than the Total Threshold Limit Concentration (TTLC) as well as less than ten times the Soluble Threshold Limit Concentration (STLC). Concentrations of TPH Motor Oil and Bunker C are less than the laboratory reporting limit of 10 mg/kg and only one sample contained TPH diesel above the laboratory reporting limit of 5 mg/kg (33 mg/kg).

Results from soil sampling conducted adjacent to the containment area, after removal of soil containing visible free product, showed concentrations of total lead and copper below the TTLC and ten times the STLC. Bunker C was also below the laboratory reporting limit. Concentrations of TPH motor oil ranged from 30 - 44 mg/kg. Concentrations of TPH diesel ranged from 10 - 22

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mg/kg; however, the laboratory method blank detected 5.1 mg/kg diesel due to contamination of the silica gel clean-up column.

Quarterly Groundwater Monitoring

Quarterly groundwater monitoring of wells PW-2, MW-SB2, MW-SB3, MW-SB4 and MW-SB5 was conducted in June, September, and December 1996. Enclosed find the results of the December sampling.

If you have any questions, please contact me at 272-1467.

Sincerely,

Diane Heinze

Diane Heinze, P.E.
Associate Environmental Scientist

enclosures: Concrete Containment Structure Removal and Remediation Oversight report
Quarterly Groundwater Monitoring Report

cc w/encls: Sum Arigala, RWQCB
Michele Heffes

cc w/out encls: Mark Filippini, Baseline Environmental
Neil Werner
Mark O'Brien

BASELINE

ENVIRONMENTAL CONSULTING

23 January 1997
S9171-C1

Ms. Diane Heinze
Port of Oakland
Environmental Department
530 Water Street
Oakland, California 94607

Subject: Concrete Containment Structure Removal and Remediation Oversight Report, Seabreeze Yacht Center, 280 6th Avenue, Oakland, California

Dear Ms. Heinze:

Enclosed please find seven copies of our report on Concrete Containment Structure Removal and Remediation Oversight at the Seabreeze Yacht Center site in Oakland, California. If you have any questions, please contact us.

Sincerely,

Yane Nordhav
Principal
Reg. Geologist No. 4009

Mark Filippini
Senior Engineering Geologist
Cert. Eng. Geologist No. 1312

YN:MF:cr
Enclosure

S9171-C1.197-1/23/97

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CONCRETE CONTAINMENT STRUCTURE REMOVAL AND REMEDIATION OVERSIGHT

JANUARY 1997

SEABREEZE YACHT CENTER
280 Sixth Avenue
Oakland, California

For:

Port of Oakland
Oakland, California

S9171-C1

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CONCRETE CONTAINMENT STRUCTURE REMOVAL AND REMEDIATION OVERSIGHT

Seabreeze Yacht Center
280 Sixth Avenue
Oakland, California

INTRODUCTION

This report documents oversight services performed during the removal of the concrete containment structure and surrounding soils at the former Seabreeze Yacht Center (site) in November and December, 1996. The oversight services, and associated water management of generated water during remediation activities, were performed by BASELINE Environmental Consulting. The work was performed for the Port of Oakland, Environmental Health and Safety Compliance Department (Port) in accordance with our scope of work and proposal dated 26 June 1996 and subsequent request by the Port to provide water management services. The containment structure and associated soils were removed at the request of Alameda County Department of Environmental Health by letter dated 24 April 1996. The letter, from Mr. Barney Chan, Hazardous Materials Specialist, stated that "... this site poses a high risk to surface waters and that remediation should be expedited to reduce petroleum discharge to the estuary."

The site is located at the end of Sixth Avenue, west of the Embarcadero on Port of Oakland property (Figure 1). The containment structure was located at the southwest end of the site, partially within the high tide line of the Oakland Inner Harbor and Clinton Basin (Figure 2).

The remediation activities were performed by the Port-selected general contractor, Evans Brothers, Inc. of Livermore, California. The work was performed under Port Public Works Project "Removal of Concrete Containment Structure and Associated Contaminants at the Former Seabreeze Yacht Center Marina," contract number 96-279. Since the project was performed within the high tide line of San Francisco Bay, work was performed under the following permits: Army Corps of Engineers, Nationwide Permit #38; Regional Water Quality Control Board, Waiver of Waste Discharge Requirements and Water Quality Certification; and San Francisco Bay Conservation and Development Commission, Amendment No. Four to Permit No. M90-6. Copies of the permits are attached in Appendix A to this report.

Remediation included the removal of the concrete containment structure (the foundation of a former aboveground 440,000-gallon Bunker C oil tank) and two to three feet of soil from beneath and surrounding the structure. The soil had been found, during previous investigations, to contain petroleum hydrocarbons and metals. During remediation, BASELINE provided for the treatment and discharge of water, generated by dewatering activities, to the East Bay Municipal Utility District (EBMUD) sanitary sewer system.

REMEDIATION

Prior to field activities, a site-specific Health and Safety Plan was prepared. The Health and Safety Plan was prepared for BASELINE field personnel to ensure that exposure to chemical and physical hazards was eliminated or minimized. A copy of the Health and Safety Plan is included in Appendix B.

Concrete Containment Area

Prior to removal of the concrete containment and underlying soils, sheet piling was installed. The sheet piling consisted of interlocking steel piles driven 30 feet below grade into the underlying Bay Mud. The sheet piles were placed approximately three feet beyond the limits of the 56-foot diameter concrete containment structure and defined the excavation area. Figure 3 shows the approximate location of the sheet piling surrounding the containment structure. Figure 4 shows photographs of the sheet piling surrounding the concrete containment.

On 4 November 1996, demolition began on the concrete containment structure. The concrete was approximately two to three feet thick. The concrete was shipped off-site by the contractor for recycling at Specialty Crushing in Emeryville. A total of 297 cubic yards of concrete was removed from the site. Immediately under the concrete, wood piles were discovered that served as the structural support for the pad. The piles were untreated redwood and pine logs approximately 12 to 18 inches in diameter and varying lengths of approximately 10 to 15 feet. The piles had been driven, on end, into the underlying Bay Mud and were approximately three to four feet on center. The number of and spacing between the piles made removal of the interstitial soil infeasible. The length of the piles made their removal impracticable; removing the piles would have created a potential conduit for contamination to depth, and the resultant volume displacement from removal of the piles inside the sheet piling would have resulted in an overall lowering of the base of the excavation. Photographs of the wood pilings in-place inside the excavation area are presented in Figure 5.

To remove the soil between the piles, the contractor used a backhoe to shear off the top of the piles and excavate the soil to the required depth; this resulted in 7- to 13-foot lengths of piles remaining in place. Several of the piles either sheared off below the depth of excavation or their entire length were removed during excavation; these piles were stockpiled separately on-site for later off-site disposal. The excavated soil and sheared pilings were stockpiled on-site on a lined pad, bermed with K-rail and lined with HDPE plastic sheeting (Figure 2). Larger pieces of wood were removed by either a Bob-cat or by hand and segregated on-site. Photographs of the soil stockpile area and wood piles are presented in Figure 6.

BASELINE field staff were present on-site during the entire soil excavation activities. Visible petroleum contamination appeared to be limited to the surface of the Bay Mud immediately beneath the concrete. Based on previous sampling, conducted by BASELINE, contamination was limited to approximately two feet of soils beneath the concrete; these two feet of soils were removed from the southern end of the excavation area. Near the northern, landward side of the excavation, the depth of excavation was increased to approximately three feet (Figure 3).

On 12 November 1996, Mr. Barney Chan with the Alameda County Department of Environmental Health inspected the limits of the excavation and the verification soil sample locations. He observed collection of soil samples C-1 through C-5 and C-7.

Beneath the concrete pad, the soil matrix was predominantly Bay Mud. Concrete, wood piles, and wood fragments were segregated from the soil to the extent possible. Excavation of the area inside the sheet piling was completed on 13 November. Figure 7 shows a photograph of the soil excavation activities under the former concrete containment.

Adjacent to Concrete Containment Area

During soil sample collection on the outside of the sheet piling on the land side of the excavation, free product was observed in the soils at a depth of four to five feet. Based on this observation, additional soil was excavated landward of the high tide line in an attempt to reach the limits of the visible contamination.

On 27 November, the contractor excavated a trench four to six feet deep around the northern side of the sheet piles (Figure 3). The trench was excavated to a width of approximately seven feet, at which point, evidence of soil contamination was no longer visible (Figure 8). The excavation trench and excavation area within the sheet piling were backfilled with imported clean fill and compacted to its original grade under the supervision of the Port Resident Engineer (Figure 8).

VERIFICATION SOIL SAMPLING

Following excavation of the soil from beneath the concrete containment structure, BASELINE collected seven verification soil samples at the base of the excavation (Figure 3). The soil samples were collected to determine the levels of petroleum hydrocarbons remaining at the limits of the excavation. The soil samples were collected on a sampling grid designed to identify seven sampling locations within the excavation. Samples C-1 through C-5 and C-7 were collected on 12 November 1996 by removing the top six inches of soil from the bottom of the excavation to ensure a fresh soil surface and inserting a six-inch sampling tube to a depth of one foot. The final verification soil sample, C-6, was collected in an identical manner on 14 November.

Following excavation of the trench on the northern side of the former containment structure on 27 November, three verification soil samples were collected (Figure 3). The soil samples, CS-1 through CS-3, were collected from the northern (outside) side wall of the trench at a depth of 5.0 to 5.5 feet by inserting a six-inch sampling tube into the freshly exposed sidewall of the trench.

All the soil samples from within and adjacent to the former concrete containment were transported under Chain-of-Custody protocol to PACE Analytical Laboratories in Petaluma, a State-certified laboratory. The samples were analyzed for total lead and copper and Total Petroleum Hydrocarbons (TPH) as diesel, Bunker C, and motor oil. Total lead and copper were identified at concentrations ranging from 5.59 to 26.2 mg/kg lead and 14.1 to 27.4 mg/kg copper. The total lead and copper levels were below the Total Threshold Limit Concentrations (TTLC) of 1,000 mg/kg and 2,500 mg/kg, respectively, and were less than ten times the Soluble Threshold Limit Concentrations

(STLC) of 5 mg/L and 25 mg/L, respectively. Therefore, samples were not analyzed for soluble lead and copper.

One of the seven samples from the bottom of the excavation contained 33 mg/kg of TPH as diesel; the remaining soil samples did not contain diesel, motor oil, or Bunker C above the laboratory reporting limits. The soil samples collected from the trench sidewalls adjacent to the former concrete containment contained up to 22 mg/kg TPH as diesel and 44 mg/kg TPH as motor oil; the diesel results (up to 22 mg/kg) did not resemble the laboratory standard. The method blank for the TPH analysis of the trench samples contained 5.1 mg/kg of diesel. The laboratory indicated that the diesel contamination resulted from the silica gel clean-up column and likely affected the diesel results from all three samples from the trench. TPH as Bunker C was not identified in any of the soil samples from the trench. The analytical results are summarized in Table 1 and the laboratory results are included in Appendix C.

SOIL CLASSIFICATION AND DISPOSAL

The excavated soil was stockpiled on-site and covered with visquene in a stockpile area (Figure 2). On 14 November 1996, BASELINE collected eight soil samples from the soil stockpile. The sample locations and depths were determined by random number generation in accordance with US EPA SW-846. The soil samples were collected using a hand auger or spade to access the required depth and inserting a sampling tube for sample collection. The samples were transported under Chain-of-Custody protocol to PACE Analytical Laboratory.

The samples were analyzed for soluble lead and copper using the Waste Extraction Test (WET) method to determine if the soil exhibited toxicity characteristics of a California hazardous waste. The samples were then composited into two samples and analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH), TPH as Bunker C, benzene, toluene, ethylbenzene, and xylenes (BTEX), Title 22 metals, and percent moisture to meet the profiling requirements of selected disposal facilities.

None of the soil samples contained soluble lead and copper at levels greater than the STLC for lead (5 mg/L) and copper (25 mg/L); TRPH was identified in the soil samples at concentrations ranging from 231 to 298 mg/kg. The analytical results are summarized in Table 2 and the laboratory reports are included in Appendix C.

Based on the analytical results, the excavated soil was classified as a Class II waste. The general contractor arranged for disposal of the soil at Forward Inc. landfill in Stockton, California. Between 16 and 18 December 1996, the soil was transported under California uniform nonhazardous waste manifest to Forward landfill by the general contractor. A total of 779 tons of soil was transported and disposed of at the landfill. The wood piles were transported to Redwood Landfill in Novato, by the general contractor, and disposed of as a Class III material.

WATER MANAGEMENT

The removal of the concrete containment and underlying soils required working below the shallow groundwater table and below the high tide line. Therefore, dewatering of the excavation was necessary. Sources of water in the excavation were leaks through the sheet piling and seepage up through the Bay Mud. Dewatering began on 4 November and continued through 4 December.

System Design

Treatment of the groundwater was performed in a portable 9,500-gallon Baker treatment tank equipped with a baffle to separate floating product, and a weir to allow settlement of solids. Once treated, the water was discharged through a four-inch diameter PVC piping, equipped with a totalizing flow meter, to the sanitary sewer. The nearest sanitary sewer inlet was a manhole located outside the gate of the site on Sixth Avenue (Figure 2).

Discharge Permitting

To discharge the dewatering water to the sewer, BASELINE applied for a wastewater discharge permit from EBMUD. Since the source of the discharge was from groundwater, a request for a waiver from an EBMUD prohibition on discharges of groundwater to the sewer was required as part of the permit application. Characterization of the discharge water was based on previous quarterly groundwater monitoring data from on-site monitoring well MW-SB2 (the well nearest the excavation area). The permit application was submitted to EBMUD on 20 September 1996. At the request of EBMUD, additional sampling of the well was required for analysis of polychlorinated biphenyls (PCBs). BASELINE sampled the well on 21 October and submitted the samples to PACE Analytical Laboratories for analysis. The sample met the EBMUD discharge limit of no detectable PCBs to a laboratory reporting limit of 0.1 μg/L. The laboratory reports are included in Appendix C.

EBMUD issued the Wastewater Discharge Permit (Permit), Account Number 503-50010, on 1 November 1996. A copy of the Permit is included in Appendix D. The Permit limited the rate of discharge to ten gallons per minute (gpm). Therefore, a primary, 20,000-gallon Baker storage tank was added to the treatment system, in series, preceding the treatment tank (Figure 9). This allowed storage capacity during high tide when the pumping rates reached approximately 35 gpm while discharge rates were maintained at ten gpm.

Self-Monitoring Program

The Permit required sampling of the wastewater discharge after two hours of operation. Discharge began on 6 November and continued for two hours. In accordance with the self-monitoring requirements of the Permit, BASELINE collected a wastewater discharge sample and submitted the sample under Chain-of-Custody protocol to PACE Analytical Laboratory. The sample was analyzed for Oil and Grease, TPH diesel, TPH Bunker C, and PCBs. After sampling, the system was shut down until EBMUD reviewed and approved the analytical results. The analytical results indicated that the wastewater did not contain chemical compounds above the discharge limitations of the Permit (Table 3). EBMUD reviewed the results on 8 November, and verbally approved discharging on a continuous basis. Discharge then began on 8 November on a continuous basis. Appendix C presents the laboratory reports and Appendix E presents a copy of the self-monitoring report.

The Permit also required discharge sampling as part of the self-monitoring program, 30 days after start of the discharge and on the last day of discharge. Dewatering activities ended on 4 December, and discharges from the tanks ended on 5 December, 29 days after startup. BASELINE collected a sample of the wastewater discharge during the final draining of the tanks on 5 December. The sample was submitted to PACE Analytical and analyzed for TPH diesel, TPH Bunker C, and PCBs (Table 3). The analytical results of the wastewater were below the Permit discharge limitations. The laboratory reports are presented in Appendix C.

System Decommissioning

Decommissioning of the storage and treatment tanks was accomplished by draining the tanks by gravity in a manner that did not result in discharge of the sediments to the sewer. No floating product was present in either of the tanks. On 5 December, the tanks were pressure-washed and the sediments in the bottom of the tanks removed by a vacuum truck, by a tank cleaning contractor, Pesco, Inc. of Martinez. The sediments were then emptied from the vacuum truck into two 55-gallon drums. The drums were labeled and stored on-site. On 18 December, the drum contents were solidified by Port of Oakland contractor, Dillard Environmental, and transported for off-site disposal at Ensco West in Willmington, California.

The results of the system closure and the final self-monitoring report were presented to EBMUD in a letter dated 10 December 1996. A copy of the closure and self-monitoring report is presented in Appendix F.

CONCLUSIONS

Following removal of contaminated soils, the excavation was backfilled with a low permeable soil, compacted, and capped in accordance with the bid specifications. The low permeable soil was placed directly on the Bay Mud and the wood pilings remaining beneath the excavation. The cap consisted of a filter fabric over the low permeable soil, a fine-grained then coarse-grained fill, another filter fabric, then a layer of rip-rap to protect the cap from tidal action (Figure 10). The sheet piles were then removed. Figure 11 shows photographs of the excavation area following completion of the capping. Backfilling and capping was performed under the direction of the Port Resident Engineer.

Based on the results of the verification sampling, one of seven soil samples from beneath the concrete containment had levels of TPH above laboratory limits (C-2 at 33 mg/kg TPH as diesel); no other analytes were identified above the laboratory reporting limit.

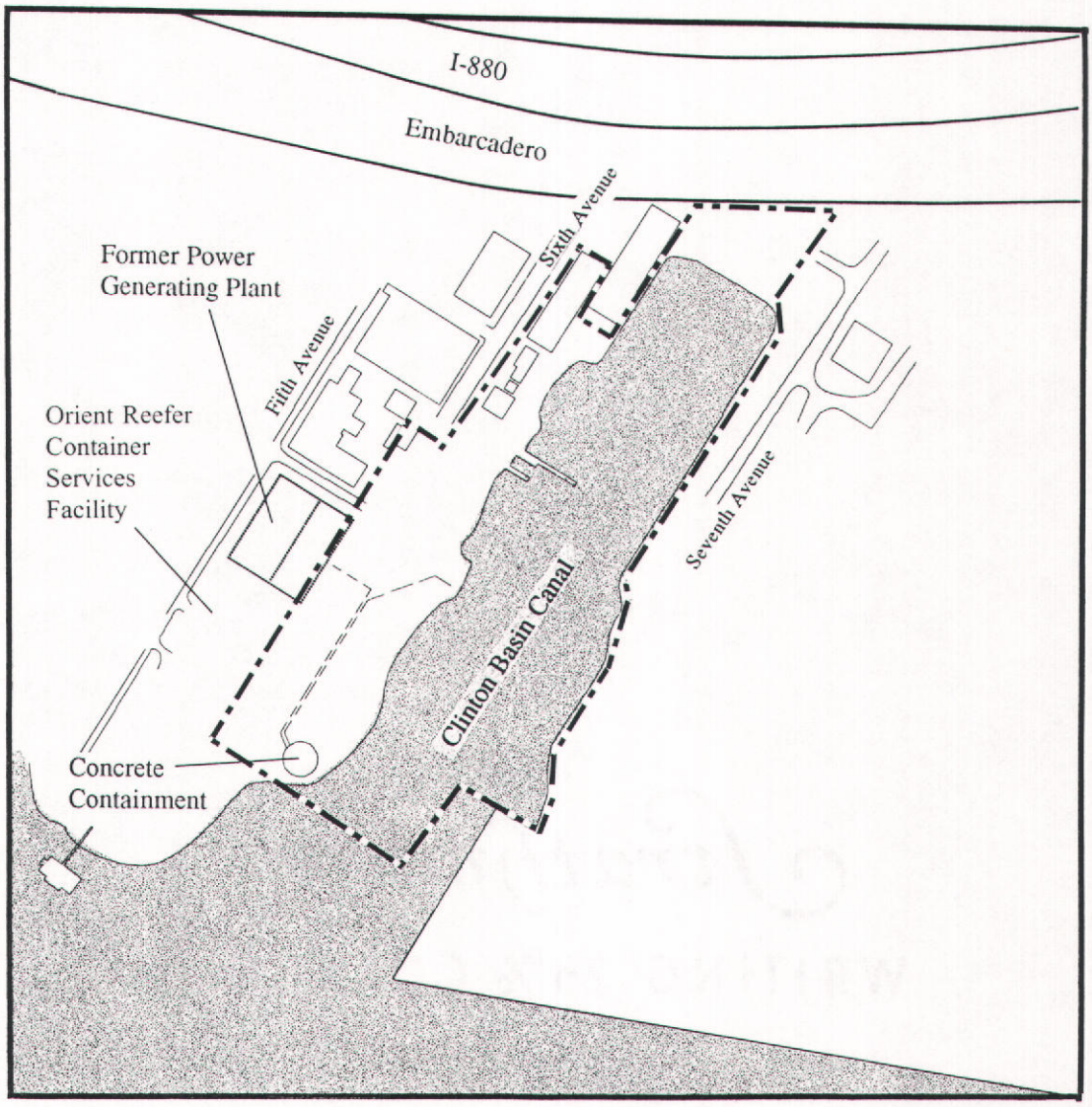
Soil samples collected from outside the containment area did not contain TPH as Bunker C above the laboratory reporting limit of 10 mg/kg. TPH as motor oil was identified in samples ranging from 30 mg/kg to 44 mg/kg. TPH as diesel was reported at levels ranging from 10 mg/kg to 22 mg/kg; however, the method blank also contained 5.1 mg/kg of TPH as diesel; the laboratory indicated that the diesel quantification resulted from the silica gel clean-up column and likely affected all diesel results.

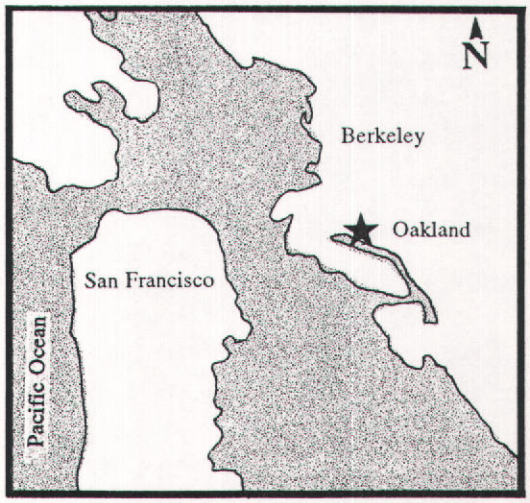
LIMITATIONS

The conclusions presented in this report are professional opinions based on the indicated data described in this report. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study. Changes in the conditions of the subject property can occur with time, because of natural processes or the works of man, on the subject sites or on adjacent properties. Changes in applicable standards can also occur as the result of legislation or from the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

PROJECT AND REGIONAL LOCATION

Figure 1





Seabreeze Yacht Center
Oakland, California

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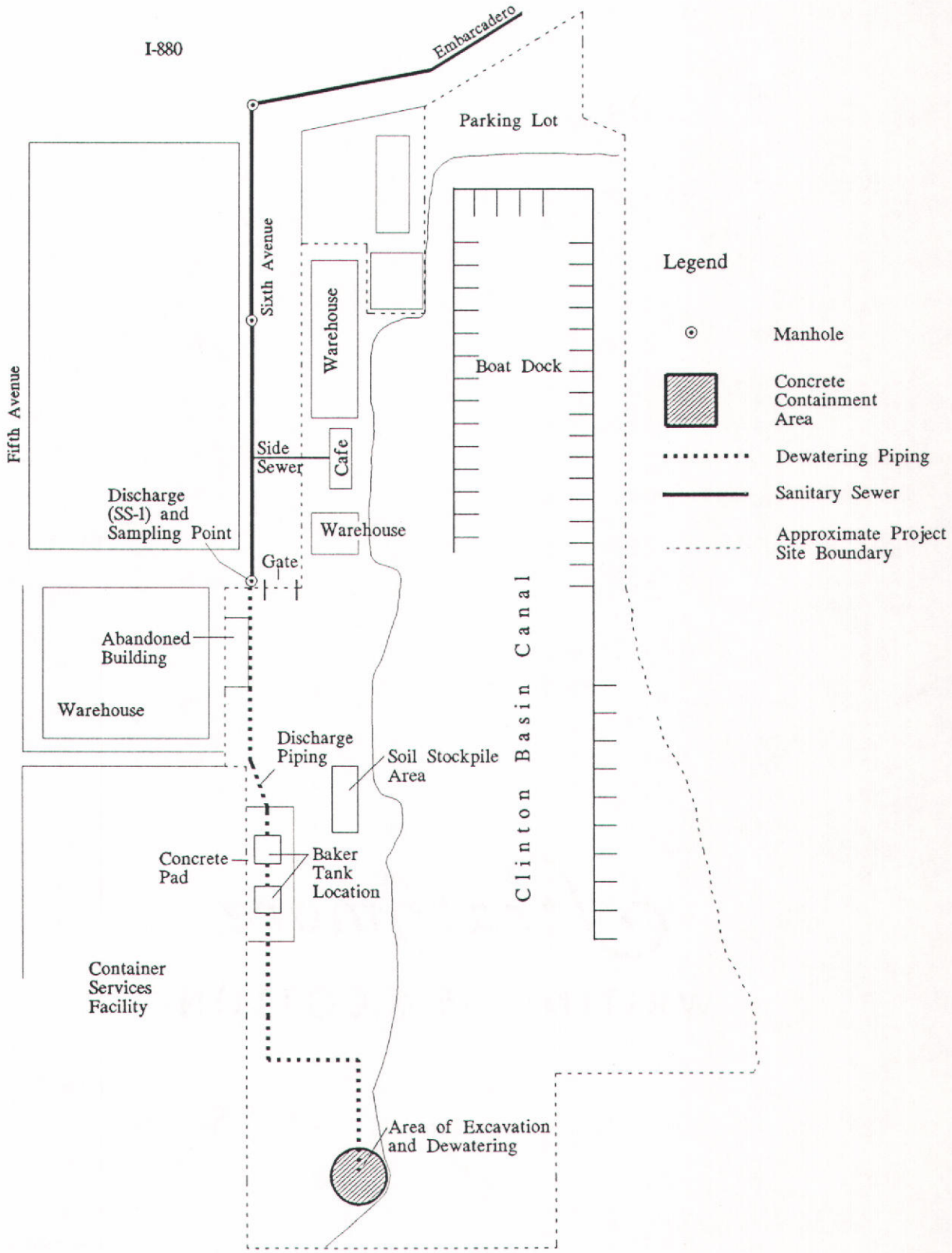
SITE LAYOUT

Figure 2



Seabreeze Yacht Center
280 Sixth Avenue
Oakland, California

Approximate

0 150 Feet

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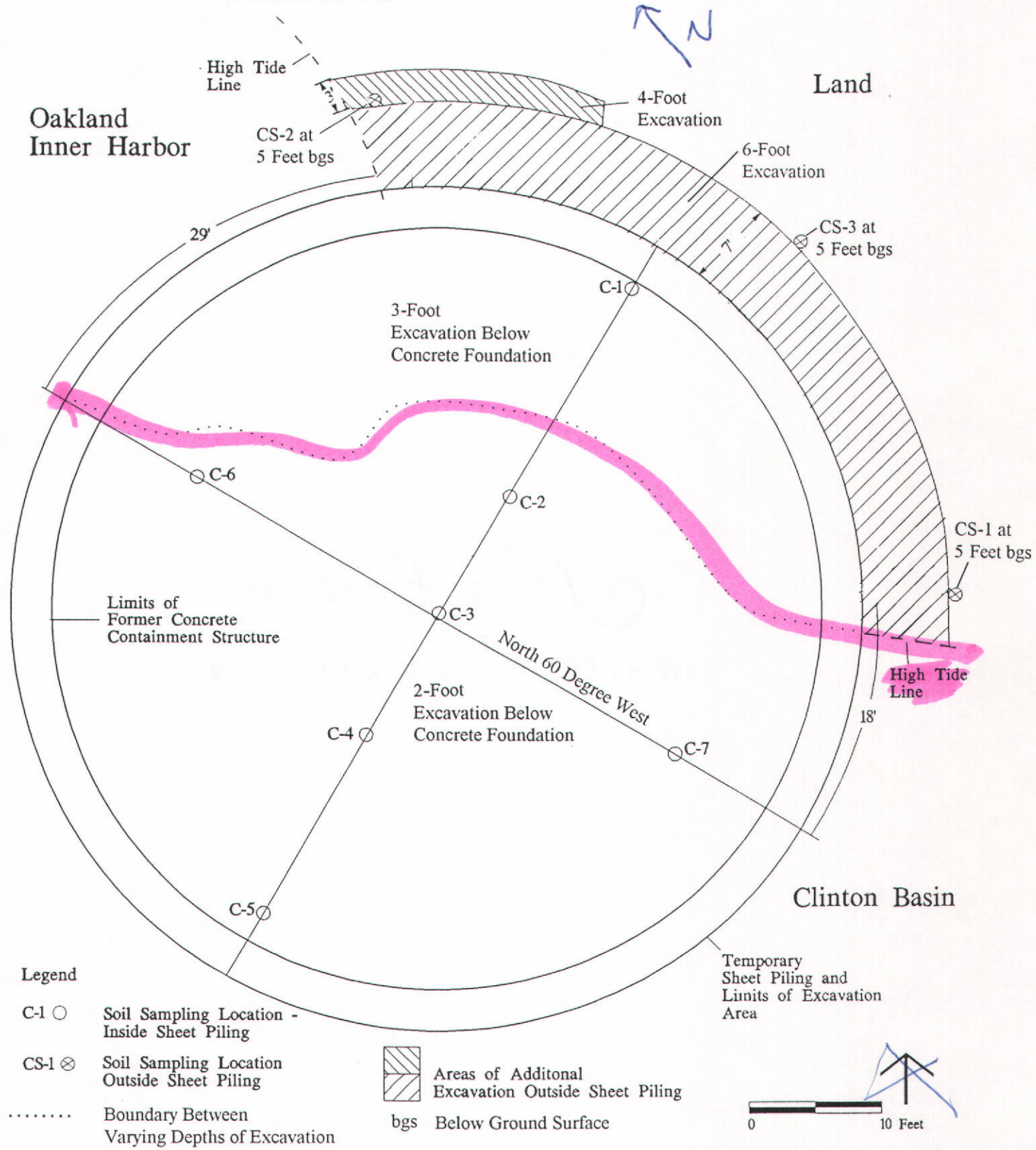
AREA OF EXCAVATION AND SOIL SAMPLING LOCATIONS

Figure 3



Seabreeze Yacht Center
280 Sixth Avenue
Oakland, California

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PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 4

Sheetpiling surrounding excavation area with concrete rubble area used as equipment pad in center.

Limits of excavation showing Bay Mud and dewatering sump (center).

PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 5

Dewatering sump and wood piling prior to excavation.

Typical wood pilings at face of excavation.

PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 6

Wood pilings removed from excavation area.

Soil stockpile area.

PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 7

Limits of excavation following completion of soil removal inside containment.

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PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 8

Trench on the northern side of the former containment structure.

Backfilling and compaction of the trench on the northern side of the former containment structure.

Seabreeze Yacht Center
Oakland, California

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PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 9

Dewatering storage tank (left) connected to treatment tank (right) with black PVC piping.

Discharge end of treatment tank showing flow meter and discharge pipe.

PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 10

Backfill showing filter fabric, fine-grained fill (white), and coarse-grain fill (brown) being placed in excavation area.

Compaction of fill material over filter fabric.

PHOTOGRAPHS OF CONTAINMENT REMOVAL ACTIVITIES

Figure 11

Completed cap of excavation area following removal of sheet piling, looking west.

Completed cap looking south east.

TABLE 1
VERIFICATION SOIL SAMPLING RESULTS
Seabreeze Concrete Containment Removal
Port of Oakland, California
(in mg/kg)

Sample Location	Depth (feet bgs)	Total Lead	Total Copper	TPH		
				Diesel	Motor Oil	Bunker C
Containment Area						
C-1	0.5-1.0	9.36	22.8	<5	<10	<10
C-2	0.5-1.0	5.83	15.3	33[1,2]	<10[1]	<10[1]
C-3	0.5-1.0	6.62	16.1	<5[1]	<10[1]	<10[1]
C-4	0.5-1.0	5.72	14.7	<5	<10	<10
C-5	0.5-1.0	6.5	14.6	<5	<10	<10
C-6	0.5-1.0	7.45	14.1	<5[1]	<10[1]	<10[1]
C-7	0.5-1.0	5.59	14.5	<5	<10	<10
Northern Trench, Beyond Containment Area						
CS-1	5.0-5.5	10.9	19.7	19[1,2,3]	44[1]	<10[1]
CS-2	5.0-5.5	19.3	24.4	10[1,2,3]	43[1]	<10[1]
CS-3	5.0-5.5	26.2	27.4	22[1,2,3]	30[1]	<10[1]

Notes: mg/kg = milligrams per kilogram
TPH = Total Petroleum Hydrocarbons by EPA Method 8015M.
bgs = below ground surface
<x = not detected above laboratory reporting limit of x.
Soil sample locations are presented in Figure 3.
Laboratory reports are presented in Appendix C.

[1] Silica gel cleanup performed prior to analysis.
[2] Chromatogram did not resemble laboratory standard.
[3] Laboratory reported presence of analyte in associated method blank at 5.1 mg/kg diesel as well as in the sample. Laboratory indicated contamination resulted from silica gel clean-up column.

TABLE 2
SOIL STOCKPILE SAMPLING RESULTS
Seabreeze Concrete Containment Removal
Port of Oakland, California
(in mg/kg, except where indicated)

	SAMPLE ID									
	ST-1	ST-2	ST-3	ST-4	ST-1 to ST-4[1]	ST-5	ST-6	ST-7	ST-8	ST-5 to ST-8[1]
Antimony	--	--	--	--	<4.72	--	--	--	--	<4.85
Arsenic	--	--	--	--	2.67	--	--	--	--	3.4
Barium	--	--	--	--	76.4	--	--	--	--	78.6
Beryllium	--	--	--	--	0.363	--	--	--	--	0.396
Cadmium	--	--	--	--	<0.472	--	--	--	--	<0.485
Chromium	--	--	--	--	42.3	--	--	--	--	42.1
Cobalt	--	--	--	--	8.49	--	--	--	--	7.86
Copper	--	--	--	--	15.8	--	--	--	--	35.7
Lead	--	--	--	--	13.2	--	--	--	--	39.6
Mercury	--	--	--	--	0.085	--	--	--	--	0.133
Molybdenum	--	--	--	--	<1.89	--	--	--	--	<1.94
Nickel	--	--	--	--	38.2	--	--	--	--	74.6
Selenium	--	--	--	--	<0.467	--	--	--	--	<0.49
Silver	--	--	--	--	0.717	--	--	--	--	0.89
Thallium	--	--	--	--	35.2	--	--	--	--	39.7
Vanadium	--	--	--	--	29.8	--	--	--	--	33.3
Zinc	--	--	--	--	46.3	--	--	--	--	82.3
WET Copper (mg/L)	0.144	0.183	0.129	0.129	--	0.284	<0.1	0.568	0.204	--
WET Lead (mg/L)	<0.42	0.607	<0.42	0.451	--	0.622	<0.42	3.23	0.765	--
TRPH[2]	--	--	--	--	231	--	--	--	--	298
Benzene	--	--	--	--	0.0029	--	--	--	--	<0.001
Toluene	--	--	--	--	<0.001	--	--	--	--	0.001
Ethylbenzene	--	--	--	--	0.0032	--	--	--	--	<0.001

Table 2: Soil Stockpile Sampling Results - *continued*

	SAMPLE ID									
	ST-1	ST-2	ST-3	ST-4	ST-1 to ST-4[1]	ST-5	ST-6	ST-7	ST-8	ST-5 to ST-8[1]
Xylenes	--	--	--	--	0.0062	--	--	--	--	<0.002
Bunker C	--	--	--	--	--	--	--	--	--	45

Notes: mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
<x.x = not detected above laboratory reporting limit of x.x.
-- = not analyzed.
WET = Soluble level as determined by Waste Extraction Test.
Metals Analytical Method EPA 7471, 7060, 7740, and 6010.
TRPH = Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1 modified; includes silica gel cleanup procedure. Method 418.1 involves the use of freon extraction and infrared spectroscopy (IR). Method 8015M uses methylene chloride extraction and gas chromatography. The two methods are not readily comparable since Method 418.1 usually reports a higher concentration of petroleum compounds.
Benzene, Toluene, Ethylbenzene, and Total Xylenes by CA LUFT method.
Bunker C by EPA Method 8015M after silica gel cleanup procedure.
Laboratory reports are presented in Appendix C.

[1] Composite sample.
[2] Analytical method required by landfill for profiling.

TABLE 3

DEWATERING DISCHARGE WATER ANALYTICAL RESULTS

Seabreeze Concrete Containment Removal

Port of Oakland, California

Sampling Date	Oil and Grease (mg/L)	TPH Diesel[1] (mg/L)	TPH Bunker C[1] (mg/L)	PCBs[2] (μg/L)
6 November 1996	<5[3]	<0.05	1.1	0.1[5]
5 December 1996	<1[4]	0.21	<0.5	0.1[6]
Discharge Limitations[7]	100	--	--	Discharge prohibited[8]

Notes: mg/L = milligrams per liter
μg/L = micrograms per liter
<x.x = not detected above laboratory reporting limit of x.x
Sampling Location, SS #1, shown on Figure 2
Laboratory reports included in Appendix C

1 TPH = Total Petroleum Hydrocarbons as diesel and Bunker C using EPA Method 8015M.

2 PCBs = Polychlorinated Biphenyls including Arochlors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 by EPA Method 8080 or EPA Method 608.

3 EPA Method 5520B&F.

4 EPA Method 418.1.

5 Reporting limit for each Arochlor using EPA Method 608.

6 Reporting limit for each Arochlor using EPA Method 8080.

7 Wastewater Discharge Limitations as specified in East Bay Municipal Utility District, Wastewater Discharge Permit, Account No. 503-50010, dated 1 November 1996.

8 PCBs, Total: Defined as the sum of detectable concentrations of Arochlors 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

APPENDIX A

STATE AND FEDERAL PERMITS

PORT OF OAKLAND

September 18, 1996

PORT OF OAKLAND
ENVIRONMENTAL DIVISION

Mr. John Hendricks
Chief, Regulatory Branch South Section
U.S. Army Corps of Engineers
333 Market Street
San Francisco, CA 94105

OCT 3 REC'D
RECEIVED
ENVIRONMENTAL DIVISION

SUBJECT: Removal of Concrete Containment Structure and Associated Contaminants a the Former Seabreeze Yacht Center Marina

Dear Mr. Hendricks:

This letter documents my understanding of our conversation today regarding Corps permitting for the project noted above.

On August 21, 1996, I sent you a letter and application requesting a Letter of Permission and notification required for Nationwide Permit #13. Liz Varnhagen spoke with Jody Zaitlin and requested that we consider Nationwide Permit #38 for this project. Because the proposed project is "sponsored" by the Alameda County Environmental Health Agency, the Port of Oakland now requests this project be permitted under Nationwide Permit #38 using the initial application (copy attached) and the August 21 application date for completion of the 30-day review. We assume that Nationwide Permit #38 covers the whole of the activity and therefore, a Section 10 Letter of Permission is not needed.

Thank you for your assistance in permitting this project. We expect to start construction of this remediation shortly and have the project complete this year, as noted in the schedule provided to the environmental health agency (copy attached).

Sincerely,

Jim McGrath
Environmental Manger

cc: Liz Varnhagen, USACE

Attachments

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (510) 272-1100 ■ Fax (510) 272-1172 ■ TDD (510) 763-5703 ■ Cable address, PORTOFOAK, Oakland

Dian Heinz

STATE OF CALIFORNIA - CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION
2101 Webster Street, Suite 500
Oakland, CA 94612
Tel: (510) 286-1255
FAX: (510) 286-1380
BBS: (510) 286-0404

96 OCT 1 AM 8

RECEIVED

Jim McGrath
Port of Oakland
P.O. Box 2064
Oakland, CA 94604-2064

Date: SEP 30 1996
File No. 2198.11(EMC)
Site No. 02-01-C0160

Subject: **Waiver of Waste Discharge Requirements and Water Quality Certification for Removal of Concrete Containment Structure and Associated Contaminants at the Former Seabreeze Yacht Center Marina, Oakland, Alameda County**

Dear Mr. McGrath:

We have reviewed the information outlining the remediation of a former PG&E fuel storage and power plant location adjacent to Clinton Basin, Oakland, Alameda County. This project involves removal of the remaining concrete containment structure and underlying contaminated soil and backfilling the cavity with low permeability fill and rip rap. The project will improve and safeguard water quality to Bay resources and will remediate petroleum contamination at this site.

You have determined that the project qualifies for a Department of Army nationwide permit (33 CFR Part 330, Appendix A, (B), (13), pursuant to the Clean Water Act Section 404 (33 U.S.C. 1344).

You have applied for a Clean Water Act Section 401 water quality certification that the proposed project will not violate State water quality standards. Pursuant to Regional Board Resolution No. 87-053, Waste Discharge Requirements are waived within the 60-day review period as required by 33 CFR 325.2 (b) (ii). The following condition applies to this waiver:

1) The discharge, or creation of potential for discharge, of any soil material including fresh concrete, cement, silts, clay, sand and other organic materials to the waters of the State is prohibited.

Pursuant to Title 23, California Code of Regulations Section 3857, this action is equivalent to a waiver of water quality certification.

We anticipate no further action on this application. However, should new information come to our attention that indicates a water quality problem with this project, the Regional Board may issue Waste Discharge Requirements.

Please contact Elizabeth Carolan of my staff at (510) 286-4212, if you have any questions.

Sincerely,

Loretta Barsamian

LORETTA BARSAMIAN
EXECUTIVE OFFICER

cc: Nadell Gayou, DWR
Oscar Balaguer, SWRCB-DWQ
Calvin Fong, Regulatory Branch, USACE

STATE OF CALIFORNIA PETE WILSON, *Governor*

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION
THIRTY VAN NESS AVENUE, SUITE 2011
SAN FRANCISCO, CALIFORNIA 94102-6080
PHONE: (415) 557-3686

Permittees' Copy

PERMIT NO. M90-6
(Issued on March 21, 1990, As
Amended Through August 9, 1996)
AMENDMENT NO. FOUR

Port of Oakland
P.O. Box 2064
Oakland, California 94604

ATTENTION: Jim McGrath, Manager,
Environmental Planning

Gentlemen:

I. Authorization

A. Subject to the conditions stated below, the permittee, the Port of Oakland, is hereby authorized to do the following:

Location: In the Bay and within the 100-foot shoreline band, on the northern shore of Alameda Estuary, at Clinton Basin within the former Seabreeze Yacht Center, at 286 Sixth Avenue, in the City of Oakland, Alameda County.

Description: (a) Conduct a remedial investigation for soil contamination at the former yacht harbor by: (1) removing a 160-square-foot floating gangway and installing portions of a temporary chain link fence around the site to protect the public from possible exposure to contaminants during the investigation; (2) installing a 150-square-foot temporary floating walkway to provide alternative access to docks previously accessed via the gangway to be removed; (3) taking soil samples to test for hazardous wastes; and (4) excavating and removing out of the Commission's jurisdiction contaminated soils at an above ground storage tank and backfill with clean earth material; (b) install seven (7) 48-foot-high light poles at the edge of the shoreline for security reasons; ~~and~~ (c) install a new waste oil collection facility on a new concrete pad and an approximately 6-foot by 12-foot chain link fence with redwood slat enclosure; and (d) conduct a remedial investigation for subsurface pollution by: (1) excavating and removing to a location outside the Commission's jurisdiction a 56-foot-in-diameter (360 cubic yard) concrete containment structure and two 10-foot-long concrete piles; (2) removing surrounding petroleum contaminated soils; (3) installing sheetpiling to hold the backfill in place; and

(4) backfilling the excavated area with clean sand, covered with filter fabric and an 18-inch layer of rock revetment (Amendment No. Four).

B. This authority is generally pursuant to and limited by your application dated January 29, 1990, and your letters dated July 9, 1991, September 1, 1992, ~~and~~ October 12, 1995, and June 25, 1996, and July 23, 1996, requesting Amendment Nos. One, Two ~~and~~ Three, and Four, respectively, including all accompanying exhibits and all conditions of this amended permit.

C. Work authorized herein must commence prior to September 1, 1990, or this permit will lapse and become null and void. Such work must also be diligently pursued to completion and must be completed by December 1, 1992, whichever is earlier, unless an extension of time is granted by a further amendment of this amended permit. Work authorized by Amendment No. Two must commence prior to November 1, 1993, and must be completed by November 1, 1996, unless an extension of time is granted by a further amendment of this amended permit. Work authorized by Amendment No. Three must commence prior to June 1, 1996 or authorization for such work will lapse and become null and void. Such work must also be diligently pursued to completion and must be completed by June 1, 1997 unless an extension of time is granted by a further amendment of this amended permit. Work authorized by Amendment No. Four must commence prior to February 1, 1997 or authorization for such work will lapse and become null and void. Such work must also be diligently pursued to completion and must be completed by June 1, 1997 unless an extension of time is granted by a further amendment of this amended permit.

II. Special Conditions

The authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. **Debris Removal.** All construction debris shall be removed to a location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, its assigns, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement. The existing rock riprap protecting the concrete containment structure shall be removed and either reused on site, or taken to a location outside the jurisdiction of the Commission (Amendment No. Four).

B. **Contaminated Soils.** All soils determined to be contaminated shall be removed off site outside the Commission's 100-foot shoreline band jurisdiction.

C. **Construction.** The installation of the new waste oil facility authorized by Amendment No. Three herein shall be built generally in conformance with the plan entitled "Construction of Waste Oil Facilities, Various Marinas, Seabreeze Marina - Site A" prepared by Hansen/Murakami/ Eshima, Inc., and dated September 6, 1995. No noticeable changes to the design of the project shall be made without the prior written approval of the BCDC staff.

II. Findings and Declarations

On behalf of the Commission, I find and declare that:

~~A. The project authorized by this amended permit involves: (1) the installation of a 150-square-foot floating walkway which is no larger than the construction of a new single boat dock of 1,000 square feet as defined in Regulation Section 10601(a)(4); (2) the taking of soil samples to test for hazardous wastes which involves the extraction of small amounts of material in a manner that does not have a significant adverse effect on present or possible future maximum feasible public access to the Bay consistent with the project as defined in Regulation Section 10601(b)(1); and (3) the installation of a temporary chain link fence, the installation of light poles at the edge of the shoreline, and the installation of a waste oil collection facility, which involve the placement of small amounts of inert inorganic fill in a manner that does not have a significant adverse effect on present or possible future maximum feasible public access to the Bay consistent with the project, or on present or possible future use for a designated priority water-related use, or on the environment, as defined in Regulation Section 10601(b)(1), and thus is a "minor repair or improvement" for which the Executive Director may issue (1) a permit, pursuant to Government Code Section 66632(f) and Regulation Section 10622(a), and (2) an amendment to a permit, pursuant to Regulation Section 10812.~~

A. The project authorized by this amended permit involves: (1) the installation of a 150-square-foot floating walkway which is no larger than the construction of a new single boat dock of 1,000 square feet as defined in Regulation Section 10601(a)(4); and (2) the taking of soil samples to test for hazardous wastes, the removal of a concrete containment structure, the removal of surrounding soil containing petroleum hydrocarbons, placement of clean backfill, the installation of a temporary chain link fence, the installation of light poles at the edge of the shoreline, and the installation of a waste oil collection facility, all of which involve the placement of small amounts of inert inorganic fill and the extraction of small amounts of material in a manner that does not have a significant adverse effect on present or possible future maximum feasible public access to the Bay consistent with the project, or on present or possible future use for a designated priority use, or on the environment, and which involve the routine removal and replacement of material in the Bay that does not involve a substantial enlargement or change in use as defined in Regulation Sections 10601(b)(1) and 10601(a)(6), and thus is a "minor repair or improvement" for which the Executive Director may issue (1) a permit, pursuant to Government Code Section 66632(f) and Regulation Section 10622(a), and (2) an amendment to a permit, pursuant to Regulation Section 10812.

B. The temporary placement of a chain link fence around the site will not affect public access along the shoreline as no public access pathways exist at this location. The soil analysis is being conducted in response to an order issued by the Alameda County Department of Environmental Health to investigate heavy metal soil contamination detected on the site, and the removal of the concrete containment structure and adjacent soils is being done to respond to the Alameda County Department of Environmental Health and Regional Water Quality Control Board request to remove this potential source of pollution. ~~Future~~ This remediation ~~of any contamination would~~ reduces the possible threat to public health of anyone walking along the shoreline at this location, thereby benefiting possible future public access.

C. The project authorized by this amended permit is consistent with the McAteer-Petris Act and with the San Francisco Bay Plan in that it will not adversely affect the Bay nor public access to and enjoyment of the Bay.

D. The Commission further finds, declares, and certifies that the activity or activities authorized herein are consistent with the Commission's Amended Management Program for San Francisco Bay, as approved by the Department of Commerce under the Federal Coastal Zone Management Act of 1972, as amended.

E. Pursuant to Regulation Section 11501, the project authorized by this amended permit is categorically exempt from the requirement to prepare an environmental impact report.

F. Pursuant to Regulation Section 10620, the original project was listed with the Commission on March 15, 1990.

IV. Standard Conditions

A. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city and/or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.

B. The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.

C. Work must be performed in the precise manner and at the precise locations indicated in your application and amendment requests, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.

D. Work must be performed in a manner so as to minimize muddying of waters, and if diking is involved, dikes shall be waterproof. If any seepage returns to the Bay, the permittee will be subject to the regulations of the Regional Water Quality Control Board in that region.

E. The rights, duties, and obligations contained in this amended permit are assignable. When the permittee transfers any interest in any property either on which the authorized activity will occur or which is necessary to the full compliance of one or more conditions to this amended permit, the permittee/transferor and the transferee shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignee executes and the Executive Director receives an acknowledgment that the assignee has read and understands the amended permit and agrees to be bound by the terms and conditions of the amended permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit .

F. Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.

G. Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

H. Unless otherwise provided in this amended permit, any work authorized herein shall be completed within the time limits specified in this amended permit, or, if no time limits are specified in the amended permit, within three years. If the work is not completed by the date specified in the amended permit, or if no date is specified, within three years from the date of the amended permit, the amended permit shall become null and void. If this amended permit becomes null and void for a failure to comply with these time limitations, any fill placed in reliance on this amended permit shall be removed by the permittee or its assignee upon receiving written notification by or on behalf of the Commission to remove the fill.

I. Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee or its assignee if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee or its assignee if the amended permit has been assigned.

J. This amended permit shall not take effect unless the permittee executes the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

K. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit.

L. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.

M. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittee or its assignee if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

Executed at San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

WILL TRAVIS
Executive Director
San Francisco Bay Conservation and
Development Commission

By: _____
JEFFRY S. BLANCHFIELD
Chief Planner

JSB/RJB/rr
cc: U. S. Army Corps of Engineers, Attn.: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn.: Certification Section
Environmental Protection Agency, Attn: Mike Monroe, W-3-3
Port of Oakland, Attn: Gail Staba

* *

Receipt acknowledged, contents understood and agreed to:

Executed at Port of Oakland _____
Applicant

On August 16, 1996 By: Director of Engineering
Title

APPENDIX B

HEALTH AND SAFETY PLAN

SITE SAFETY PLAN

PROJECT/CLIENT INFORMATION

Project No:	Project Manager:	Site Health and Safety Manager:	Field Activities Date:
S9171-C1	Rhodora Del Rosario	Bill Scott	November - December 1996

Client:	Port of Oakland Environmental Health and Safety Compliance	Address: 530 Water Street Oakland, CA
Contact Person:	Diane Heinze Phone: (510) 272-1467	

Project Description:	Perform construction oversight of concrete containment structure removal and excavation, screening, stockpiling, and sampling of underlying soil. Treat and discharge dewatering waters under EBMUD permit.
Site History:	Site has been a boat yard since the early 1900s. Numerous containers of waste had been stored on the site. The wastes were profiled and the majority disposed of as hazardous waste. Site characterization activities by BASELINE in September 1990 indicated the presence of metals, organics, and oil and grease in the subsurface at depths raging from 0.5 to 4 feet. In January 1994, three soil samples were collected adjacent to the concrete containment structure. Analytical results indicated elevated concentrations of extractable hydrocarbons, total lead, and soluble lead at each location.

CHEMICAL HAZARDS

Chemical	Description	Health and Safety Standards	Persons Exposed* and Potential Routes of Exposure	Symptoms of Acute Exposure
Lead	Inorganic metal, suspected carcinogen	8-hr TLV=0.05 mg/m^3 -- use high efficiency filter with respirator	Inhalation, ingestion	Symptoms occur with chronic exposure
Copper	Metal	TLV=1 mg/m^3	Low risk of exposure through ingestion, inhalation, and dermal	Skin, respiratory, and eye irritation
Diesel, motor oil, Bunker C	Extractable hydrocarbon	No TLV	Dermal	Minor eye/skin irritation
Oil and grease	Generic	None	Dermal	Skin irritation

* Contractor and samplers.

Note: Health and safety standards refer to airborne concentrations to which nearly all workers may be repeatedly exposed daily without harmful effects. The concentrations are time-weighted averages for a normal 8-hour work period.

PHYSICAL HAZARDS:

Heavy equipment, scrap metal and debris, noise. Deep, shored and unshored excavations. Excavation area is near open water. Climbing on high storage tanks may be required. All visitors to the site must be 40-hour health and safety trained. The health and safety officer must inquire whether each visitor is trained.

PERSONAL PROTECTIVE EQUIPMENT REQUIRED: Hard hats and steel-toed shoes required in excavation area. Tyvek coveralls, nitrile gloves, rubber boots, first aid kit, air-purifying respirator with organic vapor cartridges, and noise protection during sampling and in excavation.

AIR MONITORING STRATEGY (INCLUDING ACTION LEVELS): Monitor borings with combustible gas meter and HNu. At greater than 20% LEL in boring, stop work and identify source of combustible vapors. Continue excavation when LEL meter records <0%. If HNu reading ≥100 ppm (in excavation), don respirator with organic vapor cartridge; if ≥200 ppm (in boring), stop work and let boring or excavation air out.

SITE CONTROL MEASURES: Store and cover excavated soils on visquene. Store decontamination rinse water and contaminated personal protective gear (e.g., Tyveks) in labeled drums. Arrange for disposal of same upon receipt of lab analyses for corresponding samples. Barricade excavated areas before the end of the working day. Site is fenced and gate will be locked during nonworking hours. Public will be restricted from sampling areas. Drinking water located at Seabreeze warehouse and cafe. Clean area and contaminated area will be designated. Copy of Site Safety Plan will be supplied. No smoking within 50 feet of excavation area. Wash hands before eating or smoking to avoid ingestion of contaminated soils. Do not enter storage tanks.

DECONTAMINATION PROCEDURES (PERSONAL AND EQUIPMENT): Decontaminate soil excavation equipment with TSP; rinse equipment with deionized water. Contain rinse waters in temporary basin; store in labeled drums pending disposal. Store disposable sample equipment in separate labeled drum. Place personal protective gear in plastic bag in drum at end of each day. Wash boots, respirators, safety glasses with TSP and rinse. Store rinse water in same drum as equipment rinse water. Wash hands before leaving site.

EMERGENCY PROCEDURES: Call 911 for fire or serious injury. Proceed to hospital (see map) if necessary for minor injuries. Call Yane Nordhav at (510) 420-8686 in case of injury or accident.

Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic/Fire & Police Dept. Phone:
Summit Medical Center 350 Hawthorne, Oakland	(510) 835-4500	911

Prepared by:	Date:	Reviewed/Approved by:	Date:
Mark Filippini	11/5/96		

Read by/Date:

[signature]	11/5/96	11/5/96
[signature]	11/5/96	11/5/96
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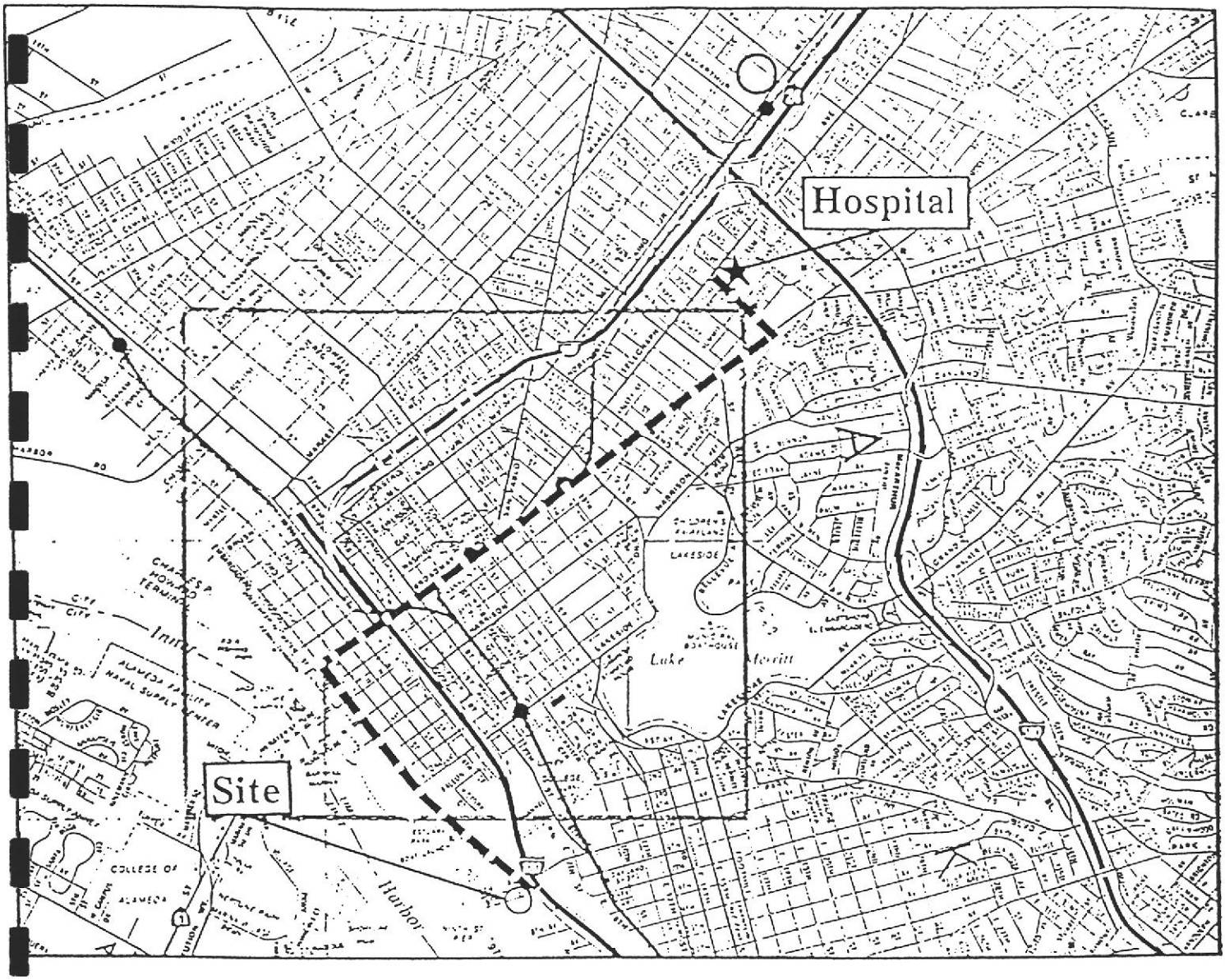


Hospital Clinic Name and Address:	Hospital Phone:	Paramedic Fire & Police Dept. Phone
Summit Medical Center, 350 Hawthorne	(510) 835-4500	911

Directions: Take Embarcadero north to Broadway. Turn right onto Broadway and continue to Webster Street. Turn left onto Webster Continue on Webster for four blocks to Hawthorne Avenue. The hospital is at the intersection of Hawthorne and Webster. (Decontamination facilities are available.)

APPENDIX C

LABORATORY ANALYTICAL REPORTS

Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

RECEIVED
DEC 4 1996
BASELINE

November 28, 1996

Ms. Rhodora DelRosario
Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

RE: PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

Dear Ms. DelRosario:

Enclosed are the results of analyses for sample(s) received on November 13, 1996. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

DATE: 11/28/96
PAGE: 1

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

PACE Sample No: 70793740
Client Sample ID: C-7; 0.5-1.0

Date Collected: 11/12/96
Date Received: 11/13/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	14.5	mg/kg	0.99	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	5.59	mg/kg	4.95	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/21/96				
GC								
8015 Fuel Fingerprint in Soil								
Diesel Fuel	ND	mg/kg	5	11/27/96	TPH by EPA 8015M	PAA	11-84-7...	1
Motor Oil	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
Bunker C	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
n-Pentacosane (S)	80	%		11/27/96	TPH by EPA 8015M	PAA	629-99-2	
Date Extracted				11/21/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70793757 Date Collected: 11/12/96
Client Sample ID: C-1; 0.5-1.0 Date Received: 11/13/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	22.8	mg/kg	0.935	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	9.36	mg/kg	4.67	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/21/96				
TPH in Soil by 8015 Modified								
Diesel Fuel	ND	mg/kg	5	11/27/96	TPH by EPA 8015M	PAA	11-84-7...	2
Motor Oil	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
Bunker C	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
n-Pentacosane (S)	48	%		11/27/96	TPH by EPA 8015M	PAA	629-99-2	
Date Extracted				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70793765 Date Collected: 11/12/96
Client Sample ID: C-5; 0.5-1.0 Date Received: 11/13/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	14.6	mg/kg	0.917	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	6.5	mg/kg	4.59	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/21/96				
GC								
TPH in Soil by 8015 Modified								
Diesel Fuel	ND	mg/kg	5	11/27/96	TPH by EPA 8015M	PAA	11-84-7...	3
Motor Oil	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
Bunker C	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
n-Pentacosane (S)	55	%		11/27/96	TPH by EPA 8015M	PAA	629-99-2	
Date Extracted				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70793781 Date Collected: 11/12/96
Client Sample ID: C-4; 0.5-1.0 Date Received: 11/13/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	14.7	mg/kg	0.943	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	5.72	mg/kg	4.72	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/21/96				
TPH in Soil by 8015 Modified								
Diesel Fuel	ND	mg/kg	5	11/27/96	TPH by EPA 8015M	PAA	11-84-7...	4
Motor Oil	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
Bunker C	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
n-Pentacosane (S)	52	%		11/27/96	TPH by EPA 8015M	PAA	629-99-2	
Date Extracted				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

PARAMETER FOOTNOTES

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
(S)	Surrogate
[1]	No silica gel clean-up was performed on this sample, however no target analytes were present.
[2]	No silica gel clean-up was performed on this sample, however no target analytes were present.
[3]	No silica gel clean-up was performed on this sample, however no target analytes were present.
[4]	No silica gel clean-up was performed on this sample, however no target analytes were present.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19131
QC Batch Method: EPA 3050
Date of Batch: 11/14/96
Analysis Method: EPA 6010
Analysis Description: Metals, ICP
Associated PACE Samples: 70793740 70793757 70793765 70793781 70793799 70793807

METHOD BLANK: 70794219
Associated PACE Samples: 70793740 70793757 70793765 70793781 70793799 70793807

Parameter	Units	Method Blank Result	PRL	Footnotes
Copper	mg/kg	ND	1	
Lead	mg/kg	ND	5	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70801964 70801972

Parameter	Units	70793740	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Copper	mg/kg	14.53	91.74	99.59	92.7	102.3	93.9	1	
Lead	mg/kg	5.594	91.74	89.97	92.0	94.21	94.8	3	

LABORATORY CONTROL SAMPLE & LCSD: 70801949 70801956

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Copper	mg/kg	100	99.53	99.5	99.63	99.6	0	
Lead	mg/kg	100	102.5	102	100.3	100	2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19317
QC Batch Method: EPA 3550
Date of Batch: 11/21/96
Analysis Method: TPH by EPA 8015M
Analysis Description: 8015 Fuel Fingerprint in Soil
Associated PACE Samples: 70793740

METHOD BLANK: 70800990
Associated PACE Samples:
70793740

Parameter	Units	Method Blank Result	PRL	Footnotes
Diesel Fuel	mg/kg	ND	5	1
Motor Oil	mg/kg	ND	10	
Bunker C	mg/kg	ND	10	
n-Pentacosane (S)	%	48		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70801006 70801014

Parameter	Units	70793211	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	0	33.33	28.10	84.3	26.67	80.0	5	
n-Pentacosane (S)					55.1		51.3		

LABORATORY CONTROL SAMPLE & LCSD: 70801022 70801030

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	33.33	22.47	67.4	23.38	70.1	4	
n-Pentacosane (S)				48.5		52.2		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

DATE: 11/28/96
PAGE: 10

seline
900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19345
QC Batch Method: CA LUFT
Date of Batch: 11/22/96
Analysis Method: TPH by EPA 8015M
Analysis Description: TPH in Soil by 8015 Modified
Associated PACE Samples: 70793757 70793765 70793781 70793799 70793807

ETHOD BLANK: 70802020
Associated PACE Samples:
70793757 70793765 70793781 70793799 70793807

Parameter	Units	Method Blank Result	PRL	Footnotes
iesel Fuel	mg/kg	ND	5	
Motor Oil	mg/kg	ND	10	
unker C	mg/kg	ND	10	
Pentacosane (S)	%	87		

ATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70802038 70802046

Parameter	Units	70793757	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
iesel Fuel	mg/kg	0	33.33	11220	33660	13140	39410	16	
n-Pentacosane (S)					59.6		57.9		

ABORATORY CONTROL SAMPLE & LCSD: 70802053 70802061

arameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	33.33	30.57	91.7	34.97	105	14	
-Pentacosane (S)				88.3		106		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707030
Client Project ID: Port of OAK/Seabreeze Site

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	No silica gel clean-up was performed on this sample, however no target analytes were present.

REPORT OF LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

707030

Turn-around Time: Normal
Lab: Pace
BASELINE Contact Person: Rhodora del Rosario

Project No.	Project Name and Location
S9171-C#	Sea Breeze, 280 6TH Ave, Oakland

Samplers: (Signature) William K Scott

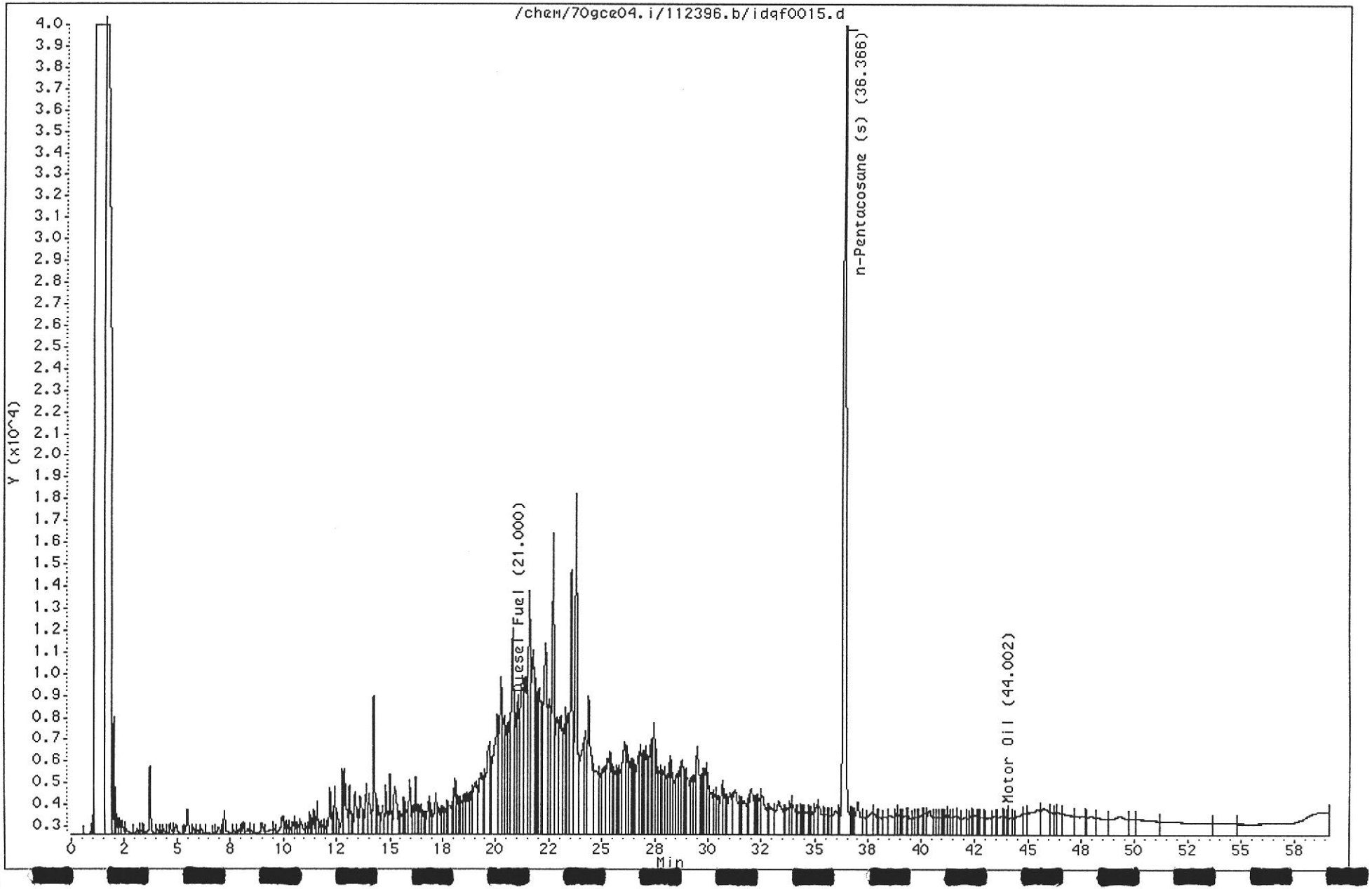
Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH as diesel	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	TFH as Bunker C	TEH as motor oil	Total Copper				Remarks/ Composite	Detection Limits
C-7; 0.5-1.0	11-12-96	10:46	Soil	0.5-1.0	1	X	70795740					X	X	X	X				Silica gel cleanup TEH Samples	
C-1; 0.5-1.0	↓	10:59	↓	↓	1	X	70793757					X	X	X	X				"	
C-5; 0.5-1.0		11:13			1	X	70795765					X	X	X	X				"	
C-4; 0.5-1.0		11:26			1	X	70795721					X	X	X	X				"	
C-2; 0.5-1.0		11:41			1	X	70795799					X	X	X	X				"	
C-3; 0.5-1.0		11:56			1	X	70795807					X	X	X	X				"	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	11-12-96 / 15:36		11/12/96 / 15:36	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
	11/13/96 / 1:53	Nick Manaras	11/13/96 1:53	• Silica gel cleanup on all TEH soil samples • Please provide chromatograms • Bill Indra Port of Oakland Directly
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	
Nick Manaras	11/13/96 15:50		11/13/96 16:45	

Data File: /chem/70gce04.i/112396.b/idqf0015.d
Date : 24-NOV-1996 04:01
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: RESTEK XTI-5

793799
C2

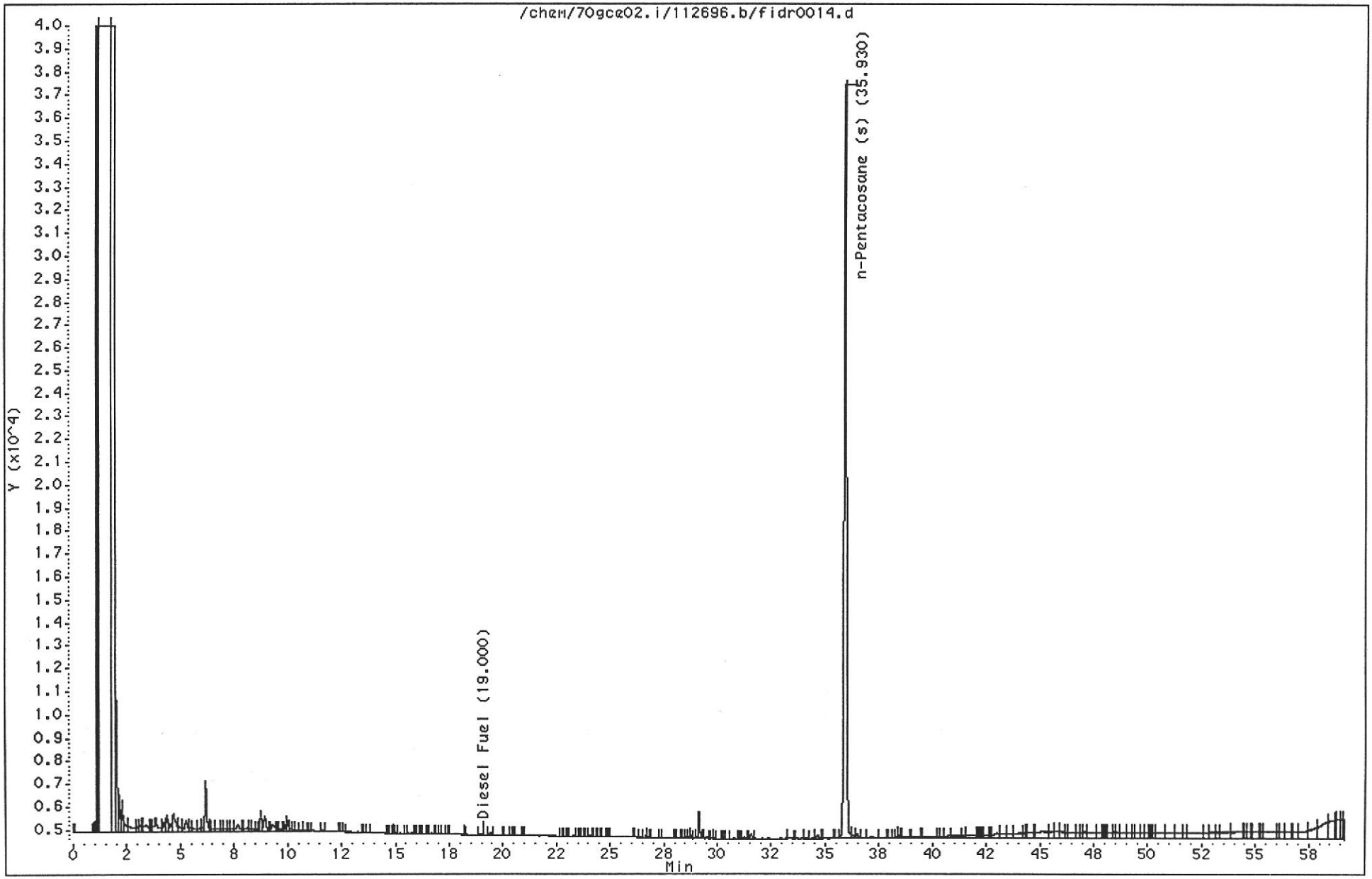
Instrument: 70gce04.i
Misc Info: 793799,,1,19345,2,0,,SMPL,,,dmof.sub,dmor.sub,
Operator: JMH
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidr0014.d
Date : 27-NOV-96 06:12
Client ID:
Sample Info: SAMPLE-water
Volume Injected (uL): 1.0
Column phase: J&W DB-1

793740

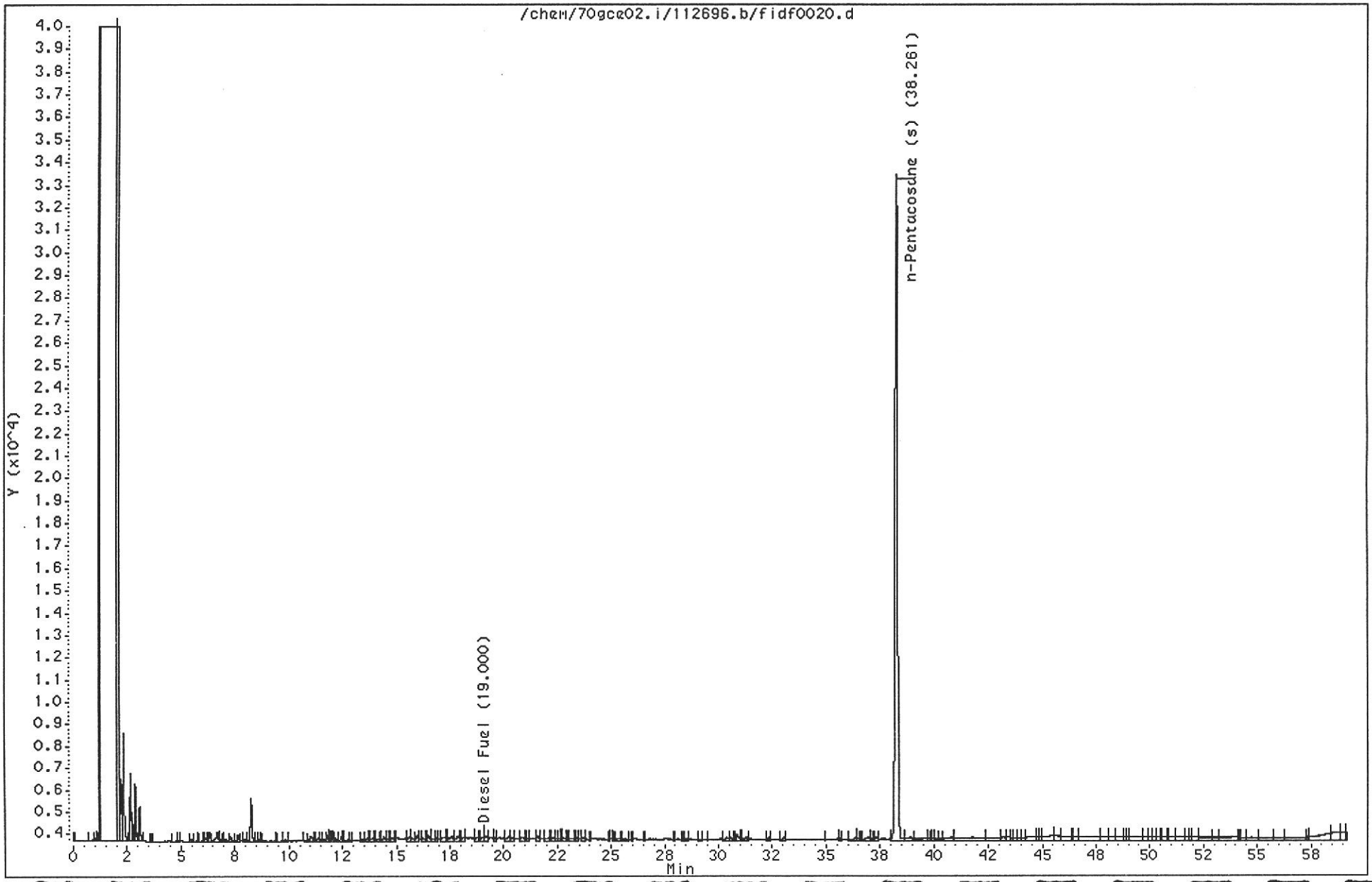
Instrument: 70gce02.i
Misc Info: 793740,,1,19317,1,0,,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidf0020.d
Date : 27-NOV-1996 12:53
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: RESTEK XTI-5

793807

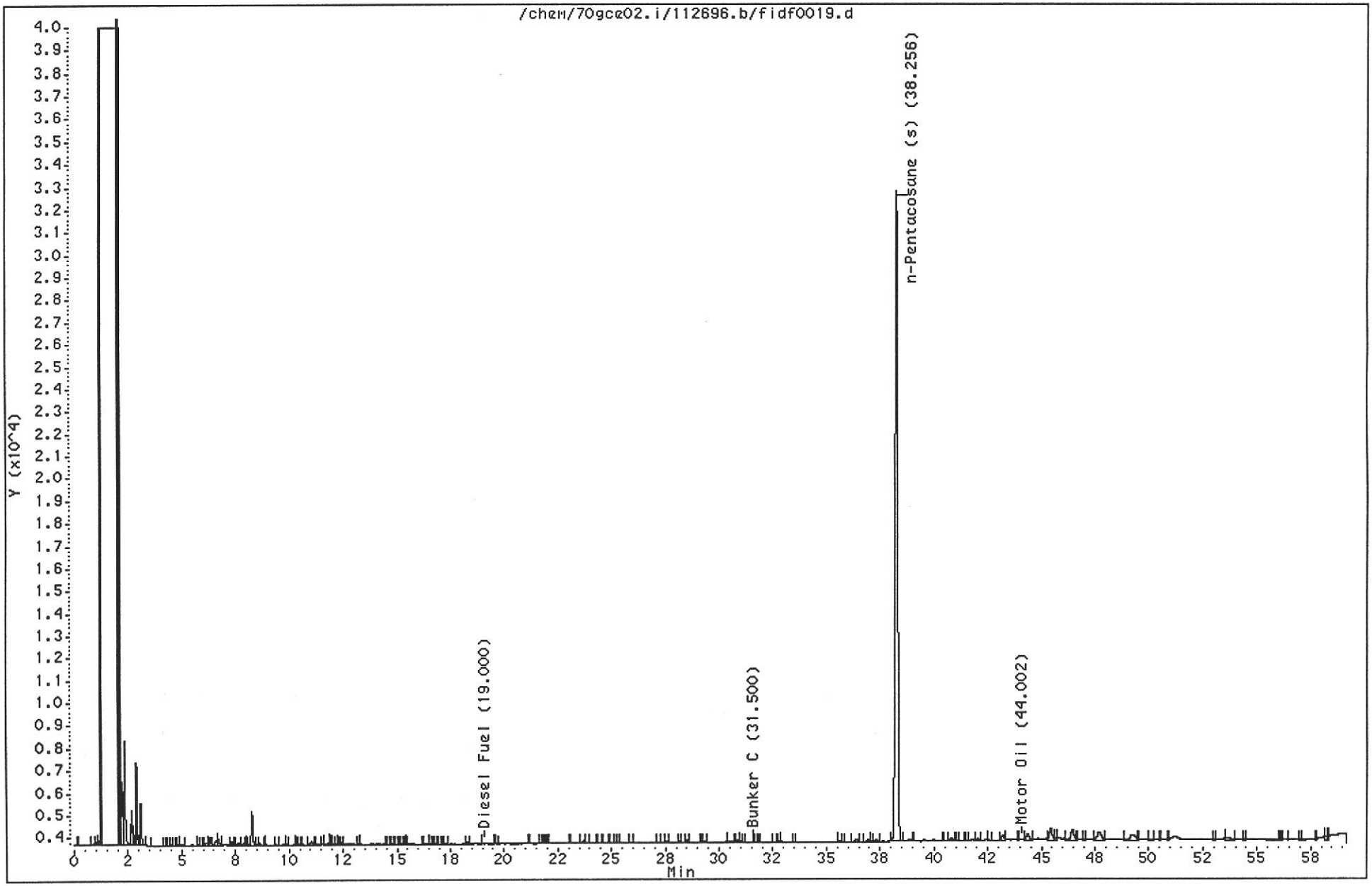
Instrument: 70gce02.i
Misc Info: 793807,,1,19345,2,0,,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidf0019.d
Date : 27-NOV-1996 11:46
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: RESTEK XTI-5

793781

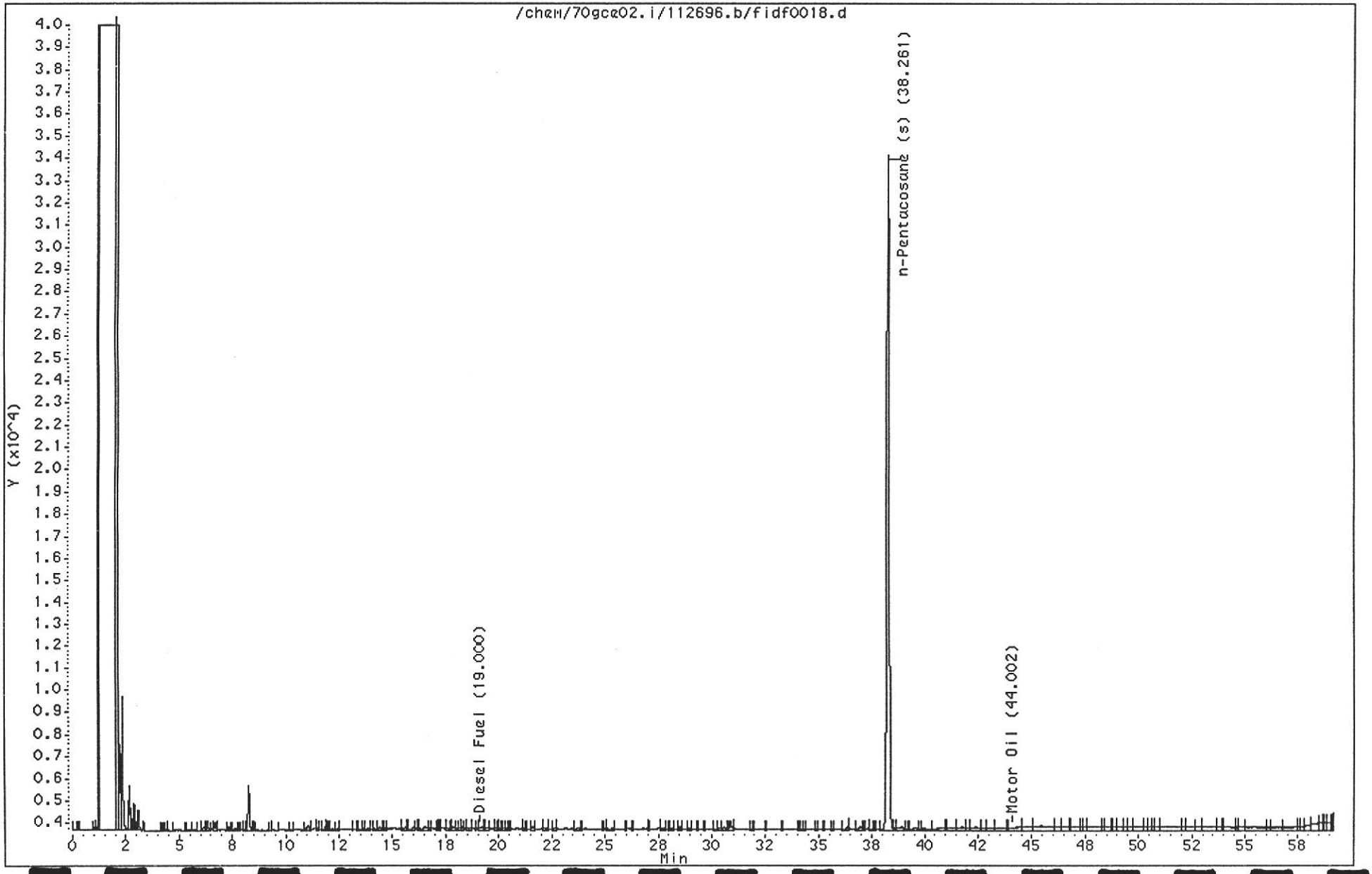
Instrument: 70gce02.i
Misc Info: 793781,,1,19345,2,0,,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidf0018.d
Date : 27-NOV-1996 10:39
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: RESTEK XTI-5

793765

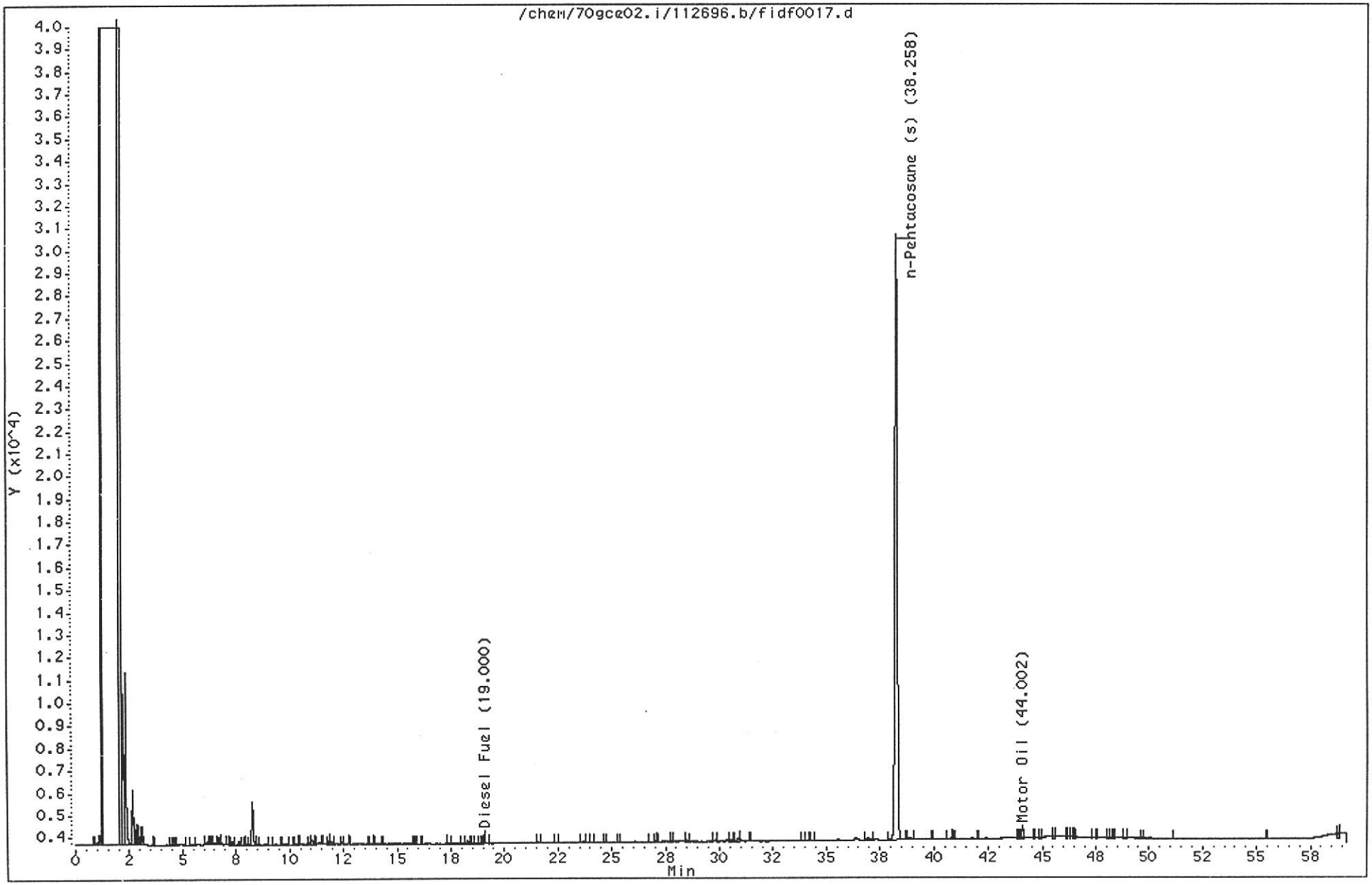
Instrument: 70gce02.i
Misc Info: 793765,,1,19345,2,0,,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidf0017.d
Date : 27-NOV-1996 09:33
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: RESTEK XTI-5

793757

Instrument: 70gce02.i
Misc Info: 793757,,1,19345,2,0,,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

November 28, 1996

Ms. Rhodora DelRosario
Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

RE: PACE Project Number: 707048
Client Project ID: Port of OAK/Seabreeze Site

Dear Ms. DelRosario:

Enclosed are the results of analyses for sample(s) received on November 14, 1996. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

DATE: 11/28/96
PAGE: 1

aseline
900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707048
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
hone: (510)420-8686

ACE Sample No: 70795695 Date Collected: 11/14/96
lient Sample ID: C-6;0.5-1.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	14.1	mg/kg	0.943	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	7.45	mg/kg	4.72	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				
GC								
TPH in Soil by 8015 Modified								
Diesel Fuel	ND	mg/kg	5	11/27/96	TPH by EPA 8015M	PAA	11-84-7...	
Motor Oil	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
Bunker C	ND	mg/kg	10	11/27/96	TPH by EPA 8015M	PAA		
n-Pentacosane (S)	54	%		11/27/96	TPH by EPA 8015M	PAA	629-99-2	
Date Extracted				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707048
Client Project ID: Port of OAK/Seabreeze Site

PARAMETER FOOTNOTES

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
(S)	Surrogate

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

aseline
900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707048
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
hone: (510)420-8686

QC Batch ID: 19247
nalysis Method: EPA 6010
ssociated PACE Samples: 70795695

QC Batch Method: EPA 3050
Analysis Description: Metals, ICP

Date of Batch: 11/19/96

ETHOD BLANK: 70798517
Associated PACE Samples:
70795695

Parameter	Units	Method Blank Result	PRL	Footnotes
opper	mg/kg	ND	1	
Lead	mg/kg	ND	5	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70803937 70803945

arameter	Units	70795000	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Copper	mg/kg	6.407	74.07	72.96	89.8	87.33	91.4	2	
ead	mg/kg	3.431	74.07	78.67	102	95.02	104	2	

LABORATORY CONTROL SAMPLE & LCSD: 70803911 70803929

arameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
opper	mg/kg	100	94.79	94.8	95.20	95.2	0	
ead	mg/kg	100	104.5	104	107.0	107	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707048
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19345
QC Batch Method: CA LUFT
Date of Batch: 11/22/96
Analysis Method: TPH by EPA 8015M
Analysis Description: TPH in Soil by 8015 Modified
Associated PACE Samples: 70795695

METHOD BLANK: 70802020
Associated PACE Samples:
70795695

Parameter	Units	Method Blank Result	PRL	Footnotes
Diesel Fuel	mg/kg	ND	5	
Motor Oil	mg/kg	ND	10	
Bunker C	mg/kg	ND	10	
n-Pentacosane (S)	%	87		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70802038 70802046

Parameter	Units	70793757	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	0	33.33	11220	33660	13140	39410	16	
n-Pentacosane (S)					59.6		57.9		

LABORATORY CONTROL SAMPLE & LCSD: 70802053 70802061

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	33.33	30.57	91.7	34.97	105	14	
n-Pentacosane (S)				88.3		106		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707048
Client Project ID: Port of OAK/Seabreeze Site

UALITY CONTROL DATA PARAMETER FOOTNOTES

onsistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

D	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
PD	Relative Percent Difference
S)	Surrogate

REPORT OF LABORATORY ANALYSIS

707048

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time
Lab: Pace
BASELINE Contact Person: Rhodora Del Rosario

Project No.	Project Name and Location
59171-C1	Seabreeze, 280 6th Ave, Oakland

Samplers: (Signature) William K Scott

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH-diesel	TEH-Bunker C	TEH-Motor Oil	Total Copper	Total Lead								Remarks/ Composite	Detection Limits
C-6; 0.5-1.0	11-14-96	7:48	Soil	0.5-1.0	1	X	X	X	X	X	70	795	695					Silica gel	
CS-1; 3.5-4.0	"	8:50	"	3.5-4.0	1	X	X	X	X	X	70	795	711	(HOLD)				cleanup for	
CS-2; 4.5-5.0	"	8:53	"	4.5-5.0	1	X	X	X	X	X	70	795	729	(HOLD)				TEH	

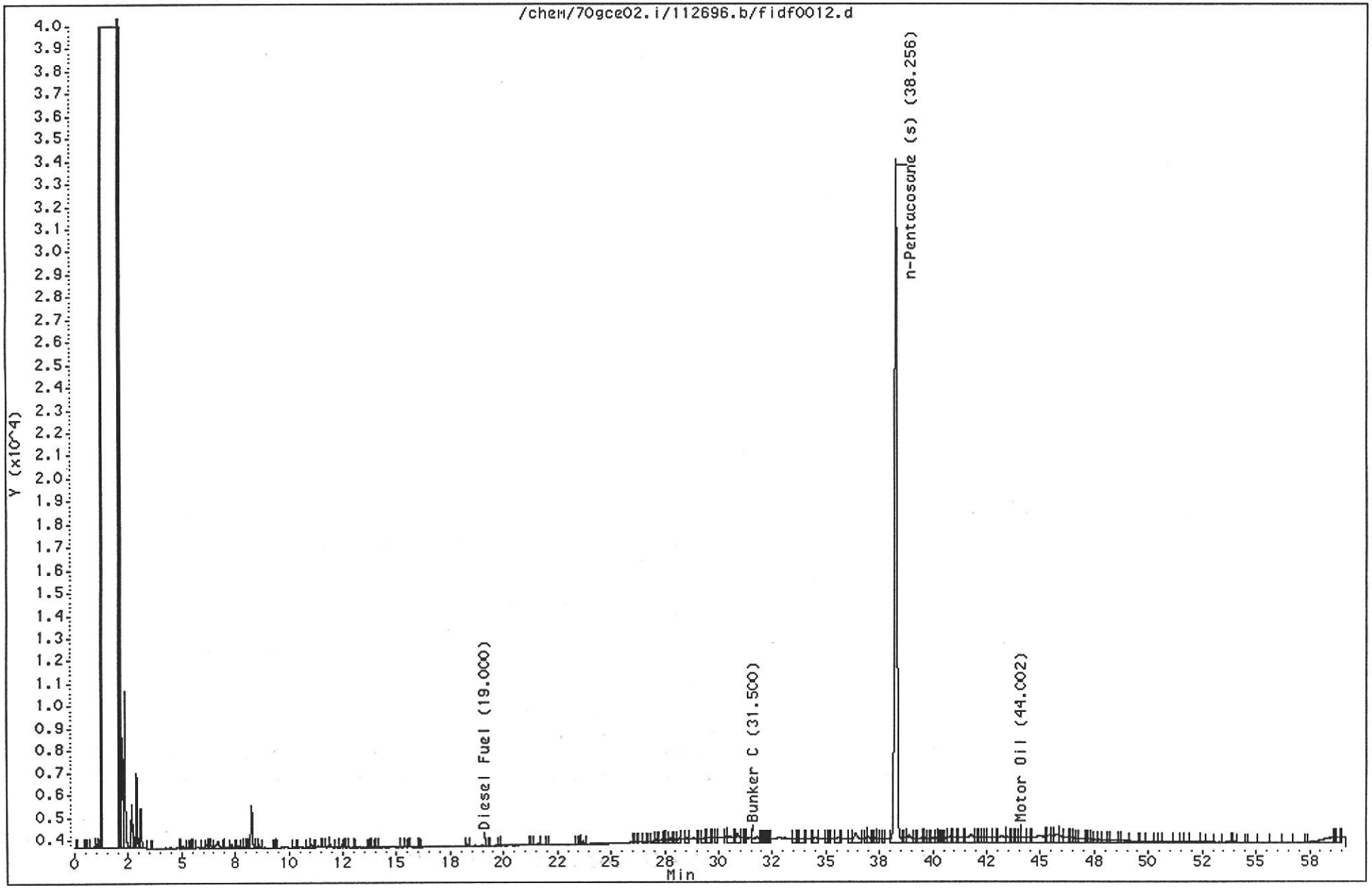
COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐
COOLER TEMPERATURE 6° °C
Blue

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	11/14/96 14:35	T MAINARIS	11-14-96 1435	ICE, cooler
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
T. MAINARIS	11-14-96 3:30	[signature]	11/14/96 16:30	• Silica gel on TEH samples • Pls provide Chromatograms • Invoice Port of Oakland
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	

Data File: /chem/70gce02.i/112696.b/fidf0012.d
Date : 27-NOV-1996 03:59
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: RESTEK XTI-5

7079695

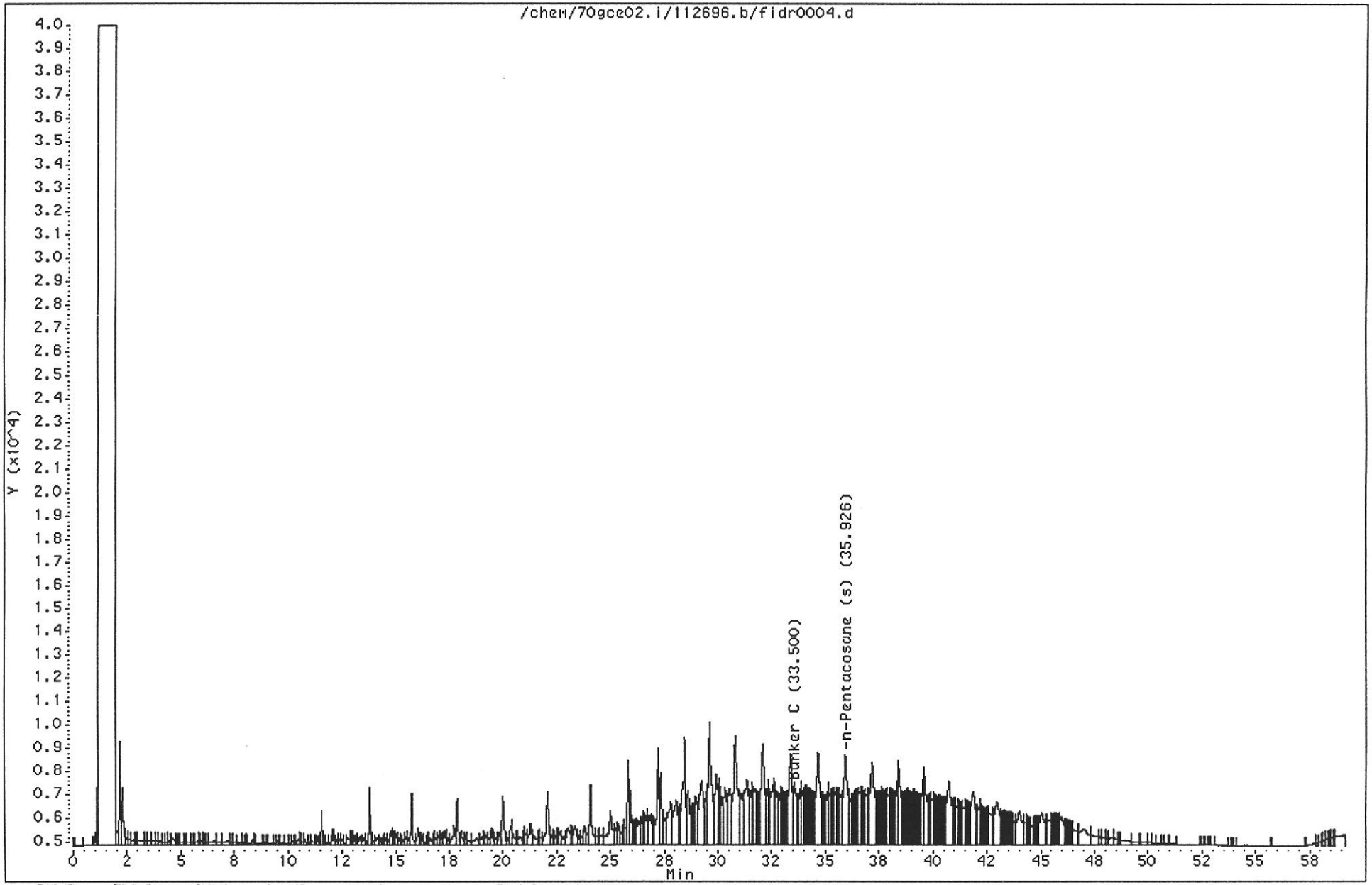
Instrument: 70gce02.i
Misc Info: 795695,,1,19345,2,0,,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidr0004.d
Date : 26-NOV-1996 19:06
Client ID:
Sample Info: CCAL-BUNKER C 2500

Column phase: J&W DB-1

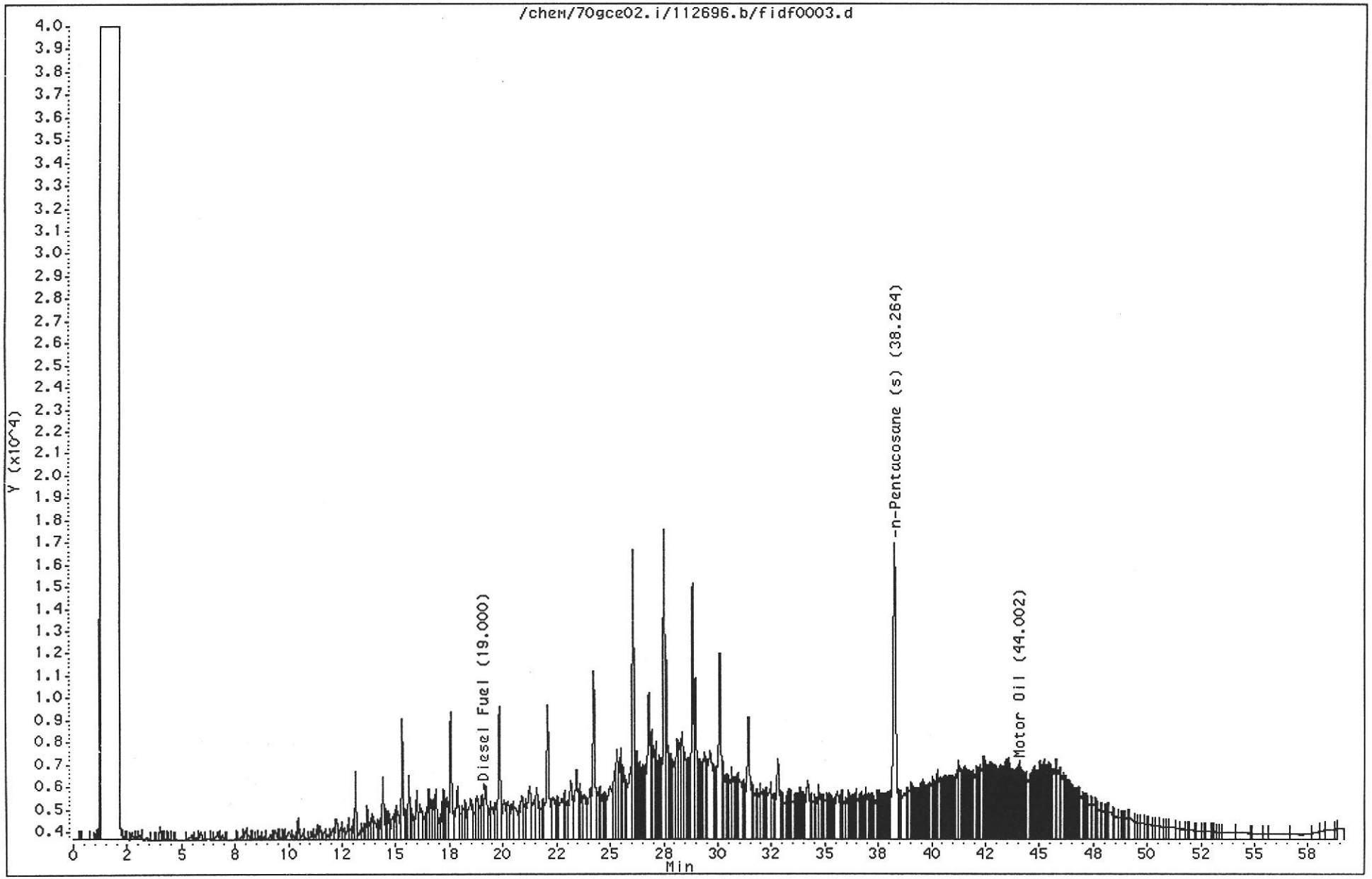
Instrument: 70gce02.i
Misc Info: DCAL-91C,,,,,2,6,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Data File: /chem/70gce02.i/112696.b/fidf0003.d
Date : 26-NOV-1996 17:59
Client ID:
Sample Info: CCAL-DIESEL/MO 1000

Column phase: RESTEK XTI-5

Instrument: 70gce02.i
Misc Info: DSTD1000,,,,,2,5,,,,dmof.sub,dmor.sub
Operator: PAA
Column diameter: 0.53



Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

December 12, 1996

Ms. Rhodora DelRosario
Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

RE: PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

Dear Ms. DelRosario:

Enclosed are the results of analyses for sample(s) received on December 2, 1996. If you have any questions concerning this report, please feel free to contact me.

Sincerely.

Ron Chew
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

DATE: 12/12/96
PAGE: 1

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

PACE Sample No: 70810197 Date Collected: 11/27/96
Client Sample ID: CS-2;5.0-5.5 Date Received: 12/02/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	24.4	mg/kg	0.943	12/09/96	EPA 6010	SMS	7440-50-8	
Lead	19.3	mg/kg	4.72	12/09/96	EPA 6010	SMS	7439-92-1	
Date Digested				12/09/96				
GC								
TPH in Soil by 8015 Modified								
Diesel Fuel	10	mg/kg	5	12/11/96	TPH by EPA 8015M	WSN	11-84-7...	1,2
Motor Oil	43	mg/kg	10	12/11/96	TPH by EPA 8015M	WSN		
Bunker C	ND	mg/kg	10	12/11/96	TPH by EPA 8015M	WSN		
n-Pentacosane (S)	96	%		12/11/96	TPH by EPA 8015M	WSN	629-99-2	
Date Extracted				12/10/96				

REPORT OF LABORATORY ANALYSIS

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Petaluma, CA 94954
Tel: 707-792-1865
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Pace Analytical

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70810254 Date Collected: 11/27/96
Client Sample ID: CS-1;5.0-5.5 Date Received: 12/02/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	19.7	mg/kg	0.901	12/09/96	EPA 6010	SMS	7440-50-8	
Lead	10.9	mg/kg	4.5	12/09/96	EPA 6010	SMS	7439-92-1	
Date Digested				12/09/96				
GC								
TPH in Soil by 8015 Modified								
Diesel Fuel	19	mg/kg	5	12/12/96	TPH by EPA 8015M	WSN	11-84-7...	1,2
Motor Oil	44	mg/kg	10	12/12/96	TPH by EPA 8015M	WSN		
Bunker C	ND	mg/kg	10	12/12/96	TPH by EPA 8015M	WSN		
n-Pentacosane (S)	103	%		12/12/96	TPH by EPA 8015M	WSN	629-99-2	
Date Extracted				12/10/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70810262 Date Collected: 11/27/96
Client Sample ID: CS-3;5.0-5.5 Date Received: 12/02/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Metals, ICP								
Copper	27.4	mg/kg	0.885	12/09/96	EPA 6010	SMS	7440-50-8	
Lead	26.2	mg/kg	4.42	12/09/96	EPA 6010	SMS	7439-92-1	
Date Digested				12/09/96				
TPH in Soil by 8015 Modified								
Diesel Fuel	22	mg/kg	5	12/12/96	TPH by EPA 8015M	WSN	11-84-7...	1,2
Motor Oil	30	mg/kg	10	12/12/96	TPH by EPA 8015M	WSN		
Bunker C	ND	mg/kg	10	12/12/96	TPH by EPA 8015M	WSN		
n-Pentacosane (S)	95	%		12/12/96	TPH by EPA 8015M	WSN	629-99-2	
Date Extracted				12/10/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

PARAMETER FOOTNOTES

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
(S)	Surrogate
[1]	Analyte is found in the associated blank as well as in the sample.
[2]	Hydrocarbons present do not match profile of laboratory standard.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Pace Analytical

QUALITY CONTROL DATA

Baseline
900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19669
QC Batch Method: EPA 3050
Date of Batch: 12/06/96
Analysis Method: EPA 6010
Analysis Description: Metals, ICP
Associated PACE Samples: 70810197 70810254 70810262

METHOD BLANK: 70814306
Associated PACE Samples:
70810197 70810254 70810262

Parameter	Units	Method Blank Result	PRL	Footnotes
Copper	mg/kg	ND	1	
Lead	mg/kg	ND	5	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70816137 70816145

Parameter	Units	70811922	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Copper	mg/kg	25.97	94.34	114.9	94.3	113.1	96.7	3	
Lead	mg/kg	12.74	94.34	102.8	95.5	98.11	94.8	1	

LABORATORY CONTROL SAMPLE & LCSD: 70816111 70816129

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Copper	mg/kg	100	96.72	96.7	97.71	97.7	1	
Lead	mg/kg	100	101.6	102	103.0	103	1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19761
QC Batch Method: CA LUFT
Date of Batch: 12/10/96
Analysis Method: TPH by EPA 8015M
Analysis Description: TPH in Soil by 8015 Modified
Associated PACE Samples: 70810197 70810254 70810262

METHOD BLANK: 70817978
Associated PACE Samples:
70810197 70810254 70810262

Parameter	Units	Method Blank Result	PRL	Footnotes
Diesel Fuel	mg/kg	5.1	5	1
Motor Oil	mg/kg	ND	10	
Bunker C	mg/kg	ND	10	
n-Pentacosane (S)	%	96		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70817986 70817994

Parameter	Units	70810197	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	10.43	33.33	31.48	63.1	27.87	52.3	19	
n-Pentacosane (S)					98.4		97.1		

LABORATORY CONTROL SAMPLE & LCSD: 70818000 70818018

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/kg	33.33	20.23	60.7	24.24	72.7	18	
n-Pentacosane (S)				86.1		97.9		

REPORT OF LABORATORY ANALYSIS

Pace Analytical

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Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

PACE Project Number: 707138
Client Project ID: Port of OAK/Seabreeze Site

UALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

D	Not Detected
C	Not Calculable
PRL	PACE Reporting Limit
PD	Relative Percent Difference
S)	Surrogate
[1]	Hydrocarbons present do not match profile of laboratory standard.

REPORT OF LABORATORY ANALYSIS

107138

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: Normal
Lab: Pace
BASELINE Contact Person: Rhodora Del Rosario

Project No.	Project Name and Location
5911-01	Seabreeze, 280 6th Ave, Oakland

Samplers: (Signature) William K Scott (William K Scott)

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	Total Copper	TEH-diesel	TEH-Bunker C	TEH-Motor Oil			Remarks/ Composite	Detection Limits
CS-2; 5.0-5.5	11-27-96	8:00	Soil	5.0-5.5	1							X	X	X	X	X			70310197	
CS-1, 5.0-5.5	11-27-96	9:45	Soil	5.0-5.5	1							X	X	X	X	X			70810254	
CS-3; 5.0-5.5	11-27-96	10:45	Soil	5.0-5.5	1							X	X	X	X	X			70810262	

COOLER CUSTODY SEALS INTAC ☐ NOT INTACT ☐
COOLER TEMPERATURE 6° °C
Blue

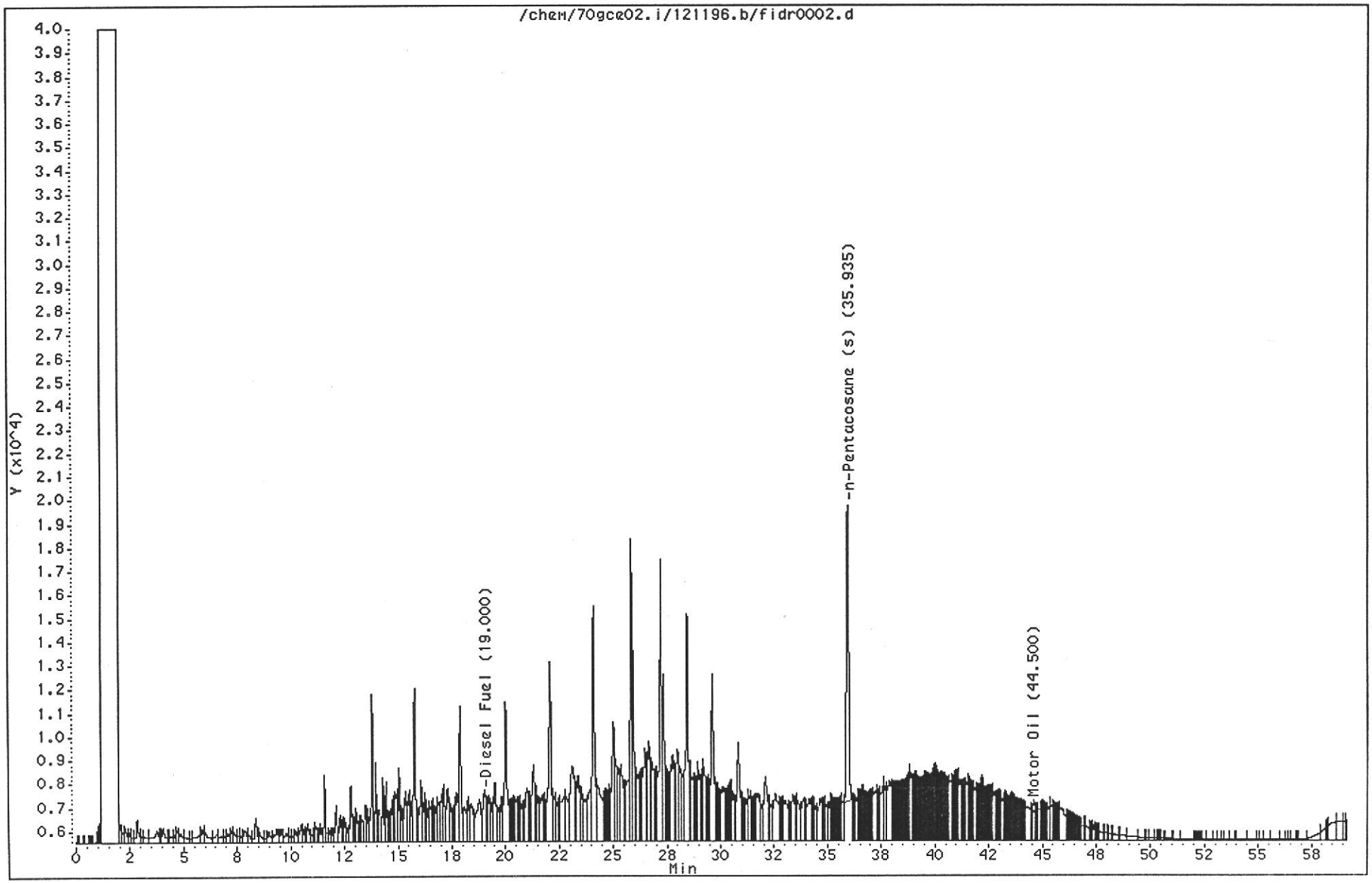
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	11/27/96 / 1:20 pm	Mark Lepp 11/27/96	11/27/96 1:20	iced cooler
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Mark Lepp	12/2/96 1:12	Nick Marinaro	12/2/96 1:20	• Silica gel cleanup on all TEH samples • Pls provide chromatograms
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	• Invoice Port of Oakland
Nick Marinaro	12/2/96 2:10	Gail Hersman	12/2/96 14:10	

Data File: /chem/70gce02.i/121196.b/fidr0002.d
Date : 11-DEC-1996 10:52
Client ID:
Sample Info: CCAL-DIESEL/MO

1000 ppm

Column phase: J&W DB-1

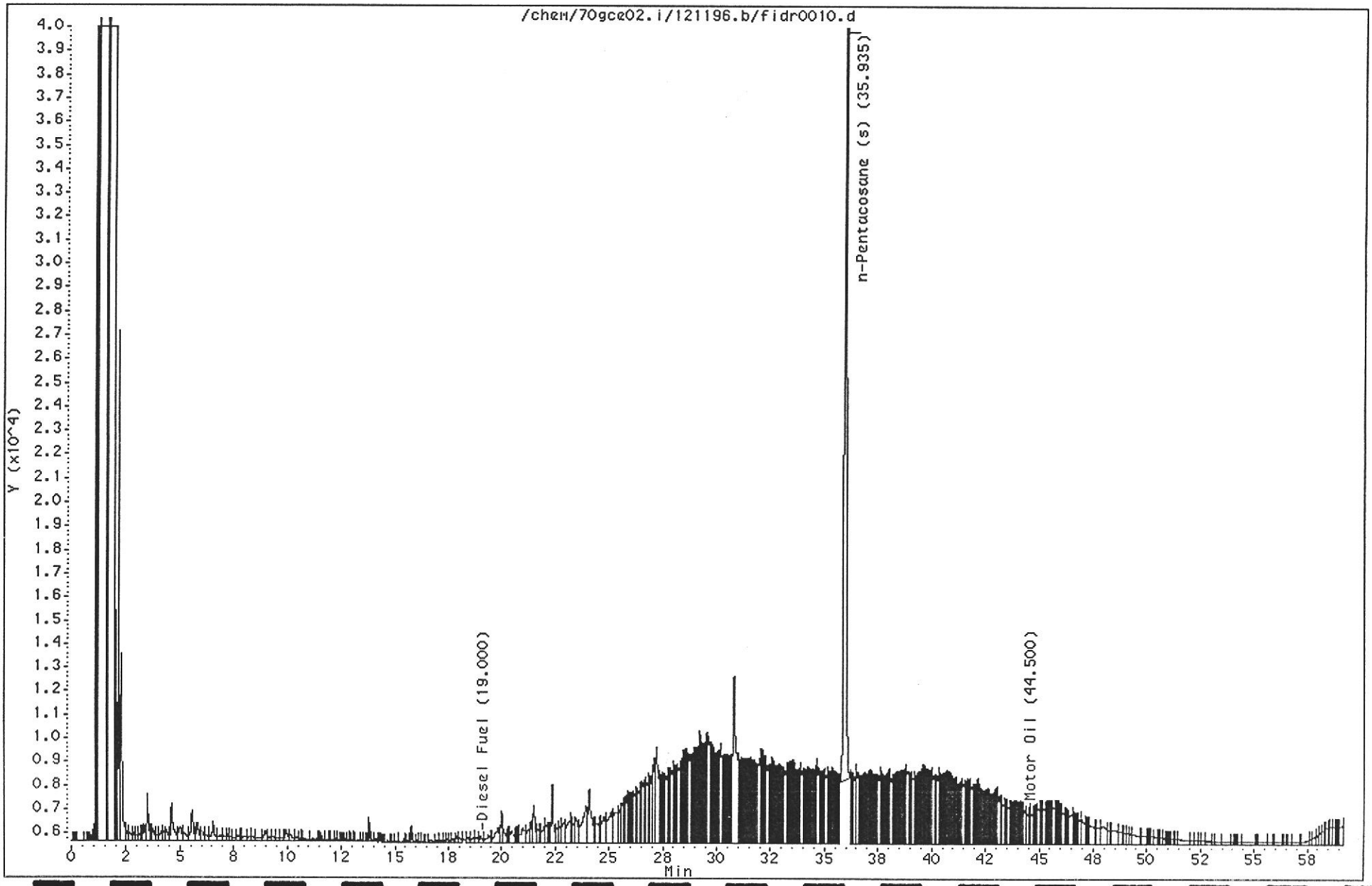
Instrument: 70gce02.i
Misc Info: 90D,,,,,2,5,,,,dMof.sub,dMor.sub
Operator: WSN
Column diameter: 0.53



Data File: /chem/70gce02.i/121196.b/fidr0010.d
Date : 12-DEC-1996 00:48
Client ID:
Sample Info: SAMPLE-soil 70810254
Volume Injected (uL): 1.0
Column phase: J&W DB-1

Instrument: 70gce02.i
Misc Info: 810254,,1,19761,2,0,,,,,dmof.sub,dmor.sub
Operator: WSN
Column diameter: 0.53

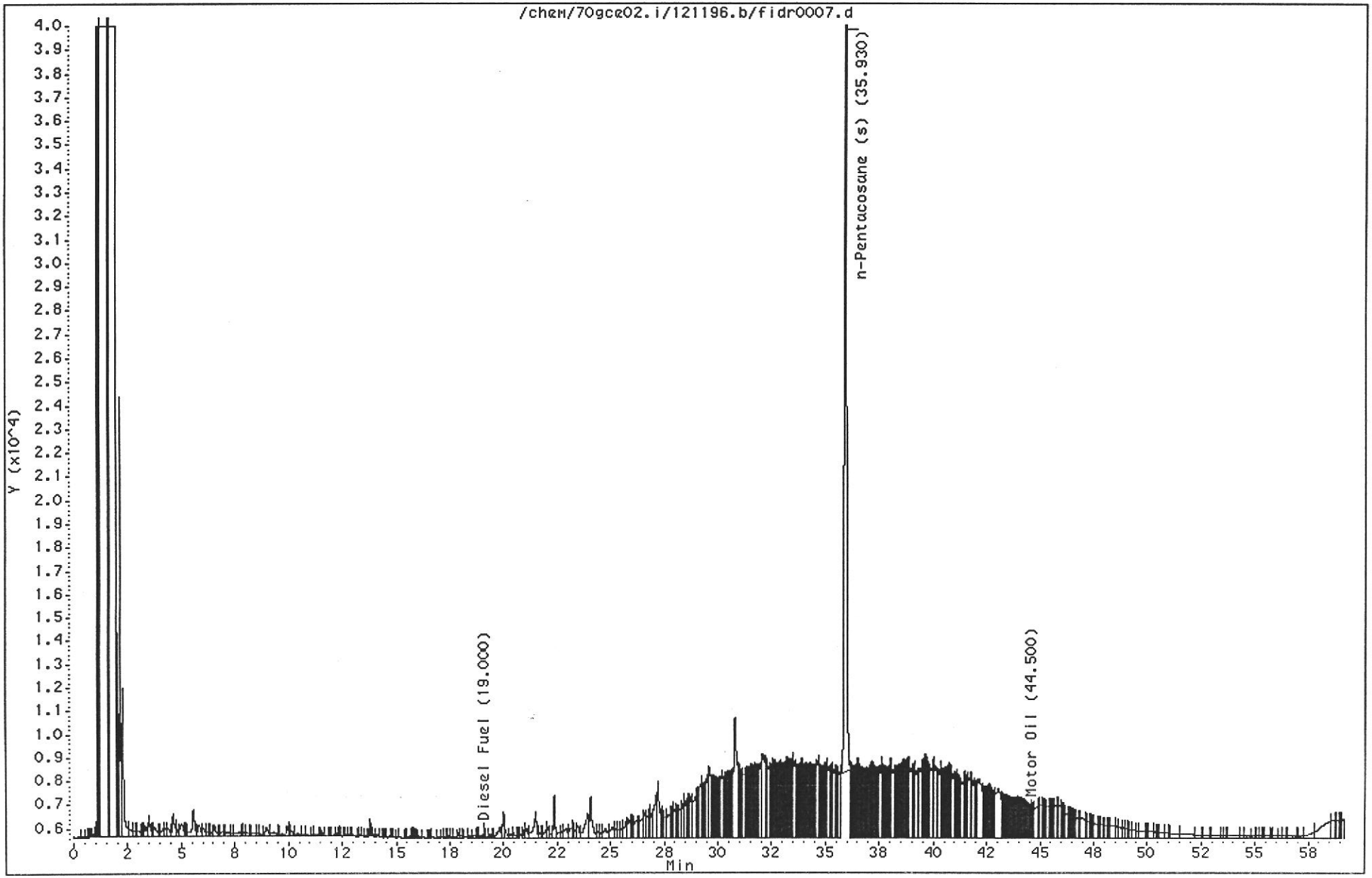
CS-1



Data File: /chem/70gce02.i/121196.b/fidr0007.d
Date : 11-DEC-1996 21:28
Client ID:
Sample Info: SAMPLE-soil 70810197
Volume Injected (uL): 1.0
Column phase: J&W DB-1

Instrument: 70gce02.i
Misc Info: 810197,,1,19761,2,0,,,,,dmof.sub,dmor.sub
Operator: WSN
Column diameter: 0.53

CS-2

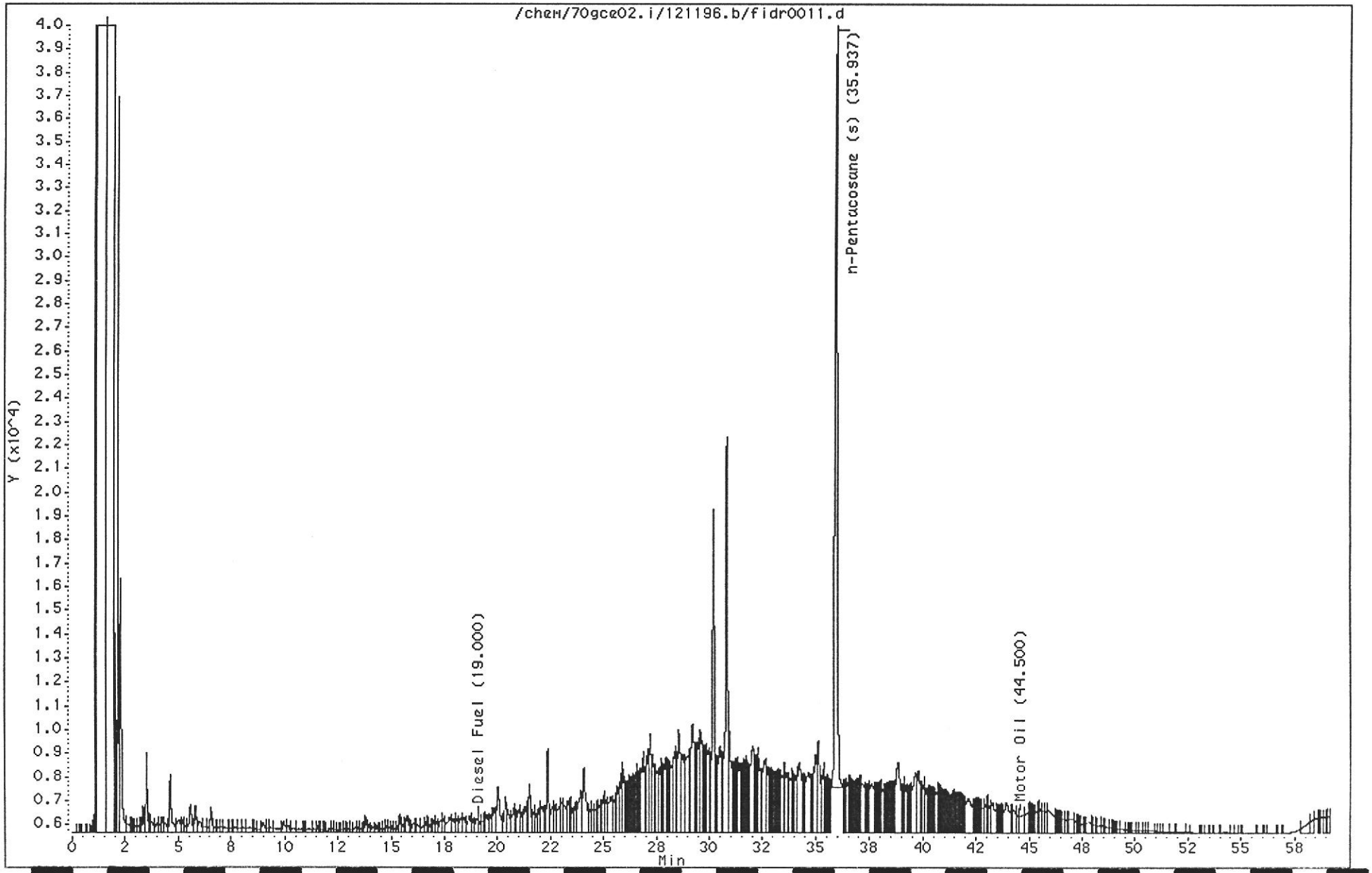


Data File: /chem/70gce02.i/121196.b/fidr0011.d
Date : 12-DEC-1996 01:55
Client ID:
Sample Info: SAMPLE-soil
Volume Injected (uL): 1.0
Column phase: J&W DB-1

7081262

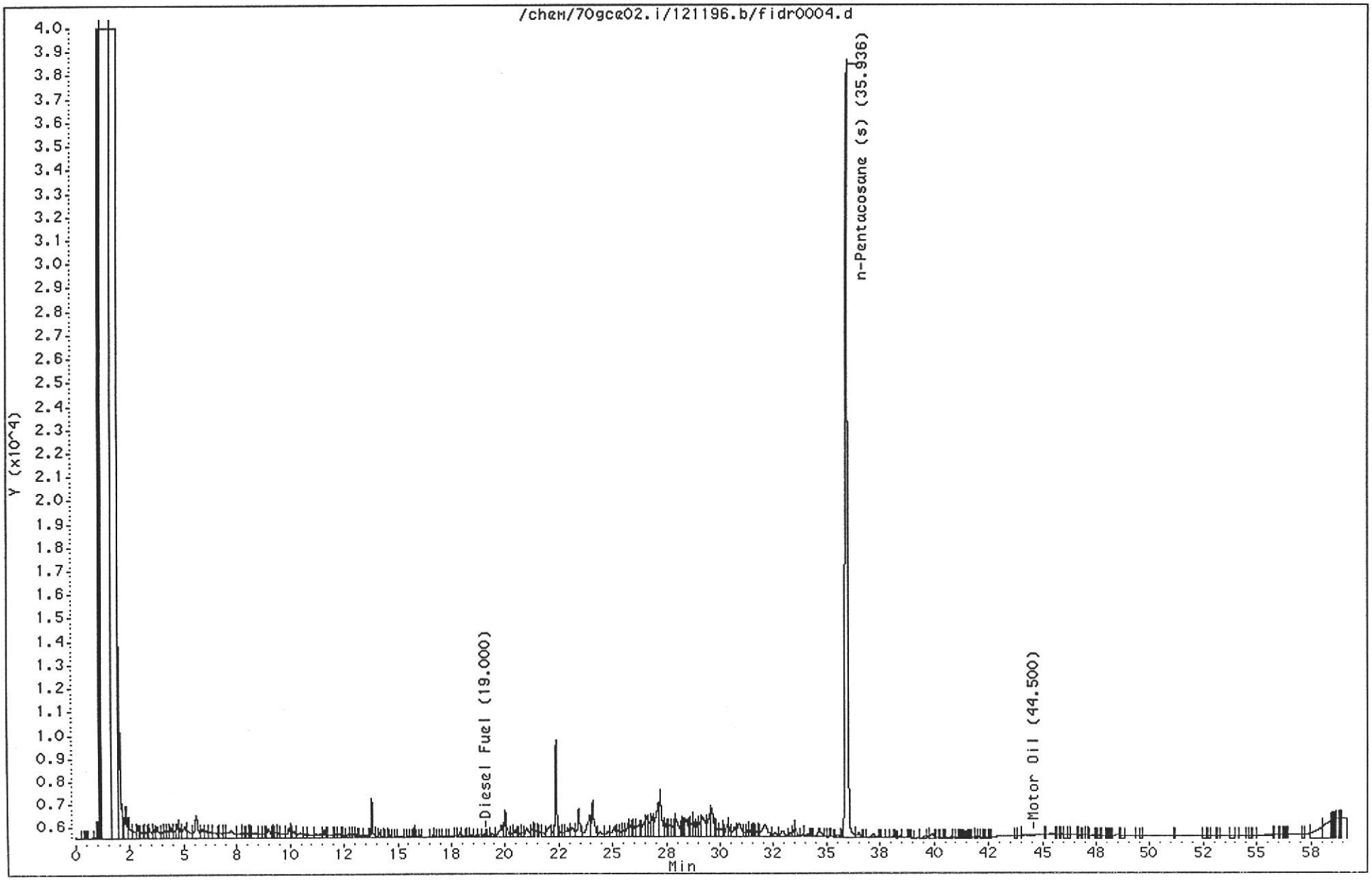
Instrument: 70gce02.i
Misc Info: 810262,,,,19761,2,0,,,,,dmof.sub,dmor.sub
Operator: WSN
Column diameter: 0.53

CS-3



Data File: /chem/70gce02.i/121196.b/fidr0004.d
Date : 11-DEC-96 18:08
Client ID:
Sample Info: BLANK-soil 70817978
Volume Injected (uL): 1.0
Column phase: J&W DB-1

Instrument: 70gce02.i
Misc Info: 817978,1,19761,2,3,,BLANK,,,dmof.sub,dmor.sub
Operator: WSN
Column diameter: 0.53



Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
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Pace Analytical

November 27, 1996

Ms. Rhodora DelRosario
Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

RE: PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Dear Ms. DelRosario:

Enclosed are the results of analyses for sample(s) received on November 14, 1996. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical

Pace Analytical Services, Inc.
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Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

DATE: 11/27/96
PAGE: 1

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

PACE Sample No: 70795737 Date Collected: 11/14/96
Client Sample ID: ST-1;1.5-2.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	144	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	ND	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70795745 Date Collected: 11/14/96
Client Sample ID: ST-2;2.5-3.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	183	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	607	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

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Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70795760 Date Collected: 11/14/96
Client Sample ID: S1-3;0.0-0.5 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	129	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	ND	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

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Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70795802 Date Collected: 11/14/96
Client Sample ID: ST-4;2.5-3.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	129	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	451	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

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Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796164 Date Collected: 11/14/96
Client Sample ID: ST-5;2.0-2.5 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	284	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	622	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				
Organics								
Percent Moisture								
Percent Moisture	35.8	%		11/18/96		RVC		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796198 Date Collected: 11/14/96
Client Sample ID: ST-6;0.5-1.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	ND	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	ND	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796222 Date Collected: 11/14/96
Client Sample ID: ST-7;0.5-1.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	568	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	3230	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796230 Date Collected: 11/14/96
Client Sample ID: ST-8;1.5-2.0 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Inorganics								
STLC Metals, ICP, STLC Leach.								
Date Digested				11/22/96				
Metals								
STLC Metals, ICP, STLC Leach.								
Copper	204	ug/L	100	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	765	ug/L	420	11/22/96	EPA 6010	SMS	7439-92-1	
Date Digested				11/22/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796347 Date Collected: 11/14/96
Client Sample ID: COMPOSITE ST-1 TO ST-4 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Mercury, CVAAS								
Mercury	0.085	mg/kg	0.0152	11/22/96	EPA 7471	BBF	7439-97-6	
Arsenic, AAS Furnace								
Arsenic	2.67	mg/kg	0.467	11/23/96	EPA 7060	BBF	7440-38-2	
Date Digested				11/22/96				
Selenium, AAS Furnace								
Selenium	ND	mg/kg	0.467	11/23/96	EPA 7740	BBF	7782-49-2	
Date Digested				11/22/96				
Metals, ICP								
Antimony	ND	mg/kg	4.72	11/22/96	EPA 6010	SMS	7440-36-0	
Barium	76.4	mg/kg	0.377	11/22/96	EPA 6010	SMS	7440-39-3	
Beryllium	0.363	mg/kg	0.0943	11/22/96	EPA 6010	SMS	7440-41-7	
Cadmium	ND	mg/kg	0.472	11/22/96	EPA 6010	SMS	7440-43-9	
Chromium	42.3	mg/kg	0.66	11/22/96	EPA 6010	SMS	7440-47-3	
Cobalt	8.49	mg/kg	0.66	11/22/96	EPA 6010	SMS	7440-48-4	
Copper	15.8	mg/kg	0.943	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	13.2	mg/kg	4.72	11/22/96	EPA 6010	SMS	7439-92-1	
Molybdenum	ND	mg/kg	1.89	11/22/96	EPA 6010	SMS	7439-98-7	
Nickel	38.2	mg/kg	2.83	11/22/96	EPA 6010	SMS	7440-02-0	
Silver	0.717	mg/kg	0.66	11/22/96	EPA 6010	SMS	7440-22-4	
Thallium	35.2	mg/kg	9.43	11/22/96	EPA 6010	SMS	7440-28-0	
Vanadium	29.8	mg/kg	1.13	11/22/96	EPA 6010	SMS	7440-62-2	
Zinc	46.3	mg/kg	1.89	11/22/96	EPA 6010	SMS	7440-66-6	
Date Digested				11/22/96				
Wet Chemistry								
TPH by EPA Method 418.1 Mod								
Total Petroleum Hydrocarbons	231	mg/kg	15.5	11/25/96	EPA 418.1 Modified	GMF		
GC -- Volatiles								
GAS/BTEX by CA LUFT, Soil								
Benzene	2.9	ug/kg	1	11/18/96	CA LUFT	AMH	71-43-2	
Toluene	ND	ug/kg	1	11/18/96	CA LUFT	AMH	108-88-3	
Ethylbenzene	3.2	ug/kg	1	11/18/96	CA LUFT	AMH	100-41-4	
Xylene (Total)	6.2	ug/kg	2	11/18/96	CA LUFT	AMH	1330-20-7	
a,a,a-Trifluorotoluene (S)	95	%		11/18/96	CA LUFT	AMH	2164-17-2	
4-Bromofluorobenzene (S)	97	%		11/18/96	CA LUFT	AMH	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Pace Analytical

DATE: 11/27/96
PAGE: 10

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796362 Date Collected: 11/14/96
Client Sample ID: COMPOSITE ST-5 TO ST-8 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Metals								
Mercury, CVAAS								
Mercury	0.133	mg/kg	0.0179	11/22/96	EPA 7471	BBF	7439-97-6	
Arsenic, AAS Furnace								
Arsenic	3.4	mg/kg	0.49	11/23/96	EPA 7060	BBF	7440-38-2	
Date Digested				11/22/96				
Selenium, AAS Furnace								
Selenium	ND	mg/kg	0.49	11/23/96	EPA 7740	BBF	7782-49-2	
Date Digested				11/22/96				
Metals, ICP								
Antimony	ND	mg/kg	4.85	11/22/96	EPA 6010	SMS	7440-36-0	
Barium	78.6	mg/kg	0.388	11/22/96	EPA 6010	SMS	7440-39-3	
Beryllium	0.396	mg/kg	0.0971	11/22/96	EPA 6010	SMS	7440-41-7	
Cadmium	ND	mg/kg	0.485	11/22/96	EPA 6010	SMS	7440-43-9	
Chromium	42.1	mg/kg	0.68	11/22/96	EPA 6010	SMS	7440-47-3	
Cobalt	7.86	mg/kg	0.68	11/22/96	EPA 6010	SMS	7440-48-4	
Copper	35.7	mg/kg	0.971	11/22/96	EPA 6010	SMS	7440-50-8	
Lead	39.6	mg/kg	4.85	11/22/96	EPA 6010	SMS	7439-92-1	
Molybdenum	ND	mg/kg	1.94	11/22/96	EPA 6010	SMS	7439-98-7	
Nickel	74.6	mg/kg	2.91	11/22/96	EPA 6010	SMS	7440-02-0	
Silver	0.89	mg/kg	0.68	11/22/96	EPA 6010	SMS	7440-22-4	
Thallium	39.7	mg/kg	9.71	11/22/96	EPA 6010	SMS	7440-28-0	
Vanadium	33.3	mg/kg	1.17	11/22/96	EPA 6010	SMS	7440-62-2	
Zinc	82.3	mg/kg	1.94	11/22/96	EPA 6010	SMS	7440-66-6	
Date Digested				11/22/96				
Wet Chemistry								
TPH by EPA Method 418.1 Mod								
Total Petroleum Hydrocarbons	298	mg/kg	16.9	11/25/96	EPA 418.1 Modified	GMF		
GC -- Volatiles								
GAS/BTEX by CA LUFT, Soil								
Benzene	ND	ug/kg	1	11/18/96	CA LUFT	AMH	71-43-2	
Toluene	1.0	ug/kg	1	11/18/96	CA LUFT	AMH	108-88-3	
Ethylbenzene	ND	ug/kg	1	11/18/96	CA LUFT	AMH	100-41-4	
Xylene (Total)	ND	ug/kg	2	11/18/96	CA LUFT	AMH	1330-20-7	
a,a,a-Trifluorotoluene (S)	103	%		11/18/96	CA LUFT	AMH	2164-17-2	
4-Bromofluorobenzene (S)	95	%		11/18/96	CA LUFT	AMH	460-00-4	
GC								
8015 Fuel Fingerprint in Soil								
Bunker C	45	mg/kg	10	11/24/96	TPH by EPA 8015M	WSN		
n-Pentacosane (S)	42	%		11/24/96	TPH by EPA 8015M	WSN	629-99-2	

REPORT OF LABORATORY ANALYSIS

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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PACE Sample No: 70796362 Date Collected: 11/14/96
Client Sample ID: COMPOSITE ST-5 TO ST-8 Date Received: 11/14/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Date Extracted				11/21/96				

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Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

PARAMETER FOOTNOTES

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
(S)	Surrogate

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QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 18882
QC Batch Method: CA LUFT
Date of Batch: 11/07/96
Analysis Method: CA LUFT
Analysis Description: GAS/BTEX by CA LUFT, Soil
Associated PACE Samples: 70796347 70796362

METHOD BLANK: 70796834
Associated PACE Samples:
70796347 70796362

Parameter	Units	Method Blank Result	PRL	Footnotes
Benzene	ug/kg	ND	1	
Toluene	ug/kg	ND	1	
Ethylbenzene	ug/kg	ND	1	
Xylene (Total)	ug/kg	ND	2	
a,a,a-Trifluorotoluene (S)	%	94		
4-Bromofluorobenzene (S)	%	85		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70784111 70784129

Parameter	Units	70783840	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Benzene	ug/kg	0.2423	100	120.5	120	120.5	120	0	
Toluene	ug/kg	0.9632	100	113.7	113	115.4	114	1	
Ethylbenzene	ug/kg	0.5223	100	108.8	108	112.0	112	3	
Xylene (Total)	ug/kg	1.539	300	336.9	112	350.4	116	4	
a,a,a-Trifluorotoluene (S)					110		106		
4-Bromofluorobenzene (S)					87.5		92.8		

LABORATORY CONTROL SAMPLE & LCSD: 70784137 70784145

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Benzene	ug/kg	100	104.1	104	108.6	109	5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

DATE: 11/27/96
PAGE: 14

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

LABORATORY CONTROL SAMPLE & LCSD: 70784137 70784145

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Toluene	ug/kg	100	101.3	101	105.3	105	4	
Ethylbenzene	ug/kg	100	102.7	103	106.9	107	4	
Xylene (Total)	ug/kg	300	324.0	108	335.8	112	4	
a,a,a-Trifluorotoluene (S)				98.9		100		
4-Bromofluorobenzene (S)				96.7		97.5		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19141
QC Batch Method: EPA 3540
Date of Batch: 11/14/96
Analysis Method: EPA 418.1 Modified
Analysis Description: TPH by EPA Method 418.1 Mod
Associated PACE Samples: 70796347 70796362

METHOD BLANK: 70794300
Associated PACE Samples:
70796347 70796362

Parameter	Units	Method Blank Result	PRL	Footnotes
Total Petroleum Hydrocarbons	mg/kg	ND	10	

MATRIX SPIKE: 70794318

Parameter	Units	70793898	Spike Conc.	Matrix Spike Result	Spike % Rec	Footnotes
Total Petroleum Hydrocarbons	mg/kg	40.09	661.2	304.5	40.0	

LABORATORY CONTROL SAMPLE: 70794334

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Total Petroleum Hydrocarbons	mg/kg	667.6	196.3	29.4	

SAMPLE DUPLICATE: 70794326

Parameter	Units	70793898	Dup. Result	RPD	Footnotes
Total Petroleum Hydrocarbons	mg/kg	40.10	43.40	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19210
QC Batch Method:
Date of Batch: 11/18/96
Analysis Method:
Analysis Description: Percent Moisture
Associated PACE Samples: 70796164

SAMPLE DUPLICATE: 70796792

Parameter	Units	70796164	Dup. Result	RPD	Footnotes
Percent Moisture	%	35.80	36.50	2	

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QUALITY CONTROL DATA

Baseline
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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19245
QC Batch Method: EPA 3050
Date of Batch: 11/19/96
Analysis Method: EPA 7060
Analysis Description: Arsenic, AAS Furnace
Associated PACE Samples: 70796347 70796362

METHOD BLANK: 70798459
Associated PACE Samples:
70796347 70796362

Parameter	Units	Method Blank Result	PRL	Footnotes
Arsenic	mg/kg	ND	0.5	
Selenium	mg/kg	ND	0.5	

MATRIX SPIKE: 70802335

Parameter	Units	70791231	Spike Conc.	Matrix Spike Result	Spike % Rec	Footnotes
Selenium	mg/kg	0	4.0	0.9360	23.4	1
Arsenic	mg/kg	1.069	4.0	3.725	66.4	1

LABORATORY CONTROL SAMPLE & LCSD: 70798483 70798491

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Arsenic	mg/kg	4.0	4.117	103	4.126	103	0	
Selenium	mg/kg	4.0	3.999	100	4.076	102	2	

SAMPLE DUPLICATE: 70802343

Parameter	Units	70791231	Dup. Result	RPD	Footnotes
Selenium	mg/kg	ND	ND	NC	

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QUALITY CONTROL DATA

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

SAMPLE DUPLICATE: 70802343

Parameter	Units	70791231	Dup. Result	RPD	Footnotes
Arsenic	mg/kg	1.070	0.4770	0	

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QUALITY CONTROL DATA

Baseline
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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19247
QC Batch Method: EPA 3050
Date of Batch: 11/19/96
Analysis Method: EPA 6010
Analysis Description: Metals, ICP
Associated PACE Samples: 70796347 70796362

METHOD BLANK: 70798517
Associated PACE Samples:
70796347 70796362

Parameter	Units	Method Blank Result	PRL	Footnotes
Antimony	mg/kg	ND	5	
Barium	mg/kg	ND	0.4	
Beryllium	mg/kg	ND	0.1	
Cadmium	mg/kg	ND	0.5	
Chromium	mg/kg	ND	0.7	
Cobalt	mg/kg	ND	0.7	
Copper	mg/kg	ND	1	
Lead	mg/kg	ND	5	
Molybdenum	mg/kg	ND	2	
Nickel	mg/kg	ND	3	
Silver	mg/kg	ND	0.7	
Thallium	mg/kg	ND	10	
Vanadium	mg/kg	ND	1.2	
Zinc	mg/kg	ND	2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70803937 70803945

Parameter	Units	70795000	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Antimony	mg/kg	1.518	74.07	47.06	61.5	58.31	64.2	4	1
Barium	mg/kg	76.01	74.07	146.7	95.4	161.3	96.4	1	
Beryllium	mg/kg	0.1781	7.4	7.062	92.9	8.558	94.7	2	
Cadmium	mg/kg	0.2588	7.4	7.818	102	9.151	100	1	
Chromium	mg/kg	6.852	74.07	79.08	97.5	94.14	98.6	1	

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QUALITY CONTROL DATA

DATE: 11/27/96
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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70803937 70803945

Parameter	Units	70795000	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Cobalt	mg/kg	4.146	74.07	76.81	98.1	92.19	99.5	1	
Copper	mg/kg	6.407	74.07	72.96	89.8	87.33	91.4	2	
Lead	mg/kg	3.431	74.07	78.67	102	95.02	104	2	
Molybdenum	mg/kg	0.3816	74.07	70.11	94.1	85.55	96.2	2	
Nickel	mg/kg	4.787	74.07	74.68	94.4	90.22	96.5	2	
Silver	mg/kg	0.5342	7.4	7.453	93.4	8.876	94.3	1	
Thallium	mg/kg	28.18	74.07	106.4	106	122.5	106	1	
Vanadium	mg/kg	29.71	74.07	103.1	99.1	114.6	95.9	3	
Zinc	mg/kg	27.48	74.07	103.3	102	117.5	102	1	

LABORATORY CONTROL SAMPLE & LCSD: 70803911 70803929

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Antimony	mg/kg	100	100.7	101	104.4	104	3	
Barium	mg/kg	100	96.16	96.2	96.26	96.3	0	
Beryllium	mg/kg	10	9.685	96.9	9.732	97.3	0	
Cadmium	mg/kg	10	10.20	102	10.61	106	4	
Chromium	mg/kg	100	100.4	100	101.6	102	2	
Cobalt	mg/kg	100	102.2	102	103.4	103	1	
Copper	mg/kg	100	94.79	94.8	95.20	95.2	0	
Lead	mg/kg	100	104.5	104	107.0	107	3	
Molybdenum	mg/kg	100	99.40	99.4	99.90	99.9	1	
Nickel	mg/kg	100	101.2	101	102.3	102	1	
Silver	mg/kg	10	9.844	98.4	9.953	99.5	1	
Thallium	mg/kg	100	109.1	109	111.9	112	3	
Vanadium	mg/kg	100	96.12	96.1	96.95	96.9	1	
Zinc	mg/kg	100	104.4	104	106.0	106	2	

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QUALITY CONTROL DATA

Baseline
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Emeryville, CA 94608

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19305
QC Batch Method: EPA 7471
Date of Batch: 11/21/96
Analysis Method: EPA 7471
Analysis Description: Mercury, CVAAS
Associated PACE Samples: 70796347 70796362

METHOD BLANK: 70800677
Associated PACE Samples:
70796347 70796362

Parameter	Units	Method Blank Result	PRL	Footnotes
Mercury	mg/kg	ND	0.025	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70800685 70800693

Parameter	Units	70796347	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Mercury	mg/kg	0.08498	0.18	0.2947	118	0.2927	125	6	

LABORATORY CONTROL SAMPLE & LCSD: 70800701 70800719

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Mercury	mg/kg	0.20	0.2125	106	0.2100	105	1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19317
QC Batch Method: EPA 3550
Date of Batch: 11/21/96
Analysis Method: TPH by EPA 8015M
Analysis Description: 8015 Fuel Fingerprint in Soil
Associated PACE Samples: 70796362

METHOD BLANK: 70800990
Associated PACE Samples:
70796362

Parameter	Units	Method Blank Result	PRL	Footnotes
Bunker C	mg/kg	ND	10	
n-Pentacosane (S)	%	48		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70801006 70801014

Parameter	Units	70793211	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
n-Pentacosane (S)					55.1		51.3		

LABORATORY CONTROL SAMPLE & LCSD: 70801022 70801030

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
n-Pentacosane (S)				48.5		52.2		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Baseline
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PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19360
QC Batch Method: EPA 3010
Date of Batch: 11/22/96
Analysis Method: EPA 6010
Analysis Description: STLC Metals, ICP, STLC Leach.
Associated PACE Samples: 70795737 70795745 70795760 70795802 70796164 70796198 70796222 70796230

METHOD BLANK: 70802764
Associated PACE Samples:
70795737 70795745 70795760 70795802 70796164 70796198 70796222 70796230

Parameter	Units	Method Blank Result	PRL	Footnotes
Copper	ug/L	ND	100	
Lead	ug/L	ND	420	

MATRIX SPIKE: 70803796

Parameter	Units	70795737	Spike Conc.	Matrix Spike Result	Spike % Rec	Footnotes
Copper	ug/L	143.5	20000	19230	95.4	
Lead	ug/L	378.7	20000	19600	96.1	

LABORATORY CONTROL SAMPLE & LCSD: 70803770 70803788

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Copper	ug/L	20000	19840	99.2	19800	99.0	0	
Lead	ug/L	20000	20140	101	20230	101	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

SAMPLE DUPLICATE: 70803804

Parameter	Units	70795737	Dup. Result	RPD	Footnotes
Copper	ug/L	144.0	138.0	4	
Lead	ug/L	ND	456.0	NC	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707049
Client Project ID: Port of OAK/Seabreeze Site

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	The spike recovery was outside acceptance limits for the MS and /or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

REPORT OF LABORATORY ANALYSIS

10/094

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time
Lab PACE
BASELINE Contact Person Rhonda Del Rosario

Project No.	Project Name and Location
5917I-C1	Seabreeze, 280 6th Ave, Oakland

Samplers: (Signature) William K Smith

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TRPH	TPH Bunker Oil	BTEX	Title 22 metals	WET heat (not composited)	WET copper (not composited)	% Moisture						Remarks/ Composite	Detection Limits
ST-1; 1.5-2.0	11-14-96	9:50	Soil	1.5-2.0	1	X		X	X	X	X		70	795	737				composit	70
ST-2; 2.5-3.0	"	10:15		2.5-3.0	1	X		X	X	X	X		70	795	745				4:1 except	196347
ST-3; 0.0-0.5	"	10:05		0.0-0.5	1	X		X	X	X	X		70	795	760				WET	
ST-4; 2.5-3.0	"	10:29		2.5-3.0	1	X		X	X	X	X		70	795	802					
ST-5; 2.0-2.5	"	10:37		2.0-2.5	1	X	X	X	X	X	X	X	70	796	164				composit	70
ST-6; 0.5-1.0	"	10:43		0.5-1.0	1	X	X	X	X	X	X		70	796	198				4:1 except	196362
ST-7; 0.5-1.0	"	11:02		0.5-1.0	1	X	X	X	X	X	X		70	796	227				WET	
ST-8; 1.5-2.0	"	13:00		1.5-2.0	1	X	X	X	X	X	X		70	796	230					

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐
COOLER TEMPERATURE 6° °C
Blue

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Smith	11-14-96 / 1435	THEO MAINARIS	11-14-96 1435	Ice, Cooler
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
T. MAINARIS	11-14-96 3:30	[signature]	11/14/96 16:30	2 composits Do not composit WET analysis Silica gel for TRPH/TPH Invoice Port of Oakland
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
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Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

November 08, 1996

Ms. Rhodora DelRosario
Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

RE: PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Dear Ms. DelRosario:

Enclosed are the results of analyses for sample(s) received on November 6, 1996. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

DATE: 11/08/96
PAGE: 1

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

PACE Sample No: 70784012 Date Collected: 11/06/96
Client Sample ID: SB-DISCHARGE Date Received: 11/06/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Wet Chemistry								
TPH Grav./S.G. by 5520								
Oil and Grease	ND	mg/L	5	11/08/96	EPA 5520 B & F	KDN		
Chemical Oxygen Demand, Filtered								
Chemical Oxygen Demand, Filtered	720	mg/L	160	11/06/96	EPA 410.4	LMD		
Total Suspended Solids								
Total Suspended Solids	18	mg/L	5	11/07/96	EPA 160.2	LMD		
GC								
TPH in Water by 8015 Modified								
Diesel Fuel	ND	mg/L	0.05	11/07/96	TPH by EPA 8015M	wsn	11-84-7...	
Bunker C	1.1	mg/L	0.5	11/07/96	TPH by EPA 8015M	wsn		1
n-Pentacosane (S)	109	%		11/07/96	TPH by EPA 8015M	wsn	629-99-2	
Date Extracted				11/06/96				
Organochlorine PCBs								
PCB-1016 (Arochlor 1016)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	12674-11-2	
PCB-1221 (Arochlor 1221)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	11104-28-2	
PCB-1232 (Arochlor 1232)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	11141-16-5	
PCB-1242 (Arochlor 1242)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	53469-21-9	
PCB-1248 (Arochlor 1248)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	12672-29-6	
PCB-1254 (Arochlor 1254)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	11097-69-1	
PCB-1260 (Arochlor 1260)	ND	ug/L	0.1	11/07/96	EPA 608	WSN	11096-82-5	
Decachlorobiphenyl (S)	51	%		11/07/96	EPA 608	WSN	2051-24-3	
Tetrachloro-meta-xylene (S)	70	%		11/07/96	EPA 608	WSN	877-09-8	
Date Extracted				11/06/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

PARAMETER FOOTNOTES

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
(S)	Surrogate
[1]	Hydrocarbons present do not match profile of laboratory standard.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
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Pace Analytical

QUALITY CONTROL DATA

DATE: 11/08/96
PAGE: 3

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 18747
QC Batch Method: EPA 3510
Date of Batch: 11/02/96
Analysis Method: EPA 5520 B & F
Analysis Description: TPH Grav./S.G. by 5520
Associated PACE Samples: 70784012

METHOD BLANK: 70785944
Associated PACE Samples:
70784012

Parameter	Units	Method Blank Result	PRL	Footnotes
Oil and Grease	mg/L	ND	5	

LABORATORY CONTROL SAMPLE & LCSD: 70779327 70779335

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Oil and Grease	mg/L	20	19.40	97.0	18.90	94.5	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
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Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

DATE: 11/08/96

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 18851
QC Batch Method: EPA 410.4
Date of Batch: 11/06/96
Analysis Method: EPA 410.4
Analysis Description: Chemical Oxygen Demand, Filtered
Associated PACE Samples: 70784012

METHOD BLANK: 70782933
Associated PACE Samples: 70784012

Parameter	Units	Method Blank Result	PRL	Footnotes
Chemical Oxygen Demand Filtered	mg/L	ND	20	

MATRIX SPIKE: 70782941

Parameter	Units	70770839	Spike Conc.	Matrix Spike Result	Spike % Rec	Footnotes
Chemical Oxygen Demand Filtered	mg/L	110.0	500	614.0	101	

LABORATORY CONTROL SAMPLE & LCSD: 70782966 70782974

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Chemical Oxygen Demand Filtered	mg/L	500	506.0	101	505.0	101	0	

SAMPLE DUPLICATE: 70782958

Parameter	Units	70770839	Dup. Result	RPD	Footnotes
Chemical Oxygen Demand Filtered	mg/L	110.0	112.0	2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 18881
QC Batch Method: EPA 160.2
Date of Batch: 11/07/96
Analysis Method: EPA 160.2
Analysis Description: Total Suspended Solids
Associated PACE Samples: 70784012

METHOD BLANK: 70784020
Associated PACE Samples:
70784012

Parameter	Units	Method Blank Result	PRL	Footnotes
Total Suspended Solids	mg/L	ND	5	

SAMPLE DUPLICATE: 70784038

Parameter	Units	70784012	Dup. Result	RPD	Footnotes
Total Suspended Solids	mg/L	18.00	19.00	5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 18889
QC Batch Method: EPA 3520
Date of Batch: 11/07/96
Analysis Method: EPA 608
Analysis Description: Organochlorine PCBs
Associated PACE Samples: 70784012

METHOD BLANK: 70784269
Associated PACE Samples: 70784012

Parameter	Units	Method Blank Result	PRL	Footnotes
PCB-1016 (Arochlor 1016)	ug/L	ND	0.1	
PCB-1221 (Arochlor 1221)	ug/L	ND	0.1	
PCB-1232 (Arochlor 1232)	ug/L	ND	0.1	
PCB-1242 (Arochlor 1242)	ug/L	ND	0.1	
PCB-1248 (Arochlor 1248)	ug/L	ND	0.1	
PCB-1254 (Arochlor 1254)	ug/L	ND	0.1	
PCB-1260 (Arochlor 1260)	ug/L	ND	0.1	
Decachlorobiphenyl (S)	%	75		
Tetrachloro-meta-xylene (S)	%	78		

LABORATORY CONTROL SAMPLE & LCSD: 70784277 70784285

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
PCB-1260 (Arochlor 1260)	ug/L	1.0	0.8788	87.9	0.8066	80.7	9	
Decachlorobiphenyl (S)				77.8		66.9		
Tetrachloro-meta-xylene (S)				59.1		42.5		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
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Pace Analytical

QUALITY CONTROL DATA

DATE: 11/08/96
PAGE: 7

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 18891
QC Batch Method: EPA 3520
Date of Batch: 11/07/96
Analysis Method: TPH by EPA 8015M
Analysis Description: TPH in Water by 8015 Modified
Associated PACE Samples: 70784012

METHOD BLANK: 70784293
Associated PACE Samples:
70784012

Parameter	Units	Method Blank Result	PRL	Footnotes
Diesel Fuel	mg/L	ND	0.05	
Bunker C	mg/L	ND	0.5	
n-Pentacosane (S)	%	81		

LABORATORY CONTROL SAMPLE & LCSD: 70784301
70784319

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/L	1.0	0.6857	68.6	0.7187	71.9	5	
n-Pentacosane (S)				103		85.8		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 706958
Client Project ID: Port of OAK/Seabreeze Site

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

ND	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
RPD	Relative Percent Difference
(S)	Surrogate

REPORT OF LABORATORY ANALYSIS

[redacted] 01658 [redacted]

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: 5-Day
Lab: Price
BASELINE Contact Person: Mark Filippi

Project No.	Project Name and Location
459171-C1	Seabreeze Site, 280 66th Avenue

Samplers: (Signature) William K Scott

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	Analysis: PCBs (EPA 608)	Oil and Grease (SM5520 B&F)	TPH diesel (8015M)	TPH Bunker C (8015M)									Remarks/ Composite	Detection Limits
SB-discharge	11/6/96	12:50	Water	--	5AG	X	X	X	X				610	784	012			none Preserved	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	11/6/96 13:37	Nick Marinaro	11-6-96 13:37	cold
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Nick Marinaro	11-6-96 15:01	Paul Herrmann	11/6/96 1600	* Reporting limit @ 0.1 µg/L Containers: 5 amber glass 1-liter bottles
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	[redacted]

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

106758

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: 5-day
Lab: PACE
BASELINE Contact Person: Mark Filippini

Project No.	Project Name and Location
59171-C1	Seabreeze Site, 280 Olhave

Samplers: (Signature) [signature]

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	Analysis: CODF (5220-C)	Analysis: TSS (2540-D)	Remarks/ Composite	Detection Limits
SB-discharge	11/6/96	12:50	Water	--	2-250mL AG	X		preserved w/ H_2SO_4	
SB-discharge	11/6/96	12:50	Water	--	2-250mL Plastic		X	non preserved	

70 784 012

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐
COOLER TEMPERATURE 6 °C
Bia

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
[signature]	11-6-96 13:37	Nick Maynard	11/6/96 1337	Cold
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Nick Maynard	11-6-96 15:01	[signature]	11/6/96 15:00	TSS: filter w/ Whatman 934 AH Glass Micro-fiber filter, or equivalent
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	CODF: filter w/a Whatman 934 AH Glass Micro fiber filter, or equivalent

TRC [illegible] 12 ADMIN-AD4-[illegible]02

Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

December 10, 1996

Ms. Rhodora DelRosario
Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

RE: PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

Dear Ms. DelRosario:

Enclosed are the results of analyses for sample(s) received on December 5, 1996. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

DATE: 12/10/96
PAGE: 1

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

PACE Sample No: 70813043 Date Collected: 12/05/96
Client Sample ID: SS1 DISCHARGE Date Received: 12/05/96

Parameters	Results	Units	PRL	Analyzed	Method	Analyst	CAS#	Footnotes
Wet Chemistry								
TPH in water by 418.1								
Total Petroleum Hydrocarbons	ND	mg/L	1	12/09/96	TPH in Water	GMF		2
GC								
Organochlorine PCBs								
PCB-1016 (Arochlor 1016)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	12674-11-2	
PCB-1221 (Arochlor 1221)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	11104-28-2	
PCB-1232 (Arochlor 1232)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	11141-16-5	
PCB-1242 (Arochlor 1242)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	53469-21-9	
PCB-1248 (Arochlor 1248)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	12672-29-6	
PCB-1254 (Arochlor 1254)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	11097-69-1	
PCB-1260 (Arochlor 1260)	ND	ug/L	0.1	12/10/96	EPA 8080	WSN	11096-82-5	
Decachlorobiphenyl (S)	36	%		12/10/96	EPA 8080	WSN	2051-24-3	
Tetrachloro-meta-xylene (S)	38	%		12/10/96	EPA 8080	WSN	877-09-8	
Date Extracted				12/09/96				
TPH in Water by 8015 Modified								
Diesel Fuel	0.21	mg/L	0.05	12/09/96	TPH by EPA 8015M	wsn	11-84-7...	1
Bunker C	ND	mg/L	0.5	12/09/96	TPH by EPA 8015M	wsn		
n-Pentacosane (S)	69	%		12/09/96	TPH by EPA 8015M	wsn	629-99-2	
Date Extracted				12/05/96				

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

PARAMETER FOOTNOTES

	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
(S)	Surrogate
[1]	Hydrocarbons present do not match profile of laboratory standard.
[2]	This protocol is equivalent to SM 5520 B & F, Total Oil and Grease, in water, Gravimetric, with Silica Gel cleanup.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

DATE: 12/10/96

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19636
Analysis Method: TPH in Water
Associated PACE Samples: 70813043

QC Batch Method: EPA 3510
Analysis Description: TPH in water by 418.1

Date of Batch: 12/05/96

METHOD BLANK: 70812698
Associated PACE Samples:
70813043

Parameter	Units	Method Blank Result	PRL	Footnotes
Total Petroleum Hydrocarbons	mg/L	ND	1	1

LABORATORY CONTROL SAMPLE & LCSD: 70812722 70812730

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Total Petroleum Hydrocarbons	mg/L	5.0	4.564	91.3	3.770	75.4	19	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19644
QC Batch Method: EPA 3520
Date of Batch: 12/05/96
Analysis Method: TPH by EPA 8015M
Analysis Description: TPH in Water by 8015 Modified
Associated PACE Samples: 70813043

METHOD BLANK: 70813175
Associated PACE Samples:
70813043

Parameter	Units	Method Blank Result	PRL	Footnotes
Diesel Fuel	mg/L	ND	0.05	
Bunker C	mg/L	ND	0.5	
n-Pentacosane (S)	%	62		

LABORATORY CONTROL SAMPLE & LCSD: 70813183 70813191

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Diesel Fuel	mg/L	1.0	0.7364	73.6	0.6227	62.3	17	
n-Pentacosane (S)				120		116		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

QUALITY CONTROL DATA

Baseline
5900 Hollis Street, Suite D
Emeryville, CA 94608

PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

Attn: Ms. Rhodora DelRosario
Phone: (510)420-8686

QC Batch ID: 19646
QC Batch Method: EPA 3520
Date of Batch: 12/05/96
Analysis Method: EPA 8080
Analysis Description: Organochlorine PCBs
Associated PACE Samples: 70813043

METHOD BLANK: 70813209
Associated PACE Samples:
70813043

Parameter	Units	Method Blank Result	PRL	Footnotes
PCB-1016 (Arochlor 1016)	ug/L	ND	0.1	
PCB-1221 (Arochlor 1221)	ug/L	ND	0.1	
PCB-1232 (Arochlor 1232)	ug/L	ND	0.1	
PCB-1242 (Arochlor 1242)	ug/L	ND	0.1	
PCB-1248 (Arochlor 1248)	ug/L	ND	0.1	
PCB-1254 (Arochlor 1254)	ug/L	ND	0.1	
PCB-1260 (Arochlor 1260)	ug/L	ND	0.1	
Decachlorobiphenyl (S)	%	67		
Tetrachloro-meta-xylene (S)	%	63		

LABORATORY CONTROL SAMPLE & LCSD: 70813217 70813225

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
PCB-1260 (Arochlor 1260)	ug/L	1.0	0.9707	97.1	0.9687	96.9	0	
Decachlorobiphenyl (S)				65.6		73.4		
Tetrachloro-meta-xylene (S)				74.6		70.1		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954
Tel: 707-792-1865
Fax: 707-792-0342

Pace Analytical

PACE Project Number: 707170
Client Project ID: Port of OAK/Seabreeze Site

QUALITY CONTROL DATA PARAMETER FOOTNOTES

[illegible]nsistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

[illegible]	Not Detected
NC	Not Calculable
PRL	PACE Reporting Limit
[illegible]D	Relative Percent Difference
[illegible])	Surrogate
[1]	This protocol is equivalent to SM 5520 B & F, Total Oil and Grease, in water, Gravimetric,with Silica Gel cleanup.

REPORT OF LABORATORY ANALYSIS

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

7071 TO

Turn-around Time: 2 day - Need 12/9/96
Lab: PACE
BASELINE Contact Person: Mark Filippini

Project No.	Project Name and Location
59171-C1	Seabreeze, Port of Oak, 280-6th Ave

Samplers: (Signature) William K Scott (William Scott)

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	Analysis: PCB's (EPA 608) 0.1 ug/l	Oil & Grease SM5520 B&F	TPH diesel (8015M)	TPH Bunker C (8015M)								Remarks/ Composite	Detection Limits
SS#1 Discharge	12/5/96	9:45	Water	—	5 one-L Amber	X	X	X	X								70813013	PCB to ppb

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	12-5-96 11:20	Mark Filippini	12/5/96 11:20	Cold, Iced Cooler
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Melinda Bury		T. MAHARIS	12/5/96 1:35	Report PCB's to 0.1ug/L DL Containers: 5 one-liter Amber glass - unpreserved Do not filter
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	
T. MAHARIS	12/5/96 1445	[illegible]	12/5/96 1446	
[illegible]	12/5/96 1500	[illegible]	12/6/ [illegible]	

APPENDIX D

EAST BAY MUNICIPAL UTILITY DISTRICT
WASTEWATER DISCHARGE PERMIT

EAST BAY
MUNICIPAL UTILITY DISTRICT

CERTIFIED MAIL
(Return Receipt Requested)
Certified Mail No. P 371 126 669

November 1, 1996

Mr. Mark O'Brien
Port of Oakland
530 Water Street
Oakland, CA 94607

RECEIVED
NOV 6 1996
BASELINE

Dear Mr. O'Brien:

Re: Wastewater Discharge Permit (Account No. 503-50010)

The Wastewater Discharge Permit for Port of Oakland, effective November 1, 1996, through April 30, 1997, is enclosed for your information and records. Please read the Standard Provisions and Reporting Requirements attached to the Permit. As a Permit holder, you are legally responsible for complying with all permit conditions and requirements.

Port of Oakland shall report to the Source Control Division any changes, either permanent or temporary, to the premises or operation that significantly affect either the volume or quality of wastewater discharged or deviate from the Terms and Conditions under which this Permit is granted.

If you have any questions regarding this matter, please contact Sue Jenné of the Source Control Division at (510) 287-1541.

Sincerely,

JOSEPH G. DAMAS, JR.
Manager of Source Control

JGD:SMJ:llg

[PERMIT]PORTOO_GW_PERMIT

Enclosures

cc: Mark Filippini, Baseline Environmental Consulting
5900 Hollis St., Suite D, Emeryville, CA 9949608

EBMUD

WASTEWATER DISCHARGE PERMIT APPLICATION

PERMIT NUMBER
503-50010

APPLICANT BUSINESS NAME

Port of Oakland

ADDRESS OF PREMISE DISCHARGING WASTEWATER	BUSINESS MAILING ADDRESS
280 6th Avenue (STREET ADDRESS)	530 Water Street (STREET ADDRESS)
Oakland, (CITY) 94607 (ZIP CODE)	Oakland (CITY) 94607 (ZIP CODE)

CHIEF EXECUTIVE OFFICER

Mark O'Brian (NAME)	Manager Env Health & Safety Compliance Dept. (TITLE)
530 Water Street (STREET ADDRESS)	Oakland (CITY) 94607 (ZIP CODE)

PERSON TO BE CONTACTED ABOUT THIS APPLICATION	PERSON TO BE CONTACTED IN EVENT OF EMERGENCY
Diane Heinze (NAME)	Mark Filippini (NAME)
Assoc. Env. Sci. (TITLE) (510) 272-1467 (PHONE)	(510) 420-8686 (DAY PHONE) (510) 376-3637 (NIGHT PHONE)

DOCUMENTATION TO BE RETURNED WITH THE PERMIT APPLICATION:

- ☒ PROCESS DESCRIPTION
- ☒ WATER BALANCE CALCULATIONS
- ☐ WASTEWATER STRENGTH DATA BASE
- ☒ SCHEMATIC FLOW DIAGRAM
- ☒ BUILDING LAYOUT PLAN
- ☒ DESCRIPTION OF TREATMENT SYSTEM
- ☐ SELF-MONITORING METHOD
- ☒ SPILL PREVENTION AND CONTAINMENT PLAN
- ☒ A LIST OF ALL ENVIRONMENTAL PERMITS (E.G. Air, Hazardous Waste)
- ☒ OTHER: (1) WASTEWATER CHARACTERIZATION DATA (2) $2,490 PERMIT APPLICATION FEE (3) RECLAMATION ALTERNATIVES; SPECIFY (4) PRETREATMENT MAINT. PROCEDURE

PROVISIONS

Applicant will comply with the EBMUD Wastewater Control Ordinance and all applicable rules and regulations.

Applicant will report to EBMUD, Wastewater Department any changes, permanent or temporary, to the premise or operations that significantly change the quality or volume of the wastewater discharge or deviation from the terms and conditions under which this permit is granted.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

MARK O'BRIEN
NAME (See certification requirements on reverse)

SIGNATURE

MGR EH&S
TITLE

9/23/96
DATE

SD-30.1 2/91 N

EBMUD

Port of Oakland
BUSINESS NAME

Process Description

PURPOSE — The Process Description is intended to provide a description of the primary business activities and the substances which may enter into the wastewater from the business activity.

EBMUD USE
Permit Number
503-50010

BUSINESS ACTIVITY
Excavation Dewatering

Business Classification Code
4950

DESCRIPTION OF PRODUCT

TYPE OF PRODUCT OR BRAND NAME	QUANTITIES	
	Past Calendar Year	Estimated This Year
None	Ø	408,000 gal

PROCESS DESCRIPTION

PROCESS DESCRIPTION List all wastewater generating operations	CHARACTERISTICS List all substances that may be discharged to the sewer.
Example: Rinsewater from electroplating bath	Cr, Cu, Ni, Zn
Example: Washdown of milk filling area	fatty acids, milk
Excavation Dewatering	Pb, Cu, Diesel, Chloride

DISCHARGE PERIOD

a. Time of day from 24 hours to _____

b. Days of the week Seven

BATCH DISCHARGE(S)

a. Day(s) of the week Seven b. Time(s) of the day 24 hours

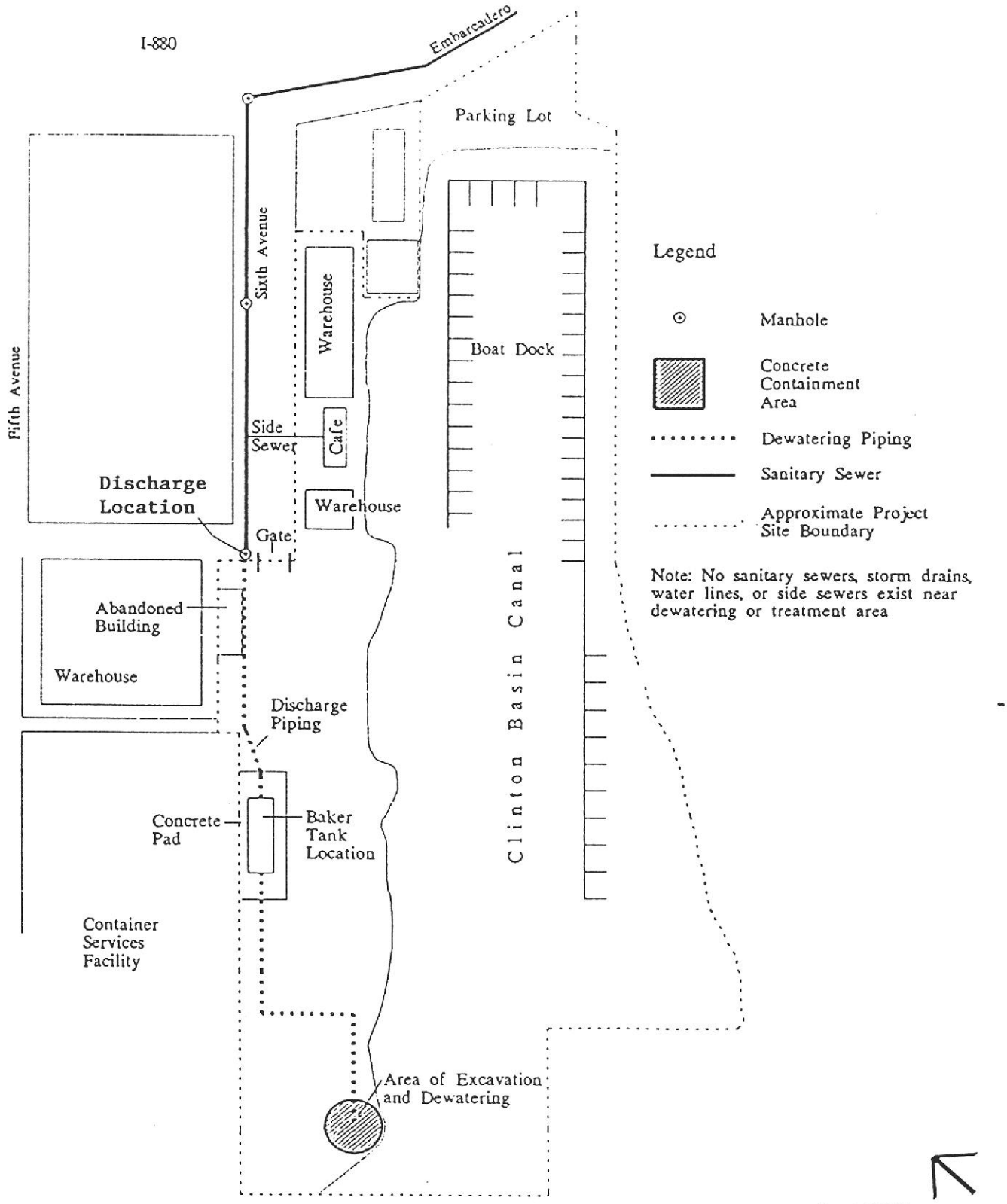
c. Volume discharged 20,000 gal d. Rate of discharge 10 gpm

OTHER WASTES — List the type and volume of liquid waste and sludges removed from the premises by means other than the community sewer.

WASTE REMOVED BY (Name, address and State Transporter ID No.)	TYPE OF WASTE (Example: alkaline cleaners, organic solvents, treatment sludge)	WASTE I.D. No.	VOLUME (lbs)(gal)/mo
Not Applicable			

SITE LAYOUT

Figure 1



280 Sixth Avenue
Oakland, California

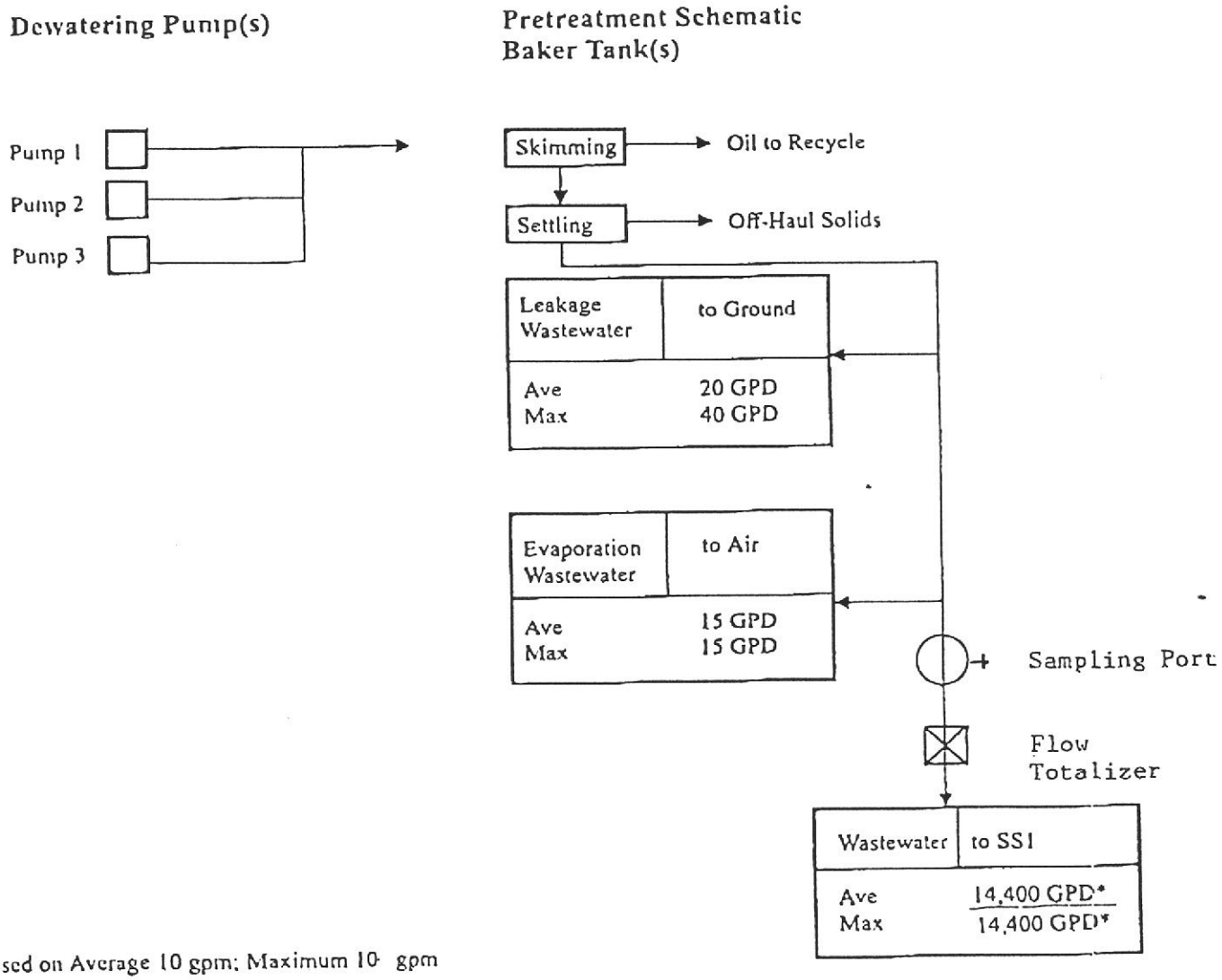
BASELINE

S9171-CO 9/17/96, Cadd C:\S9171SL

Permit No. 503-50010

SCHEMATIC FLOW DRAGRAM
DEWATERING OPERATION

Figure 2



*Based on Average 10 gpm; Maximum 10 gpm

280 Sixth Avenue
Oakland, California

10/23/96

S9171-CO 9/17/96, Crl. e:/draw/s9171co

EBMUD

Business Name Port of Oakland

Water Balance / Strength Summary

PURPOSE: This information will enable EBMUD to evaluate the volumes, source(s) and strengths of wastewater discharged to the community sewer.

Permit Number 503-50010

WATER USE AND DISPOSITION: Show on a ~~separate sheet~~ the method and calculations used to determine the quantities shown in the table. see below

Figures are: ☐ gallons per calendar day ☒ gallons per working day Number of working days per year 60

WATER USE	WATER SUPPLY FROM:			WASTEWATER DISCHARGED TO:					
	EBMUD	OTHER (1)		SIDE SEWER (gal/day)				OTHER (2)	
	gal/day	gal/day	CODE	No.1	No. ____	No. ____	No. ____	gal/day	CODE
Sanitary									
Processes									
Boiler									
Cooling									
Washing									
Irrigation									
Product									
Stormwater									
Other (3)	Ø	14,415	a	*14, 400				15	c
Subtotal		14,415		14,400					

EBMUD AND OTHER SUPPLY TOTAL 14,415 ALL SIDE SEWERS TOTAL 14,400

* 10 gallons per minute dewatering X 1440 min per day = 14,400gpd (estimate)

NOTES:

1. Enter the quantity and the appropriate code letter indicating the source:
   Dewatering
   a. Well b. Creek c. Stormwater d. Reclaimed Water e. Raw Materials.
2. Enter the quantity and appropriate code letter indicating the discharge point:
   a. Stormdrain b. Rail, Truck, Barge c. Evaporation d. Product
3. Describe Other: Excavation Dewatering

SANITARY DISCHARGE: Please use the following data from the Uniform Plumbing Code, 1985, to determine sanitary wastewater volumes.

Field service employees - 5 gallons per employee per day
Office employees - 20 gallons per employee per day
Production employees - 25 gallons per employee per day
Production employees with showers - 35 gallons per employee per day

Include the effect that seasonal and weekend staffing changes may have on determining average volumes.

AVERAGE WASTEWATER STRENGTH: Data base must be attached, average self-monitoring and EBMUD data.

	SIDE SEWER (mg/L)			
	No. 1	No. ____	No. ____	No. ____
CODF	50			
TSS	94			

SD-34 • 10/88

WASTEWATER DISCHARGE PERMIT

Terms and Conditions

Port of Oakland
Account No. 503-50010

GENERAL REQUIREMENTS

I. Title I, Section 5 of EBMUD Ordinance No. 311 prohibits the discharge of groundwater to the community sewer. This Permit to discharge treated groundwater is considered an exception to the prohibition and is issued based on Port of Oakland's application that discharge of pollutants to the community sewer will be minimized and methods to reclaim the groundwater, to the extent technically and economically feasible, have been made.

II. Port of Oakland shall comply with all items of the attached STANDARD PROVISIONS AND REPORTING REQUIREMENTS, revised 07/96 (SPARR).

III. This Permit is granted to Port of Oakland, only for the discharge of treated groundwater generated as a result of the excavation and removal of approximately 1,000 cubic yards of soil contaminated with petroleum hydrocarbon at 280 6th Avenue in Oakland.

IV. Port of Oakland shall cease discharge of the treated groundwater immediately if not in compliance with any of the Terms and Conditions of this Permit.

COMPLIANCE REQUIREMENTS

I. Port of Oakland shall pretreat all groundwater prior to discharging to the side sewer at 280 6th Avenue in Oakland. Pretreatment shall consist of processes displayed in *Figure 2, Schematic Flow Diagram, Dewatering Operation, 280 Sixth Avenue, Oakland, California, 9/17/96.* Port of Oakland shall maintain the Pretreatment System in proper operating condition.

II. Port of Oakland identified the sanitary sewer manhole located outside the site fence at 280 Sixth Avenue to the east, as the discharge location. The location is identified in *Figure 1, Site Layout, 280 Sixth Avenue, Oakland, California, 9/17/96.* Port of Oakland shall not discharge at any other location without prior approval from the Source Control Division.

III. Port of Oakland shall maintain a current accidental spill prevention plan to eliminate or minimize the potential for an accidental or slug discharge of pollutants into the sanitary sewer system. The spill plan shall contain a response procedure which is posted in the work areas where spills are most likely to occur. The response procedure shall be prepared in accordance with Section B Paragraph 1 of *SPARR*.

SD-30 7/96

COMPLIANCE REQUIREMENTS (continued)

IV. Port of Oakland shall conduct sampling on the treated groundwater in accordance with the Self-Monitoring Reporting Requirements of this Permit. two hours after the start up of the pretreatment system. After sampling, the system shall be shut down, until EBMUD has reviewed the technical report. No commencement of groundwater discharge shall start without prior approval from EBMUD.

WASTEWATER DISCHARGE LIMITATIONS

I. Port of Oakland shall not discharge wastewater into the side sewer if the strength of the wastewater exceeds the following limits:

Regulated Parameter	Daily Maximum (mg/l)
Polychlorinated biphenyls (PCBs), Total[1]	Discharge Prohibited
Oil and Grease (hydrocarbon)	100

[1] PCBs, Total is defined as the sum of detectable concentrations of Arochlors 1016, 1221, 1232, 1242, 1248, 1254 and 1260.

REPORTING REQUIREMENTS

I. Violations shall be reported in accordance with Section B Paragraph II of SPARR.

SELF-MONITORING REPORTING REQUIREMENTS

I. Port of Oakland shall submit a Technical Report for each of the reporting period by the corresponding due date:

Reporting Period	Due Date
The first two hours of the pretreatment system operation.	within 30 days from the end of the reporting period
The first 30 days of the pretreatment system operation.	within three days from the end of the reporting period
The 31st day through the final day of the pretreatment system operation.	within 30 days from the end of the reporting period

The Report shall contain, at a minimum, the following information:

- The actual dates of the reporting period.
- Monthly readings on the discharge of the flow totalizer located on the final discharge to the side sewer.
- Total volume discharged to the sanitary sewer in gallons.
- A description of the sampling method.
- All laboratory results and the corresponding chain of custody documentation.
- Certification and signature prepared in accordance with Section B Part V of *SPARR*, "Signature Requirements".

II. Port of Oakland shall monitor and sample the wastewater in accordance with Section C of *SPARR*. The wastewater shall be representative of the wastewater to be discharged into the side sewer.

III. Sample representative of the discharge from the pretreatment system to the side sewer shall be taken at the sampling port located on the final effluent line of the pretreatment unit. This sample location shall be referred to as Side Sewer No. 1 (SS#1) in all self-monitoring reports.

The sample locations are indicated in *Figure 2, Schematic Flow Diagram, Dewatering Operation, 280 Sixth Avenue, Oakland, California, 9/17/96.*

SELF-MONITORING REPORTING REQUIREMENTS (continued)

IV. Parameters to be monitored and the corresponding analytical method shall be:

Parameter	Analysis Method
Oil and Grease	SM[1] 5520F
TPH - diesel	EPA 8015 modified - diesel
TPH - Bunker C	EPA 8015 modified - Bunker C
PCBs[2]	EPA 608[3]

[1] Standard Methods for the Examination of Water and Wastewater, 18th Edition.
[2] PCBs, Total is defined as the sum of detectable concentrations of Arochlors 1016, 1221, 1232, 1242, 1248, 1254 and 1260.
[3] The detection limit shall be a minimum of 0.0001 mg/L for each Arochlor.

V. Port of Oakland shall sample SS#1, at a minimum, at the time indicated below:

1. Two hours after the start up of the pretreatment system.
2. The 30th day of the pretreatment system operation.

Port of Oakland
Account No. 503-50010

MONITORING and TESTING CHARGES

Total EBMUD Inspections Per Year: 1 @ $540.00 each = $540.00 /year

Total Analyses Per Year:

Parameter	Tests per year	Charge per test	Total Charge per year
Oil & Grease (HC)	1	$47.00	$47.00
EPA 608	1	$114.00	$114.00
			==========
	Monitoring and Testing Charge =		$701.00 /year
			$116.83 /month

WASTEWATER DISPOSAL CHARGE

All wastewater discharged will be charged for treatment and disposal service at the unit rate measured for other carbon treated groundwater discharges.
(1 Ccf = 100 cubic feet = 748 gallons)

Unit rate = $0.54 /Ccf
Discharge volume = 586 Ccf/month or $316.44 /month

WASTEWATER CAPACITY FEE

The capacity fee is calculated by multiplying the maximum monthly wastewater discharge volume by the applicable fee in effect at start-up. Each month, 1/36 of the capacity fee will be billed to the account, until the entire fee has been paid in three years.

Discharge volume = 586 Ccf/month
Capacity fee rate = $61.75 /Ccf-month
Capacity fee = $36,185.50 or $1,005.15 /month

WASTEWATER DISCHARGE PERMIT

Terms and Conditions

FEES AND WASTEWATER CHARGES

The following fees and charges are due when billed by the District:

Permit Fee	$2,490.00 (PAID)
Monthly Monitoring Charges	$116.83
Monthly Wastewater Disposal Charge	$316.44
Monthly Wastewater Capacity Fee	$1,005.15
Total Monthly Charges =	$1,438.43

This Permit may be amended to include changes to rates and charges which may be established by the District during the term of this Permit.

AVERAGE WASTEWATER DISCHARGE *

LAST 12 MONTHS	PRECEDING 12 - 24 MONTHS
Not Applicable	Not Applicable

* Gallons per calendar day.

AUTHORIZATION

The above named Applicant is hereby authorized to discharge wastewater to the community sewer, subject to said Applicant's compliance with EBMUD Wastewater Control Ordinance, compliance conditions, reporting requirements and billing conditions.

Effective Date: November 1, 1996

Expiration Date: April 30, 1997

David E. Williams 11/4/96

DIRECTOR, WASTEWATER DEPARTMENT DATE

2/91

APPENDIX E

SELF-MONITORING REPORT - NOVEMBER 1996

PORT OF OAKLAND

15 November 1996

Ms. Sue Jenne
East Bay Municipal Utility District
Source Control Division
375 Eleventh Street
Oakland, California 94607-4240

Subject: Results, First Reporting Period, Wastewater Discharge Permit, Account No. 503-50010, Seabreeze Yacht Harbor, Port of Oakland, California

Dear Ms. Jenne:

This letter presents the initial Self-Monitoring Technical Report for the Port of Oakland Wastewater Discharge Permit at the Seabreeze Yacht Harbor facility at 280 Sixth Avenue in Oakland. The Terms and Conditions of the permit require that a report for the first two hours of operation of the groundwater dewatering pretreatment system be submitted to EBMUD. This report also presents the results of the sampling activities conducted at Side Sewer #1 (SS#1) sample location, as indicated in figures 1 and 2 of our permit.

Dates of Reporting Period

This reporting period includes 10:50 a.m. to 12:50 p.m. on 6 November 1996. That period represents the initial startup of the pretreatment operation discharge to SS#1. Discharge was discontinued at 12:50 p.m.

Readings of the Flow Totalizer

The readings of the flow totalizer located on the final discharge pipe of the system to the side sewer were as follows:

- Initial meter reading (when purchased and installed) — 2,606 gallons
- Reading at end of discharge period (12:50 p.m.) — 2,925 gallons
- Total Volume Discharged to Sanitary Sewer — 319 gallons
- Flow Rate — 2.7 gallons/minute

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (510) 272-1100 ■ Fax (510) 272-1172 ■ TDD (510) 763-5703 ■ Cable address, PORTOFOAK, Oakland

Sampling Method

Water samples were collected by a BASELINE Environmental Consulting field geologist at the discharge point, SS#1. The sample was representative of the volume and nature of the monitored discharge. Five laboratory-supplied unpreserved 500-milliliter amber glass bottles were filled at the end of the discharge pipe at the top of the sewer manhole. Samples were labeled and stored in an iced cooler. The samples were transported under Chain-of-Custody procedures to Pace Analytical Laboratory in Petaluma, California, a State-certified analytical laboratory.

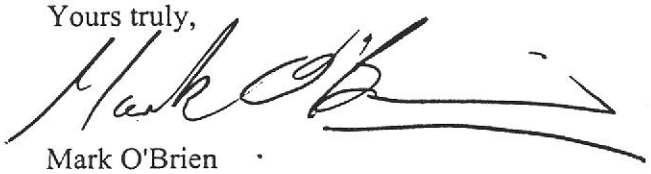
Analytical Results

The results of the laboratory analysis are presented in Table 1. The laboratory reports, Chain-of Custody documents, and QA/QC reports are presented in the attachment. The results indicate that the wastewater quality is within the discharge limitations specified in the permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

We trust this report provides you the information you require at this time. Our next report will be submitted within three days of the first 30 days of the pretreatment system operation as required in the permit. If you have any questions or require further information, please contact Mark Filippini or Rhodora Del Rosario at BASELINE at (510) 420-8686.

Yours truly,



Mark O'Brien
Manager, Environmental Health & Safety Compliance

cc: Mark Filippini, BASELINE Environmental

TABLE 1

ANALYTICAL RESULTS
Wastewater Discharge Sample (SS#1)
6 November 1996
Seabreeze Yacht Harbor, Oakland

Parameter	Result	Analytical Method
Oil & Grease	<5 mg/L	SM 5520F
TPH-diesel	<0.05 mg/L	EPA 8015M
TPH-Bunker C	1.1 mg/L	EPA 8015M
PCBs[1]	<0.1 μg/L[2]	EPA 608

Notes: <x.x = compound not detected above laboratory reporting limit of x.x
mg/L = miligrams per liter
μg/L = micrograms per liter

[1] Includes Arochlors 1016, 1221, 1232, 1242, 1248, 1254, and 1260.
[2] Reporting limit for each Arochlor.

APPENDIX F

CLOSURE AND SELF-MONITORING REPORT - DECEMBER 1996

PORT OF OAKLAND

10 December 1996

Ms. Sue Jenne
East Bay Municipal Utility District
Source Control Division
375 Eleventh Street
Oakland, California 94607-4240

Subject: Report, Final Self-Monitoring Period and System Closure, Wastewater Discharge Permit, Account No. 503-50010, Seabreeze Yacht Harbor, Port of Oakland, California

Dear Ms. Jenne:

This letter presents the final Self-Monitoring Technical Report and Closure Report for the Port of Oakland Wastewater Discharge Permit at the Seabreeze Yacht Harbor facility at 280 Sixth Avenue in Oakland. The Terms and Conditions of the permit require that a self-monitoring report be submitted to EBMUD for the final day of operation of the groundwater dewatering pretreatment system. Since the system was shut down and discharge ceased on the 29th day of operation, the 30-day report will not be required. This report also presents the results of the sampling activities conducted at Side Sewer #1 (SS#1) sample location, as indicated in figures 1 and 2 of our permit, and the Closure Report for final system decommissioning.

CLOSURE REPORT

Pursuant to Section A VI of the Standard Provisions and Reporting Requirements (SPARR) of our Permit, this presents the closure procedures for the groundwater treatment system. Due to the nature of the construction work, prior notice was not possible.

Date of discharge stoppage: 5 December 1996

Date of final closure: 6 December 1996
(completion of cleaning and demobilization)

Container Consolidation and Wastewater Sampling

Input to the dewatering system ceased on 4 December 1996. The treatment tanks were gravity drained through SS#1 and the wastestream sampled as described below in self-monitoring technical report. No floating product was present in either treatment tank. Tanks were drained so as not to allow any sediments accumulated in the bottom of the tanks to be discharged. Discharge valves were then closed.

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (510) 272-1100 ■ Fax (510) 272-1172 ■ TDD (510) 763-5703 ■ Cable address, PORTOFOAK, Oakland

Cleaning Activities

Once gravity drained, the tanks were pressure washed and accumulated sediments vacuumed into a vacuum truck by a licensed cleaning contractor. Sediments and rinsate water were then decanted into two 55-gallon drums. Drums were sealed, labeled, and are currently stored on-site pending disposal.

Disposal Method

Once sampled and profiled, the drums will be shipped off-site by a licensed hauler for appropriate disposal or recycling. Contents will not be discharged to the sanitary sewer.

FINAL SELF-MONITORING REPORT

Dates of Reporting Period

This reporting period includes 4:14 p.m. on 8 November 1996 to 9:45 a.m. on 5 December 1996. That period represents the final reporting period of the pretreatment operation discharge to SS#1.

Readings of the Flow Totalizer

The readings of the flow totalizer located on the final discharge pipe of the system to the side sewer (SS #1) were as follows:

- Initial meter reading (8 November 1996) — 2,925 gallons
- Reading at end of discharge period (5 December 1996) — 93,038 gallons
- Total Volume Discharged to Sanitary Sewer (Reporting Period) — 90,113 gallons
- Total Volume Discharged to Sanitary Sewer (Life of System) — 90,432 gallons
- Flow Rate — 2.2 gallons/minute

Sampling Method

A water sample was collected by a BASELINE Environmental Consulting field geologist at the discharge point, SS#1. The sample was representative of the volume and nature of the monitored discharge. Five laboratory-supplied unpreserved 500-milliliter amber glass bottles were filled at the end of the discharge pipe at the top of the sewer manhole. The sample was labeled and stored in an iced cooler. The samples were transported under Chain-of-Custody procedures to Pace Analytical Laboratory in Petaluma, California, a State-certified analytical laboratory.

Analytical Results

The results of the laboratory analysis are presented in Table 1. The laboratory reports, Chain-of Custody documents, and QA/QC reports are presented in the attachment. The results indicate that the wastewater quality is within the discharge limitations specified in the permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

We trust this report provides you the information you require at this time. This completes the reporting requirements of the pretreatment system operation as required in the permit. If you have any questions or require further information, please contact Mark Filippini or Rhodora Del Rosario at BASELINE at (510) 420-8686.

Yours truly,

Mark O'Brien
Manager, Environmental Health & Safety Compliance

cc: Mark Filippini, BASELINE Environmental

TABLE 1

ANALYTICAL RESULTS
Wastewater Discharge Sample (SS#1)
5 December 1996
Seabreeze Yacht Harbor, Oakland

Parameter	Result	Analytical Method
Oil & Grease	<5 mg/L	SM 5520F
TPH-diesel	0.21 mg/L	EPA 8015M
TPH-Bunker C	<0.5 mg/L	EPA 8015M
PCBs[1]	<0.1 μg/L[2]	EPA 608

Notes: <x.x = compound not detected above laboratory reporting limit of x.x
mg/L = miligrams per liter
μg/L = micrograms per liter

[1] Includes Arochlors 1016, 1221, 1232, 1242, 1248, 1254, and 1260.
[2] Reporting limit for each Arochlor.