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SUBSURFACE INVESTIGATION INTERIM DATA REPORT

DECEMBER 1994

SEABREEZE YACHT CENTER Oakland, California

For:

Port of Oakland Oakland, California

S9171-B0

Sender's Tel. No. (510) 272-1220

December 15, 1994

Mr. Barney M. Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency,
Department of Environmental Health,
Environmental Protection Division
1131 Harbor Bay Parkway #250
Alameda, California 94502-6577

Re: Transmittal of Seabreeze Yacht Center, Inc., Subsurface Investigation Interim Data Report dated <u>December 1994</u>

Dear Mr. Chan:

As you know, during November and December of this year, the Port of Oakland (Port) has been conducting further environmental investigations of the Seabreeze and adjacent sites to further define the scope of contamination at the site(s) as part of the current litigation involving past users and owners of the site(s) including Seabreeze and Pacific Gas and Electric Company. Enclosed please find the above-referenced report that documents the Port's most recent investigation activities.

If you have any questions or comments, do not hesitate to contact me at your earliest convenience.

Very truly yours,

Dan Schoenholz

Associate Environmental Scientist

Attachment

cc w/attach.: Ravi Arulanantham

Regional Water Quality Control Board

Michele Heffes Jonathan Redding

BASELINE

ENVIRONMENTAL CONSULTING

14 December 1994 S9171-B0

Ms. Michele Heffes Port of Oakland Legal Department 530 Water Street Oakland, CA 94607

Subject:

Subsurface Investigation, Seabreeze Yacht Center, November/December 1994

Dear Michele:

Enclosed please find this Interim Data Report for our subsurface investigation at and adjacent to the Seabreeze Yacht Center site in November/December 1994. Should you have any questions or comments, please do not hesitate to contact us at your convenience.

Sincerely,

Yane Nordhav

Principal

Reg. Geologist No. 4009

Vollat

Julie Pettijohn, M.P.H. Staff Scientist

Codie Fethioli

YN:JP:tt Enclosures

S9171-B0.RPT-12/14/94

Subsurface Investigation Interim Data Report

DECEMBER 1994

SEABREEZE YACHT CENTER Oakland, California

For:

Port of Oakland Oakland, California

S9171-B0

BASELINE Environmental Consulting 5900 Hollis Street, Suite D • Emeryville, California 94608 (510) 420-8686

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SUBSURFACE INVESTIGATION

Seabreeze Yacht Center December 1994

INTRODUCTION

BASELINE Environmental Consulting performed additional subsurface investigations at and adjacent to the Seabreeze Yacht Center (the Site) (Figure 1) in November/December 1994 at the request of the Port of Oakland Legal Department. The purpose of the additional investigation was to further characterize the subsurface conditions at and adjacent to the Site. This Interim Data Report documents the field activities performed during November/December 1994, the field methods, and the analytical results obtained from the laboratory on soil and groundwater samples.

FIELD ACTIVITIES

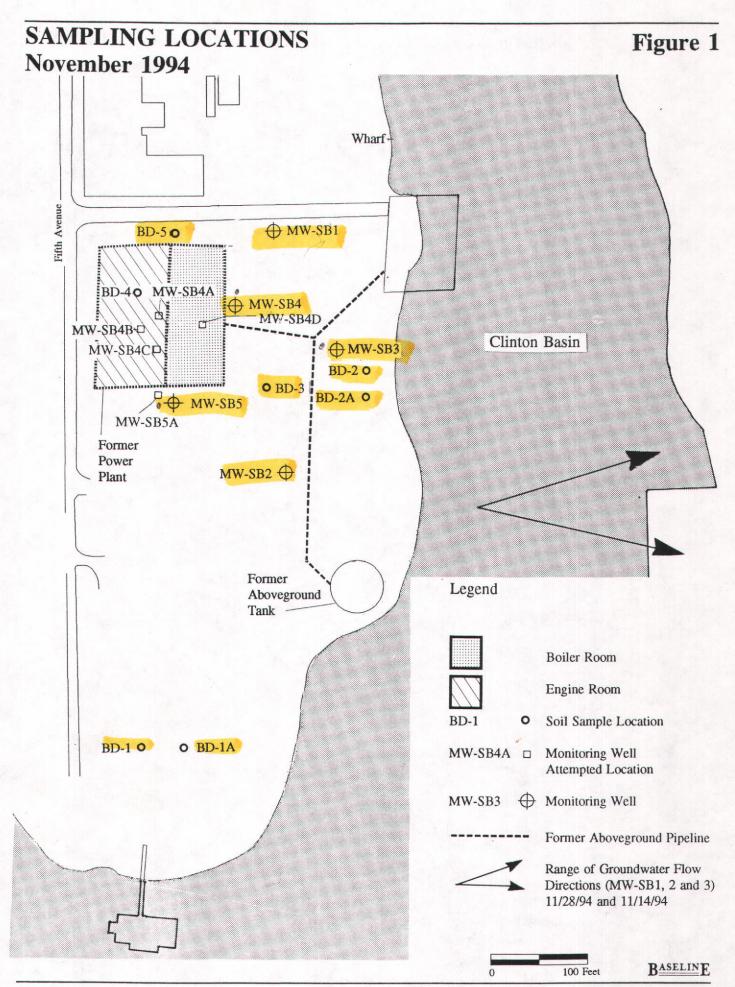
Soil samples were collected from six soil boring locations, one surface location, and three monitoring well locations. A total of 20 soil samples were collected and submitted to the laboratory. Three new monitoring wells were installed on the Site (Figure 1). A total of five groundwater samples were collected from the three wells installed in November as well as from two previously installed groundwater monitoring wells.

Selection of Sampling Locations and Analytical Methods

The sampling locations for this investigation were selected along the Clinton Basin shoreline and areas near the former power plant and the former pipeline supplying fuel to the power plant (Figure 1). In a site history investigation, performed previously by BASELINE for the Port, Bunker C oil was identified as being used at the power plant to generate steam. No other users of Bunker C oil have been identified on the Site. The Bunker C fuel consists of a mixture of medium to high boiling point hydrocarbons, including about 5 to 20 percent hydrocarbons that are generally considered to be within the diesel range. In this investigation petroleum hydrocarbons have been quantified by the laboratory by using a diesel standard and two Bunker C standards: one Bunker C standard from the laboratory and a second standard from a sample of a thick black substance collected from below a concrete containment on-Site, formerly containing the aboveground Bunker C fuel storage tank (Figure 1). The free product was collected as part of a previous investigation on the site.

Bunker C oil has been found in previous investigations in shallow soil samples throughout the site. This investigation assessed the quality of soil near Bunker C source areas, i.e., along the aboveground fuel pipeline from the aboveground storage tank to the plant and under and adjacent to the boiler room of the former plant (Figure 1).

Soil borings BD-1, BD-1A, BD-2, and BD-2A were randomly located in the southern and southeastern part of the Site where fill had been placed along the shoreline. BD-3 was located downgradient of the footprint of the former power plant. BD-4 was located within the footprint of the former power plant. BD-5 was located adjacent to and crossgradient from the footprint of the



former power plant. Monitoring well MW-SB3 was located downgradient of the former location of a pipeline juncture extending northward from the concrete containment structure toward the power plant. MW-SB4 was located outside the footprint of the former power plant in the area near the boiler room. MW-SB5 was located adjacent to and crossgradient from the footprint of the former power plant.

Field Methods

Field activities were conducted in accordance with a site-specific safety plan. The site safety plan was reviewed by BASELINE staff prior to commencement of field activities, and an on-Site safety tailgate meeting was conducted by BASELINE staff prior to work on the Site. Drilling activities were conducted in accordance with an Alameda County Flood Control and Water Conservation District Zone 7 permit. The Underground Service Alert and the Port of Oakland were contacted for underground utility clearance prior to field activities.

Soil Borings and Sampling

The soil borings and monitoring well boreholes were completed by Gregg Drilling, Inc., of Pacheco, and HEW Drilling of East Palo Alto under the supervision of a BASELINE geologist. The borings were completed using an eight-inch hollow stem auger. Steam-cleaned augers were used for each boring. Drill cuttings were stored in five labeled 55-gallon drums. Drilling equipment was steam cleaned on-Site and the rinsate and purged water were stored in two labeled 55-gallon drums. Drums were secured and stored on-Site. Each borehole was backfilled to grade using a cement/bentonite grout. The boring logs are included in Appendix A.

Soil samples were collected from each boring using a California Modified sampler (two-inch diameter) fitted with six-inch stainless steel liners. The sampler was driven into the ground by a 140-lb hammer. The filled stainless steel liners were removed from the sampler, capped with teflon and plastic caps, labeled, placed in a zip-lock bag, and placed in a refrigerated cooler. The sampling equipment was decontaminated using trisodium phosphate, water, and deionized water prior to each sampling event. The soil samples were submitted under chain-of-custody to Curtis and Tompkins Laboratory.

Monitoring Well Installation and Groundwater Sampling

Three monitoring wells were installed under the supervision of a BASELINE geologist (well construction summaries are included in Appendix A). The monitoring wells were installed in an eight-inch borehole. The casing material was two-inch, Schedule 40 PVC, and the screen was two-inch, 0.020-inch machine-slotted PVC. The monitoring wells were developed using a double diaphragm pump and bailer. Well development records are included in Appendix B. A sheen was observed in the development water from MW-SB4.

Groundwater samples were collected after the wells were checked for floating product using a dual-interface probe, calibrated to the nearest 1/100th of a foot; no floating product was identified in the wells. The water levels were then measured with a probe. The wells were then purged of two to five well volumes using a disposable plastic bailer.

Groundwater samples were collected from the wells using a disposable, bottom-valve, plastic bailer and transferred into glass containers. The containers were labeled, placed in a refrigerated plastic cooler, and submitted under chain-of-custody to Curtis and Tompkins Laboratory. A duplicate sample was collected from MW-SB3 and also submitted to the laboratory for analysis. The well sampling records are included in Appendix C.

Field Observations

Unusual field conditions were encountered during drilling at three locations: boring BD-5 and wells MW-SB4 and MW-SB5. The field observations at these three locations are described below.

BD-5

One soil sample was collected at BD-5 at 2.5-3.0 feet below ground surface (bgs). A sample was not collected at the groundwater interface at BD-5 due to a lack of recovery at depth within the borehole. Wood was encountered between 4.0 and 5.5 feet bgs which made it difficult to obtain a sample. A second boring was attempted adjacent to BD-5 to obtain a representative sample at the groundwater interface, but wood was also encountered at this location. No further sampling attempts were made at this location since access was limited by a fence in the northeastern direction and the concrete pad in the southwestern direction in the area.

MW-SB4

During drilling of MW-SB4A, a concrete slab was encountered at a depth of about 1.5 feet; the concrete appeared to be loosely cemented. At five feet bgs, limited wood chips appeared in the drill cuttings. Drilling was continued through about 5.5 feet of concrete at which time drilling was stopped to attempt an adjacent location that might not contain the same thickness of concrete. A second attempt at drilling was made southwest of the original location (MW-SB4B). At the second location, concrete was encountered at a depth of about one foot. Drilling was continued through five feet of concrete at which point the drill bit was destroyed. Subsequently, the hole was abandoned and a third attempt was made to install a well about 30 feet southwest of the original location but still within the footprint of the former power plant (MW-SB4C). At the third location, concrete was encountered at a depth of about one foot and drilling was terminated at about three feet.

Since the subsurface conditions did not appear to vary, an attempt to continue drilling at the first location (MW-SB4A) was made, and an additional three feet of concrete was penetrated. At this depth, about 9.5 feet below ground surface, the drilling was not advancing and the bit was pulled out of the hole. The bottom of the drill stem was coated with black liquid and water. One sample of the cuttings with the black liquid was collected for laboratory analysis (MW-SB4A). Inspection of the boring indicated that black liquid was seeping into the borehole at a depth of about 5.5 feet from the ground surface. The borehole was immediately sealed with concrete and bentonite pellets.

It appeared that drilling had taken place in the location of that part of the foundation of the former power plant where the stacks had been located and, based on foundation drawings, the concrete would be about 15 feet thick. The location was therefore abandoned for well installation. The hole was then moved about 45 feet to the southeast in a location where the foundation drawings indicated about six feet of concrete (MW-SB4D). During drilling, concrete was encountered at about one foot below the ground surface. The concrete was different from the concrete at the previously abandoned

locations; it was substantially harder to drill through. After drilling through about 3.5 feet of concrete, the drill bit was damaged and the hole was abandoned. This hole, as well as all other holes, were grouted to the ground surface.

MW-SB4 was installed outside the footprint of the former power plant. Two soil samples were collected during the drilling of MW-SB4 at 2.0 to 2.5 feet bgs and 5.0 to 5.5 feet bgs, respectively. The shallow groundwater table (1.75 feet bgs) observed during drilling may have been due to recent heavy rains. A groundwater interface sample was collected at 5.0 to 5.5 feet bgs, based on previous groundwater levels measured at the Site. When the auger was pulled out of the hole for the collection of the deeper sample, a black tarry substance in Bay mud was observed on the bit. A grab sample of this material was collected from approximately 4.75 to 5.0 feet bgs (MW-SB4-grab). This sample is being kept refrigerated at BASELINE's office.

MW-SB5

One soil sample was collected at 2.0 to 2.5 feet bgs at MW-SB5A. During drilling, a strong petroleum odor was noted at 3.5 feet bgs; at this depth, the HNu photoionization detector registered 25 ppm in the borehole. Drilling was continued to 5.25 feet at which point a hard substance (concrete?) was encountered and the drill would no longer advance. The drill bit was pulled out of the hole and a second reading in the borehole was taken; the HNu registered greater than 200 ppm. Soils at 3.5 to 5.0 feet bgs were dark brown/greenish gray sands with gravel and shell fragments, and were medium dense and moist (fill). Soils at 5.0 feet bgs had a strong petroleum hydrocarbon odor and became black in color. A grab sample of this material (MW-SB5-grab) was collected from the auger in a sixinch sampling tube and submitted to the laboratory for analysis. A second attempt at drilling was made about ten feet southeast of MW-SB5A at MW-SB5. An additional sample was collected at this location at 3.0 to 3.5 feet bgs. The soils encountered above the Bay muds (at 3.0 feet bgs) were gravel with clay and sand and greenish gray to very dark gray in color. Drilling was continued to a total depth of 15 feet bgs to allow for installation of a monitoring well at this location.

WELL SURVEY

The elevation of the ground surface and the top of casing of each of the monitoring wells were surveyed by Bates and Bailey, a licensed surveyor. Table 6 contains groundwater elevations for each of the five monitoring wells. On the basis of groundwater elevation data from MW-SB1, MW-SB2, and MW-SB3 on 14 and 28 November 1994, the groundwater flow direction is toward Clinton Basin during specific tidal conditions. The surveyor's report is included in Appendix D.

SAMPLE ANALYSES AND DISCUSSION

The analyses performed on the soil and groundwater samples collected in November/December 1994 are shown in Tables 1 and 2, respectively. The summary of the organic analyses on soil samples is shown in Table 3 and the results of metal analyses on soil samples are shown in Table 4. The results of analyses performed on groundwater samples collected from the five on-Site monitoring wells are presented in Table 5 and the laboratory reports are included in Appendix E.

Soil

Petroleum hydrocarbons (quantified as Bunker C and diesel by the laboratory) were identified in all of the soil samples collected during this investigation. The highest concentration (55,000 mg/kg quantified as Bunker C) of petroleum hydrocarbons was identified in the soil sample from the abandoned borehole MW-SB4A. The second highest concentration of petroleum hydrocarbons (16,000 mg/kg quantified as Bunker C) was identified in the 3.0 to 3.5-foot soil sample from the borehole in which MW-SB5 was installed; the groundwater sample from MW-SB5 also contained the highest concentration of petroleum hydrocarbons (74,000 µg/L quantified as Bunker C); the shallower sample (at 2.0-2.5 feet) contained petroleum hydrocarbons at order-of-magnitude lower concentrations, suggesting a subsurface source. The soil quality data indicate significant contamination of the soils in the unsaturated soil column in and around the footprint of the former power plant and along and near the fuel pipeline formerly located aboveground between the fuel tank and the power plant. Bunker C has been identified as the only, or in places, a constituent of the petroleum hydrocarbons in the analyzed soil samples. Bunker C has only been associated with the operation of the former power plant on the Site, according to site history research previously conducted on the Site.

Groundwater

Petroleum hydrocarbons (quantified as Bunker C and diesel by the laboratory) were identified in significant concentrations in each of the five groundwater monitoring wells on the Site. The highest concentration was found in MW-SB5 (74,000 μ g/L) adjacent to the former power plant's southern boundary. MW-SB4, adjacent to the former power plant along the eastern boundary, contained 4,300 μ g/L of petroleum hydrocarbons. The remaining three wells, downgradient from the former power plant, including MW-SB3 located downgradient of the former aboveground fuel pipeline, contained between 30,000 and 460 μ g/L of petroleum hydrocarbons; the lowest concentration (460 μ g/L in MW-SB3) was closest to Clinton Basin (about 60 feet from the shoreline). The groundwater flow direction is toward Clinton Basin; the petroleum hydrocarbons (including Bunker C) found in the five on-Site monitoring wells appear to be migrating into Clinton Basin.

CONCLUSIONS

There are significant concentrations of Bunker C compounds adjacent to and beneath the structures used for the transport, storage, handling, and use of Bunker C fuel in connection with the operation of the Pacific Gas and Electric Company's power generation plant. There are no data in the historic record indicating that there have been other users of Bunker C on the Site than the Pacific Gas and Electric Company's power generation plant.

The Bunker C compounds identified in the soil appear also to have significantly affected the underlying groundwater with petroleum hydrocarbons identified by the laboratory as Bunker C and diesel. The extent of groundwater contamination has not been fully defined at the current time. Additional investigations and coordination with regulatory agency officials would be required to determine the scope of additional investigations and ultimate remedial actions.

TABLE 1

ANALYSES PERFORMED, SOILS Seabreeze Yacht Center, Oakland, California November 1994

89		0 8 0 0				Metals		Volatile	
Location	Depth (feet bgs)	Diesel ¹	Kerosene ¹	Bunker C ^{1, 2}	Title 26 ³	Total Lead ⁴	Total Copper ⁵	Organic Compounds ⁶	Creosote ⁷
BD-1	2.0-2.5	1		1		1	1		1
BD-1	6.0-6.5	1		1		/	1		1
BD-1A	2.0-2.5	1	N.	1		/	1		
BD-1A	4.0-4.5	1		1		/	1		
BD-2	2.0-2.5			1		/	/		
BD-2	4.0-4.5	1		1		/	1		
BD-2A	2.0-2.5	1		1		/	1		
BD-2A	4.5-5.0	/		1	M	1	/	70	
BD-3	5.0-5.5	1		1	1				
BD-3	2.5-3.0	/		1		1	1		
BD-4	0.0-0.4	1	1	1	1		40	1	
BD-5	2.5-3.0	1		1		/	/		
MW-SB3	2.0-2.5	1		1		1	1		
MW-SB3	4.5-5.0	1		1		1	1		
MW-SB4	2.0-2.5	1		1	e e	1	1		
MW-SB4	5.0-5.5	1	(1	. 1				
MW-SB4A	5.0-5.5	1	1	1	1				

Table 1, Analyses Performed, Soils - continued

						Metals	Volatile		
Location	Depth (feet bgs)	Diesel ¹	Kerosene ¹	Bunker C ^{1, 2}	Title 26 ³	Total Lead ⁴	Total Copper ⁵	Organic Compounds ⁶	Creosote ⁷
MW-SB5	2.0-2.5	1	5)	1		/	/		
MW-SB5	3.0-3.5	1		1			7		
MW-SB5- grab		/		1				1	

California DOHS Method, LUFT Manual, October 1989.

² Quantification based on a Bunker C standard obtained from the liquids below the concrete containment and a laboratory Bunker C standard.

³ EPA Methods 6010, 7060, 7421, 7471, 7740, and 7841.

⁴ EPA Method 6010.

EPA Method 7420.

⁶ EPA Method 8240.

⁷ EPA Method 8270.

TABLE 2

ANALYSES PERFORMED, GROUNDWATER Seabreeze Yacht Center, Oakland, California November/December 1994

Location	Gasoline ¹	Diesel ¹	Bunker C ^{1, 2}	Total Lead ³	Total Copper ⁴	Volatile Organic Compounds ⁵	BTXE ⁶
MW-SB1		✓	1	✓	1	√	
MW-SB2		✓ .	1	✓	1	y	
MW-SB3	1	1	1	1	1		1
MW-SB3A ⁷			1	· /	1	2	
MW-SB4		1	1	1	1	/	
MW-SB5		1	1	1	1	1	Ti .

Notes: BTXE = Benzene, toluene, xylenes, and ethylbenzene.

¹ California DOHS Method, LUFT Manual, October 1989.

² Quantification based on a Bunker C standard obtained from the liquids below the concrete containment and a laboratory Bunker C standard.

EPA Method 6010.

⁴ EPA Method 7421.

EPA Method 8240.

⁶ EPA Method 602.

Duplicate sample.

TABLE 3

SUMMARY OF ORGANIC ANALYTICAL RESULTS, SOILS Seabreeze Yacht Center, Oakland, California November 1994

(mg/kg)

					Bunl	ker C
Location	Depth (feet bgs)	Sample Date	Kerosene	Diesel	Lab Standard	Site Standard
BD-1 ¹	2.0-2.5	11/10/94		2	210	230
	6.0-6.5	11/10/94		6	370	410
BD-1A	2.0-2.5	11/10/94		2	280	250
	4.0-4.5	11/10/94		1	<30	<30
BD-2	2.0-2.5	11/10/94		40	1,600	1,800
	4.0-4.5	11/10/94	<u>.</u>	<20	2,300	2,500
BD-2A	2.0-2.5	11/10/94		<1	110	100
	4.5-5.0	11/10/94	-	<20	11,000	12,000
BD-3	2.5-3.0	11/22/94		70	1,700	1,500
	5.0-5.5	11/22/94		480	1,500	1,800
BD-4 ²	0.0-0.4	11/10/94	<10	<1	1,600	1,900
BD-5	2.5-3.0	11/22/94		350	7,100	7,800
MW-SB3	2.0-2.5	11/10/94		66	4,000	(4,500)
4	4.5-5.0	11/10/94	STANSBURS OF STREET	11	300	340
MW-SB4	2.0-2.5	11/22/94		2	160	140
	5.0-5.5	11/22/94		21	410	460
MW-SB4A	5.0-5.5	11/10/94	3	11,000	49,000	55,000
MW-SB5	2.0-2.5	11/22/94	_	30	1,200	1,100
	3.0-3.5	11/22/94		820	16,000	15,000
MW-SB5-grab ⁴	NA	11/22/94		8	140	150

Notes: -- = Analysis not requested.

NA = Not applicable.

Refer to Table 1 for analytical methods.

Refer to Figure 1 for sampling locations.

Samples also analyzed for creosote (EPA Method 8270). Creosote was not identified above laboratory reporting limits $(2,000 \mu g/kg)$.

Sample also analyzed for volatile organic compounds (EPA Method 8240). Concentrations of all volatile organic compounds were below laboratory reporting limits.

Kerosene range not reported due to overlap of hydrocarbon ranges.

Sample also analyzed for volatile organic compounds (EPA Method 8240). All compounds were below reporting limits, except ethylbenzene (150 µg/kg) and total xylenes (340 µg/kg). This sample was collected from borehole MW-SB5A.

TABLE 4

SUMMARY OF METAL ANALYTICAL RESULTS, SOILS

Seabreeze Yacht Center, Oakland, California November 1994

(mg/kg)

Sample ID	Depth (feet)	Sample Date	Sb	Ar	Ba	Be	Cd	Cr (total)	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	TI	v	Zn
BD-1	2.0-2.5 6.0-6.5	11/10/94 11/10/94		-	-			-	-	7.6 15	<5 190	-			-	- :	-	-	
BD-1A	2.0-2.5 4.0-4.5	11/10/94 11/10/94		-	-			-		13 14	21 23	-	-	-	-	-	-		-
BD-2	2.0-2.5 4.0-4.5	11/10/94 11/10/94	-	-			-			18 20	230 130		-		-	25			
BD-2A	2.0-2.5 4.5-5.0	11/10/94 11/10/94	-						-	23 28	590 91	_		-	-	-		-	
BD-3	2.5-3.0 5.0-5.5	11/22/94 11/22/94	<3.0	<2.5	33	0.40	<0.25	41	5.5	2,300	160 8.1	<0.10	<0.99	35	<25	<0.50	 <25	31.	43
BD-4	0.0-0.4	11/10/94	<5.9	11	360	0.63	0.77	31	8.2	53	150	0.29	<2	39	<2.5	< 0.99	<2.5	40	300
BD-5	2.5-3.0	11/22/94						330	-	38	78	-							
MW-SB3	2.0-2.5 4.5-5.0	11/10/94 11/10/94	=		-	-	45	- E		50 53	190 310	Ξ		-	Ξ	=		-	
MW-SB4	2.0-2.5 5.0-5.5	11/22/94 11/22/94	<3.0	3.9	35	0.33	<0.25	37	4.5	35 15	79 10	<0.091	<1.0	28	 <2.5	<0.50	<2.5	29	32
MW-SB4A	5.0-5.5	11/10/94	<6	13	440	1	< 0.50	29	8.1	13	6.2	< 0.091	<2	34	<2.5	<1	<2.5	30	30
MW-SB5	2.0-2.5 3.0-3.5	11/22/94 11/22/94	<3.0	11	200	1.2	2.4	38		24 150	63 320	0.40	1.7	180	 <2.5	<0.5	<2.5	250	280

Notes: -- = No analysis requested.

Refer to Table 1 for analytical methods. Refer to Figure 1 for sampling locations.

TABLE 5

SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER

Seabreeze Yacht Center, Oakland, California November/December 1994

 $(\mu g/L)$

				Bu	nker C				
Sample ID	Date	Gasoline	Diesel	Lab Standard	Site Standard	Total Lead	Total Copper	VOCs	BTXE
MW-SB1	11/28/94	4 Marie 19 4	1,300	4,800	4,800	<3.0	14	2	h
MW-SB2	11/28/94		12,000	30,000	30,000	<3.0	54	3	-
MW-SB3	11/14/94 12/07/94	=	1,400/1,100	3,000/2,500	460 3,000/2,300	<3.0	10	Ξ	 <0.5
MW-SB3A1	11/14/94	-			350	<3.0	<10		
MW-SB4	11/28/94		1,100	4,300	4,300	93	78	4	
MW-SB5	11/28/94	-	34,000	74,000	74,000	<3.0	19	5	

Notes:

-- = No analysis requested.

xx/xx = Duplicate sample.

VOCs = Volatile organic compounds.

BTXE = Benzene, toluene, xylenes, and ethylbenzene.

Refer to Table 1 for analytical methods. Refer to Figure 1 for well locations.

Duplicate sample.

All compounds below reporting levels except acetone (43 μ g/L), a common laboratory contaminant.

All compounds below reporting levels except acetone (33 μg/L), a common laboratory contaminant. Toluene was detected below the reporting limit (5 μg/L) at 3 μg/L.

⁴ All compounds below reporting levels except acetone (75 μ g/L), a common laboratory contaminant.

All compounds below reporting levels except acetone (130 μg/L), a common laboratory contaminant. Chloroform was detected below the reporting limit of 5 μg/L (detected concentration not reported).

TABLE 6

GROUNDWATER ELEVATION
Seabreeze Yacht Center, Oakland, California

Well	Date	Time	Surface Elevation (msl)	TOC Elevation (msl)	Depth to Groundwater (feet)	Groundwater Elevation (msl)
MW-SB1	4/17/91	10:36	5.9	7.25	5.93	1.32
12	7/9/91	10:03			5.92	1.33
	1/10/94	11:45			5.0	2.25
	1/26/94	13:10			5.03	2.22
	11/14/94	7:32 10:55 14:08	3		4.48 5.02 5.27	2.77 2.23 1.98
	11/28/94	8:56			4.82	2.43
MW-SB2	4/19/91	11:09	6.2	7.18	5.38	1.8
	7/9/91	11:04			3.7	3.48
	1/10/94	12:31			3.08	4.1
	1/26/94	13:40			1.63	5.5
,	11/14/94	7:30 11:05 14:14			4.8 4.76 4.73	2.38 2.42 2.45
	11/28/94	9:00			2.85	4.33
MW-SB3	11/14/94	7:25 11:00 14:12	6.0	8.10	8.23 8.14 8.07	-0.13 -0.04 0.03
	11/28/94	8:53	4	4	6.32	1.78
	12/06/94	8:37			6.15	1.95
MW-SB4	11/28/94	9:02	6.6	6.39	1.05	5.34
MW-SB5	11/28/94	8:40	6.9	6.30	6.32	-0.02

Notes: 11/14/94: High tide 9:21 a.m.; Low tide 3:50 p.m.

11/28/94: High tide 7:46 a.m. msl = Feet above mean sea level.

TOC = Top of casing.

Refer to Figure 1 for well locations.

APPENDIX A

BORING LOGS AND WELL CONSTRUCTION SUMMARIES

	PF	RIMARY DIVISION	VS	GROUP SYMBOL	SECONDARY DIVISIONS			
	IAL	GRAVELS	CLEAN GRAVELS	GW	Well graded gravels, gravel-sand mixtures, little or no fines.			
SOILS	MATERIAL 3. 200	MORE THAN HALF OF COARSE	(LESS THAN 5% FINES)	GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.			
	, ž	FRACTION IS	GRAVEL WITH	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines			
GRAINED	~ ₹ B	NO 4 SIEVE	NO 4 SIEVE FINES		Clayey gravels, gravel-sand-clay mixtures, plastic fine			
	I - 1	SANDS	CLEAN SANDS	SW	Well graded sands, gravelly sands, little or no fines.			
COARSE	THAN H	MORE THAN HALF OF COARSE	(LESS (HAN 5% FINES)	SP	Poorly graded sands or gravelly sands, little or no fines.			
8	MORE THAN IS LARGEF	FRACTION IS SMALLER THAN	SANDS	SM	Silty sands, sand-silt mixtures, non-plastic fines.			
	2	NO. 4 SIEVE	FINES	sc	Clayey sands, sand-clay mixtures, plastic fines.			
SOILS	OF LER SIZE	SILTS AND	CLAYS	ML	inorganic silts and very fine sands rock flour, silty or clayey fine sands or clayey silts with slight plasticity.			
	HALF OF SMALLER SIEVE SIZ	LIQUID LIM		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.			
NED		LESS THAN	50%	OL	Organic silts and organic silty clays of low plasticity.			
GRAINED	E THA	SILTS AND	CLAYS	МН	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.			
FINE	MORE THAN MATERIAL IS THAN NO. 200	LIQUID LIMI		СН	Inorganic clays of high plasticity, fat clays.			
ш	- < F	GREATER THA	N 50%	ОН	Organic clays of medium to high plasticity, organic silts.			
	HIC	GHLY ORGANIC SOILS	5	Pt	Peat and other highly organic soils.			

DEFINITION OF TERMS

	200	J.S. STANDAR 40	D SERIES 10	SIEVE	4	LEAR SQUAR 3/4"		NINGS 2"
SILTS AND CLAYS		S/	AND		G	RAVEL		
THE PINE CEARS	FINE	ME	DIUM	COARSE	FINE	CC4RSE	COBBLES	BOULDERS

GRAIN SIZES

SANDS AND GRAVELS	BLOWS/FOOT †
VERY LOOSE	0 - 4
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

SILTS AND CLAYS	STRENGTH #	BLOWS/FOOT [†]
VERY SOFT SOFT FIRM STIFF VERY STIFF HARD	0 - 1/4 1/4 - 1/2 1/2 - 1 1 - 2 2 - 4 OVER 4	0 - 2 - 2 - 4 4 - 8 8 - 16 16 - 32 OVER 32

RELATIVE DENSITY

CONSISTENCY

Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch 0.D. (1-3/8 inch I.D.)

split spoon (ASTM D-1586).
†Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

SAMPLE DRILLING LOG

DRILLING LOG

Scale: 1 inch = 1.5 feet

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Page 1 of 2

Location Driller Method Logger		atum		Pro	ring No bject No ite sing size
Depth	Graphic	Lithold			lotes
0		Feet below ground surface	a 140 fallin to dri	s per foot of Ibs hammer g 30-inches ive a 2-inch spoon	1-3-9
1	_	Reddish brown, claye	y, sandy GRAVEL,	moist	
2	GC —	— Unified soil classification	Litholo descrip		
3		Sample for visual identification		\mathfrak{I}_{i}	
4	for	mple retained laboratory			HNu = ppm
5	ana	alysis	$\ / / \ $	\	Air monitoring measurement
6			71		CGM = 0% LEL
$\stackrel{7}{\Rightarrow}$	- 15		otal depth illed by auger		Combustible gas meter reading
/\$	DU	T.B.D. = 8.0 Feet			
<u></u>		Total depth e	xplored		
10		132. ·			b

Location	Seabreeze, Por	t of Oakland, 10 5th Avenue, Oakland, CA	Boring no. BD-1
Driller	Gregg Drilling		Project no. S9171-00
Method		continuous-flight auger	Date 11/10/94
Logger	WKS	Datum Bore size 8"	Casing size
Depth (ft.)	Graphic	Lithology	Notes
0	***************************************	Asphalt.	
1	SP	Reddish brown, SAND, fine-grained, loose to very loose, wet (Fill).	
2	GC	Dark brown, very dark gray, clayey GRAVEL, medium dense, pieces of concrete, brick, moist (Fill).	8-16-21 HNu = 0 ppm in breathing zone LEL = 0% HNu = 0 ppm at sample
3			2 ° 00
4		Concrete pieces at 4.0 feet.	10-50 (6")
5		Please cite: CLAV with around and cond high pleaticity wars	8-12-14
6 ▼	СН	Black, silty CLAY with gravel and sand, high plasticity, very moist, wet (Bay mud).	HNu = 0 ppm in breathing zone HNu = 0 ppm at sample LEL = 0%
7			
8		Greenish gray to very dark gray, silty CLAY with sand, high plasticity, wet (Bay mud).	HNu = 0 ppm in borehole
9			Gastech = 50 ppm in borehole LEL = 0%
10		Total depth = 9.5 feet.	

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(S9117NOV.XLW-11/11/94)

Location		t of Oakland, 10 5th Avenue, Oakland, CA	Boring no.	BD-1A
Driller	Gregg Drilling		1.50	S9171-00
Method		continuous-flight auger	Date	11/10/94
Logger	WKS	DatumBore size 8"	Casing size	
Depth (ft.)	Graphic	Lithology		Notes
0	GW	Brown, GRAVEL with sand, 1/3- to 3/4-inch diameter subangular clasts, loose, moist (Fill).	HNu = 0 ppi LEL = 0%	m in breathing zone
1	SP	Brown, SAND, fine- to very fine-grained, medium dense, very	- 1	
2		moist (Fill).	8-7-12	· ·
3				
4	SW	Very dark gray, silty SAND with clay, minor gravel, medium dense, wet (Fill).		n in borehole 5 ppm in borehole 1 borehole
5		Total depth = 5.0 feet.		
6			¥	
. 7				
8				
9				
10		ж		

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(S9117NOV.XLW-12/6/94)

Location	Seabreeze, Por	t of Oakland, 280 6th Avenue, Oakland, CA	Boring no. BD-2
Driller	Gregg Drilling		Project no. S9171-00
Method	Hollow-stem,	continuous-flight auger	Date 11/10/94
Logger	WKS	Datum Bore size 8"	Casing size
Depth (ft.)	Graphic	Lithology	Notes
0			HNu = 0 ppm in breathing zone
1	SW	Brown, SAND with gravel, fine- to medium-grained, 1/3- to 3/4-inch diameter subangular clasts, loose to medium dense, moist to very moist (Fill).	LEL = 0%
2		•	5-8-11
3			
4		Increase in gravel content and clast size at 3.5 feet.	6-7-5 HNu = 0 ppm in borehole Gastech = 90 ppm in borehole LEL = 0% in borehole
5		Total depth = 5.0 feet.	
6			
7			
8			
9			
10			

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(\$9117NOV.XLW-11/11/94)

Location		rt of Oakland, 280 6th Avenue, Oakland, CA	Boring no. BD-2A
Driller	Gregg Drilling		Project no. S9171-00
Method		continuous-flight auger	Date 11/10/94
Logger	WKS	Datum Bore size 8"	Casing size
Depth (ft.)	Graphic	Lithology	Notes
0	SW	Brown, SAND, with gravel, fine- to medium-grained, very loose,	HNu = 0 ppm in breathing zone LEL = 0%
1		very moist (Fill).	
2			3-5-14
3	GW	Dark brown, GRAVEL with sand, 1/3- to 1 3/4-inch diameter subangular clasts, concrete and wood pieces, medium dense, very moist (Fill).	
4			12-45-32 12" recovery HNu = 0 ppm in borehole Gastech = 0 ppm in borehole
5		Total depth = 5.0 feet.	LEL = 0% in borehole
6			
7			
8			
9		y a	
10			

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(S9117NOV.XLW-11/11/94)

Location	Seabreeze Yac	cht Center	Boring no. BD-3
Driller	HEW		Project no. S9171
Method	Hollow-stem,	Date 11/22/94	
Logger	WKS	Datum Bore size 8"	Casing size 2"
Depth (ft.)	Graphic	Lithology	Notes
0	SW	Dorle grove SAND ware fine to fine agained some sound to	HNu = 0 ppm in breathing zone LEL = 0% in breathing zone
1		Dark gray, SAND, very fine- to fine-grained, some gravel, I concrete and wood pieces, wet (Fill).	LEL = 0% in borehole Ground surface near hole has standing water due to dripping pipe near hole.
2			Groundwater interface assumed at approx. 4-5 feet, indicative of site. Hit concrete pieces at 2.0 feet.
3	СН	Greenish gray, silty CLAY, high plasticity, soft, wet (Bay m	Drilled to 2.5 feet to take sample. 2-1-2 HNu = 0 ppm at sample
4		Some interbedding of plant matter	LEL = 0% at sample
5			3-3-3
		Total depth = 5.5 feet.	
6	e	* .	,
7	_		
8	2		
20 10		, f.	*
9		6 V	
10			

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S9171N94.XLW-11/23/94

Location		Port of Oakland, 10 5th Ave	nue, Oakland, CA		Boring no.	BD-4
Driller	Gregg Drilli		~~~		Project no.	S9171-00
Method		n, continuous-flight auger			_ Date	11/10/94
Logger	WKS	Datum	Bore size	8"	_ Casing size	
Depth (ft.)	Graphic		Lithology			Notes
0	GC	Greenish gray, clayey G			HNu = 0 pp	m in breathing zone
		diameter subangular cla	sts, medium dense,	very moist (Fill).	LEL = 0%	
1		Concrete slab.			Drove samp	ler four times
2						
3		a a				
4	_					
5		,				
6 .						
7		N				
8	3	,				
9					× ×	
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(S9117NOV.XLW-12/6/94)

Location	Seabreeze Yac	ht Center	Boring no.	BD-5
Driller	HEW		Project no.	S9171
Method		Continuous-flight auger	Date	11/22/94
Logger	WKS	Datum Bore size 8"	Casing size	NA .
Depth (ft.)	Graphic	Lithology		Notes
0			Gastech mal	function
1	GW	Brown, GRAVEL with clay and sand, 1/3- to 3/4-inch subangular clasts, crushed brick and concrete, medium dense, very moist (Fill).	HNu = 0 ppi	m in breathing zone
2			0.4.0	
3			8-4-8 HNu = 0 ppi	n at sample
	СН	Greenish gray, silty CLAY, high plasticity, wood fragments, very moist (Bay mud).		
4			2-2-3 No recovery	
5				t, attempted again.
		Total depth = 5.5 feet.	Too much w	
6	_			
7				
8				2 4
		,		
9		,		
10		e e		

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S9171N94.XLW-11/23/94

0			WE	LL CONST	DUCTIO	NCIIMN	IADV	Duniant na	50171.00		Wallma	MW cpa
١		\top	Project r					Project no.	S9171-00		Well no.	MW-2B3
-	CI		Location		Seabreeze 3		er	Date	11/10/94			
-	CL		Location	1	280 6th Av			Personnel WKS Driller Gregg Drilling				
-	CH CH				Oakland, C	.А		Driller	Gregg Dril	ling		
5	CH CH			DDILL	NG CIDA	4 A D.V.			ON COMPANS	miori mir	(DY OC	
٥ـــ	CH		DRILLING SUMMARY					TION TIM				
-			Drill rig		M10			Task		art	T	ish
			Auger/bit	Marine Control of the	Hollow ste	m			<u>Date</u>	Time	Date	<u>Time</u>
-			Drilling f		None			Drilling	11/10/94	11.00	11/10/94	11:18
10				- Committee of the comm	8			_				
10	L	-		epth (feet)	10.0		,	Geophys log				
\dashv				ompletion	Stove pipe			Casing	11/10/94	11:19	11/10/94	11:20
4			VOID 13	Ground surface elevation (feet) 6.0								
4			TOC elev	ation (feet)		8.10						
								Filter placement	11/10/94	11:20	11/10/94	11:41
15_					LL DESIG			Cementing	11/10/94	11:45	11/10/94	11:56
4	Si Si		Basis:	Geologic log	g	x Geoph	ysical log	Development	11/11/94	10:00	11/11/94	13:00
\dashv				14								
4			Casing	Mater		Slot						
	lit.		Diameter			Size	Interval	Other				
20_			(inch)	(fee	t)	1	(feet bgs)				L	
\dashv			2	PVC 4.86			+2.06-2.80	I				
4			2	PVC 6.20		0.20	2.80-9.00			EVELOPM		
\dashv								Method	Double dia	phragm	Date	11/11/94
٦, ١	10							_, =				
25								Time	Gallons		Appearance	
\dashv				0 1				10:00		Very slight	ly turbid	
4				Centralizer			25.10	12:31		Clear		
- 1				Filter material			2.5-10	12:33		Clear		
20 1				Bentonite		that the terror to the terror	2.0-2.5	12:35		Clear		
30				Cement	Neat		0-2.0	12:40		Very slight		
\dashv				**/ • 77		r.c	/3	13:00	2.5	Very slight	ly turbid	
-1				WAI	ER LEVE		Б 1					
\dashv					Date	Time	Depth					
35					N		(ft bgs)					
33			l	uring drilling:	None		NA NA				4	
-				er completion:	NA	10.48	NA NA					
4		Ш	Вегоге	development:	11/11/94	10:48	NA ·				3:	
-1								MENTS				
40							CON	IMEN15				
40-											······································	
-								***************************************				
-												
-												
45										- 36		
43		_11										

S9171NOV.XLW-12/6/94

Signature:

Location		rt of Oakland, 280 6th Avenue, Oakland, CA	Boring no.	MW-SB3 .
Driller	Gregg Drilling		Project no.	S9171-00
Method		continuous-flight auger	_ Date	11/10/94
Logger	WKS	Datum TOC 8.10 Bore size 8"	_ Casing size	2"
Depth (ft.)	Graphic	Lithology	î.	Notes
0				
1	CL	Very dark brown, gravelly CLAY with sand, 1/3- to 1-inch diameter clasts, sub-angular, low plasticity, wet to very moist (Fill).		
2		Increase in sand.	4-5-9 HNu=0 ppm LEL = 0% HNu = 0 pp	in breathing zone
3	СН	Black, silty CLAY, some sand and gravel, high plasticity, concrete pieces, 2-inch thick abundant wood pieces at 3.0 feet, wet (Fill).	That - Opp	in at sample
4	СН	Greenish gray, silty CLAY, high plasticity, wood pieces, wet (Bay mud).	2-2-1 HNu = 0 ppr LEL = 0% HNu = 0 ppr	m in breathing zone
▼ 5				**
6				
7				
8				
9				
10		Total boring depth = 10.0 feet.		

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(S9117NOV.XLW-12/6/94)

Location	Seabreeze, Por Gregg Drilling	Boring no. MW-SB4-A Project no. S9171-00	
Method _		continuous-flight auger	Date 11/10/94
Logger _	WKS	Bore size 8"	Casing size
Depth (ft.)	Graphic	Lithology	Notes
0	GW	Reddish brown, sandy GRAVEL with clay, 1/3- to 1-inch diameter subangular clasts, medium dense, very moist (Fill).	HNu = 0 ppm in breathing zone LEL = 0%
2		Concrete slab.	à .
3			
4			
5		Wood chips and pipe.	Black liquid and water seen
6			seeping into boring at 5.5 feet
7			
9			er de la companya de
10		Total depth = 9.5 feet.	Hole abandoned

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(S9117NOV.XLW-11/11/94)

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Location _ Driller	Seabreeze, Po Gregg Drillin	ort of Oakland, 10 5th Avenue, Oakland, CA	Boring no.	MW-SB4-B
Method _			Project no.	S9171-00
provide the control of the control o	WKS	continuous-flight auger	_ Date	11/10/94
Logger _	WAS	Bore size 8"	Casing size	
Depth (ft.)	Graphic	Lithology		Notes
0			HNu = 0 pp	m in breathing zone
1	GW	Reddish brown, sandy GRAVEL with clay, 1/3- to 1-inch diameter subangular clasts, medium dense, very moist (Fill).	LEL = 0%	*
2		Concrete slab.		
3				
4	_			¥
5	-			
6	_	Total depth = 6.0 feet	Hole abando	oned
7	_			
8			· · · · · · · · · · · · · · · · · · ·	
9	-			
10	_			

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(S9117NOV.XLW-11/11/94)

	NG LOG				
Location	Seabreeze, Po	rt of Oakland, 10 5th Avenu	ue, Oakland, CA	Boring no.	MW-SB4-C
Driller	Gregg Drilling			Project no.	S9171-00
Method		continuous-flight auger		Date *	11/10/94
Logger	WKS	_ Datum	Bore size 8"	Casing size	
Depth (ft.)	Graphic		Lithology		Notes
0				HNu = 0 pp	m in breathing zone
1	GW —		RAVEL with clay, 1/3- to 1-inch ts, medium dense, very moist (Fi	LEL = 0%	in in broading zone
2		Concrete slab.		ā	2 mg
3		y .			u
4					ı
5					n an
6		Total depth = 6.0	feet.	Hole abando	oned
7					
8		W.			e e
9					,
10		M			e .

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(S9117NOV.XLW-11/11/94)

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Location Driller	Seabreeze, Po Gregg Drilling	Boring no. MW-SB4-D Project no. S9171-00	
Method Logger	Hollow-stem, WKS	continuous-flight auger	Date
		Bore size 8"	Casing size
Depth (ft.)	Graphic	Lithology	Notes
0	GW	Reddish brown, sandy GRAVEL with clay, 1/3- to 1-inch	HNu = 0 ppm in breathing zone LEL = 0%
1	_	diameter subangular clasts, medium dense, very moist (Fill).	ELL = 0 %
2		Concrete slab.	
3			
4			· ·
5		Total depth = 5.0 feet.	Hole abandoned
6			
7		e e e e e e e e e e e e e e e e e e e	
8			
9			
10			

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(S9171NOV.XLW-11/11/94)

0				WE	LL CONST	DUCTIO	NI CTIMA	IADV	Decises	50171 DO		337.33	NOW OR 4	
١ ١		T	Н	Project r					Project no. Date	S9171-B0		Well no.	MW-SB4	
-	GW			Location		Seabreeze 10 Fifth A		er	Personnel	11/22/94				
1				Location	1	Oakland, C			Driller	WKS	•			
7						Oakiaiiu, C	.А		Diller	HEW Drill	ing			
5				DRILLING SUMMARY				C	CONSTRUCTION TIME LOG					
				Drill rig		CME-75			Task		art		nish	
]	CH			Auger/bit		Hollow-ste	em			Date	Time	Date	Time	
]				Drilling f		None			Drilling	11/22/94	9:15	11/22/94	9:43	
				Boring di	ameter (inch)	8								
10						15.0			Geophys log					
				Surface c	ompletion	Christy box	x		Casing	11/22/94	9:55	11/22/94	10:00	
				Ground s	urface elevation	(feet)	6.60							
J				TOC elev	ation (feet)		6.39				5055			
						S			Filter placement	11/22/94	10:40	11/22/94	11:16	
15					WE	LL DESIG	N		Cementing	11/22/94	15:30	11/22/94	15:45	
				Basis:	× Geologic lo	g	Geophys	sical log	Development	11/23/94	10:00	11/23/94	11:30	
-														
_				Casing	Mater	rial	Slot							
_				Diameter	and Le	ngth	Size	Interval	Other					
20_				(inch)	(fee	t)		(feet bgs)						
4				2	PVC 2.55			-0.25 - 2.8	1					
-				2	PVC 10.0		0/0	2.8 - 12.8		WELL DI	EVELOPM	ENT		
-				2	PVC 2.2	-		12.8 - 15	Method	Double dia	phragm	Date	11/23/94	
- 4				-					ď					
25						-			Time	Gallons		Appearance		
4					L		L		10:00		Very turbio			
4					Centralizer				10:05		Very turbio			
4					Filter material			2.5-15.0				l; well pump	ed dry	
20 -	-				Bentonite			2.0-2.5	10:20		Slightly tur			
30_					Cement	Neat		0-2.0	10:45	20		ly turbid to	slightly	
4					XX/ A 77	NO. 1 101/10			11.00	22	turbid			
Ⅎ					WAI	ER LEVE		D 11	11:30	32	Very slight	ly turbid		
4						Date	Time	Depth (ft bas)			<u></u>			
35				D	uring drilling:	11/22/94	9:35	(ft bgs) ~2.0						
"-		-			er completion:	11/22/94	9:45	~2.0		7		-		
1					development:	11/23/94	9:55	1.69						
٦				Belofe	development.	11/25/54	7.55	1.05						
٦			ŀ					CON	MENTS					
40								00.						
1											3			
٦					*									
٦						W. W. (100)		*******************						
45														

Signature:

S9171SB4.XLW (12/2/94)

Location	Seabreeze Yac	cht Center	Boring no.	MW-SB4	
Driller	HEW		Project no.	S9171	
Method	Hollow-stem,	Date	11/22/94		
Logger	WKS	Datum TOC 6.39 Bore size 8"	Casing size	2"	
Depth (ft.)	Graphic	Lithology	1	Notes	
0		Concrete slab	HNu = 0 pp	m in breathing zone	
1	GW	Light gray, GRAVEL with sand and clay, 1/3- to 3/4-inch			
2 ▼		diameter subangular clasts, medium dense, damp, pieces of fine brick, concrete pieces, wet (Fill).	9-12-15		
3					
4	С н	Greenish gray, silty CLAY, high plasticity, very soft, lenses of plant matter with black tarry substance, wet (Bay mud).	2-1-1		
5			Grab sample tarry substar HNu = 0 ppr		
6	_				
7			2		
8					
9			4 4 4		
10					

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S9171N94 XI W-12/6/94

DRILLING LOG

Location _	Seabreeze Ya	cht Center		of the second	Boring no.	MW-SB4
Driller _	HEW				Project no.	S9171
Method _		continuous-flight auger			Date	11/22/94
Logger _	WKS	Datum TOC 6.39	Bore size 8"		Casing size	2"
Depth (ft.)	Graphic	·	Lithology		_	Notes
10						
		1				81
	СН					
11	_					
12	-				1	
13						
13						
	¥, #	9				
14						
		M.				
15		Total depth = 15.0 f	eet.			
				%		
		m "				
16	_	· ·				
		*				
47						
17				167		
		9				
18		2				
	_					3
2		E (200				
19	_					
	77					
		*				
20	_					

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S9171N94 XI W-12/6/9

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yac	ht Center	Boring no. MW-SB5A
Driller	HEW	ant Gomes	Boring no. MW-SB5A Project no. S9171
Method	Hollow-stem, o	continuous-flight auger	Date 11/22/94
Logger	WKS	Datum Bore size 8"	Casing size 2"
Depth (ft.)	Graphic	Lithology	Notes
0	GW	Greenish gray, GRAVEL with clay and sand, 1/3- to 3/4-inch diameter subangular clasts, medium dense, moist (Baserock fill).	HNu = 0 ppm in breathing zone LEL = 0% in breathing zone
1	_		
2	SP	Brown, SAND, fine-grained, shell fragments, medium dense to dense, moist (Fill).	25-40-50 (4") Concrete piece at 2.75 feet
3)	Large concrete pieces at 3 feet.	HNu = 25 ppm in borehole LEL = 0% in borehole
4 ▼	SW	Dark brown/greenish gray, SAND with gravel, shell fragments, fine-grained, medium dense, moist to very moist (Fill).	Petroleum odor at 3.5 feet
5		Becoming black at 5.0 feet. Total depth = 5.25 feet.	5-6-Refusal, no recovery. Very hard at 5.25 feet. HNu = >200 ppm in borehole LEL = 0% in borehole Pulled out. Redrilled due to refusal at approx. 5.25 feet.
6			(Redrilled 2 feet east, 7 feet
7	_		southwest of previous location).
8			
9	_		
10	_		

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S9171N94 XI W-12/6/9

	 WE	LL CONST	RUCTIO	N SUMM	1ARY	Project no.	S9171-B0		Well no.	MW-SB
	Project i	name	Seabreeze	Yacht Cent	er	Date	11/22/94			
GW	Location	1	10 Fifth A	venue		Personnel	WKS			
			Oakland, C	CA		Driller	HEW Drill	ing		
		3								
2		DRILL	ING SUMN	MARY		CONSTRUCTION TIME LOG				
СН	Drill rig		CME-75			Task	St	art	Fir	nish
	Auger/bi	ts	Hollow-ste	em	Part continue and the		<u>Date</u>	<u>Time</u>	Date	Time
	Drilling f	luid	None			Drilling	11/22/94	12:20	11/22/94	13:40
	Boring d	iameter (inch)	8							
	Boring d	epth (feet)	15.0			Geophys log				
	II.	ompletion	Christy box	х		Casing	11/22/94	13:56	11/22/94	13:56
		urface elevation	n (feet)	6.90						
	TOC elev	ation (feet)		6.30						<u> </u>
				21		Filter placement	11/22/94	14:00	11/22/94	14:45
			LL DESIG	N		Cementing	11/22/94	14:50	11/22/94	15:00
	Basis:	x Geologic lo	g	Geophys	ical log	Development	11/23/94	8:00	11/23/94	8:20
	Casing	Mate		Slot						
	Diameter			Size	Interval	Other				
	(inch)	(fee	t)		(feet bgs)		L		<u> </u>	
	2	PVC 2.55			-0.25-2.8	ii				
	2	PVC 5.0		0/0	2.8-7.8		WELL DE			
	2	PVC 7.2			7.8-15.0	Method	Double dia	phragm	Date	11/23/94
						Time	C-11			29
						8:00	Gallons	Light ambe	Appearance	;
		Centralizer	None			8:05		Light amb		
		Filter material			2.5-15.0			Light ambe		
		Bentonite			2.0-2.5	8:15		Light amb		
		Cement			0-2.0			Light amb		
			1.000		0 2.0	0.20	1.75	Digit tulio		
		WAT	ER LEVE	LS						
			Date	Time	Depth					
					(ft bgs)					
	D	uring drilling:	11/22/94	12:30	None					
		er completion:	11/22/94	13:40	Trace					
		development:	11/23/94	7:58	12.94					
•	Before	development:	11/28/94	8:40	6.32		·			
					CO	MMENTS				
							8			
										0
				a .	0					

Signature:

S9171SB4.XLW (12/6/94)

DRILLING LOG

Location	Seabreeze Yac	cht Center	Boring no. MW-SB5
Driller	HEW		Project no. S9171
Method		continuous-flight auger	Date 11/22/94
Logger	WKS	Datum TOC 6.30 Bore size 8"	Casing size 2"
Depth (ft.)	Graphic	Lithology	Notes
0			HNu= 0 ppm in breathing zone
1	- GW	Greenish gray/very dark gray, GRAVEL with clay and sand, 1/3-to 3/4-inch diameter subangular clasts, very moist (Fill).	LEL = 0% in breathing zone
2	в о		6-7-9
3			HNu = 0.ppm in borehole LEL = 0% in borehole No return (moved 2 feet northeast to take sample)
4	СН	Greenish gray, silty CLAY, high plasticity, soft, wood chips, wet (Bay mud).	5 (60
5			a
6			a a
7			
8			
9		et e	
10			

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S9171N94 XI W-12/6/94

DRILLING LOG

Location Driller	Seabreeze Ya	cht Center			Boring no. Project no.	MW-SB5 S9171
Method	W/Attaches and the second and the se	continuous-flight auger			Date	11/22/94
Logger	WKS	Datum TOC 6.30	Bore size 8"		Casing size	2"
Depth (ft.)	Graphic		Lithology			Notes
10						
ė	СН	Increase in wood pie	eces.			
11				*	8	
12	er er					
13					2	8
	z =	5				
14						
15		Total depth = 15.0 f	eet.			
16		· 9 · 9	ī		d	
70000						
17		N .				
18		,			9	
19						
20						

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S9171N94.XLW-12/6/94

APPENDIX B WELL DEVELOPMENT FORMS

WELL DEVELOPMENT

Project no.:	S9171-00		Well no .:	MW-SB	3	Date: 11/11/94
Project name:	Seabreeze Yacht C	Center	Depth of w	ell from TOC (feet):	11.06	•
Location:	280 6th Avenue		Well diame	eter (inch):	2	
8	Oakland, CA		Screened in	nterval from TOC (feet	+2.06-11.00	5
Recorded by:	WKS		TOC eleva	tion (feet msl):	8.10	
Weather:	Sunny		Water leve	l from TOC (feet):	10.48	Time 9:40
Precip in past			Product lev	el from TOC (feet):	None	Time
5 days (inch):	0.80		Water leve	l measurement:	Double dia	phragm pump/bailer
FIELD MEAS	SUREMENTS					
				Recharge:		
vi g	Gallons				,	Water Level
Time	Removed	Appearan	ce	Time		(feet)
10:00	0.5	Well ran dry; very sli	ghtly turbid	10:30		9.90
12:31	1.0	Clear		10:32		9.85
12:33	1.5	Clear		10:36		9.80
12:35	1.75	Clear		10:40		9.75
12:40	2.0	Very slightly turbid		10:46		9.70
13:00	2.5	Very slightly turbid		10:54		9.65
				11:39		9.52
				12:30		9.46 (static)
		0.00				

Comments:			- MOESTON			
	¥		***************************************			

Total gallons r	emoved	2.5	Average re	charge rate (ft/min)	0.0036	
Development r	nethod	Double diaphragm	Purged wat	The state of the s	MW-SB3 W	V1 .
<u> </u>		pump and bailer	Number of	•	1	
Decontaminati	on method	TSP-DI	Rinsate disp	posal	MW-SB3 W	V1

S9171NOV.XLW-12/6/94

WELL DEVELOPMENT

TTLL DL	VLLOFIVILI	Y I				
Project no.:	S9171	-B0	Well no.:	MW-SB4	I	Date: 11/23/94
Project name:	Seabro	eeze Yacht Center	Depth of w	vell from TOC (feet):	14.8	
Location:	10 Fift	th Avenue	Well diam		2	
_		nd, CA		nterval from TOC (fee		
Recorded by:	WKS			tion (feet msl):	6.39	
Weather:	Sunny			l from TOC (feet):		Time 9:55
Precip in past				vel from TOC (feet):		Time 9:55
5 days (inch):	0			l measurement:	Double diaphi	
FIELD MEASU	Gallons		100 1100 1100 1100 1100 1100 1100 1100	Recharge:	Wa	ater Level
Time	Time Removed Appearance		ice	Time		(feet)
10:00	3	Very turbid		10:15:06		11
10:05	6	Very turbid		10:15:50		9
10:10	9	Very turbid; well pu	imped dry	10:16:10		8
10:20	12	Slightly turbid		10:16:37		7
10:45	20	Very slightly to slig	htly turbid	10:16:58		6
11:30	32	Very slightly turbid		10:17:18		5
				10:17:41		4
				10:18:10	all marketines consider the marketines consent	3 .
			39			
		9				
		8				
Comments: _	***************************************	· · · · · · · · · · · · · · · · · · ·		5	MANAGE AND COMPANY OF THE STREET	12
Total gallons rea		32	Average re	charge rate (ft/min)	2.6	
Development me	ethod	Double diaphragm	Purged wat	er disposal	Drum SB-W2	
		pump	Number of	drums	1	
Decontamination	n method	TSP & DI water	Rinsate dis	posal	Drum SB-W2	

S9171SB4.XLW (12/2/94)

Drum SB-W2

TSP & DI water Rinsate disposal

WELL DEVELOPMENT

Project no.:	S9171	-B0	Wall no :	MC CD5		Data: 11/02/04
Project no.: —		eeze Yacht Center	Well no.:		14.75	Date: 11/23/94
Location:		th Avenue		vell from TOC (feet): eter (inch):	14.75 2	
Location.		nd, CA		eter (mcn). nterval from TOC (fee	-	5
Recorded by:	WKS	iiu, CA		ition (feet msl):	6.30	3
Weather:	Sunny	7		el from TOC (feet):	12.94	Time 7:58
Precip in past	Sumi			vel from TOC (feet):	None	Time 7:58
5 days (inch):	0			el measurement		iaphragm pump
				· moussionent	<u>Dodolo d</u>	apinugin punip
FIELD MEASU	REMENTS			Recharge:		
	Gallons					Water Level
Time	Removed	Appearance	ce	Time	250	(feet)
8:00	0.1	Light amber		8:23		14.60
8:05	0.5	Light amber		8:24		14.50
8:10	1.0	Light amber		8:28		14.40
8:15	1.5	Light amber		8:42		14.30
8:20	1.75	Light amber		9:24		14.20
				11:36		14.00
					harrer av då om yeld sammark og en dav forsett ydgeret	
Comments:		2				
Total gallons rem	noved	1.75	Average re	charge rate (ft/min)	0.0065	
Development me	thod	Double diaphragm	Purged wat	er disposal	Drum SB	-W2
Decontamination	method	pump TSP & DI water	Number of Rinsate dis		1 Drum SB	wa
	meulou	151 & DI Water	Misale 018	posai	Diuli SB	- YY L

S9171SB4.XLW (12/2/94)

APPENDIX C GROUNDWATER SAMPLING FORMS

GROUND	VVATE	R SAMPLING				10 EU 30 300 000E
Project no.:		S9171-B0	Well no.:	MW-SB1		Date: 11/28/94
Project name:_		Seabreeze Yacht Cente	er Depth of well	from TOC (feet):	10.5	
Location:		260 6th Avenue	Well diameter	r (inch):	2	10
		Oakland, CA	Screened inter	rval from TOC (fe	et): 2.8-15	*
Recorded by:		WKS	TOC elevation	n (feet):	7.25	
Weather:		Sunny	Water level fr	om TOC (feet):	4.82	Time 8:56
Precip in past				from TOC (feet):	None	Time 8:56
5 days (inch):_		1.0	Water level m	- A - A	Dual interfa	
VOLUME OF	WATER 1	O BE REMOVED BE	FORE SAMPLING	 };		
[[(10.5 ft) - (4.82 ft)] × (0.0	(6.00) 10 $(6.0$.48 =	0.9 gallons in o	ne well volume
	Well depth	Water level Well	radius		4.6 gallons in 5	
*				-	3.8 total gallons	s removed
CALIBRATIC	N:					
	5 (54.55.35))		Temp		EC	
20		<u>Time</u>	(°C)	pН	(µmho/cm	<u>n)</u>
	n Standard:		100	7.00-10.01	10,000	
	ore Purging: ter Purging:		13.0 18.5	7.00-10.01 7.06-10.0	7,000 8,000	
All	ter rurging.	11.13	10.3	7.00-10.0	8,000	
FIELD MEAS	UREMEN	TS:				
				Cumulative		
	Temp		EC	Gallons		
<u>Time</u>	(°C)	. <u>pH</u>	(µmho/cm)	Removed		Appearance
9:20	15.0	7.43	4,800	1.0	Clear with h	olack algae particles
9:29	15.6	7.48	4,800	2.0		olack algae particles
9:39	16.2	7.37	4,850	3.0	Clear with b	olack algae particles
WE	LL PUMPE	D DRY	** **I	3.8	Clear with t	plack algae particles
Water level aft	ter purging	prior to sampling (feet):		7.39		Time 12:30
Appearance of		Clear		1.37		Time 12:30
Duplicate/blan	•	None				Time
Purge method:		Double diaphragm pun	np		n en hermane de l'annu a viva de la vigil a le con	
Sampling equi		Disposable PVC bailer		VOC attachment:	Used for VO	OA .
Sample contain			Yearday)			
Sample analys		TEH-Bunker C & diesel,			Curtis & To	
Decontaminati	ion method:	TSP and water, DI wat	er rinse	Rinsate disposal:	Drum SB-W	V1

Project no.:		S9171-B0	Well no.:	MW-S	B2	Date: 11/28/94
Project name:		Seabreeze Yacht Center	Depth of well	from TOC (feet):	11.0	- 10 to
Location:		260 6th Avenue	Well diameter	r (inch):	2	
		Oakland, CA	Screened inte	rval from TOC (feet)	: 2.8-14.75	
Recorded by:		WKS	TOC elevation	n (feet):	7.18	
Weather:		Sunny	•	om TOC (feet):	2.85	Time 9:00
Precip in past				from TOC (feet):	None	Time 9:00
5 days (inch):		1.0	Water level m	Ki	Dual interfac	
VOLUME OF	WATER T	O BE REMOVED BEFOR	RE SAMPLING);		- 15
[(t) - (2.85 ft)] × (0.083)			0 gallons in on	
	Well depth	Water level Well radio	ıs		$\frac{0}{2}$ gallons in 5	
				6.	5 total gallons	removed
CALIBRATIC	N:					
			Temp		EC	
Calibratio	n Standard:	<u>Time</u>	<u>(°C)</u>	<u>pH</u> 7.00-10.01	(µmho/cm)	1
	ore Purging:		13.0	7.00-10.01	10,000 7,000	
	ter Purging:		18.5	7.06-10.0	8,000	
		9				
FIELD MEAS	UREMENT	rs:				9
	Temp		EC	Cumulative Gallons		
<u>Time</u>	(°C)	<u>pH</u>	(µmho/cm)	Removed		Appearance
	1.11.2.2.2.2.1.2.3.	4=0000				
9:54	15.6	6.87	10,000	1	Clear, sulfur	
10:00 10:11	15.0 15.9	6.91 6.74	10,000	2 4	Clear, sulfur	
10:11	15.9	9.98	11,000 11,000	6	Clear, sulfur Clear, sulfur	
	LL PUMPE		11,000	6.5	Clear, sulfur	
Water level aft	er nurging 1	prior to sampling (feet):	9.0			Time 12:40
Appearance of		Clear				Time 12:40
Duplicate/blank number: None						Time
Duplicate/blan		Double diaphragm pump	4			
Purge method:						
Purge method: Sampling equi	pment:	Disposable PVC bailer		VOC attachment:	Used for VO	A
Purge method:	pment: ners:	Disposable PVC bailer TEH-Bunker C & diesel, Cu, 1	N. NOG YOUR	-	Curtis & Tor	

S9171SB4.XLW (12/2/94)

Project no.:		S9171-00	Well no.:	MW-	SB3	Date: 11/14/94
Project name:		Seabreeze Yacht Center	Depth of wel	from TOC (feet):	11.06	
Location:		280 6th Avenue	Well diamete	r (inch):	2	
-		Oakland, CA	Screened inte	rval from TOC (fee	t): 4.86 - 11.06	
Recorded by:		WKS		TOC elevation (feet):		
Weather:		Sunny		rom TOC (feet):	8.10 8.07	Time 14:12
Precip in past		Duany		from TOC (feet):	None	Time
5 days (inch):		0.80				
J days (men).		0.80	_ Water level r	neasurement:	Dual interfac	ce probe
VOLUME OF	WATER T	O BE REMOVED BEFO	RE SAMPLING	G:		
		ft) - (8.07 ft)] × (0.083)		7.48 = 0.	49 gallons in or	e well volume
	Well depth	Water level Well radi	us	No.	2.4 gallons in 5	
				1	1.5 total gallons	removed
CALIBRATIO	ON:					er.
	3		Temp		EC	
7920 10170 000		<u>Time</u>	<u>(° C)</u>	<u>pH</u>	(umho/cm))
	on Standard:		14.0	7.00-10.01	1,000	
	ore Purging: fter Purging:		16.0 16.0	7.00-10.01 6.81 - 9.97	1,000 1,000	
	20	Þ.				
FIELD MEAS	SUREMENT	rs:				
	or the Control			Cumulative		7.0
TC:	Temp		EC	Gallons		
<u>Time</u>	(<u>°C</u>)	<u>pH</u>	(µmho/cm)	Removed		Appearance
14:30	19.9	6.94	8,500	0.25		Clear
14:40	20.1	6.85	9,000	0.75		Clear
14:45	19.8	6.90	10,000	1.00		Clear
14:50	19.6	6.90	12,000	1.50		Clear
Water level af	ter purging t	prior to sampling (feet):		9.56		Time 13:30
Appearance of		Clear				Time 15:40
Duplicate/blar	nk number:	Duplicate, MW-SB3A				Time 15:45
Purge method	•	Disposable bailer				
Sampling equi	•	Disposable PVC bailer		VOC attachment:		
Sample contai		1-liter amber, 1-liter plastic	c			
Sample analys		Copper, lead, Bunker C		Laboratory: Curtis		
Decontaminat	ion method:	TSP and water, DI water ri	nse	Rinsate disposal:	Drum MW-S	BW1

Project no.:		S9171-B0	Well no.:	MW-SB3		Date: 12/7/94	ļ	
Project name:		Seabreeze Yacht Center	Depth of well	Depth of well from TOC (feet):				
Location:	100	280 6th Street	Well diamete	er (inch):	2	2		
•		Oakland, CA	Screened inte	Screened interval from TOC (feet):		4.86-11.06		
Recorded by:		WKS	TOC elevation	137 (S.	8.1			
Weather:		Sunny	-	· · · · · · · · · · · · · · · · · · ·		Time 10:55		
Precip in past		- Cumy		from TOC (feet):	None	Time 10:55		
5 days (inch):		0.25	Water level n		Dual interface			
VOLUME OF	F WATER T	O BE REMOVED BEFOR			011			
		(t) - (8.03 ft)] × (0.083 Water level Well radi			Ogallons in one gallons in 5 w			
	wen achai	water icver well ladi	uo		0 total gallons r			
CALIBRATIO	ON:		т		EC			
		Time	Temp (°C)	pН	(umho/cm)			
Calibrati	on Standard:			7.00-10.01	10,000			
	fore Purging:	10:56	10.4	7.00-10.01	6,500			
A	fter Purging:		10.4	7.07-10.17				
FIELD MEAS	SUREMENT	rs:						
				Cumulative				
	Temp		EC	Gallons				
<u>Time</u>	(°C)	pН	(µmho/cm)	Removed	4	<u>Appearance</u>		
11:04	17.1	6.79	13,000	0.25		Clear		
11:06	18.2	6.77	20,000	0.50		Clear		
11:08	18.4	6.75	21,000	0.75		Clear		
11:15	17.9	6.77	19,000	1.50		Clear		
						8.		
				* **				
Water level a	fter purging	prior to sampling (feet):	9.07	1		Time 11:40		
Appearance o		Clear				Time 11:45		
Duplicate/bla	-	None				Time		
Purge method	l:	Bailer						
Sampling equ		Disposable PVC bailer		VOC attachment:	For BTXE an	d gasoline		
Sample conta								
Sample analy		TPH-gas, -diesel, -Bunker		Laboratory: Curtis		DIVIO		
Decontamina	tion method:	TSP and water, DI water ri	inse	Rinsate disposal:	Drum MW-S	BW3		

S9171SB4.XLW (12/8/94)

Project no.:		S9171-B0	Well no.:	MW-SB4		Date: 11/28/94
Project name:		Seabreeze Yacht Center	Depth of well	l from TOC (feet):	14.75	0
Location:		260 6th Avenue	Well diamete	er (inch):	2	27
		Oakland, CA	Screened inte	erval from TOC (feet): 2.55-14.75	
Recorded by:		WKS	TOC elevation		6.39	
Weather:		Sunny	Water level f	rom TOC (feet):	1.05	Time 9:02
Precip in past			Product level	from TOC (feet):	None	Time 9:02
5 days (inch):		1.0	_ Water level n	neasurement:	Dual interfac	ce probe
VOLUME OF	WATER T	O BE REMOVED BEFO	RE SAMPLING	3:		
		(t) - (1.05 ft)] × (0.08)	47.0		.2 gallons in on	
1	Well depth	Water level Well rad	lius	· ·	.2 gallons in 5 v	
					10 total gallons	removed
CALIBRATION	V:					
		-	Temp		EC	
Calibration	Standard	<u>Time</u>	<u>(° C)</u>	<u>pH</u> 7.00-10.01	(µmho/cm)	1
	e Purging:		13.0	7.00-10.01	10,000 7,000	
	er Purging:		18.5	7.06-10.01	8,000	
		_=				
FIELD MEASU	JREMENT	rs:		Cumulative		
	Temp		EC	Gallons		
<u>Time</u>	(° C)	<u>pH</u>	(µmho/cm)	Removed		Appearance
		2 200				
10:22	16.3	7.43	3,200	1.0		Clear
10:24	15.6	7.41	2,000	2.0		Clear
10:29 10:38	15.3 14.6	7.42 7.23	1,700 1,700	4.0 8.0		Clear Clear
10:38	14.6	7.23	1,700	10.0		Clear
20.72	17.0	1.21	1,700	10.0		Cicai
						g = 0
Water level afte	r purging 1	prior to sampling (feet):		1.05		Time 12:09
Appearance of s	sample:	Clear - very slightly turbic	d			Time 12:10
Duplicate/blank	number:	None				Time
Purge method:		Double diaphragm pump				
Sampling equip		Disposable PVC bailer		VOC attachment:	Used for VO	A
Sample containe						
Sample analyses		TEH-Bunker C & diesel, Cu			Curtis & Ton	
Decomamnano	n memod:	TSP and water, DI water i	mse	Rinsate disposal:	Drum SB-W	1

S9171SB4.XLW (12/2/94)

Project no.:		S9171-B0	Well no.:	MW-SB5		Date:11/28/	94
Project name:_		Seabreeze Yacht Center	Depth of well	from TOC (feet):	14.75		
Location:		260 6th Avenue	Well diameter	r (inch):	2	142	
		Oakland, CA	Screened inte	rval from TOC (fe	et): 2.8-14.75		
Recorded by:_		WKS	TOC elevation	n (feet):	6.30		12
Weather:		Sunny	Water level fr	om TOC (feet):	6.32	Time 8:40	
Precip in past			Product level	from TOC (feet):	None	Time 8:40	
5 days (inch):_		1.0	Water level m	easurement:	Dual interfac	ce probe	
		O BE REMOVED BEFOR					
L		t) - (6.32 ft)] × (0.083		7.48 =	1.4 gallons in or		
	Well depth	Water level Well radio	ıs		6.9 gallons in 5		
						Termoved	
CALIBRATIO	N:		9992		(a. 140.4)		
		Tima	Temp	»U	EC	70	
Calibratio	n Standard:	Time	<u>(°C)</u>	<u>pH</u> 7.00-10.01	(<u>µmho/cm</u>) 10,000	L	
	re Purging:	9:17	13.0	7.00-10.01	7,000		
	er Purging:	11:15	18.5	7.06-10.0	8,000		
FIELD MEAS	UREMENT	S:		W			
	Tr.		FG	Cumulative			
Time	Temp (°C)	nU	EC (umho/cm)	Gallons Removed		Annagranca	
Time		<u>pH</u>	(µmmo/cm)	Removed		Appearance	
11:00	18.2	6.98	20,000	1.0		Light amber	
11:03	19.4	6.94	21,000	2.0		Light amber	
11:08	19.3	6.97	17,000	3.0		Light amber	
Purg	ed water to	depth of ~12.0 feet below 1	IUC	E ×			
		Ē					
Water level aft	er purging p	rior to sampling (feet):		8.55		Time 13:10	
Appearance of	sample:	Light amber				Time 13:15	
Duplicate/blan		None				Time	•
Purge method:		Double diaphragm pump					
Sampling equi		Disposable PVC bailer		VOC attachment:	Used for VO	A	
	iers:						
Sample contain Sample analysis		TEH-Bunker C & diesel, Cu, l	Db. VOC= (8240)	Laboratory	Curtis & Tor	nnkine	

APPENDIX D
SURVEYOR'S REPORT

BATES AND BAILEY LAND SURVEYORS

15 Shattuck Square Berkeley, CA 94704 P. O. Box 592 Berkeley, CA 94701

NOV 2 1 1794

LETTER OF TRANSMITTAL

Jun Wilson

Nov. 18, 1994 14401 (415) 843-2007 Bill Scott BASELINE Monitor Wells at 280 6th Avenue Baseline Environmental Consulting Oakland, CA 5900 Hollis Street Suite D Emeryville, CA 94608 WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ ____the following items: ☐ Shop drawings M Prints ☐ Plans □ Samples □ Specifications □ Copy of letter □ Change order COPIES DATE NO. DESCRIPTION THESE ARE TRANSMITTED as checked below: ☐ For approval □ Approved as submitted □ Resubmit____copies for approval ☐ Submit _____copies for distribution DX For your use ☐ Approved as noted ☐ As requested □ Returned for corrections ☐ Return _____ corrected prints ☐ For review and comment ☐ FOR BIDS DUE ______ ☐ PRINTS RETURNED AFTER LOAN TO US REMARKS_ WELL T.C. ELEVATION GROUND ELEVATION 7.25 MW-SB 1 5.9 MW-SB 2 7.18 6.2 MW-SB 3 8.10 6.0 Elevations based on Mean Sea Level datum

If enclosures are not as noted, kindly notify us at once.

SIGNED:

PRODUCT 240-2 (NEBS) Inc. Groton, Mass. 01471

COPY TO

BATES AND BAILEY LAND SURVEYORS 15 Shattuck Square Berkeley, CA 94704 15 Shattuck Square Berkeley, CA 94704

LETTER OF TRANSMITTAL

	P. O. Box 592	Berkele	v CA 94701	
	(51	0)	y. CA 94701 NOV 2 9 1994	November 28, 1994 JOB NO. 14401
	(43)	0) 5) 843-20	07 Baseline	Bill Scott
)	Baseline	Environ	mental Consulting	2 additional monitor wells at
	5900 Hol	llis Str	eet, Suite D	280 6th Ave., Oakland, CA
1				
	Emeryvill	ie, LA 9	4608	
WE ARE	SENDING YOU	rX Attac	thed □ Under separate cover via	the following items:
	☐ Shop draw			s Samples Specifications
	☐ Copy of le			3 Germania
	□ оору от то			
COPIES	DATE	NO.		DESCRIPTION
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			B)	1
HESE A	RE TRANSMITT	ED as ch		
	☐ For approv	val		☐ Resubmitcopies for approval
	∑ For your ι	ıse	☐ Approved as noted	☐ Submitcopies for distribution
	☐ As request	ted		Return corrected prints
	☐ For review			
	☐ FOR BIDS	DUE	19	□ PRINTS RETURNED AFTER LOAN TO US
REMARK	S			
	WELL		T.C. ELEVATION	GROUND ELEVATION
	MW - SB	4	6.39	6,6
Name and the state of the state	MW - SB	5	6.30	6.9
	Flovatio	one has		
				1
	naru co	y to To	TIOW.	
	CONTRACTOR OF THE PARTY OF THE			
COPY TO)			SIGNED:

APPENDIX E LABORATORY REPORTS



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 9471O, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Deputy Port Attorney, Port of Oakland 530 Water Street P.O. Box 2064 Oakland, CA 94604-2064

Date: 08-DEC-94

Lab Job Number: 118790 Project ID: N/A

Location: Seabreeze Yacht Oakland

Reviewed by: Many Plessan

Reviewed by: Julia E Salla

This package may be reproduced only in its entirety.

Berkeley

Irvine



LABORATORY NUMBER: 118790

CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAKLAND

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 11/10/94
DATE RECEIVED: 11/10/94
DATE REQUESTED: 11/29/94
DATE EXTRACTED: 12/05/94
DATE ANALYZED: 12/06,07/94
DATE REPORTED: 12/08/94

Extractable Petroleum Hydrocarbons in Soils & Wastes California DOHS Method LUFT Manual October 1989

LAB ID	SAMPLE ID	DIESEL RANGE (mg/Kg)	BASELINE BUNKER "C" (mg/Kg)	C&T BUNKER "C" (mg/Kg)
118790-001 118790-002 118790-003 118790-004	BD-2A:2.0-2.5 BD-2A:4.5-5.0 BD-1A:4.0-4.5 BD-1A:2.0-2.5	ND(1) ND(20) 2* ND(1)	100 11,000* 250 ND(30)	110* 12,000* 280* ND(30)
	METHOD BLANK	ND(1)	ND(30)	ND(30)

ND = Not detected at or above reporting limit; reporting limit indicated in parentheses.

* Sample chromatogram does not resemble hydrocarbon standard pattern.

QA/QC SUMMARY		
LCS RECOVERY, %	the transfer of	88 ==============

CLIENT: Deputy Port Attorney, Port of Oakland

118790-002 11/10/94 11/10/94

118790-003 11/10/94 11/10/94

118790-004 11/10/94 11/10/94

LOCATION: Seabreeze Yacht Oakland

MATRIX: Soil

Sample ID

BD-2A:2.0-2.5

BD-2A:4.5-5.0

BD-1A:2.0-2.5

BD-1A: 4.0-4.5

DATE REPORTED: 12/09/94

Metals Analytical Report

28

14

13

		Cop	pper				
Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
118790-001	11/10/94	11/10/94	23	0.50	17892	EPA 6010	12/06/94

0.50

0.50

0.50

17892

17892

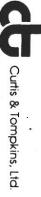
17892

RECEIVEL DEC 1 3 1994 BASELINE

EPA 6010

EPA 6010

EPA 6010



12/06/94

12/06/94

12/06/94

CLIENT: Deputy Port Attorney, Port of Oakland LOCATION: Seabreeze Yacht Oakland

MATRIX: Soil

Metals Analytical Report

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
BD-2A:2.0-2.5 BD-2A:4.5-5.0 BD-1A: 4.0-4.5	118790-001 118790-002 118790-003	11/10/94	11/10/94	590 91 23	15 5.0 5.0	17892 17892 17892	EPA 6010 EPA 7420 EPA 7420	12/06/94 12/06/94 12/06/94
BD-1A:2.0-2.5	118790-004			21	5.0	17892	EPA 7420	12/06/94

DATE REPORTED: 12/09/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/09/94
JOB NUMBER: 118790

BATCH QC REPORT BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	240.6	244.1	ug/L	96	98	97	1	17892	EPA 6010	12/06/94
Lead	500	429.1	436.6	ug/L	86	87	87	2	17892	EPA 6010	12/06/94
Lead	500	490	480	ug/L	98	96	97	2	17892	EPA 7420	12/06/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/09/94 JOB NUMBER: 118790

BATCH QC REPORT PREP BLANK

Compound	Result	Reporting Limit	Units Ba	QC Method atch	Analysis Date
Copper Lead Lead	ND ND ND	0.5 15 5	mg/Kg 17 mg/Kg 17 mg/Kg 17	7892 EPA 6010	12/06/94

ND = Not Detected at or above reporting limit

BASELINE 5900 Hollis Street, Suite D Emeryville, CA 94608

CHAIN OF CUSTODY RECORD

Turn-around Time Lab BASELINE Contact Person

510) 420-8686			•											.8					. \\'
Project No.	Project Name	and Locatio	n			Anal	ysis				1		1	\$1.	\prec	7	幸 /		
59171	Scabreeze	Port	of Oa	kbad			1 5	ì		1		13	2 2	V.		10/0%	1 1	9	-
Samplers: (Signature)	William	Ll	coly	/gulve c	Pettijulu	٠ ر	th BTX	& Grease			Metal			1	-1 3	12 /82	P 1		
Sample ID No. Station	Date	Time	Media	Depth	No. of Contain- ers	祖	(TPH with BTXAE)	S S S S S	Motor Oil	PNAS	Tive 28 Metals	Total 1 east	100 Sept.	405020	10407	Solvent		Remarks/ Composite	Detec- tion Limits
BD-112.0-25	11-16-94	9:51	5011	2.9-2.5								X	X	X	X				
BD-1:60-65		10:00	soil	6.1-6.5	Annual Contraction of the last	- 1						X	X	X	X				
mw-58-3; 1,0-2		11:05	svil	2.0-1.5	1							X	X		X				11/29
Mw-52-3; 4.5-5	P-10-94	(1:10	soi(4.0-4.5	. 3							X	X		X				
BD-2A: 20-25	11-10-94	32:10	Soi	2.0-25	1							X	X		X			Police V	Binka
BD-24; 45-50	11-17-94	12:15	Soil	4,5-5,0	1							X	X		X			1-1 M	1-1-
BD-2:40-40	11-17-94	13:30	SPIL	4.0-45	1							X	X		X			1	1
	11-10-94	13:16	Soil	2.0-2.5						_		X	X		X				- M
BD-1A: 4.04.5	11-10-94	16:00	Soil	40-45	1			_	_			X	Ă-	X	X			Hold ,	or Burn
mw-584A	11-10-94	14:56	-401	50-55	THE RESERVE TO A PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	X					Xy		X_	-,-	1	-	_ _	1 1 1	044
150.1A : 2.8-76	11-10.94	15:55	501	2.0-2:								X	X	X	X	1	_	Herick Y	Panter +dus
BD-4. 0-0.4	11-10-94	16:25	suil	0.1-0.1	11	X		_			X		-		_	X	_		1000
Relinquished by: (Sign:	alune)		Date /T	ine !	Received by:	(Signat	ure)					Ďati	e 1'	l'ime	一	Conditio	ons of San	ples Upon Arm	ral at /
Julie C. Pevil		1 1	1	5:20	man po	ssa				<i>i</i>	11/1	. /9	1 5	121/	n	Laborate	ory:	ox	ilha gap
Relinquished by: (Signa	0		Date /T		Received by:	(Signal	ure)					Date	e /	Time		Remark		lesuth To	Zap
														39		Hickell Deput	e Hel	fes Attorne y	
Relinquished by: (Signa	ature)		Date /T	ime 1	Received by:	(Signal	iure)					Date	e /*	Time		POST OF F30 W F40 Bot	2 00 to 10 - 51 200	int y	
		<u> </u>												`				94604-20	
CESTRODE 1 12	ter analys	is the	1A +	8D-2	12 hold	SOLAI	ple	5. 1	1						<u>, , , , , , , , , , , , , , , , , , , </u>	1	Sent T	Boseline IINT)	N(AD4)-5/27/
/		_ '1	1 4	not likiti.	No. F.	* 1	1 LTV\ }(PV (Sou	MALA I	PA	My C	M AK	(1.)	ilath	n th	WHY	ニハインチ	-



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Deputy Port Attorney, Port of Oakland 530 Water Street P.O. Box 2064 Oakland, CA 94604-2064

Date: 08-DEC-94

Lab Job Number: 118673 Project ID: N/A

Location: Seabreeze

Reviewed by: May Klessan

Reviewed by: Aprillia & Sellee

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Irvine Berkeley



LABORATORY NUMBER: 118786

CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAKLAND

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 11/22/94
DATE RECEIVED: 11/22/94
DATE REQUESTED: 11/29/94
DATE EXTRACTED: 12/05/94
DATE ANALYZED: 12/07/94
DATE REPORTED: 12/07/94

Extractable Petroleum Hydrocarbons in Soils & Wastes California DOHS Method LUFT Manual October 1989

LAB ID	SAMPLE ID	DIESEL RANGE (mg/Kg)	 BASELINE BUNKER "C" (mg/Kg)	C&T BUNKER "C" (mg/Kg)
118786-001 118786-002 118786-003 118786-004 118786-005 118786-006 118786-007	MWSB4;2.0-2.5 MWSB4;5.0-5.5 BD-3;5.0-5.5 BD-3;2.5-3.0 MWSB5;2.0-2.5 MWSB5;3.0-3.5 BD-5;2.5-3.0	2* 21* 480* 70* 30* 820* 350*	140 410 1,800* 1,500 1,100* 15,000* 7,100*	160* 460* 2,000* 1,700* 1,200* 16,000* 7,800*
	METHOD BLANK	ND(1)	ND(30)	ND(30)

ND = Not detected at or above reporting limit; reporting limit indicated in parantheses.

* Sample chromatogram does not resemble hydrocarbon standard pattern.

QA/Q	C SUMMA	RY
~ / ~		

LCS RECOVERY, % 88



LABORATORY NUMBER: 118673

CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAKLAND

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 11/22/94
DATE RECEIVED: 11/22/94
DATE EXTRACTED: 11/29/94
DATE ANALYZED: 12/02/94
DATE REPORTED: 12/07/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	,	DIESEL RANGE (mg/Kg)	BASELINE BUNKER "C" (mg/Kg)	C&T BUNKER "C" (mg/Kg)
118673-007	MWSB5;GRAB		8*	150*	140*
	METHOD BLANK		ND(1)	ND(30)	ND(30)

ND = Not detected at or above reporting limit; reporting limit applies to all analytes indicated in paranthesis.

* Sample chromatogram does not resemble hydrocarbon standard pattern.

QA/QC SUMMARY	
RPD, %	8
RECOVERY, %	69



SAMPLE ID: MWSB4;5.0-5.5

LAB ID: 118673-002

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze

MATRIX: Soil

DATE SAMPLED: 11/22/94

DATE RECEIVED: 11/22/94

DATE REPORTED: 12/07/94

California TITLE 26 Metals

			- 7		100000000000000000000000000000000000000
Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Antimony	ND 3.9	3.0	17751	EPA 6010	11/28/94
Arsenic		2.5	17742	EPA 7060	11/28/94
Barium	35	0.50	17751	EPA 6010	11/28/94 11/28/94
Beryllium	0.33	0.10	17751	EPA 6010	
Cadmium	ND	0.25	17751	EPA 6010	
Chromium (tota Cobalt		0.50	17751 17751 17751	EPA 6010 EPA 6010 EPA 6010	11/28/94 11/28/94 11/28/94
Copper	15	0.50	17751	EPA 6010	11/28/94
Lead	10	1.5	17742	EPA 7421	11/28/94
Mercury	ND	0.091	17848	EPA 7471	12/02/94
Molybdenum	ND	1.0	17751	EPA 6010	11/28/94
Nickel	28	1.0	17751	EPA 6010	11/28/94
Selenium	ND	2.5	17742	EPA 7740	11/28/94
Silver	ND	0.50	17751	EPA 6010	11/28/94
Thallium	ND	2.5	17742	EPA 7841	11/28/94
Vanadium	29	0.50	17751	EPA 6010	11/28/94
Zinc	32	1.0	17751	EPA 6010	11/28/94
	32	1.0	17731	DIA COTO	11/20/94

ND = Not detected at or above reporting limit



SAMPLE ID: BD-3;5.0-5.5

LAB ID: 118673-003

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze

MATRIX: Soil

DATE SAMPLED: 11/22/94

DATE RECEIVED: 11/22/94 DATE REPORTED: 12/07/94

California TITLE 26 Metals

			8		
Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Antimony Arsenic Barium Beryllium Cadmium Chromium (total Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	ND ND 33 0.40 ND 1) 41 5.5 19 8.1 ND	3.0 2.5 0.50 0.099 0.25 0.50 0.99 0.50 1.5 0.10 0.99 0.99 2.5 0.50 2.5 0.50	17751 17742 17751 17751 17751 17751 17751 17742 17848 17751 17742 17742 17742 17751 17742 17751	EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 7421 EPA 7471 EPA 6010 EPA 6010 EPA 7740 EPA 6010 EPA 7841 EPA 6010 EPA 6010 EPA 6010 EPA 6010	11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94
	ND No. 2-4				

ND = Not detected at or above reporting limit



11/22/94

DATE SAMPLED:

DATE RECEIVED: 11/22/94

DATE REPORTED: 12/07/94

SAMPLE ID: MWSB5;3.0-3.5

LAB ID: 118673-006

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze

MATRIX: Soil

California TITLE 26 Metals

			20 30 30 30 30 30 30 30 30 30 30 30 30 30		
Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Antimony Arsenic Barium Beryllium Cadmium Chromium (total) Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	ND 11 200 1.2 2.4 38 11 150 320 0.40 1.7 180 ND ND ND ND ND ND ND 250 280	3.0 2.5 0.50 0.10 0.25 0.50 1.0 0.50 15 0.10 1.0 2.5 0.50 2.5	17751 17742 17751 17751 17751 17751 17751 17742 17848 17751 17742 17742 17742 17751 17742 17751	EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 7421 EPA 7471 EPA 6010 EPA 6010 EPA 6010 EPA 740 EPA 6010 EPA 7841 EPA 6010 EPA 6010 EPA 6010 EPA 6010	11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94
· N	D = Not detect	ted at or abo	ve reporti	ng limit	

CLIENT: Deputy Port Attorney, Port of Oakland LOCATION: Seabreeze

MATRIX: Soil

DATE REPORTED: 12/07/94

Metals Analytical Report

1			Co	opper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
MWSB4;2.0-2.5	118673-001	11/22/94	11/22/94	35	0.50	17739	EPA 6010	11/28/94
BD-3;2.5-3.0	118673-004	11/22/94	11/22/94	2300	2.5	17739	EPA 6010	11/28/94
MWSB5;2.0-2.5	118673-005				0.49	17739	EPA 6010	11/28/94
BD-5;2.5-3.0	118673-008	11/22/94	11/22/94	38	2.5	17739	EPA 6010	11/28/94

CLIENT: Deputy Port Attorney, Port of Oakland LOCATION: Seabreeze

MATRIX: Soil

DATE REPORTED: 12/07/94

Metals Analytical Report

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Т	.0	2	\sim
_	10	а	u

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
MWSB4;2.0-2.5	118673-001	11/22/94	11/22/94	79	15	17739	EPA 6010	11/28/94
BD-3;2.5-3.0	118673-004	11/22/94	11/22/94	160	75	17739	EPA 6010	11/28/94
MWSB5;2.0-2.5	118673-005	11/22/94	11/22/94	63	15	17739	EPA 6010	11/28/94
BD-5;2.5-3.0	118673-008	11/22/94	11/22/94	78	75	17739	EPA 6010	11/28/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/07/94
JOB NUMBER: 118673

BATCH QC REPORT PREP BLANK

Compound	Result	Reporting Limit	Units QC Batch	Method	Analysis Date
Antimony Arsenic Barium Beryllium Cadmium Chromium (total) Cobalt Copper Copper Lead Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium	ND N	3 2.5 0.5 0.1 0.25 0.5 1 0.5 0.5 1.5 0.1 1 1 2.5 0.5 2.5	mg/Kg 17751 mg/Kg 17742 mg/Kg 17751 mg/Kg 17751 mg/Kg 17751 mg/Kg 17751 mg/Kg 17751 mg/Kg 17751 mg/Kg 17739 mg/Kg 17739 mg/Kg 17742 mg/Kg 17751	EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 7421 EPA 7471 EPA 6010 EPA 6010 EPA 6010 EPA 7740 EPA 6010 EPA 7841 EPA 6010	11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94

ND = Not Detected at or above reporting limit



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/07/94 JOB NUMBER: 118673

BATCH QC REPORT BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Antimony Arsenic Barium Beryllium Cadmium Chromium (total) Cobalt Copper Lead Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium	500 40 2000 50 50 200 500 250 250 250 30 4 400 500 500 500	472.8 402.4 1906 46.1 46.8 177.1 464.6 240.8 232.3 451.2 292.3 3.904 340.9 461.8 295.9 39 386.1 457.1 454.1	396 417.6 1828 48.3 48.1 190.6 483.8 230.2 232.1 458.9 285.5 3.904 340.8 479.7 307.3 40.6 401.4 474.5 466.4	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	95 101 95 92 94 89 93 96 93 90 97 98 85 92 99 78 97	79 104 91 97 96 95 97 92 93 92 95 98 85 96 102 81 100 95 93	87 103 93 95 95 92 95 94 93 91 96 98 85 94 101 80 99 93 92	18 4 5 3 7 4 5 0 2 2 0 0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	17751 17742 17751 17751 17751 17751 17751 17751 17751 17739 17742 17848 17751 17751 17742 17751 17751 17751	EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 7421 EPA 7470 EPA 6010 EPA 7740 EPA 6010 EPA 7740 EPA 6010 EPA 6010 EPA 6010	11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/23/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94 11/28/94



LABORATORY NUMBER: 118673-007 DATE SAMPLED: 11/22/94
CLIENT: Deputy Port Attorney, Port of Oak DATE RECEIVED: 11/22/94
LOCATION: Seabreeze DATE ANALYZED: 12/06/94
SAMPLE ID: MWSB5; GRAB DATE REPORTED: 12/08/94

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES

COMPOUND	Result	: Report	ing
	(ug/Ko		
Chloromethane	ND	100	3, 3,
Bromomethane	ND	100	
Vinyl chloride	ND	100	
Chloroethane	ND	100	
Methylene chloride	ND	200	
Acetone	ND	200	
Carbon disulfide	ND	50	
Trichlorofluoromethane	ND	50	
1,1-Dichloroethene	ND	50	
1,1-Dichloroethane	ND	50	
trans-1,2-Dichloroethene	ND	50	
cis-1,2-Dichloroethene	ND	50	
Chloroform	ND	50	
Freon 113	ND	50	
1,2-Dichloroethane	ND	50	
2-Butanone	ND	100	
1,1,1-Trichloroethane	ND	50	
Carbon tetrachloride	ND	50	¥
Vinyl acetate	ND	500	
Bromodichloromethane	ND	50	
1,2-Dichloropropane	ND	50	
cis-1,3-Dichloropropene	ND	. 50	
Trichloroethene	ND	50	
Dibromochloromethane	ND	50	
1,1,2-Trichloroethane	ND	50	
Benzene	ND	50	
trans-1,3-Dichloropropene	ND	50	
Bromoform	ND	50	
2-Hexanone	ND	100	
4-Methyl-2-pentanone	ND	100	
1,1,2,2-Tetrachloroethane	ND	50	
Tetrachloroethene	ND	50	
Toluene	ND	50	
Chlorobenzene	ND	50	
Ethyl benzene		150 50	
Styrene	ND	50	
Total xylenes		340 50	

1,2-Dichloroethane-d4	96	*
Toluene-d8	105	8
Bromofluorobenzene	104	ક



LABORATORY NUMBER: 118673-METHOD BLANK DATE ANALYZED: 12/06/94 CLIENT: Deputy Port Attorney, Port of Oak DATE REPORTED: 12/08/94

LOCATION: Seabreeze

SAMPLE ID: MB

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES

COMPOUND	Result	Reporting
	(ug/Kg)	Limit (ug/Kg)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

1,2-Dichloroethane-d4	88	ક્ર
Toluene-d8	100	ક
Bromofluorobenzene	97	ક્ર



QC SUMMARY SHEET FOR EPA 8240

Laboratory Number:

118673

Date Analyzed: 12/06/94

Client:

Deputy Port Attorney, Port of Oakland

Sample type:

Soil

BLANK SPIKE DATA (spiked at 25 ppb)

SPIKE COMPOUNDS	RECOVERY	LIMITS
1,1-Dichloroethene	82 %	80-120
Benzene	96 %	80-120
Toluene	95 %	80-120
Chlorobenzene	97 %	80-120
Trichloroethene	97 %	80-120

MS/MSD SUMMARY SHEET FOR EPA 8010

MATRIX SPIKE DATA (spiked at 25 ppb)

			====
SPIKE COMPOUNDS	RECOVERY	LIMITS	
1,1-Dichloroethene	112 %	59-172	
Benzene	106 %	66-142	
Toluene	109 %	59-139	
Chlorobenzene	104 %	60-133	
Trichloroethene	107 %	62-137	

MATRIX SPIKE DUP DATA (spiked at 25 ppb)

SPIKE COMPOUNDS	RECOVERY	LIMITS
1,1-Dichloroethene	108,8	59-172
Benzene	105 %	66-142
Toluene	103 %	59-139
Chlorobenzene	102 %	60-133
Trichloroethene	102 %	62-137

RPD DATA

	======	=====	=======	===	:=
KE COMPOUNDS	RPD		LIMIT	rs	
1,1-Dichloroethene	4	%	<	22	
Benzene	1	ક	<	21	
Toluene	6	ક	<	21	
Chlorobenzene	2	ક	<	21	
Trichloroethene	5	ક	<	24	

CHAIN OF CUSTODY RECORD tandard BASELINE 2 neeks) Turn-around Time 5900 Hollis Street, Suite D Lab TomoKIVIS Emerwille, CA 94608 BASELINE Contact Person (510) 420-8686 Project Name and Location the previde Stricted 12 Cot 16th previde Volling Control 10 Coth Humbe Project No. Amalysis S9171-40 95 Buly Samplers: (Signature) Million & Lag / Micc . Pethjohn Oil & Grease Motor Oil TEH Sample ID Date Time Media Depth No. of Detec-No. Station Contain-Remarks/ tion crs Composite Limits MW584,20-25 11-22-44 2.0-25 1. 267 Soil MW SBU, 50-55 11-22-94 745 Svil 5.0.5.5 8 4 Soil 5.055 -3.5t-5h 11-22-94 fullther 5:53 2.5-3.0 Soil 11-22-94 2.5-3.0 : NUSES 25-25 11-22-94 SAL 2.0-2.5 WW.V.S. 30-35 11-77-94 Sil 3,0-7,5 MWSB5 grab 11-22-9413:05 Suil 2.5 3,0 11-22-94 Sell 25-30 to lalvet fn ?H Relinquished by: (Signature) Date / Time Received by: (Signature) Conditions of Samples Upon Arrival at Date / Time Laboratory: nhe c pertijoh 11-22-94 5:55 Remarks: Serrel vesuits to: Relinquished by: (Signature) Date—/Time Received by: (Signature) Date -- / Time vnichele Heffes
yert of carlacy Legal Dep
P.O. BOX 2064
530 water street
Chillingal, CA 94604-2064 Relinquished by: (Signature) Date / Time Received by: (Signature) Date / Time DUNUT SEND RESULTS TO P-ASELINE CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

BASELINE 5900 Hollis Street, Suite I Emeryville, CA 94608 (510) 420-8686			CHAIN	of Cu	STODY I	RECO	RD	P 11-22-4			Lab	ı	nd Tim			Hav Liv	n5	erd (2 or Completed	ceiss) vis
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Samplers: (Signature)		_				-		Se la			Ceals	直直	200	SWING SWING		अमुश	\parallel		
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MW 584; 50-55		9:35	Suil	511-55	Ì					Х		1	X					of Tret	
60-3.50-56		859	Svil	5055	1					15			X					Further	
BD-3: 25-3.0	11-22-94	\$.53	Sil	2.5-3.8	1						1)	$\langle \chi \rangle$	X						43
17WSVES 26-25	4		SAIL	2.1-2.5)						1		X						
MWK5, 3,0-35		15:20	Soil.	3. レスト	1						(1'		X	100				V	
musss grab	11-22-94		Soil		1	X	X			1.			/		X				
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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Deputy Port Attorney, Port of Oakland 530 Water Street P.O. Box 2064 Oakland, CA 94604-2064

Date: 22-NOV-94

Lab Job Number: 118501 Project ID: N/A

Location: Seabreeze

PORT ATTOHNEY'S OFFICE

DEC 1 1994

RECEIVED

Reviewed by: Tuya KMorriso-

Reviewed by:

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CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAKLAND

LOCATION: SEABREEZE

DATE RECEIVED: 11/14/94 DATE EXTRACTED: 11/16/94 DATE ANALYZED: 11/17/94 DATE REPORTED: 11/22/94

DATE SAMPLED: 11/14/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions California DOHS Method LUFT Manual October 1989

TO

LAB ID	CLIENT ID	TEH as BUNKER C (ug/L)	REPORTING LIMIT (ug/L)
118501-001 118501-002	MW-SB3 MW-SB3A	460 * 350 *	250 250
METHOD BLANE	ζ.	ND	250

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

QA/QC SUMMARY:

RPD, %	5
RECOVERY, %	85
400 and 400 an	

^{*} Samples were quantitated using a Bunker C standard provided by Baseline Environmental. Sample chromatograms do not resemble this standard.

RECEIVEL

DEC 1 4, 1994



SAMPLE ID: MW-SB3A

BASELINE

DATE SAMPLED: 11/14/94

LAB ID: 118501-001

DATE RECEIVED: 11/14/94 DATE REPORTED: 12/14/94

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze

MATRIX: Water

Metals Analytical Report

Compound	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
Copper Lead	10 ND	10 3.0	17571 17569	EPA 6010 EPA 7421	11/15/94 11/16/94
	ND = Not detect	tod at or abo	ara manamtin	aw limit	



SAMPLE ID: MW-SB3A

LAB ID: 118501-002

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze

MATRIX: Water

DATE SAMPLED: 11/14/94
DATE RECEIVED: 11/14/94

DATE REPORTED: 12/14/94

Metals Analytical Report

Compound	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
Copper	ND	10	17571	EPA 6010	11/15/94
Lead	ND	3.0	17569	EPA 7421	11/16/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/14/94 JOB NUMBER: 118501

BATCH QC REPORT BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	253.3	253	ug/L	· 101	101	101	0	17571	EPA 6010	11/15/94
Lead	30	24.99	25.03	ug/L	83	83	83		17569	EPA 7421	11/16/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/14/94
JOB NUMBER: 118501

BATCH QC REPORT PREP BLANK

Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
ND ND	10	ug/L ug/L	17571 17569	EPA 6010 EPA 7421	11/15/94 11/16/94
	ND	Limit ND 10	Limit ND 10 ug/L	ND 10 ug/L 17571	ND 10 ug/L 17571 EPA 6010

BASELINE 5900 Hollis Street, Su Emeryville, CA 94608 (510) 420-8686	ite D	501	CHAIN	OF C	USTODY R	RECO	RD		,	1	ab	round		•	rson _	Cu	10/2 21:5 Ball	& Tompk	વયુ
Project No. 54171 -140	Project Name		ion			Anal		g)	1		7	1	+	200	T	1		V 19	
Samplers: (Signatur	e) Meller	. t.l.	arlı-	9	•		h Braye	3		1.	T Regis								
Sample ID No. Station	Date	Time	Media	Depth	No. of Contain- ers	百	(TPH with BTY a.	Oil & Grease	Motor Oil	Tribe 22	3/1	Burk	2 1					Remarks/ Composite	Detec- tion Limits
MW-5133 1447-583A	11-14-94	15:40	who.		2 2						× 火	×							
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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 9471O, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Deputy Port Attorney, Port of Oakland 530 Water Street P.O. Box 2064 Oakland, CA 94604-2064

Date: 07-DEC-94

Lab Job Number: 118785 Project ID: N/A

Location: Seabreeze

Reviewed by: Many plansa.

Reviewed by: Andhu & Sallas

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CLIENT: Deputy Port Attorney, Port of Oakland DATE RECEIVED: 11/28/94

LOCATION: Seabreeze

DATE SAMPLED: 11/28/94
DATE RECEIVED: 11/28/94
DATE REQUESTED: 11/29/94
DATE EXTRACTED: 12/05/94
DATE ANALYZED: 12/07/94
DATE REPORTED: 12/07/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions California DOHS Method LUFT Manual October 1989

LAB ID	CLIENT ID	BASELINE BUNKER "C" (ug/L)	C&T BUNKER "C" (ug/L)	DIESEL RANGE (ug/L)
118785-001 118785-002 118785-003 118785-004	MW-SB1 MW-SB4 MW-SB2 MW-SB5	4,800* 4,300* 30,000* 74,000*	4,800* 4,300* 30,000* 74,000*	1,300* 1,100* 12,000* 34,000*
	METHOD BLANK	ND(50)	ND(50)	ND(50)

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

* Sample chromatogram does not resemble hydrocarbon standard.

QA/QC SUMMARY:

RPD, %
RECOVERY, %
80

CLIENT: Deputy Port Attorney, Port of Oakland LOCATION: Seabreeze

MATRIX: Water

DATE REPORTED: 12/07/94

Metals Analytical Report

Copper

Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1 MW-SB4 MW-SB2 MW-SB5	118723-001 118723-002 118723-003 118723-004	11/28/94 11/28/94	11/28/94 11/28/94	14 78 54 19	10 10 10 10	17860 17860 17860 17860	EPA 6010 EPA 6010 EPA 6010 EPA 6010	12/05/94 12/05/94 12/05/94 12/05/94

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze

MATRIX: Water

DATE REPORTED: 12/07/94

Metals Analytical Report

Lead

Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
118723-002 118723-003	11/28/94 11/28/94	11/28/94 11/28/94	ND 93 ND ND	3.0 12 3.0 3.0	17819 17819 17819 17819	EPA 7421 EPA 7421 EPA 7421 EPA 7421	12/01/94 12/01/94 12/01/94 12/01/94
	118723-001 118723-002 118723-003	Date 118723-001 11/28/94 118723-002 11/28/94 118723-003 11/28/94	•	Date Date (ug/L) 118723-001 11/28/94 11/28/94 ND 118723-002 11/28/94 11/28/94 93 118723-003 11/28/94 11/28/94 ND	Lab ID Sample Receive Result (ug/L) (ug/L) 118723-001 11/28/94 11/28/94 ND 3.0 118723-002 11/28/94 11/28/94 93 12 118723-003 11/28/94 11/28/94 ND 3.0	Lab ID Sample Receive Result Limit QC Batch 118723-001 11/28/94 11/28/94 ND 3.0 17819 118723-002 11/28/94 11/28/94 ND 3.0 17819 118723-003 11/28/94 11/28/94 ND 3.0 17819	Lab ID Sample Receive Date Result (ug/L) Limit QC Method (ug/L) Batch 118723-001 11/28/94 11/28/94 ND 3.0 17819 EPA 7421 118723-002 11/28/94 11/28/94 ND 3.0 17819 EPA 7421 118723-003 11/28/94 11/28/94 ND 3.0 17819 EPA 7421



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/07/94
JOB NUMBER: 118723

BATCH QC REPORT PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper Lead	ND ND	10	ug/L ug/L	17860 17819	EPA 6010 EPA 7421	12/05/94 12/01/94
	<u> </u>					



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/07/94
JOB NUMBER: 118723

BATCH QC REPORT BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	260.6	261.4	ug/L	104	105	105	0 2	17860	EPA 6010	12/05/94
Lead	30	33.2	33.9	ug/L	111	113	112		17819	EPA 7421	12/01/94



LABORATORY NUMBER: 118723-001 DATE SAMPLED: 11/28/94

CLIENT: Deputy Port Attorney, Port of Oak DATE RECEIVED: 11/28/94

LOCATION: Seebreeze DATE ANALYZED: 12/05/94
SAMPLE ID: MW-SB1 DATE REPORTED: 12/07/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L		Reportin Limit (ug	
Chloromethane	ND		10	, -,
Bromomethane	ND		10	
Vinyl chloride	ND		10	
Chloroethane	ND		10	
Methylene chloride				
Acetone	ND	4.0	20	
Carbon disulfide		43	20	
Trichlorofluoromethane	ND		5	
	ND		5	
1,1-Dichloroethene	ND		5	
1,1-Dichloroethane	ND		5	
trans-1,2-Dichloroethene	ND		5	
cis-1,2-Dichloroethene	ND		5	
Chloroform	ND		5	
Freon 113	ND		5	
1,2-Dichloroethane	ND		5	
2-Butanone	ND		10	
1,1,1-Trichloroethane	ND		5	
Carbon tetrachloride	ND		5	
Vinyl acetate	ND		50	
Bromodichloromethane	ND		5	
1,2-Dichloropropane	ND		5	
cis-1,3-Dichloropropene	ND		5	
Trichloroethene	ND		5	
Dibromochloromethane	ND		5	
1,1,2-Trichloroethane	ND		5	
Benzene	ND		5	
trans-1,3-Dichloropropene	ND		5	
Bromoform	ND		5	
2-Hexanone	ND		10	
4-Methyl-2-pentanone	ND		10	
1,1,2,2-Tetrachloroethane	ND		5	
Tetrachloroethene	ND		5	
Toluene	ND	47	5	
Chlorobenzene	ND		5	
Ethyl benzene	ND		5	
Styrene	ND		5	
Total xylenes	ND		5	
a special contract of the second			· ·	

ND = Not detected at or above reporting limit QA/QC SUMMARY: SURROGATE RECOVERIES

2 7 2	
1,2-Dichloroethane-d4	104 %
Toluene-d8	101 %

Toluene-d8 101 % Bromofluorobenzene 103 %



LABORATORY NUMBER: 118723-003

CLIENT: Deputy Port Attorney, Port of Oak
LOCATION: Seebreeze

SAMPLE ID: MW-SB2

DATE SAMPLED: 11/28/94

DATE RECEIVED: 11/28/94

DATE ANALYZED: 12/05/94

DATE REPORTED: 12/07/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	33	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	Detected (3)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

1,2-Dichloroethane-d4	102 %
Toluene-d8	101 %
Bromofluorobenzene	98 %



LABORATORY NUMBER: 118723-002 DATE SAMPLED: 11/28/94 CLIENT: Deputy Port Attorney, Port of Oak DATE RECEIVED: 11/28/94

LOCATION: Seebreeze DATE ANALYZED: 12/05/94

SAMPLE ID: MW-SB4 DATE REPORTED: 12/07/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result	Reporting
Chloromethane	ug/L ND	Limit (ug/L) 10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND 75	
Carbon disulfide	ND /:	5 20
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	, S
Chloroform	ND	5 5 5
Freon 113	ND	5
1,2-Dichloroethane	ND	·5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	. 5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

		====	==
1,2-Dichloroethane-d4	102	ક્ર	
Toluene-d8	103	ક્ર	
Bromofluorobenzene	104	ક્ર	



LABORATORY NUMBER: 118723-004

CLIENT: Deputy Port Attorney, Port of Oak
LOCATION: Seebreeze
SAMPLE ID: MW-SB5

DATE SAMPLED: 11/28/94

DATE RECEIVED: 11/28/94

DATE ANALYZED: 12/06/94

DATE REPORTED: 12/07/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	130	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	Detected (3)	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

1,2-Dichloroethane-d4	109	8
Toluene-d8	101	ક્ર
Bromofluorobenzene	97	ક્ષ



LABORATORY NUMBER: 118723-METHOD BLANK DATE ANALYZED: 12/05/94 CLIENT: Deputy Port Attorney, Port of Oak DATE REPORTED: 12/07/94

LOCATION: Seebreeze

SAMPLE ID: MB

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result	Reporting
	ug/L	Limit (ug/L)
Chloromethane	ND	10
Bromomethane	. ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5 5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

		-===	====
1,2-Dichloroethane-d4	101	ક્ષ	
Toluene-d8	97	ક્ર	
Bromofluorobenzene	100	9	



LABORATORY NUMBER: 118723-METHOD BLANK DATE ANALYZED: 12/06/94 CLIENT: Deputy Port Attorney, Port of Oak DATE REPORTED: 12/07/94

LOCATION: Seebreeze

SAMPLE ID: MB

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result	Reporting
Chloromethane	ug/L	Limit (ug/L)
Bromomethane	ND	10
	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	. 5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene		5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1 1 2-maichleane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	* ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5
k a by		· ·

1,2-Dichloroethane-d4		108	ક
Toluene-d8		98	ક્ર
Bromofluorobenzene	43	97	ક્ર



Curtis & Tompkins, Ltd

8240 MS/MSD Report

Matrix Sample Number: 118685-002

Date Analyzed:

05-DEC-94

Lab No: QC79821 QC79822

Spike File:

BL514

Matrix: WATER

Spike Dup File: BL515

Batch No: 17882 414339216014 414339224015 414339142005 Analyst: TW

Instrdg	SpikeAmt	% Rec	Limits
55 43	50	111 %	C1 1450
			61-145%
			71-120%
			76-127%
43.24	50	99 %	75-130%
50.55	50	101 %	70-121%
			59-113%
		22 8	22 112.
	(e)		
58.18	50	116 %	61-145%
53.22	50	106 %	71-120%
70.09	50	106 %	76-127%
152.84	50		76-125%
49.19	50		75-130%
	50	105 %	70-121%
		94 %	84-138%
51	50	102 %	59-113%
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0			
5 %			- 140
			< 14%
			< 14%
			< 11%
			< 13%
5 6			< 13%
	55.43 50.18 67.33 151.79 49.24 50.55 50.29 49.46 58.18 53.22 70.09 152.84	55.43 50 50.18 50 67.33 50 151.79 50 49.24 50 50.55 50 50.29 50 49.46 50 58.18 50 53.22 50 70.09 50 152.84 50 49.19 50 52.63 50 47.11 50 51 50 0 0 16.98 106.07 0 5 8 6 8 4 8 1 8	55.43 50 111 % 50.18 50 100 % 67.33 50 101 % 151.79 50 91 % 49.24 50 99 % 50.55 50 101 % 50.29 50 101 % 49.46 50 99 % 58.18 50 116 % 53.22 50 106 % 70.09 50 106 % 152.84 50 94 % 49.19 50 98 % 52.63 50 105 % 47.11 50 94 % 51 50 102 %

Results within Specifications - PASS

Curtis & Tompkins, Ltd

BASELINE 5900 Hollis Street, Suite Emeryville, CA 94608 (510) 420-8686	D		CHAII		CUSTODY			1		1	Lab	round T		Person	Co	1.1.	mal of Tongton	
Project No. S9/7/-H 0	Project Nam		ion	,			alysis	a l		7								
Samplers: (Signature)	Mille	en K	Scorts		·		Burke	88e		7+9	etals		/ /				-	
Sample ID No. Station	Date	Time	Media	Depth	No. of Contain- ers		A PANCIT IN HALL	Oil & Grease	PN.4	+ St. +	Total Lead	5340					Remarks/ Composite	Detec- tion Limits
MW-SB4 MW-SB4 MW-SBS	11-28-94 11-28-94 11-28-94	12:30 12:10 12:40 13:15	water water water water		\$ \$ \$ \$	×××				XXXXX		× × × Y						
Relinquished by: (Signa Relinq	ature)	11/261	Date / Ti	440 me	Received by: Received by:	(Signal	aure)	and a		11/2		/ Tim / Tim / Tim	4 <i>40</i> e	Rema	P.C	ENI Inche Tof D. Boy AKLA	DESULTS LE HELFS Oakland L ADGY LATER STIELE WID, CA 9 BORNER RESULTS	TU: -egal Dep T -4604-2
CCSTRCDE.FM2	For Bunker Hold Bunk	c us	e Lahor	וילהו	Sunka C + Further 12	Bun	Ker C	Previ	icusty	Coll	ected	57 E	Basel.				INE	AD4)-5/27/92

CHAIN OF CUSTODY RECORD SELINE Turn-around Time 00 Hollis Street, Suite D peryville, CA 94608 BASELINE Contact Person R.II 10) 420-8686 Project No. Project Name and Location 59171-HU Seebien Samplers: (Signature) Total Lead Motor Oil Detec-Sample ID Date Time Media Depth No. of Remarks/ tion No. Station Contain-Composite Limits ers MW-SB1 X Ran TEHLAS 12:30 11-28-94 water Burklerc X X Mn-534 5 X Water 11-28-94 12:10 talesel K My-582 5 X 11-28-94 12:40 Wite X X MW- 535 11-28-94 13:15 5 X hiten Conditions of Samples Upon Arrival at Date / Time Relinquished by: (Signature) Received by: (Signature) Date / Time Laboratory: 1440 Remarks: SEND RESULTS 70: Date / Time Relinquished by: (Signature) Received by: (Signature) Date / Time Michele Helfs
Port of Oatland Legal De P.O. Box 2064 530 water street OAKLAND, CA 94604-22. Relinquished by: (Signature) Date / Time Received by: (Signature) Date / Time Do not send Results to INTRODETM? * For Bunker C, use Laboratory Bunker C + Bunker C Providing collected by Busilie & BASELINE ADMINIAD4)-S27/92



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental 5900 Hollis Street Suite D Emeryville, CA 94608

Date: 08-DEC-94

Lab Job Number: 118918 Project ID: S9171

Location: Seabreeze Yacht Oakland

Reviewed by:

Reviewed by:

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Berkeley

Irvine



CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9171-HO

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 12/07/94 DATE RECEIVED: 12/07/94 DATE ANALYZED: 12/08/94

DATE REPORTED: 12/08/94

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
118918-001	MW-SB3	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
	METHOD BLANK	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %

RECOVERY, %

95



CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9171-HO

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 12/07/94

DATE RECEIVED: 12/07/94
DATE EXTRACTED: 12/07/94
DATE ANALYZED: 12/08/94

DATE REPORTED: 12/08/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions California DOHS Method LUFT Manual October 1989

LAB ID	CLIENT ID	BASELINE BUNKER "C" (ug/L)	C&T BUNKER "C" (ug/L)	DIESEL RANGE (ug/L)
118918-001	MW-SB3	2,300*	2,500*	1,100*
	METHOD BLANK	ND(50)	ND(50)	ND(50)

Note: Extracts were produced using a separatory funnel extraction. The sample was filtered prior to extraction.

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

* Sample chromatogram does not match hydrocarbon standard.

QA/QC SUMMARY:

RPD, %	27
RECOVERY, %	50



CLIENT: BASELINE ENVIRONMENTAL

PROJECT ID: S9171-HO

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 12/07/94
DATE RECEIVED: 12/07/94

DATE EXTRACTED: 12/07/94

DATE ANALYZED: 12/07/94 DATE REPORTED: 12/08/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	BASELINE BUNKER "C" (ug/L)	C&T BUNKER "C" (ug/L)	DIESEL RANGE (ug/L)
118918-001	MW-SB3	3,000*	3,000*	1,400*
	METHOD BLANK	ND(50)	ND(50)	ND(50)

Note: Extracts were produced using a liquid-liquid extraction. The sample was filtered prior to extraction.

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

* Sample chromatogram does not match hydrocarbon standard.

QA/QC SUMMARY:

RPD, %	<1
RECOVERY, %	87

BASELINE

CHAIN OF CUSTODY RECORD

Turn-around Time

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

118918

Lab BASELINE Contact Person

24-hr Curhs + Tumpkins Yane

Project No.	Project Name			2. 1		Λn	alysis	7	T	7	T		\neg	The law	7	\overline{I}	7			
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Sample ID No. Station	Date	Time	Media	Depth	No. of Contain- ers	TEL		Oil & C.	Motor Oil	PNAs	Title 23 M.	Total 1	BUMPOL	BUMPO, C. BOSUM	Dipol	2007	BT 7 2	7/1/2	Remarks/ Composite	Detec- tion Limits
MW-SB3	12/7/94	11145	water		6				5				Х	χ	Χ	×	X			737777.
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DEC 1 4 1994





LABORATORY NUMBER: 118450

CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAKLAND

PROJECT ID: S9171

LOCATION: Seebreeze Yacht Oakland

DATE SAMPLED: 11/10/94

DATE RECEIVED: 11/10/94

DATE EXTRACTED: 11/15/94
DATE ANALYZED: 12/03,04/94

DATE REPORTED: 12/06/94

Extractable Petroleum Hydrocarbons in Soils & Wastes California DOHS Method LUFT Manual October 1989

LAB ID	SAMPLE ID	DIESEL RANGE (mg/Kg)	BASELINE BUNKER "C" (mg/Kg)	C&T BUNKER "C" (mg/Kg)
118450-001	BD-1:2.0-2.5	2*	230*	210*
118450-002	BD-1:6.0-6.5	6*	410*	370*
118450-003	MW-SB-3:2.0-2.5	66*	4,500*	4,000*
118450-004	MW-SB-3:4.5-5.0	11*	340*	300*
118450-007	BD-2:4.0-4.5	ND(20)	2,500*	2,300*
118450-008	BD-2:2.0-2.5	40*	1,800*	1,600*
118450-010	MW-SB4A	11,000*	55,000	49,000
118450-012	BD-4:0-0.4	ND(10)	1,900*	1,600*
	METHOD BLANK	ND(1)	ND(30)	ND(30)

ND = Not detected at or above reporting limit; reporting limit applies to all analytes.

* Sample chromatogram does not resemble hydrocarbon standard pattern.

QA/QC SUMMARY

RPD, % 9
RECOVERY, % 77

CLIENT: Deputy Port Attorney, Port of Oakland LOCATION: Seabreeze Yacht Oakland

MATRIX: Soil

DATE REPORTED: 12/14/94

Metals Analytical Report

Copper

				pper	ii.			
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
BD-1:2.0-2.5 BD-1:6.0-6.5 MW-SB-3:2.0-2.5 MW-SB-3:4.5-5.0 BD-2:4.0-4.5 BD-2:2.0-2.5	118450-001 118450-002 118450-003 118450-004 118450-007 118450-008	11/10/94 11/10/94 11/10/94 11/10/94	11/10/94 11/10/94 11/10/94 11/10/94	7.6 15 50 53 20 18	0.50 0.49 0.50 0.49 0.50	17514 17514 17514 17514 17514 17514	EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010	11/14/94 11/14/94 11/14/94 11/14/94 11/14/94

CLIENT: Deputy Port Attorney, Port of Oakland LOCATION: Seabreeze Yacht Oakland

MATRIX: Soil

DATE REPORTED: 12/14/94

Metals Analytical Report

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
BD-1:2.0-2.5 BD-1:6.0-6.5 MW-SB-3:2.0-2.5 MW-SB-3:4.5-5.0 BD-2:4.0-4.5 BD-2:2.0-2.5	118450-001 118450-002 118450-003 118450-004 118450-007 118450-008	11/10/94 11/10/94 11/10/94 11/10/94	11/10/94 11/10/94 11/10/94 11/10/94	ND 190 190 310 130 230	5.0 4.9 5.0 4.9 5.0	17514 17514 17514 17514 17514 17514	EPA 7420 EPA 7420 EPA 7420 EPA 7420 EPA 7420 EPA 7420	11/14/94 11/14/94 11/14/94 11/14/94 11/14/94 11/14/94



SAMPLE ID: MW-SB4A LAB ID: 118450-010

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze Yacht Oakland

MATRIX: Soil

DATE SAMPLED: 11/10/94
DATE RECEIVED: 11/10/94

DATE REPORTED: 12/14/94

California TITLE 26 Metals

The state of the s	7)				
Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Antimony	ND	6.0	17533	EPA 6010	11/15/94
Arsenic	13	2.5	17534	EPA 7060	11/15/94
Barium	440	0.50	17533	EPA 6010	11/15/94
Beryllium	1.0	0.10	17533	EPA 6010	11/15/94
Cadmium	ND	0.50	17533	EPA 6010	11/15/94
Chromium (total)	29	1.0	17533	EPA 6010	11/15/9
Cobalt	8.1	2.0	17533	EPA 6010	11/15/9
Copper	13	1.0	17533	EPA 6010	11/15/9
Lead	6.2	1.5	17534	EPA 7421	11/15/9
Mercury	ND	0.091	17532	EPA 7471	11/14/9
Molybdenum	ND	2.0	17533	EPA 6010	11/15/9
Nickel	34	1.0	17533	EPA 6010	11/15/9
Selenium	ND	2.5	17534	EPA 7740	11/15/9
Silver	ND	1.0	17533	EPA 6010	11/15/9
Thallium	ND	2.5	17534	EPA 7841	11/15/9
Vanadium	30	1.0	17533	EPA 6010	11/15/9
Zinc	30	2.0	17533	EPA 6010	11/15/9



SAMPLE ID: BD-4:0-0.4 LAB ID: 118450-012

CLIENT: Deputy Port Attorney, Port of Oakland

LOCATION: Seabreeze Yacht Oakland

MATRIX: Soil

DATE SAMPLED: 11/10/94 DATE RECEIVED: 11/10/94

DATE REPORTED: 12/14/94

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Antimony	ND	5.9	17533	EPA 6010	11/15/94
Arsenic	11	2.5	17534	EPA 7060	11/15/94
Barium	360	0.49	17533	EPA 6010	11/15/94
Beryllium	0.63	0.099	17533	EPA 6010	11/15/94
Cadmium	0.77	0.49	17533	EPA 6010	11/15/94
Chromium (total)	31	0.99	17533	EPA 6010	11/15/94
Cobalt	8.2	2.0	17533	EPA 6010	11/15/9
Copper	53	0.99	17533	EPA 6010	11/15/9
Lead	150	4.9	17533	EPA 7420	11/15/9
Mercury	0.29	0.087	17532	EPA 7471	11/14/9
Molybdenum	ND	2.0	17533	EPA 6010	11/15/9
Nickel	39	0.99	17533	EPA 6010	11/15/9
Selenium	ND	2.5	17534	EPA 7740	11/15/9
Silver	ND	0.99	17533	EPA 6010	11/15/9
Thallium	ND	2.5	17534	EPA 7841	11/15/9
Vanadium	40	0.99	17533	EPA 6010	11/15/9
Zinc	300	2.0	17533	EPA 6010	11/15/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/14/94
JOB NUMBER: 118450

BATCH QC REPORT BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Antimony Arsenic Barium Beryllium	500 40 2000 50	443.7 444.6 1915 46.7	512.8 434.2 1903 47	ug/L ug/L ug/L ug/L	89 111 96 93	103 109 95 94	96 110 96 94	14 2 1	17533 17534 17533 17533	EPA 6010 EPA 7060 EPA 6010 EPA 6010	11/14/94 11/15/94 11/14/94 11/14/94
Cadmium Chromium (total) Cobalt Copper Copper Lead	50 200 500 250 250 500	48.2 201.4 492.4 218.6 239.6 540	48.8 199.6 483.7 225 238.3 540	ug/L ug/L ug/L ug/L ug/L ug/L	96 101 99 87 96 108	98 100 97 90 95 108	97 101 98 89 96 108	1 1 2 3 1 0	17533 17533 17533 17514 17533 17514	EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 7420	11/14/94 11/14/94 11/14/94 11/14/94 11/14/94 11/14/94
Lead Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	500 30 4 400 500 500 500 500 500	440 306.4 3.904 380.7 488.1 316.8 47.2 391 475.4 473.8	440 298.5 3.862 384.3 482.3 298 45.8 392.9 473	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	88 102 98 95 98 106 94 98 95	88 100 97 96 97 99 92 98 95	88 101 98 96 98 103 93 98 95	0 3 1 1 6 3 1 1 0	17533 17534 17532 17533 17533 17534 17533 17534 17533 17533	EPA 7420 EPA 7421 EPA 7470 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010	11/15/94 11/15/94 11/14/94 11/14/94 11/15/94 11/15/94 11/15/94 11/15/94 11/14/94



CLIENT: Deputy Port Attorney, Port of Oakland DATE REPORTED: 12/14/94

JOB NUMBER: 118450

BATCH QC REPORT PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Antimony Arsenic Barium Beryllium Cadmium Chromium (total) Cobalt Copper Copper Lead Lead Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	ND N	3 2.5 0.5 0.1 0.25 0.5 1 0.5 5 5 1.5 0.1 1 2.5 0.5 2.5	mg/Kg	17533 17534 17533 17533 17533 17533 17514 17533 17514 17533 17534 17533 17534 17533 17534 17533 17534 17533 17533	EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 6010 EPA 7420 EPA 7420 EPA 7421 EPA 7471 EPA 6010 EPA 6010 EPA 7421 EPA 7471 EPA 6010 EPA 7740 EPA 6010 EPA 7841 EPA 6010 EPA 6010 EPA 6010	11/14/94 11/15/94 11/14/94 11/14/94 11/14/94 11/14/94 11/14/94 11/14/94 11/15/94 11/15/94 11/14/94 11/15/94 11/15/94 11/15/94 11/15/94 11/15/94 11/15/94 11/14/94 11/15/94 11/14/94 11/14/94



CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAKLAND DATE RECEIVED: 11/10/94

PROJECT ID: S9171

LOCATION: Seabreeze Yacht Oakland

DATE SAMPLED: 11/10/94

DATE ANALYZED: 11/16/94

DATE REPORTED: 11/22/94

ANALYSIS: CRESOTE

ANALYSIS METHOD: EPA 8270

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
118450-001 118450-002	BD-1:2.0-2.5 BD-1:6.0-6.5	ND ND	ug/Kg ug/Kg	2,000
	METHOD BLANK	ND	ug/Kg	2,000

Curtis & Tompkins, Ltd

8270 Laboratory Control Sample Report



Lab No:

QC78040

Date Analyzed: 16-NOV-94

Matrix: Batch No: SOIL

17540 514320115005 Dilution Factor : 1

LCS Datafile: 05_LCS_17540.d

Extraction Chemist: KEG

MS Operator: Prep Final Vol

			***	• -	
Compound	Instrdg	SpikeAmt	% Rec	Limits	
Phenol 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Pentachlorophenol 1,4-Dichlorobenzene N-Nitroso-di-n-propylamine 1,2,4-Trichlorobenzene Acenaphthene 2,4-Dinitrotoluene Pyrene	95 89 116 108 81 49 70 55 49 56	150 150 150 150 150 100 100 100 100	63 59 78 72 54 49 70 55 49 8 8 66 8	26-90% 25-102% 26-103% 11-114% 17-109% 28-104% 41-126% 38-107% 31-137% 28-89% 35-142%	
Surrogate Recoveries	S.	2 16			
2-Fluorophenol Phenol-d5 2,4,6-Tribromophenol Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14 2-Chlorophenol-d4 1,2-Dichlorobenzene-d4	98 117 103 76 60 77 100	150 150 150 100 100 100 150	66 % % % % % % % % % % % % % % % % % %	25-121% 24-113% 19-122% 23-120% 30-115% 18-137% 20-130% 20-130%	

Results within Specifications - PASS Calculations based on On-Column amounts (ngs)

Curtis & Tompkins, Ltd

8240 Laboratory Control Sample Report



Lab No:

QC77865

LCS Datafile: CKB04

Date Analyzed: 11-NOV-94

Batch No:

Operator:

JON

Matrix:

SOIL

17506 424315140004

Compound	Instrdg	SpikeAmt	% Rec	Limits	
1,1-Dichloroethene	46.7658	50	94 %	59-172%	
Trichloroethene	43.2371	50	86 %	62-137%	
Benzene	44.1796	50	88 %	66-142%	
Toluene	45.0365	50	90 %	59-139%	
Chlorobenzene	42.6967	50	85 %	60-133%	
•				. 2	
Surrogate Recoveries					
1,2-Dichloroethane-d4	50.5923	50	101 %	70-121%	
Toluene-d8	50.6603	50	101 %	84-138%	
Bromofluorobenzene	49.3068	50	99 %	59-113%	ž až
%* ≪••					

Results within Specifications - PASS

Note: Instrument C and D surrogates based on LCS data

An 11/15



73 %

LABORATORY NUMBER: 118450-012

CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAK DATE RECEIVED: 11/10/94

PROJECT ID: S9171

LOCATION: Seebreeze Yacht Oakland

SAMPLE ID: BD-4:0-0.4

DATE SAMPLED: 11/10/94
DATE RECEIVED: 11/10/94
DATE ANALYZED: 11/12/94

DATE REPORTED: 11/21/94

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES

COMPOUND	Result	Reporting
Ohlowenshir	(ug/Kg)	Limit (ug/Kg)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit. QA/QC SUMMARY: SURROGATE RECOVERIES

Bromofluorobenzene

1,2-Dichloroethane-d4	105 %
Toluene-d8	120 %



LABORATORY NUMBER: 118450-METHOD BLANK DATE ANALYZED: 11/12/94 CLIENT: DEPUTY PORT ATTORNEY, PORT OF OAK DATE REPORTED: 11/21/94

PROJECT ID: S9171

LOCATION: Seebreeze Yacht Oakland

SAMPLE ID: MB

EPA METHOD 8240: VOLATILE ORGANICS IN SOILS & WASTES

COMPOUND	Result	Reporting
*	(ug/Kg)	Limit (ug/Kg)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND .	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

1,2-Dichloroethane-d4	100	ક્ર
Toluene-d8	96	%
Bromofluorobenzene	93	2

CHAIN OF CUSTODY RECORD 00 Hollis Street, Suite D Turn-around Time serville, CA 94608 . lab BASELINE Contact Person m (0) 420-8686 ¹ Project No. Project Name and Location Analysis 59171 Seabreeze, Port of Oakland (TPH with BIXAE) Samplers: (Signature) William & lowy Shire C Pettich Total Lead Sample ID Date Time Media Depth No of No. Station Detco-Contain-Remarks/ tion Composite Limits 80-1:2.0-25 11-16-94 9:51 5011 2.4-25 10:00 BD-1:60-6511-1894 Soil 6.6.5 - mw-sp.3; 2,02\$ 11-11-99 Svil 11:05 2,0-1,5 MW-58-3; 45-50 11-10-99 (1:10 4.0-4.5 Soil BD-2A. 20-25 11-10-94 12:10 Soil 2.4-25 3D-24; 45-50 11-11-94 12:15 4.5-8.0 coil BD-2: 40-40 11-1191 Sei ! 4.0-45 13:30 2.0-2.5 11-11-94 13:10 Soil 2.0-2.5 4.045 11-10-94 16:00 Scil 40.45 nw-584A 11-10-94 14:56 501 50-55 2.8-7F 11-10-96 15:55 501 2.0-25 Hold YN 6-0.4 11-10-04 16:25 D.1-D.4 Relinquished by: (Signature) Date / Time Received by: (Signature) Date / Time Conditions of Samples Upon Arrival at 11/10/94 5:20 Laboratory: 11/11/04 Sizyon telinquished by: (Signature) Date /Time Received by: (Signature) Date /Time Remarks: Heave Send results To Michelle Heffes Deputy for Attorney lelinquished by: (Signature) Date / Time Received by: (Signature) Port of Oatland Date / Time 530 water strat 90 Box 2064 potterd ca guery- accy Do not sent to Boschne opa IA + 80-21 hold samples W. we inhovatory frances a f burner a somete orningly motorful by Russman. ADMIN(AD4)-5/27/92 (510) 420-8686

5900 Hollis Street, Suite D Emeryville, CA 94608

CHAIN OF CUSTODY RECORD

Tum-around Time Lab BASELINE Contact Person

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