1. Oil and Grease*
2. Organic Matter (Volatile Solids or TOC)
3. Free Sulfides (pH 7)
4. Zinc
5. Copper
6. Lead
7. Cadmium
8. Mercury
9. Arsenic
10. Chromium
11. Particle size distribution (incl. total % retained on #200 sieve)

Chemical extractions are to be run for 24 hours with dilute HCL (.5N) using guidelines recommended by the SWRCB. Subsequent analysis shall be conducted in accordance with the current edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants," promulgated by the United States Environmental Protection Agency. Any variations must be reported with the test results.

*Elemental sulfur may be present in some sediments and will interfere with this determination. The sulfur should be removed by precipitation with mercury after initial extraction and before final evaporation.

In addition, records shall be kept of at least the following operational information:

- Quantity dredged (cubic yards) and disposal location on a daily basis
- Hours of operation, 24-hr. clock, daily

REPORTING

Results of the sampling program shall be submitted to the Regional Board one month prior to beginning the seasonal dredging operations. Operational data shall be supplied to the Board monthly by the 15th of the following month.

ORDERED BY _____
Executive Officer

February 8, 1985
Date

AIR POLLUTION
CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

April 11, 1995

Mr. Robert S. Joe
Chief, Planning Division
U.S. Army Corps of Engineers
Attn: Ms. Hayley Lovan
P.O. Box 2711
Los Angeles, California 90053-2325

SUBJECT: Morro Bay Harbor Maintenance Dredging

Dear Robert:

The District has reviewed the Morro Bay Harbor Maintenance Dredging Draft Environmental Assessment. The proposed project includes dredging of 1,100,000 cubic yards (cy) of littoral drift material; an estimated 740,000 coming from an approved channel modification project as described in the August 1991 Feasibility Study and Environmental Assessment, and the remainder coming from routine dredging maintenance areas.

General Comments

As mentioned in the environmental assessment (EA), San Luis Obispo County has been designated a nonattainment area for the state ozone and PM_{10} standards and is thus required to reduce the emissions of these nonattainment pollutants (and their precursors) in order to meet these standards. Protective and corrective measures are proposed in the 1991 Air Quality Maintenance Plan (AQMP) to reduce emissions of ozone and PM_{10}.

Large diesel engines, like those aboard dredges and heavy equipment such as bulldozers have the potential to emit significant amounts of nitrogen oxides (NOx) and reactive organic gases (ROG), both of which are precursor components in the formation of ozone. The scheduled work plan for the dredging of the harbor (August 1 through March 15) overlaps the period of peak ozone formation in the county (April through October), thereby prompting the District to impose controls on potential ozone forming activities associated with this project.

Additionally, sulfur oxides (SOx) implicated in the formation of the acid rain (H_2SO_4) by reaction with water vapor in the atmosphere are produced during the combustion of fuels containing organicly bound sulfur. Geographic and atmospheric conditions in the Morro Bay and adjoining areas facilitate the conversion of SOx to H_2SO4, impacting down wind receptors and overall air quality. The large diesel engines associated with dredging operations are potentially significant contributors of oxidized sulfur to the atmosphere.

Air borne particulate matter of the respirable size (<10um) can be produced in significant quantities from construction activities. The use of vehicles on the beach to move pipe and to build public access ramps will need to be limited to avoid the excess production of fugitive dust. The combustion of fuels also produces particulate emissions as components of the hot post-burn

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exhaust cool and condense. The condensed particulate from diesel combustion is potentially quite toxic and therefore subject to control.

The District expects that emissions from dredging, construction equipment and related activities will cause short-term adverse impacts on air quality. The impacts of dredging and construction activity will be mitigated to a level of insignificance by adopting the following specific comments.

Specific Comments

1. *Permit to Operate (PTO).* The engines aboard dredging units, excluding the propulsion engines, are subject to permit according to the Federal Clean Air Act. The District will require an Authority to Construct (A/C) permit be obtained prior to operation of any dredging engines.

1a. *Best Available Control Technology (BACT).* The use of BACT is required for allpermitted emission sources for which the potential to emit 25lb/day or more of any criteria pollutant is expected. The large diesel engines associated with dredging are capable of emitting NOx over this threshold and are thus subject to BACT requirements. The applicant is responsible for submitting a proposal detailing the measures taken to satisfy BACT requirements. Please note that the last dredging project in Morro Bay harbor utilized selective catalytic reduction to control emissions from the diesel engines.

1b. *Emission Offsets.* Emission offsets are necessary if the potential to emit ROG, NOx, PM_{10} or SOx exceeds 25 tons per year, or in the case of CO emissions, 250tons per year.

2. *Equipment Inventory.* The Army Corps of Engineers or its contractor shall supply a list of all construction equipment to be used on the project, including that which does not require an air quality permit. The inventory should include a description of the engines being operated on the dredges, their power/fuel ratings, and projected duration of use in both hours per day (hr/day) and total hours for the project.

3. *Fuel.* All diesel powered construction equipment shall use reformulated, low sulfur content diesel fuel (<0.05% sulfur by weight). The use of low sulfur diesel fuel will limit the formation of SOx.

4. *Engine Modifications.* All diesel engines should be modified by applying a 2° injection timing retard and installation of high pressure injectors. Engine modifications as stated above are standard mitigation measures applied to construction projects by the District.

5. *Opacity.* Assurances that contaminants emitted to the atmosphere, for a period or periods of three minutes or more within 1 hour shall not exceed Ringlemann 1 or equivalent 20% opacity.

6. *Maintenance.* All construction and work related equipment shall be properly maintained to reduce emissions.

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7. *Vehicles.* The number and speed of vehicles used on the beach shall be kept to a minimum so as to limit the production of dust clouds.

8. *Dust Abatement.* Should a dust problem arise at the equipment staging area due to construction activity, water or other stabilization techniques may need to be applied.

Summary

The District expects that adverse air quality impacts associated with dredging and construction activities from the Morro Bay Harbor Maintenance Dredging Project can be mitigated to a level of insignificance by adopting the above mentioned specific recommendations. Limiting the formation of 1) ozone through control of precursors (NOx, ROG), 2) respirable particulate matter (PM10) and 3) acid deposition forming SOx are the primary objectives of the District regarding this project and its impact on attainment of federal air quality standards.

Thank you for the opportunity to comment on this project. Please feel free to call me at (805) 781-5743 if you have need of further information.

Sincerely,

Barry Lajoie
Air Quality Specialist

C:\BPL\WP60\ACEMBH.BPL

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STATE OF CALIFORNIA — THE RESOURCES AGENCY
PETE WILSON, Governor
OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO 94296-0001
(916) 445-8006
FAX: (916) 322-6377

26 March 1992

Reply to: CoE 920302A

Col. Charles Thomas, District Engineer
U.S. Army Corps of Engineers
P.O. Box 2711
LOS ANGELES CA 90053-2325

Subject: Dredging of Morro Bay Channel

Dear Col. Thomas

Thank you for requesting my review of the undertaking noted above and for including the underwater archaeological survey report which justifies your determination.

I concur in your determination that there are no historic properties in the Area of Potential Effects for this undertaking. Accordingly, you have fulfilled federal agency responsibilities pursuant to 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act. Please note that you agency may have additional responsibilities under 36 CFR 800 under any of the following circumstances:

1. If any person requests that the Advisory Council on Historic Preservation review your findings in accordance with 36 CFR 800.6(e);
2. If this undertaking changes in ways that could affect historic properties [36 CFR 800.5(c)];
3. If previously undocumented properties are discovered during the implementation of this undertaking or if a known historic property will be affected in an unanticipated manner [36 CFR 800.11];
4. If a property that was to be avoided has been inadvertently or otherwise affected [36 CFR 800.4(c);800.5];
5. If any condition of the undertaking, such as a delay in implementation or implementation in phases over time, may justify reconsideration of the current National Register status of properties within the undertaking's Area of Potential Effects [36 CFR 800.4(c)].

Thank you for considering historic properties during project planning. If you have any questions, please call staff archaeologist Nicholas Del Cioppo at (916) 653-9696.

Sincerely,

Steade R. Craigo, AIA, Acting
State Historic Preservation Officer

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APPENDIX C

Geotechnical Report

Morro Bay Harbor Maintenance Dredging
San Luis Obispo County, California

April 1993

CESPL-CO-ON 15 June 1993

MEMORANDUM FOR THE RECORD

SUBJECT: Morro Bay Harbor Sediment Chemistry Analysis.

1. Sediment samples were taken from the potential dredge and receiving sites at Morro Bay during the week of 8 Mar 93. Beach samples north and south of the harbor were collected by personnel from the Corps of Engineers, Los Angeles District. Dive samples of the potential nearshore disposal site north of the harbor and the proposed dredge sites within the harbor were collected by personnel from the Corps of Engineers, San Francisco District.

2. A total of 55 sediment samples were collected during the week of 8 Mar 93. The breakdown of the number of samples taken and the type of tests performed for each location are as follows (attached is the list of the specific chemical constituents):

Location	Number	Tests
Nearshore (North)	8	Physical, Conventional, Metals, Pesticides
Beach (North)	20	Physical, Conventional, Metals, Pesticides
Beach (South)	16	Physical
Entrance Channel	1	Physical
Navy Channel	4	Physical
Morro Channel	6	Physical, Conventional, Metals, Pesticides, Organotins

3. There were four (4) transects (TR 1 through 4) south of the harbor from which sediment samples were retrieved. Samples were taken between +12 ft MLLW and -6 ft MLLW at elevation increments of 6 ft. An attempt was made to collect samples from -12 ft MLLW to -30 ft MLLW, however, hazardous wave conditions prevented sediment sampling in the nearshore environment south of the harbor. Samples for each transect were composited into one sample for testing purposes. A total of four (4) consolidated samples were tested.

4. There were five (5) transects (TR 5 through 9) north of the harbor from which sediment samples were retrieved. Samples were taken between +12 ft MLLW and -6 ft MLLW at elevation increments of 6 ft. Dive samples were also collected at -24 ft MLLW and -30 ft MLLW for transects #5 through #7 (TR 5 through 7) and -30 ft for TR 8 and TR 9. Rough wave conditions prevented sampling in the shallower depths. Beach samples (-6 ft MLLW to +12 ft MLLW) for each transect were consolidated into one sample for testing purposes. Nearshore samples (-30 ft to -24 ft) for TR 5 through TR 7 were consolidated into one sample for testing purposes. A total of ten (10) samples, of which five (5) were composited samples, were tested.

5. A total of 11 dive samples were collected from the navigation channels (Entrance, Navy, and Morro). Compositing did not occur for these samples. Each sample was tested separately.

6. Analysis of the sediment chemistry results indicate that the levels of chemical constituents detected for the proposed dredged area are below possible effects range (NOAA-NOS/OMA 1990). Discrepancies were noted for Mercury test results for samples DH-8, DH-9, and DH-11. The level of mercury for these three samples were below the detection limit, however numeric values were reported in the test results. In addition, detection limits for PCB's were set well above specified limits, restricting an accurate analysis of the effects, if any, total PCB's may have on the receiving sites.

ESPL-CO-ON
SUBJECT: Morro Bay Harbor Sediment Chemistry Analysis.

7. Chemical testing of the materials sampled from the Entrance and Navy channels were not conducted because of the frequency of dredging and the dynamic nature of these areas.

8. Despite the discrepancies described in the paragraph (6), all sediments sampled (total of 11 samples) from the proposed dredge areas were composed of a poorly graded sand material with less than 10% fines. Because of the overall coarse nature of the material proposed to be dredged and the physical compatibility of this material with the potential receiving sites, it is anticipated that the dredged material from the Morro Bay navigation channels, will not have an adverse chemical impact to the potential disposal sites.

Anthony J. Risko
Navigation Section

MORRO BAY HARBOR
SEDIMENT CHEMICAL TESTING
17 March 1993

Parameter	Detection Limits* Sediments	Units	Method
CONVENTIONALS (10 Composites TR5 to TR9, 6 Long Tubes):			
Total Organic Carbon	0.1	%	9060
Oil & Grease	20.0	mg/kg	(wet) 413.2
Total Petroleum Hydrocarbons (TPH)	20.0	mg/kg	418.1
Total Sulfides	0.1	mg/kg	Plumb 1981
METALS (10 Composites TR5 to TR9, 6 Long Tubes):			
Arsenic (As)	0.1	mg/kg	7060/7061
Cadmium (Cd)	0.1	mg/kg	7130/7131
Chromium (Cr)	0.1	mg/kg	7190/7191
Copper (Cu)	0.1	mg/kg	7210
Lead (Pb)	0.1	mg/kg	7420/7421
Mercury (Hg)	0.02	mg/kg	7471
Nickel (Ni)	0.1	mg/kg	7520
Selenium (Se)	0.1	mg/kg	7740/7741
Silver (Ag)	0.1	mg/kg	7760
Zinc (Zn)	0.1	mg/kg	7950
POLYCHLORINATED BIPHENYLS (10 Composites TR5 to TR9, 6 Long Tubes):			
Individual Arochlors (1016, 1221, 1232, 1242, 1248, 1254, 1260)	20.0	ug/kg	8080
Total PCBs	20.0	ug/kg	8080
PESTICIDES (10 Composites TR5 to TR9, 6 Long Tubes):			
Aldrin	20.0	ug/kg	8080
Chlordane and Derivatives	25.0	ug/kg	8080
Dieldrin	20.0	ug/kg	8080
DDT and Derivatives	20.0	ug/kg	8080
Endosulfan and Derivatives	25.0	ug/kg	8080
Endrin and Derivatives	20.0	ug/kg	8080
Heptachlor and Derivatives	20.0	ug/kg	8080
Lindane and Derivatives	250.0	ug/kg	8080
Methoxychlor	20.0	ug/kg	8080
Toxaphene	30.0	ug/kg	8080
ORGANOTINS (For Long Tubes #6 thru #11 only)			
Monobutyltin	1.0	ug/kg	
Dibutyltin	1.0	ug/kg	
Tributyltin	1.0	ug/kg	
Tetrabutyltin	1.0	ug/kg	

* Based on dry weight, unless specified otherwise.

METHOD EPA 6010 ACCEPTABLE FOR METALS
WITH THE EXCEPTION OF MERCURY (Hg).

DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
LABORATORY
25 LIBERTY SHIP WAY, SAUSALITO, CALIFORNIA 94965-1768

REPLY TO
ATTENTION OF

CESPD-ED-GL (1110-1-8100b)

MEMORANDUM FOR Commander, Los Angeles District,
ATTN: CESPL-CO-O/T. Risko

SUBJECT: Morro Bay Harbor

1. Reference DD Form 448, Number E86 93 0057, dated 14 April 93.

2. Attached test results were completed on subject project.

3. Billing will be made by the Sacramento District Finance and Accounting Branch.

4. Significant Findings: None

Encl

Dennis Thuet
DENNIS THUET
Director, SPD Laboratory

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIV...ON LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	#4	#7	#10	#14	#18	#25	SAND #35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
93-0160	IR 1	MLLW -6			Poorly graded sand (SP)											100	79	40	12	1	0	0			
93-0161	IR 1	MLLW 0			Poorly graded sand (SP)					100	99	99	98	97	95	92	80	45	18	1	0	0			
93-0162	IR 1	MLLW +6			Poorly graded sand (SP)									100	99	99	97	56	15	2	0	0			
93-0163	IR 1	MLLW +12			Poorly graded sand (SP)											100	99	47	13	1	0	0		NP	
93-0164	IR 2	MLLW -6			Poorly graded sand (SP)				100	98	98	98	97	97	96	95	89	63	25	1	0	0		NP	
93-0165	IR 2	MLLW 0			Poorly graded sand (SP)							100	99	99	99	99	96	47	14	1	0	0		NP	
93-0166	IR 2	MLLW +6			Poorly graded sand (SP)				100	99	99	99	99	99	99	99	97	65	15	2	0	0		NP	
93-0167	IR 2	MLLW +12			Poorly graded sand (SP)											100	97	51	15	1	0	0		NP	
93-0168	IR 3	MLLW -6			Poorly graded sand (SP)							100	99	98	98	96	91	55	18	1	0	0		NP	
93-0169	IR 3	MLLW 0			Poorly graded sand (SP)											100	96	48	12	1	0	0		NP	
93-0170	IR 3	MLLW +6			Poorly graded sand (SP)												100	74	25	3	1	0		NP	
93-0171	IR 3	MLLW +12			Poorly graded sand (SP)												100	94	31	3	1	0		NP	
93-0172	IR 4	MLLW -6			Poorly graded sand (SP)									100	99	99	97	72	26	1	0	0		NP	
93-0173	IR 4	MLLW 0			Poorly graded sand (SP)											100	99	78	31	1	0	0		NP	
93-0174	IR 4	MLLW +6			Poorly graded sand (SP)											100	99	81	29	2	1	0		NP	
93-0175	IR 4	MLLW +12			Poorly graded sand (SP)											100	99	77	27	2	1	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	SAND #4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plasticity Index	Water Content
93-0176	IR 5	MLLW -6			Poorly graded sand (SP)			100	99	99	99	98	97	96	95	92	89	78	44	3	0	0		NP	
93-0177	IR 5	MLLW 0			Poorly graded sand (SP)			100	84	70	64	62	59	56	53	48	42	29	11	1	0	0		NP	
93-0178	IR 5	MLLW +6			Poorly graded sand (SP)												100	96	33	5	1	0		NP	
93-0179	IR 5	MLLW +12			Poorly graded sand (SP)												100	96	51	3	1	0		NP	
93-0180	IR 6	MLLW -6			Poorly graded sand (SP)					100	99	99	97	95	91	80	58	27	10	1	0	0		NP	
93-0181	IR 6	MLLW 0			Poorly graded sand (SP)				100	99	99	98	98	97	96	92	78	43	17	2	1	1		NP	
93-0182	IR 6	MLLW +6			Poorly graded sand (SP)												100	93	37	3	1	0		NP	
93-0183	IR 6	MLLW +12			Poorly graded sand (SP)												100	97	34	4	1	0		NP	
93-0184	IR 7	MLLW -6			Poorly graded sand (SP)								100	99	99	98	96	83	37	3	0	0		NP	
93-0185	IR 7	MLLW 0			Poorly graded sand (SP)											100	99	83	28	2	0	0		NP	
93-0186	IR 7	MLLW +6			Poorly graded sand (SP)												100	97	55	5	1	0		NP	
93-0187	IR 7	MLLW +12			Poorly graded sand (SP)												100	98	48	6	1	0		NP	
93-0188	IR 8	MLLW -6			Poorly graded sand with silt (SP-SM)											100	99	94	56	18	15	15		NP	
93-0189	IR 8	MLLW 0			Poorly graded sand (SP)												100	98	40	7	2	0		NP	
93-0190	IR 8	MLLW +6			Poorly graded sand (SP)												100	91	36	5	2	0		NP	
93-0191	IR 8	MLLW +12			Poorly graded sand (SP)												100	99	52	9	2	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	SAND #4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
93-0192	IR 9	MLLW -6			Poorly graded sand (SP)									100	99	98	95	70	29	3	0	0		NP	
93-0193	IR 9	MLLW 0			Poorly graded sand (SP)									100	99	99	96	82	39	4	0	0		NP	
93-0194	IR 9	MLLW +6			Poorly graded sand (SP)											100	99	80	29	1	0	0		NP	
93-0195	IR 9	MLLW +12			Poorly graded sand (SP)										100	98	94	69	20	1	0	0		NP	
93-0196	IR 5	-24			Poorly graded sand (SP)												100	98	74	10	1	0		NP	
93-0197	IR 5	-30			Poorly graded sand (SP)												100	98	63	10	1	0		NP	
93-0198	IR 6	-24			Poorly graded sand (SP)								100	99	99	99	99	98	88	23	2	0		NP	
93-0199	IR 6	-30			Poorly graded sand (SP)				100	97	97	97	97	96	96	96	96	95	89	26	2	1		NP	
93-0200	IR 7	-30			Poorly graded sand with silt (SP-SM)			100	99	98	98	98	98	98	98	98	98	96	84	37	26	25		NP	
93-0201	IR 8	-30			Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	98	68	14	4	1		NP	
93-0202	IR 9	-30			Poorly graded sand (SP)												100	99	87	18	1	0		NP	
93-0203	IR 7	-24			Poorly graded sand (SP)												100	99	74	11	1	0		NP	
93-0204	Site 1				Poorly graded sand (SP)												100	99	91	29	9	7		NP	
93-0205	Hole 2				Poorly graded sand (SP)										100	99	98	76	19	1	0	0		NP	
93-0206	Hole 3				Poorly graded sand (SP)												100	96	48	3	0	0		NP	
93-0207	Hole 4				Poorly graded sand (SP)												100	99	60	5	1	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	#4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
93-0208	Hole 5				Poorly graded sand (SP)												100	98	49	3	0	0			
93-0209	Hole 6				Poorly graded sand (SP)							100	99	99	98	98	97	87	47	4	1	1			
93-0210	Hole 7				Poorly graded sand (SP)						100	99	99	99	99	99	98	98	53	6	1	1		NP	
93-0211	Hole 8				Poorly graded sand (SP)											100	99	98	55	6	2	1		NP	
93-0212	Hole 9				Poorly graded sand (SP)													100	74	14	3	2		NP	
93-0213	Hole 10				Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	99	73	10	3	2		NP	
93-0214	Hole 11				Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	99	43	4	1	1		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	#4	#7	#10	#14	#18	#25	SAND #35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content
93-0160	TR 1	MLLW -6			Poorly graded sand (SP)											100	79	40	12	1	0	0		NP	
93-0161	TR 1	MLLW 0			Poorly graded sand (SP)					100	99	99	98	97	95	92	80	45	18	1	0	0		NP	
93-0162	TR 1	MLLW +6			Poorly graded sand (SP)									100	99	99	97	56	15	2	0	0		NP	
93-0163	TR 1	MLLW +12			Poorly graded sand (SP)											100	99	47	13	1	0	0		NP	
93-0164	TR 2	MLLW -6			Poorly graded sand (SP)				100	98	98	98	97	97	96	95	89	63	25	1	0	0		NP	
93-0165	TR 2	MLLW 0			Poorly graded sand (SP)							100	99	99	99	99	96	47	14	1	0	0		NP	
93-0166	TR 2	MLLW +6			Poorly graded sand (SP)				100	99	99	99	99	99	99	99	97	65	15	2	0	0		NP	
93-0167	TR 2	MLLW +12			Poorly graded sand (SP)											100	97	51	15	1	0	0		NP	
93-0168	TR 3	MLLW -6			Poorly graded sand (SP)							100	99	98	98	96	91	55	18	1	0	0		NP	
93-0169	TR 3	MLLW 0			Poorly graded sand (SP)											100	96	48	12	1	0	0		NP	
93-0170	TR 3	MLLW +6			Poorly graded sand (SP)												100	74	25	3	1	0		NP	
93-0171	TR 3	MLLW +12			Poorly graded sand (SP)												100	94	31	3	1	0		NP	
93-0172	TR 4	MLLW -6			Poorly graded sand (SP)									100	99	99	97	72	26	1	0	0		NP	
93-0173	TR 4	MLLW 0			Poorly graded sand (SP)											100	99	78	31	1	0	0		NP	
93-0174	TR 4	MLLW +6			Poorly graded sand (SP)											100	99	81	29	2	1	0		NP	
93-0175	TR 4	MLLW +12			Poorly graded sand (SP)											100	99	77	27	2	1	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	SAND #4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plasticity Index	Water Content
93-0176	IR 5	MLLW -6			Poorly graded sand (SP)			100	99	99	99	98	97	96	95	92	89	78	44	3	0	0			
93-0177	IR 5	MLLW 0			Poorly graded sand (SP)			100	84	70	64	62	59	56	53	48	42	29	11	1	0	0			
93-0178	IR 5	MLLW +6			Poorly graded sand (SP)												100	96	33	5	1	0		NP	
93-0179	IR 5	MLLW +12			Poorly graded sand (SP)												100	96	51	3	1	0		NP	
93-0180	IR 6	MLLW -6			Poorly graded sand (SP)					100	99	99	97	95	91	80	58	27	10	1	0	0		NP	
93-0181	IR 6	MLLW 0			Poorly graded sand. (SP)				100	99	99	98	98	97	96	92	78	43	17	2	1	1		NP	
93-0182	IR 6	MLLW +6			Poorly graded sand (SP)												100	93	37	3	1	0		NP	
93-0183	IR 6	MLLW +12			Poorly graded sand (SP)												100	97	34	4	1	0		NP	
93-0184	IR 7	MLLW -6			Poorly graded sand (SP)								100	99	99	98	96	83	37	3	0	0		NP	
93-0185	IR 7	MLLW 0			Poorly graded sand (SP)											100	99	83	28	2	0	0		NP	
93-0186	IR 7	MLLW +6			Poorly graded sand (SP)												100	97	55	5	1	0		NP	
93-0187	IR 7	MLLW +12			Poorly graded sand (SP)												100	98	48	6	1	0		NP	
93-0188	IR 8	MLLW -6			Poorly graded sand with silt (SP-SM)											100	99	94	56	18	15	15		NP	
93-0189	IR 8	MLLW 0			Poorly graded sand (SP)												100	98	40	7	2	0		NP	
93-0190	IR 8	MLLW +6			Poorly graded sand (SP)												100	91	36	5	2	0		NP	
93-0191	IR 8	MLLW +12			Poorly graded sand (SP)												100	99	52	9	2	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	#4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
93-0192	IR 9	MLLW -6			Poorly graded sand (SP)									100	99	98	95	70	29	3	0	0		NP	
93-0193	IR 9	MLLW 0			Poorly graded sand (SP)									100	99	99	96	82	39	4	0	0		NP	
93-0194	IR 9	MLLW +6			Poorly graded sand (SP)											100	99	80	29	1	0	0		NP	
93-0195	IR 9	MLLW +12			Poorly graded sand (SP)										100	98	94	69	20	1	0	0		NP	
93-0196	IR 5	-24			Poorly graded sand (SP)												100	98	74	10	1	0		NP	
93-0197	IR 5	-30			Poorly graded sand (SP)												100	98	63	10	1	0		NP	
93-0198	IR 6	-24			Poorly graded sand (SP)								100	99	99	99	99	98	88	23	2	0		NP	
93-0199	IR 6	-30			Poorly graded sand (SP)				100	97	97	97	97	96	96	96	96	95	89	26	2	1		NP	
93-0200	IR 7	-30			Poorly graded sand with silt (SP-SM)			100	99	98	98	98	98	98	98	98	98	96	84	37	26	25		NP	
93-0201	IR 8	-30			Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	98	68	14	4	1		NP	
93-0202	IR 9	-30			Poorly graded sand (SP)												100	99	87	18	1	0		NP	
93-0203	IR 7	-24			Poorly graded sand (SP)												100	99	74	11	1	0		NP	
93-0204	Site 1				Poorly graded sand (SP)												100	99	91	29	9	7		NP	
93-0205	Hole 2				Poorly graded sand (SP)										100	99	98	76	19	1	0	0		NP	
93-0206	Hole 3				Poorly graded sand (SP)												100	96	48	3	0	0		NP	
93-0207	Hole 4				Poorly graded sand (SP)												100	99	60	5	1	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	SAND #4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content
93-0208	Hole 5				Poorly graded sand (SP)												100	98	49	3	0	0		NP	
93-0209	Hole 6				Poorly graded sand (SP)							100	99	99	98	98	97	87	47	4	1	1		NP	
93-0210	Hole 7				Poorly graded sand (SP)						100	99	99	99	99	99	98	98	53	6	1	1		NP	
93-0211	Hole 8				Poorly graded sand (SP)											100	99	98	55	6	2	1		NP	
93-0212	Hole 9				Poorly graded sand (SP)													100	74	14	3	2		NP	
93-0213	Hole 10				Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	99	73	10	3	2		NP	
93-0214	Hole 11				Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	99	43	4	1	1		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	SAND #4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Wat Cont %
93-0160	TR 1	MLLW -6			Poorly graded sand (SP)											100	79	40	12	1	0	0		NP	
93-0161	TR 1	MLLW 0			Poorly graded sand (SP)					100	99	99	98	97	95	92	80	45	18	1	0	0		NP	
93-0162	TR 1	MLLW +6			Poorly graded sand (SP)									100	99	99	97	56	15	2	0	0		NP	
93-0163	TR 1	MLLW +12			Poorly graded sand (SP)											100	99	47	13	1	0	0		NP	
93-0164	TR 2	MLLW -6			Poorly graded sand (SP)				100	98	98	98	97	97	96	95	89	63	25	1	0	0		NP	
93-0165	TR 2	MLLW 0			Poorly graded sand (SP)							100	99	99	99	99	96	47	14	1	0	0		NP	
93-0166	TR 2	MLLW +6			Poorly graded sand (SP)				100	99	99	99	99	99	99	99	97	65	15	2	0	0		NP	
93-0167	TR 2	MLLW +12			Poorly graded sand (SP)											100	97	51	15	1	0	0		NP	
93-0168	TR 3	MLLW -6			Poorly graded sand (SP)							100	99	98	98	96	91	55	18	1	0	0		NP	
93-0169	TR 3	MLLW 0			Poorly graded sand (SP)											100	96	48	12	1	0	0		NP	
93-0170	TR 3	MLLW +6			Poorly graded sand (SP)												100	74	25	3	1	0		NP	
93-0171	TR 3	MLLW +12			Poorly graded sand (SP)												100	94	31	3	1	0		NP	
93-0172	TR 4	MLLW -6			Poorly graded sand (SP)									100	99	99	97	72	26	1	0	0		NP	
93-0173	TR 4	MLLW 0			Poorly graded sand (SP)											100	99	78	31	1	0	0		NP	
93-0174	TR 4	MLLW +6			Poorly graded sand (SP)											100	99	81	29	2	1	0		NP	
93-0175	TR 4	MLLW +12			Poorly graded sand (SP)											100	99	77	27	2	1	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

Division Number	Hole Number	Field Sample No.	Depth or Elevation From	Depth or Elevation To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	SAND #4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
93-0176	IR 5	MLLW -6			Poorly graded sand (SP)			100	99	99	99	98	97	96	95	92	89	78	44	3	0	0			
93-0177	IR 5	MLLW 0			Poorly graded sand (SP)			100	84	70	64	62	59	56	53	48	42	29	11	1	0	0			
93-0178	IR 5	MLLW +6			Poorly graded sand (SP)												100	96	33	5	1	0		NP	
93-0179	IR 5	MLLW +12			Poorly graded sand (SP)												100	96	51	3	1	0		NP	
93-0180	IR 6	MLLW -6			Poorly graded sand (SP)					100	99	99	97	95	91	80	58	27	10	1	0	0		NP	
93-0181	IR 6	MLLW 0			Poorly graded sand (SP)				100	99	99	98	98	97	96	92	78	43	17	2	1	1		NP	
93-0182	IR 6	MLLW +6			Poorly graded sand (SP)												100	93	37	3	1	0		NP	
93-0183	IR 6	MLLW +12			Poorly graded sand (SP)												100	97	34	4	1	0		NP	
93-0184	IR 7	MLLW -6			Poorly graded sand (SP)								100	99	99	98	96	83	37	3	0	0		NP	
93-0185	IR 7	MLLW 0			Poorly graded sand (SP)											100	99	83	28	2	0	0		NP	
93-0186	IR 7	MLLW +6			Poorly graded sand (SP)												100	97	55	5	1	0		NP	
93-0187	IR 7	MLLW +12			Poorly graded sand (SP)												100	98	48	6	1	0		NP	
93-0188	IR 8	MLLW -6			Poorly graded sand with silt (SP-SM)											100	99	94	56	18	15	15		NP	
93-0189	IR 8	MLLW 0			Poorly graded sand (SP)												100	98	40	7	2	0		NP	
93-0190	IR 8	MLLW +6			Poorly graded sand (SP)												100	91	36	5	2	0		NP	
93-0191	IR 8	MLLW +12			Poorly graded sand (SP)												100	99	52	9	2	0		NP	

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U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

PROJECT: Morro Bay Harbor

DATE: April 1993

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Division Number	Hole Number	Field Sample No.	Depth or Elevation from	Depth or Elevation to	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	#4	#7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
93-0192	IR 9	MLLW -6			Poorly graded sand (SP)									100	99	98	95	70	29	3	0	0		NP	
93-0193	IR 9	MLLW 0			Poorly graded sand (SP)									100	99	99	96	82	39	4	0	0		NP	
93-0194	IR 9	MLLW +6			Poorly graded sand (SP)											100	99	80	29	1	0	0		NP	
93-0195	IR 9	MLLW +12			Poorly graded sand (SP)										100	98	94	69	20	1	0	0		NP	
93-0196	IR 5	-24			Poorly graded sand (SP)												100	98	74	10	1	0		NP	
93-0197	IR 5	-30			Poorly graded sand (SP)												100	98	63	10	1	0		NP	
93-0198	IR 6	-24			Poorly graded sand (SP)								100	99	99	99	99	98	88	23	2	0		NP	
93-0199	IR 6	-30			Poorly graded sand (SP)				100	97	97	97	97	96	96	96	96	95	89	26	2	1		NP	
93-0200	IR 7	-30			Poorly graded sand with silt (SP-SM)			100	99	98	98	98	98	98	98	98	98	96	84	37	26	25		NP	
93-0201	IR 8	-30			Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	98	68	14	4	1		NP	
93-0202	IR 9	-30			Poorly graded sand (SP)												100	99	87	18	1	0		NP	
93-0203	IR 7	-24			Poorly graded sand (SP)												100	99	74	11	1	0		NP	
93-0204	Site 1				Poorly graded sand (SP)												100	99	91	29	9	7		NP	
93-0205	Hole 2				Poorly graded sand (SP)										100	99	98	76	19	1	0	0		NP	
93-0206	Hole 3				Poorly graded sand (SP)												100	96	48	3	0	0		NP	
93-0207	Hole 4				Poorly graded sand (SP)												100	99	60	5	1	0		NP	

U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION LABORATORY, SAUSALITO, CALIFORNIA

SOIL TEST RESULT SUMMARY

OJECT: Morro Bay Harbor

DATE: April 1993

vision Number	Hole Number	Field Sample No.	Depth or Elevation From	To	Laboratory Descriptive Classification	GRAVEL PERCENT FINER 3.0	1.5	3/4	3/8	#4	SAND #7	#10	#14	#18	#25	#35	#45	#60	#80	#120	#170	FINE #200	Liquid Limit	Plastic Index	Water Content %
3-0208	Hole 5				Poorly graded sand (SP)												100	98	49	3	0	0		NP	
3-0209	Hole 6				Poorly graded sand (SP)							100	99	99	98	98	97	87	47	4	1	1		NP	
3-0210	Hole 7				Poorly graded sand (SP)						100	99	99	99	99	99	98	98	53	6	1	1		NP	
3-0211	Hole 8				Poorly graded sand (SP)											100	99	98	55	6	2	1		NP	
3-0212	Hole 9				Poorly graded sand (SP)													100	74	14	3	2		NP	
3-0213	Hole 10				Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	99	73	10	3	2		NP	
3-0214	Hole 11				Poorly graded sand (SP)				100	99	99	99	99	99	99	99	99	99	43	4	1	1		NP	

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DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
LABORATORY
25 LIBERTY SHIP WAY, SAUSALITO, CALIFORNIA 94965-1768

REPLY TO
ATTENTION OF

CESPD-ED-GL (1110-1-8100b)

APR 27 1993

MEMORANDUM FOR Commander, Los Angeles District,
ATTN: CESPL-CO-ON/Tony Risko

SUBJECT: Morro Bay Test Results

1. Reference Form MIPR, No. E86-93-0057 dated 14 April 1993.

2. Enclosed is a report prepared on subject project.

3. Billing will be made by the Sacramento District Finance and Accounting Branch.

4. Significant Findings: Oil and Grease found in samples TR7 (93-0184 - 87QS Composite) and TR8 (93-0188 - 91QS Composite) at 54 mg/kg and 62 mg/kg respectively. Sample TR8 contained 33 mg/kg TRPH. This value is slightly above detection limits.

Encl

Dennis Thuet
DENNIS THUET
Director, SPD Laboratory

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SOUTH PACIFIC DIVISION LABORATORY

SUMMARY OF RESULTS

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93

COE Sample	Field ID	Matrix	Method/Analysis		Positive Hit Concentrations		Page
93-0184 - 87QS	TR7	Soil	418.1/413.2	Oil & Grease	54	mg/kg	9-15
93-0188 - 91QS	TR8	Soil	418.1/413.2	TRPH	33	mg/kg	9-15
				Oil and Grease	62	mg/kg	9-15

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
Page: 1

EPA METHOD: 8080

COE Sample ID:	93-176 - 79QS	93-0180 - 83QS	93-0184 - 87QS
Field ID:	TR5	TR6	TR7
Sample Received:	03/16/93	03/16/93	03/16/93
Sample Extracted:	03/22/93	03/22/93	03/22/93
Sample Analyzed:	03/31/93	03/31/93	03/31/93
Dilution Factor:	1	1	1
Units:	ug/kg	ug/kg	ug/kg

Parameter	Reporting Limits	Results	Results	Results
BHC-A	0.3	ND	ND	ND
Lindane	1.2	ND	ND	ND
BHC-B	0.3	ND	ND	ND
Heptachlor	3	ND	ND	ND
BHC-D	0.3	ND	ND	ND
Aldrin	1.2	ND	ND	ND
Hept-epo	3	ND	ND	ND
Endo I	3	ND	ND	ND
Dieldrin	3	ND	ND	ND
DDE	3	ND	ND	ND
Endrin	3	ND	ND	ND
DDD	3	ND	ND	ND
Endo II	3	ND	ND	ND
Endrin Aldehyde	3	ND	ND	ND
DDT	3	ND	ND	ND
Endo Sulfate	3	ND	ND	ND
Methoxychlor	5	ND	ND	ND
Toxaphene	60	ND	ND	ND
Chlordane	60	ND	ND	ND
Polychlorinated Biphenyls:				
Arochlor 1016	100	ND	ND	ND
Arochlor 1221	500	ND	ND	ND
Arochlor 1232	200	ND	ND	ND
Arochlor 1242	100	ND	ND	ND
Arochlor 1248	100	ND	ND	ND
Arochlor 1254	50	ND	ND	ND
Arochlor 1260	50	ND	ND	ND

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Analyst: Brenda Gainey

Manager:

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
Page: 2

EPA METHOD: 8080

COE Sample ID:	93-0188 - 91QS	93-0192 - 95QS	93-196QS - 97QS
Field ID:	TR8	TR9	TR5,-24 & TR5,-30
Sample Received:	03/16/93	03/16/93	03/16/93
Sample Extracted:	03/22/93	03/22/93	03/22/93
Sample Analyzed:	03/31/93	03/31/93	03/31/93
Dilution Factor:	1	1	1
Units:	ug/kg	ug/kg	ug/kg

Parameter	Reporting Limits	Results	Results	Results
BHC-A	0.3	ND	ND	ND
Lindane	1.2	ND	ND	ND
BHC-B	0.3	ND	ND	ND
Heptachlor	3	ND	ND	ND
BHC-D	0.3	ND	ND	ND
Aldrin	1.2	ND	ND	ND
Hept-epo	3	ND	ND	ND
Endo I	3	ND	ND	ND
Dieldrin	3	ND	ND	ND
DDE	3	ND	ND	ND
Endrin	3	ND	ND	ND
DDD	3	ND	ND	ND
Endo II	3	ND	ND	ND
Endrin Aldehyde	3	ND	ND	ND
DDT	3	ND	ND	ND
Endo Sulfate	3	ND	ND	ND
Methoxychlor	5	ND	ND	ND
Toxaphene	60	ND	ND	ND
Chlordane	60	ND	ND	ND
Polychlorinated Biphenyls:				
Arochlor 1016	100	ND	ND	ND
Arochlor 1221	500	ND	ND	ND
Arochlor 1232	200	ND	ND	ND
Arochlor 1242	100	ND	ND	ND
Arochlor 1248	100	ND	ND	ND
Arochlor 1254	50	ND	ND	ND
Arochlor 1260	50	ND	ND	ND

Analyst: Brenda Gainey

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
Page: 3

EPA METHOD: 8080

COE Sample ID:	93-0198 - 99QS	93-0200 & 203QS	93-0201QS
Field ID:	TR6,24 & TR6,-30	TR7,-30 & TR7-24	TR8,-30
Sample Received:	03/16/93	03/16/93	03/16/93
Sample Extracted:	03/22/93	03/22/93	03/22/93
Sample Analyzed:	03/31/93	03/31/93	03/31/93
Dilution Factor:	1	1	1
Units:	ug/kg	ug/kg	ug/kg

Parameter	Reporting Limits	Results	Results	Results
BHC-A	0.3	ND	ND	ND
Lindane	1.2	ND	ND	ND
BHC-B	0.3	ND	ND	ND
Heptachlor	3	ND	ND	ND
BHC-D	0.3	ND	ND	ND
Aldrin	1.2	ND	ND	ND
Hept-epo	3	ND	ND	ND
Endo I	3	ND	ND	ND
Dieldrin	3	ND	ND	ND
DDE	3	ND	ND	ND
Endrin	3	ND	ND	ND
DDD	3	ND	ND	ND
Endo II	3	ND	ND	ND
Endrin Aldehyde	3	ND	ND	ND
DDT	3	ND	ND	ND
Endo Sulfate	3	ND	ND	ND
Methoxychlor	5	ND	ND	ND
Toxaphene	60	ND	ND	ND
Chlordane	60	ND	ND	ND
Polychlorinated Biphenyls:				
Arochlor 1016	100	ND	ND	ND
Arochlor 1221	500	ND	ND	ND
Arochlor 1232	200	ND	ND	ND
Arochlor 1242	100	ND	ND	ND
Arochlor 1248	100	ND	ND	ND
Arochlor 1254	50	ND	ND	ND
Arochlor 1260	50	ND	ND	ND

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MINUTE PAGE 1233

Analyst: Brenda Gainey

Manager:

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
Page: 4

EPA METHOD: 8080

COE Sample ID:	93-202QS	93-209QS	93-210QS
Field ID:	TR9,-30	HOLE 6	HOLE 7
Sample Received:	03/16/93	03/16/93	03/16/93
Sample Extracted:	03/22/93	03/22/93	03/22/93
Sample Analyzed:	03/31/93	03/31/93	03/31/93
Dilution Factor:	1	1	1
Units:	ug/kg	ug/kg	ug/kg

Parameter	Reporting Limits	Results	Results	Results
BHC-A	0.3	ND	ND	ND
Lindane	1.2	ND	ND	ND
BHC-B	0.3	ND	ND	ND
Heptachlor	3	ND	ND	ND
BHC-D	0.3	ND	ND	ND
Aldrin	1.2	ND	ND	ND
Hept-epo	3	ND	ND	ND
Endo I	3	ND	ND	ND
Dieldrin	3	ND	ND	ND
DDE	3	ND	ND	ND
Endrin	3	ND	ND	ND
DDD	3	ND	ND	ND
Endo II	3	ND	ND	ND
Endrin Aldehyde	3	ND	ND	ND
DDT	3	ND	ND	ND
Endo Sulfate	3	ND	ND	ND
Methoxychlor	5	ND	ND	ND
Toxaphene	60	ND	ND	ND
Chlordane	60	ND	ND	ND
Polychlorinated Biphenyls:				
Arochlor 1016	100	ND	ND	ND
Arochlor 1221	500	ND	ND	ND
Arochlor 1232	200	ND	ND	ND
Arochlor 1242	100	ND	ND	ND
Arochlor 1248	100	ND	ND	ND
Arochlor 1254	50	ND	ND	ND
Arochlor 1260	50	ND	ND	ND

Analyst: Brenda Gainey

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
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EPA METHOD: 8080

COE Sample ID:		93-0211QS	93-0212QS	93-0213QS
Field ID:		HOLE 8	HOLE 9	HOLE 10
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Extracted:		03/22/93	03/22/93	03/22/93
Sample Analyzed:		03/31/93	03/31/93	03/31/93
Dilution Factor:		1	1	1
Units:		ug/kg	ug/kg	ug/kg
Parameter	Reporting Limits	Results	Results	Results
BHC-A	0.3	ND	ND	ND
Lindane	1.2	ND	ND	ND
BHC-B	0.3	ND	ND	ND
Heptachlor	3	ND	ND	ND
BHC-D	0.3	ND	ND	ND
Aldrin	1.2	ND	ND	ND
Hept-epo	3	ND	ND	ND
Endo I	3	ND	ND	ND
Dieldrin	3	ND	ND	ND
DDE	3	ND	ND	ND
Endrin	3	ND	ND	ND
DDD	3	ND	ND	ND
Endo II	3	ND	ND	ND
Endrin Aldehyde	3	ND	ND	ND
DDT	3	ND	ND	ND
Endo Sulfate	3	ND	ND	ND
Methoxychlor	5	ND	ND	ND
Toxaphene	60	ND	ND	ND
Chlordane	60	ND	ND	ND
Polychlorinated Biphenyls:				
Arochlor 1016	100	ND	ND	ND
Arochlor 1221	500	ND	ND	ND
Arochlor 1232	200	ND	ND	ND
Arochlor 1242	100	ND	ND	ND
Arochlor 1248	100	ND	ND	ND
Arochlor 1254	50	ND	ND	ND
Arochlor 1260	50	ND	ND	ND

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MINUTE PAGE 1235

Analyst: Brenda Gainey

Manager:

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
Page: 6

EPA METHOD: 8080

COE Sample ID:	93-214QS
Field ID:	HOLE 11
Sample Received:	03/16/93
Sample Extracted:	03/23/93
Sample Analyzed:	03/31/93
Dilution Factor:	1
Units:	ug/kg

Parameter	Reporting Limits	Results
BHC-A	0.3	ND
Lindane	1.2	ND
BHC-B	0.3	ND
Heptachlor	3	ND
BHC-D	0.3	ND
Aldrin	1.2	ND
Hept-epo	3	ND
Endo I	3	ND
Dieldrin	3	ND
DDE	3	ND
Endrin	3	ND
DDD	3	ND
Endo II	3	ND
Endrin Aldehyde	3	ND
DDT	3	ND
Endo Sulfate	3	ND
Methoxychlor	5	ND
Toxaphene	60	ND
Chlordane	60	ND
Polychlorinated Biphenyls:		
Arochlor 1016	100	ND
Arochlor 1221	500	ND
Arochlor 1232	200	ND
Arochlor 1242	100	ND
Arochlor 1248	100	ND
Arochlor 1254	50	ND
Arochlor 1260	50	ND

Analyst: Brenda Gainey

Manager:

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MINUTE PAGE 1236

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
Page: 7

EPA METHOD: 8080

COE Sample ID: METHOD BLANK
Sample Analyzed: 03/31/93
Units: ug/l

Parameter	Reporting Limits	Results
BHC-A	0.3	ND
Lindane	1.2	ND
BHC-B	0.3	ND
Heptachlor	3	ND
BHC-D	0.3	ND
Aldrin	1.2	ND
Hept-epo	3	ND
Endo I	3	ND
Dieldrin	3	ND
DDE	3	ND
Endrin	3	ND
DDD	3	ND
Endo II	3	ND
Endrin Aldehyde	3	ND
DDT	3	ND
Endo Sulfate	3	ND
Methoxychlor	5	ND
Toxaphene	60	ND
Polychlorinated Biphenyls:		
Arochlor 1016	100	ND
Arochlor 1221	500	ND
Arochlor 1232	200	ND
Arochlor 1242	100	ND
Arochlor 1248	100	ND
Arochlor 1254	50	ND
Arochlor 1260	50	ND

Analyst: Brenda Gainey

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/02/93
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EPA METHOD: 8080 - QUALITY CONTROL DATA

COE QC Sample ID: 93-0180QS

Parameter	Reporting Limits	Units	Blank	Spike Conc	Spike % Rec	Spike Dup % Rec	RPD
DECA	-	% Rec	ND	50.0	108	87	22.2
Lindane	0.3	ug/kg	ND	25.0	84	83	1.8
Heptachlor	3	ug/kg	ND	25.0	96	93	2.5
Aldrin	1	ug/kg	ND	25.0	*	*	24.5
Dieldrin	3	ug/kg	ND	50.0	85	95	11.1
Endrin	3	ug/kg	ND	50.0	72	84	16.4
DDT	3	ug/kg	ND	50.0	48	51	7.8

* UNKNOWN COMPONENT ELUTED IN THE VICINITY OF ALDRIN WHICH OVERSHADOWED THE SPIKE AND SPIKE DUPLICATE VALUES OF ALDRIN. STANDARD ADDITON OF ALDRIN SHOWED THAT COMPONENT WAS NOT ALDRIN. RPD VALUES OF ALDRIN BASED ON AREA COUNTS OF UNKNOWNED COMPONENT AND ALDRIN COMBINED TOGETHER.

CONTROL LIMITS

Parameter	Method Blank	LCS % Rec	Method Standard	RPD %
Lindane	<0.3	30-120	46-127	<50
Heptachlor	<3	30-120	35-130	<31
Aldrin	<1	30-120	35-130	<43
Dieldrin	<3	30-120	31-134	<38
Endrin	<3	30-120	42-139	<45
DDT	<3	30-120	23-134	<50
DBC	--	30-120		
DECA	--	30-120		

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Analyst: Brenda Gainey

QC Manager: [illegible] 4/20/93

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2

COE Sample ID:	93-0176 - 79QS	93-0180 - 83QS	93-0184 - 87QS
Field ID:	TR5	TR6	TR7
Sample Received:	03/16/93	03/16/93	03/16/93
Sample Extracted:	03/30/93	03/30/93	03/30/93
Sample Analyzed:	03/30/93	03/30/93	03/30/93
Dilution Factor:	1	1	1
Units:	mg/kg	mg/kg	mg/kg

Parameter	Reporting Limits	Results	Results	Results
TRPH	25	ND	ND	ND
Oil and Grease	25	ND	ND	54

Analyst: Sam Taormina

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2

COE Sample ID:		93-0188 - 91QS	93-0192 - 95QS	93-0196 - 97QS
Field ID:		TR8	TR9	TR5,-24 & TR5,-30
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Extracted:		03/30/93	03/30/93	03/30/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Reporting Limits	Results	Results	Results
TRPH	25	33	ND	ND
Oil and Grease	25	62	ND	ND

Analyst: Sam Taormina

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2

COE Sample ID:		93-0198 - 99QS	93-0200 - 203QS	93-0201QS
Field ID:		TR6,-24 & TR6,-30	TR7,-30 & TR7-24	TR8,-30
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Extracted:		03/30/93	03/30/93	03/30/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Reporting Limits	Results	Results	Results
TRPH	25	ND	ND	ND
Oil and Grease	25	ND	ND	ND

Analyst: Sam Taormina

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2

COE Sample ID:		93-0202QS	93-0209QS	93-0210QS
Field ID:		TR9-30	HOLE 6	HOLE 7
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Extracted:		03/30/93	03/30/93	03/30/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Reporting Limits	Results	Results	Results
TRPH	25	ND	ND	ND
Oil and Grease	25	ND	ND	ND

Analyst: Sam Taormina

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2

COE Sample ID:		93-0211QS	93-0212QS	93-0213QS
Field ID:		HOLE 8	HOLE 9	HOLE 10
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Extracted:		03/30/93	03/30/93	03/30/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Reporting Limits	Results	Results	Results
TRPH	25	ND	ND	ND
Oil and Grease	25	ND	ND	ND

Analyst: Sam Taormina

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2

COE Sample ID:	93-0214QS
Field ID:	HOLE 11
Sample Received:	03/16/93
Sample Extracted:	03/30/93
Sample Analyzed:	03/30/93
Dilution Factor:	1
Units:	mg/kg

Parameter	Reporting Limits	Results
TRPH	25	ND
Oil and Grease	25	ND

Analyst: Sam Taormina

Manager:

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MINUTE PAGE 1244

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/05/93
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EPA METHOD: 418.1/413.2 - QUALITY CONTROL DATA

COE QC Sample ID: 93-0214QS

Parameter	Reporting Limits	Units	LCS % Rec	Blank	Spike Conc	Spike % Rec	Spike Dup % Rec	RPD
TRPH	25	mg/kg	95	ND	200	86	95	10
Oil and Grease	25	mg/kg	95	ND	200	86	95	10

CONTROL LIMITS

Parameter	Method Blank	LCS % Rec	Method Standard	RPD %
TRPH	ND	80-120	80-120	25
Oil and Grease	ND	80-120	80-120	25

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Analyst: Sam Taormina

QC Manager:

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID:		93-0176 - 79QS	93-0180 - 83QS	93-0184 - 87QS
Field ID:		TR5	TR6	TR7
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Digested:		03/22/93	03/22/93	03/22/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Method	Reporting Limits	Results	Results	Results
Silver (Ag)	6010	1	ND	ND	ND
Arsenic (As)	6010	5	ND	ND	ND
Cadmium (Cd)	6010	1	ND	ND	ND
Mercury (Hg)	7470	0.1	ND	ND	ND
Nickel (Ni)	6010	5	24.7	37.0	25.5
Lead (Pb)	6010	5	ND	ND	ND
Selenium (Se)	6010	10	ND	ND	ND
Zinc (Zn)	6010	5	12.0	13.5	13.5

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID:			93-0188 - 91QS	93-0192 - 95QS	93-0196 - 97QS
Field ID:			TR8	TR9	TR5,-24 & TR5,-30
Sample Received:			03/16/93	03/16/93	03/16/93
Sample Digested:			03/22/93	03/22/93	03/22/93
Sample Analyzed:			03/30/93	03/30/93	03/30/93
Dilution Factor:			1	1	1
Units:			mg/kg	mg/kg	mg/kg
Parameter	Method	Reporting Limits	Results	Results	Results
Silver (Ag)	6010	1	ND	ND	ND
Arsenic (As)	6010	5	ND	ND	ND
Cadmium (Cd)	6010	1	ND	ND	ND
Mercury (Hg)	7470	0.1	ND	ND	ND
Nickel (Ni)	6010	5	24.0	21.7	38.6
Lead (Pb)	6010	5	ND	ND	ND
Selenium (Se)	6010	10	ND	ND	ND
Zinc (Zn)	6010	5	14.3	8.85	15.5

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID:		93-0198-99QS	93-0200 & 203QS	93-0201QS
Field ID:		TR6,-24 & TR6,-30	TR7,-30 & TR7-24	TR8,-30
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Digested:		03/22/93	03/22/93	03/22/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Method	Reporting Limits	Results	Results	Results
Silver (Ag)	6010	1	ND	ND	ND
Arsenic (As)	6010	5	ND	ND	ND
Cadmium (Cd)	6010	1	ND	ND	ND
Mercury (Hg)	7470	0.1	ND	ND	0.03
Nickel (Ni)	6010	5	44.1	47.2	44.6
Lead (Pb)	6010	5	ND	ND	ND
Selenium (Se)	6010	10	ND	ND	ND
Zinc (Zn)	6010	5	18.8	17.6	19.7

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID:		93-0202QS	93-0209QS	93-0210QS
Field ID:		TR9,-30	HOLE 6	HOLE 7
Sample Received:		03/16/93	03/16/93	03/16/93
Sample Digested:		03/22/93	03/22/93	03/22/93
Sample Analyzed:		03/30/93	03/30/93	03/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Method	Reporting Limits	Results	Results	Results
Silver (Ag)	6010	1	ND	ND	ND
Arsenic (As)	6010	5	ND	ND	ND
Cadmium (Cd)	6010	1	ND	ND	ND
Mercury (Hg)	7470	0.1	ND	ND	ND
Nickel (Ni)	6010	5	50.6	25.8	33.7
Lead (Pb)	6010	5	ND	ND	ND
Selenium (Se)	6010	10	ND	ND	ND
Zinc (Zn)	6010	5	16.8	10.5	15.5

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID:		93-0211QS	93-0212QS	93-0213QS
Field ID:		HOLE 8	HOLE 9	HOLE 10
Sample Received:		3/16/93	3/16/93	3/16/93
Sample Digested:		3/22/93	3/22/93	3/22/93
Sample Analyzed:		3/30/93	3/30/93	3/30/93
Dilution Factor:		1	1	1
Units:		mg/kg	mg/kg	mg/kg
Parameter	Method	Reporting Limits	Results	Results	Results
Silver (Ag)	6010	1	ND	ND	ND
Arsenic (As)	6010	5	ND	ND	ND
Cadmium (Cd)	6010	1	ND	ND	ND
Mercury (Hg)	7470	0.1	0.07	0.05	ND
Nickel (Ni)	6010	5	17.1	60.5	46.6
Lead (Pb)	6010	5	ND	ND	ND
Selenium (Se)	6010	10	ND	ND	ND
Zinc (Zn)	6010	5	6.73	19.1	17.9

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID:		93-0214QS	93-0214QS DUP
Field ID:		HOLE 11	HOLE 11
Sample Received:		3/16/93	3/16/93
Sample Digested:		3/22/93	3/22/93
Sample Analyzed:		3/30/93	3/30/93
Dilution Factor:		1	1
Units:		mg/kg	mg/kg
Parameter	Method	Reporting Limits	Results	Results
Silver (Ag)	6010	1	ND	ND
Arsenic (As)	6010	5	ND	ND
Cadmium (Cd)	6010	1	ND	ND
Mercury (Hg)	7470	0.1	0.02	-
Nickel (Ni)	6010	5	23.6	23.5
Lead (Pb)	6010	5	ND	ND
Selenium (Se)	6010	10	ND	ND
Zinc (Zn)	6010	5	11.5	12.9

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470

COE Sample ID: METHOD BLANK
Sample Analyzed: 03/30/93
Units: mg/l

Parameter	Method	Reporting Limits	Results
Silver (Ag)	6010	0.01	ND
Aluminum (Al)	6010	0.1	ND
Arsenic (As)	6010	0.05	ND
Boron (B)	6010	0.1	ND
Barium (Ba)	6010	0.05	ND
Beryllium (Be)	6010	0.05	ND
Calcium (Ca)	6010	0.1	ND
Cadmium (Cd)	6010	0.01	ND
Cobalt (Co)	6010	0.05	ND
Chromium (Cr)	6010	0.1	ND
Copper (Cu)	6010	0.01	ND
Iron (Fe)	6010	0.01	ND
Mercury (Hg)	7470	0.001	ND
Potassium (K)	6010	5	ND
Magnesium (Mg)	6010	0.01	ND
Manganese (Mn)	6010	0.01	ND
Molybdenum (Mo)	6010	0.01	ND
Sodium (Na)	6010	1	ND
Nickel (Ni)	6010	0.05	ND
Lead (Pb)	6010	0.05	ND
Antimony (Sb)	6010	0.05	ND
Selenium (Se)	6010	0.1	ND
Silicon (Si)	6010	0.05	ND
Thallium (Tl)	6010	0.2	ND
Vanadium (V)	6010	0.01	ND
Zinc (Zn)	6010	0.05	ND

Analyst: Teri Davis

Manager:

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SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
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EPA METHOD: 6010/7060/7470 - QUALITY CONTROL DATA

COE QC Sample ID: 93-0214QS
Units: mg/kg

Parameter	Method	Reporting Limits	LCS % Rec	Blank	Spike Conc	Spike % Rec	Spike Dup % Rec	RPD
Silver (Ag)	6010	1	93	ND	10 PPM	100	98	2
Arsenic (As)	6010	5	117	ND	10 PPM	106	105	1
Cadmium (Cd)	6010	1	109	ND	10 PPM	104	102	2
Mercury (Hg)	7470	0.1	94	ND	0.5	92	95	3
Nickel (Ni)	6010	5	111	ND	10 PPM	106	105	1
Lead (Pb)	6010	5	112	ND	10 PPM	105	103	2
Selenium (Se)	6010	10	114	ND	10 PPM	106	104	2
Zinc (Zn)	6010	5	110	ND	10 PPM	104	103	1

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Analyst: Teri Davis

QC Manager:

SOUTH PACIFIC DIVISION LABORATORY

Client Name: CESPL
Project Name: Morro Bay
Date Collected: 03/16/93
Reference: Pending

Date Reported: 04/01/93
Page: 24

EPA METHOD: 6010/7060/7470 - CONTROL LIMITS

CONTROL LIMITS

Parameter	EPA Method	Method Blank	LCS % Rec	Spike % Rec
Silver (Ag)	6010	ND	80-120	70-120
Arsenic (As)	6010	ND	94-112	70-120
Cadmium (Cd)	6010	ND	95-101	70-120
Mercury (Hg)	7470	ND	80-120	80-120
Nickel (Ni)	6010	ND	96-112	70-120
Lead (Pb)	6010	ND	93-111	70-120
Selenium (Se)	6010	ND	90-108	70-120
Zinc (Zn)	6010	ND	95-105	70-120

Analyst: Teri Davis

Manager:

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DEPARTMENT OF THE ARMY
South Pacific Division, Corps of Engineers
Division Laboratory
Sausalito, California

PAC. ENV.
DUE 4-7-93

CHAIN OF CUSTODY RECORD

PROJECT NAME: MORRO BAY HARBOR

SAMPLERS: (signature)

LAB ID	DATE	TIME	COMP.	GRAB	FIELD IDENTIFICATION	NO. OF CONTAINERS	TOC (9060)	TOTAL SULFIDES (PLUMB 1981)	ORGANOTINS					REMARKS
93-0176 aS to 93-0179 aS	3-8-93				TR5 -6 TO +12 MLLW	1	X	X						
93-0180 aS to 93-0183 aS					TR6 -6 TO +12 MLLW	1	X	X						ORGANOTINS
93-0184 aS to 93-0187 aS					TR7 -6 TO +12 MLLW	1	X	X						MONO-, DI-, TRI-,
93-0188 aS to 93-0191 aS					TR8 -6 TO +12 MLLW	1	X	X						TETRABUTYLTIN
93-0192 aS to 93-0195 aS					TR9 -6 TO +12 MLLW	1	X	X						
93-0196 aS & 93-0197 aS	3-11-93				TR5 -24 & -30	1	X	X						
93-0198 aS & 93-0199 aS					TR6 -24 & -30	1	X	X						
93-0203 aS & 93-0200 aS					TR7 -24 & -30	1	X	X						NUMBERS FOR LAB ID OUT OF SEQUENCE BUT OK
93-0201 aS					TR8 -30	1	X	X						
93-0202 aS					TR9 -30	1	X	X						
93-0209 aS	3-10-93				HOLE 6	1	X	X	X					
93-0210 aS					HOLE 7	1	X	X	X					
93-0211 aS					HOLE 8	1	X	X	X					
93-0212 aS					HOLE 9	1	X	X	X					
93-0213 aS					HOLE 10	1	X	X	X					

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[signature]	3-17-93	12:22	Sonny [signature]				
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received for Lab	Date	Time	REMARKS	

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DEPARTMENT OF THE ARMY
South Pacific Division, Corps of Engineers
Division Laboratory
Sausalito, California

PAC ENV.

CHAIN OF CUSTODY RECORD

PROJECT NAME: MORRO BAY HARBOR

SAMPLERS: (signature)

LAB ID	DATE	TIME	COMP.	GRAB	FIELD IDENTIFICATION	NO. OF CONTAINERS	TOC (9060)	TOTAL SULFIDES (PLUMB 1981)	ORGANOTINS					REMARKS
93-0214 [illegible]	3-10-93				HOLE 11	1	X	X	X					

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[illegible]	3-17-93	12:22	Sonny 657				
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received for Lab	Date	Time	REMARKS	

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3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 806024, Petaluma, CA 94975-6024
Telephone: (707) 763-8245
FAX (707) 763-4065

APR 12 1993

Ted Nakamura
Kennedy/Jenks/Chilton, Lab. Division
674 Harrison St.
San Francisco, CA 94107

April 9, 1993

Customer Project: 19-MAR-93/TN
Laboratory Job: L9303197

On March 19, 1993 we received 16 sample(s) for analysis. Samples were analyzed by the following method(s):

Moisture, Percent (SM 2540)

Total Organic Carbon (SW 9060)

Deborah Fisher

Project Manager

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D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02698
Lab Id: L9303197-1

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	1400	50.	mg/Kg	1	02-APR-93	02-APR-93

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02699
Lab Id: L9303197-2

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	1700	50.	mg/Kg	1	02-APR-93	02-APR-93

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02700
Lab Id: L9303197-3

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	1500	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02701
Lab Id: L9303197-4

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	1300	50.	mg/Kg	1	02-APR-93	02-APR-93

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02702
Lab Id: L9303197-5

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	2800	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02703
Lab Id: L9303197-6

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	2900	50.	mg/Kg	1	02-APR-93	02-APR-93

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02704
Lab Id: L9303197-7

Collected: 03-MAR-93
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	2900	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02705
Lab Id: L9303197-8

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
	[illegible]	[illegible]	[illegible]	1	02-APR-93	02-APR-93

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D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02706
Lab Id: L9303197-9

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	2300	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02707
Lab Id: L9303197-10

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	3100	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02708
Lab Id: L9303197-11

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	2400	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02709
Lab Id: L9303197-12

Collected: 03-MAR-93
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						

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D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02710
Lab Id: L9303197-13

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	3700	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02711
Lab Id: L9303197-14

Collected: 03-MAR-93
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	4400	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02712
Lab Id: L9303197-15

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						
EPA 9060 - TOC	3100	50.	mg/Kg	1	02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Kennedy/Jenks/Chilton, Lab. Division
Project Id: 19-MAR-93/TN
Sample Id: DK02713
Lab Id: L9303197-16

Collected:
Received: 19-MAR-93
Reported: 09-APR-93

Parameter	Value	Limit	Units	Dilution	Extracted	Analyzed
EPA 9060 - TOC						

APR 12 1993

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG983-1

Reported: 08-APR-93

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
EPA 9060 TOC COM							
EPA 9060 TOC COM	1331.	mg/Kg				02-APR-93	02-APR-93
-		mg/Kg				02-APR-93	02-APR-93
Comments:		mg/Kg				02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG983-2

Reported: 08-APR-93

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
EPA 9060 TOC COM							
EPA 9060 TOC COM	1391.	mg/Kg	400	mg/Kg	0 %	02-APR-93	02-APR-93
-		mg/Kg				02-APR-93	02-APR-93

Comments: Samples were non-homogeneous. The matrix spike and matrix spike duplicate percent
Comments: recoveries are not significant due to the high concentration of the analyte in the
Comments: sample relative to the amount of spike added. And dry weight corrected.

APR 12 1993

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG983-3

Reported: 08-APR-93

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
EPA 9060 TOC COM							
EPA 9060 TOC COM	1806.	mg/Kg	400	mg/Kg	125 %	02-APR-93	02-APR-93
-	-						
Comments:	-						

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D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG983-4

Reported: 08-APR-93

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
EPA 9060 TOC\COM							
EPA 9060 TOC COM	ND <50	mg/Kg				02-APR-93	02-APR-93
-		mg/Kg				02-APR-93	02-APR-93
Comments:		mg/Kg				02-APR-93	02-APR-93

APR 12 1993

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG983-5

Reported: 08-APR-93

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
EPA 9060 TOC COM							
EPA 9060 TOC COM	390	mg/Kg	400	mg/Kg	96 %	02-APR-93	02-APR-93
-		mg/Kg				02-APR-93	02-APR-93
Comments:		mg/Kg				02-APR-93	02-APR-93

APR 1 8 1993

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245
FAX (707) 763-4065

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, D&M Laboratories reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (MB) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (MBS) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (MS) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources,, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated MX, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (MSD), along with the MS, is used to monitor the precision (RPD) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about D&M Laboratories in general. Please contact a Project Manager for further information.

QCRep.319216

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ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 8, 1993

Pacific Environmental Lab
674 Harrison Street
San Francisco , CA 94107

RE: Inorganic Analysis SP 301444

Sampling Site: PEL Lab No. DK02698

Sample Handling Information

ID	Sample Number	Sample Description	Sample Type	Grab or Comp.	Sampled by	Date Sampled	Date Received	Date Completed	Preservatives	Sample Container
1	SP 301444-01	DK02698	Soil	Grab		03/08/93	03/23/93	04/02/93	1	a
2	SP 301444-02	DK02699	Soil	Grab		03/08/93	03/23/93	04/02/93	1	a
3	SP 301444-03	DK02700	Soil	Grab		03/08/93	03/23/93	04/02/93	1	a
4	SP 301444-04	DK02701	Soil	Grab		03/08/93	03/23/93	04/02/93	1	a
5	SP 301444-05	DK02702	Soil	Grab		03/08/93	03/23/93	04/02/93	1	a
6	SP 301444-06	DK02703	Soil	Grab		03/11/93	03/23/93	04/02/93	1	a
7	SP 301444-07	DK02704	Soil	Grab		03/11/93	03/23/93	04/02/93	1	a
8	SP 301444-08	DK02705	Soil	Grab		03/11/93	03/23/93	04/02/93	1	a
9	SP 301444-09	DK02706	Soil	Grab		03/11/93	03/23/93	04/02/93	1	a
10	SP 301444-10	DK02707	Soil	Grab		03/11/93	03/23/93	04/02/93	1	a
11	SP 301444-11	DK02708	Soil	Grab		03/10/93	03/23/93	04/02/93	1	a
12	SP 301444-12	DK02709	Soil	Grab		03/10/93	03/23/93	04/02/93	1	a
13	SP 301444-13	DK02710	Soil	Grab		03/10/93	03/23/93	04/02/93	1	a
14	SP 301444-14	DK02711	Soil	Grab		03/10/93	03/23/93	04/02/93	1	a
15	SP 301444-15	DK02712	Soil	Grab		03/10/93	03/23/93	04/02/93	1	a
16	SP 301444-16	DK02713	Soil	Grab		03/10/93	03/23/93	04/02/93	1	a

Preservatives: (1) Cool 4°C Containers: (a) Plastic

ANALYTICAL RESULTS

ID	Sample Description	Sulfide, Total
1	DK02698	ND
2	DK02699	ND
3	DK02700	ND
	Detection Limit	10
	Units	mg/kg
	Analytical Method	376.2

ND = Not Detected at or above the Detection Limit Reported.

Table cont'd next page ...

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Corporate Office & Laboratory
[illegible] Street

Office & Laboratory
2500 Stagecoach
Stockton, CA 952
[illegible]

Field Office

April 8, 1993
Pacific Environmental Lab

RE: Inorganic Analysis SP 301444
Sampling Site: PEL Lab No. DK02698

ANALYTICAL RESULTS Cont'd.

ID	Sample Description	Sulfide, Total
4	DK02701	ND
5	DK02702	ND
6	DK02703	ND
7	DK02704	ND
8	DK02705	ND
9	DK02706	ND
10	DK02707	ND
11	DK02708	ND
12	DK02709	ND
13	DK02710	ND
14	DK02711	ND
15	DK02712	ND
16	DK02713	ND
Detection Limit		10
Units		mg/kg
Analytical Method		376.2

ND = Not Detected at or above the Detection Limit Reported.

If you have any questions please call.

Kurt Wilkinson, B.S.
Inorganic Lab Manager

KW/DHN:vt

FGL Environmental

Darrell H. Nelson, B.S.
Laboratory Director

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CALENDAR PAGE 381

ToxScan Inc.

42 Hangar Way
Watsonville, CA 95076

(408) 724-4522

FAX (408) 724-3188

APR 05 1993

Pacific Environmental Laboratory
674 Harrison Street
San Francisco, CA 94107

April 1, 1993

Attn: Ted Nakamura

MATERIAL: Soil samples received March 19, 1993
ANALYSIS COMPLETED: March 30, 1993
EXTRACTION DATE: March 29, 1993
IDENTIFICATION: None provided
TOXSCAN NUMBER: T-9598
REPORT: Quantitative chemical analysis for butyltin species by pentyl derivatization using a Gas Chromatograph with a Flame Photometric Detector is as follows, expressed as micrograms per kilogram (parts per billion) on a dry weight basis:

Sample ID	Monobutyltin	Dibutyltin	Tributyltin	Tetrabutyltin	% TPT SUR
DK-02708 (Hole 6)	ND	ND	ND	ND	59
DK-02709 (Hole 7)	ND	ND	ND	ND	54
DK-02710 (Hole 8)	ND	3	3	ND	51
DK-02711 (Hole 9)	ND	ND	ND	ND	57
DK-02712 (Hole 10)	ND	ND	1	ND	52
DK-02713 (Hole 11)	ND	ND	ND	ND	56
Blank	ND	ND	ND	ND	69
Spike (recovery as %)	2	89	78	14	52
SRM, PACS, (recovery as percent)	74	92	75	NA	61

TPT Sur - Tripropyltin surrogate recovery

ND - None detected

NA - Not available

Detection limit - 1 ppb

Philip D. Carpenter
Laboratory Director

CALENDAR PAGE 382
MINUTE PAGE 1267

ToxScan Inc.

42 Hangar Way
Watsonville, CA 95076

(408) 724-4522

FAX (408) 724-3188

Pacific Environmental Laboratory
674 Harrison Street
San Francisco, CA 94107

April 1, 1993

Attn: Ted Nakamura

MATERIAL: Soil samples received March 19, 1993
ANALYSIS COMPLETED: March 29, 1993
IDENTIFICATION: None provided
TOXSCAN NUMBER: T-9598
REPORT: Quantitative analysis for percent solids is as follows:

Sample Identification	Percent Solids
DK-02708 (Hole 6)	82
DK-02709 (Hole 7)	83
DK-02710 (Hole 8)	75
DK-02711 (Hole 9)	69
DK-02712 (Hole 10)	73
DK-02713 (Hole 11)	80

Philip D. Carpenter
Laboratory Director

DEPARTMENT OF THE ARMY
South Pacific Division, Corps of Engineers
Division Laboratory
Sausalito, California

PAC. ENV.

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CHAIN OF CUSTODY RECORD

PROJECT NAME: MORRO BAY HARBOR

SAMPLERS: (signature)

LAB ID	DATE	TIME	COMP.	GRAB	FIELD IDENTIFICATION	NO. OF CONTAINERS	TOC (9060)	TOTAL SULFIDES (PLUMB 198)	ORGANOTINS	[illegible]	[illegible]	[illegible]	REMARKS
93.0176 as to 93.0179 as	3-8-93				TR5 -6 to +12 MLLW	1	X	X	X	0269	2	X	ORGANOTINS
93.0180 as to 93.0183 as					TR6 -6 to +12 MLLW	1	X	X	X	2699	1	X	MONO-, DI-, TRI-,
93.0184 as to 93.0187 as					TR7 -6 to +12 MLLW	1	X	X	X	2700	0	X	TETRABUTYLTIN
93.0188 as to 93.0191 as					TR8 -6 to +12 MLLW	1	X	X	X	2701	1	X	
93.0192 as to 93.0195 as					TR9 -6 to +12 MLLW	1	X	X	X	2702	2	X	
93.0196 as & 93.0197 as	3-11-93				TR5 -24 & -30	1	X	X	X	2703	3	X	
93.0198 as & 93.0199 as					TR6 -24 & -30	1	X	X	X	2704	4	X	
93.0203 as & 93.0200 as					TR7 -24 & -30	1	X	X	X	2705	5	X	NUMBERS FOR LAB ID OUT OF SEQUENCE BUT OK
93.0201 as					TR8 -30	1	X	X	X	2706	6	X	
93.0202 as					TR9 -30	1	X	X	X	2707	7	X	
93.0209 as	3-10-93				HOLE 6	1	X	X	X	2708	8	X	
93.0210 as					HOLE 7	1	X	X	X	2709	9	X	
93.0211 as					HOLE 8	1	X	X	X	2710	10	X	
93.0212 as					HOLE 9	1	X	X	X	2711	11	X	
93.0213 as					HOLE 10	1	X	X	X	2712	12	X	

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[signature]	3-17-93	12:22	Sonny [signature]				
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received for Lab	Date	Time	REMARKS	
			[signature]	3/17/93	1530		

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DEPARTMENT OF THE ARMY
South Pacific Division, Corps of Engineers
Division Laboratory
Sausalito, California

PAC. ENV.

CHAIN OF CUSTODY RECORD

PROJECT NAME: MORRO BAY HARBOR

SAMPLERS: (signature)

LAB ID	DATE	TIME	COMP.	GRAB	FIELD IDENTIFICATION	NO. OF CONTAINERS	TOC (9060)	TOTAL SULFIDES (PCUMO 1981)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	REMARKS
93-0214 [illegible]	3-10-93				HOLE 11	1	X	X	[illegible]	X	D	02713			

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[signature]	3-17-93	12:22	Sonny 657				
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received for Lab	Date	Time	REMARKS	
			[signature]	3/17/93	1530		

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APPENDIX D

MAILING LIST

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
501 West Ocean Blvd. Suite 4200
Long Beach, CA 90802-4221
ATTN: ROBERT HOFFMAN

U.S. Department of the Interior
Fish and Wildlife Service
Ecological Enhancement Office
2140 Eastman Ave. Suite 100
Ventura, CA 93003
ATTN: NAOMI MITCHELL

Environmental Protection Agency, Region IX
75 Hawthorne St.
San Francisco, CA 94105
ATTN: JOHN AMDUR

Commander
11th Coast Guard District
400 Ocean Gate Blvd.
Long Beach, CA 90822-2399
ATTN: LT. PETE BARNETT

Department of the Navy
Defense Fuel Supply Point
3300 Panorama Drive
Morro Bay, CA 93442

U.S. Army Corps of Engineers
South Pacific Division
630 Sansome St. Room 720
San Francisco, CA 94111-2206

California Department of Fish and Game
Marine Resources
330 Goldenshore Suite 50
Long Beach, CA 90802
ATTN: DICK NITSOS

California Department of Fish and Game
213 Beach
Morro Bay, California 93442
ATTN: BOB HARDY

Executive Officer
Regional Water Quality Control Board
Central Coast Region
81 Higuera St. Suite 200
San Luis Obispo, CA 93401-5427
ATTN: JESSIE NIGHSWONGER

California Coastal Commission
45 Fremont St. Suite 2000
San Francisco, CA 94105
ATTN: JAMES RAIVES

State of California
Department of Parks and Recreation
3220 South Higuera Street, Suite 311
San Luis Obispo, CA 93401
ATTN: VINCE CICERO; DAVID SEARS

State Lands Commission
100 Howe Ave. Suite 100 South
Sacramento, CA 95825
ATTN: BETTY EUBANKS

The Resources Agency of California
1416 Ninth Street
Sacramento, CA 95814

State Clearing House
1400 Tenth Street, Room 121
Sacramento, CA 95814

Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

California Department of Boating & Waterways
1629 S Street
Sacramento, CA 95814

State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001

Morro Bay State Park
Museum of Natural History

Morro Bay, CA 93442
ATTN: RANGER

Air Pollution Control District
San Luis Obispo County
2156 Sierra Way, Suite B
San Luis Obispo, CA 93401
ATTN: LARRY ALLEN

Director
Department of Parks and Beaches
County of San Luis Obispo
1009 Monterey
San Luis Obispo, CA 93408

Environmental Coordinator
San Luis Obispo County Administrative Ofc
County Government Center
San Luis Obispo, CA 93408

Director, Planning Department
County of San Luis Obispo
County Government Center
San Luis Obispo, CA 93408

Librarian
City-County Library
County of San Luis Obispo
1034 Bishop Street
San Luis Obispo, CA 93408

City Engineer
City of Morro Bay
695 Harbor
Morro Bay, CA 93442

Director of Public Works
City of Morro Bay
695 Harbor
Morro Bay, CA 93442

Director of Planning
City of Morro Bay
595 Harbor
Morro Bay, CA 93442

Morro Bay Chamber of Commerce
895 Napa, Suite A1
P.O. Box 876
Morro Bay, CA 93442

Citizen's Advisory Association
of San Luis Obispo County
P.O. Box 15247
San Luis Obispo, CA 93406

Civic Action League of Morro Bay
P.O. Box 245
Morro Bay, CA 93442

Morro Bay Commercial Fisherman's Association
P.O. Box 450
Morro Bay, CA 93442

Morro Bay Boat Owner's Association
P.O. Box 36
Morro Bay, CA 93442

Port San Luis Obispo Harbors District
P.O. Box 248, Pier 3
Avila Beach, CA 93424

Harbor Master
City of Morro Bay
1275 Embarcadero
Morro Bay, CA 93442

Harbor Advisory Board
City of Morro Bay
c/o Harbor Department
1275 Embarcadero
Morro Bay, CA 93442

U.C. Santa Cruz
Predatory Bird Research Group
Lower Quarry
Santa Cruz, CA 95064
ATTN: BRIAN WALTON

Point Reyes Bird Observatory
4990 Shoreline Highway
Stinson Beach, CA 94970

ATTN: GARY PAGE

Audubon Society, Morro Coast Chapter
2264 Del Norte
Los Osos, CA 93401

The Nature Conservancy
P.O. Box 15810
San Luis Obispo, CA 93406

Morro Bay Beautiful
P.O. Box 601
Morro Bay, CA 93443

Save Our Shellfish
P.O. Box 571
San Luis Obispo, CA 93406

Friends of the Estuary at Morro Bay
1261 Pasadena Dr.
Los Osos, CA 93402
ATTN: Donald S. Parham

Pacific Gas and Electric Company
1290 Embarcadero
Morro Bay, CA 93442
ATTN: PLANT MANAGER

Chevron Pipeline Company
4000 Highway 1
Morro Bay, CA 93442
ATTN: DISTRICT SUPERVISOR

Chevron Shipping Company
P.O. Box 910
San Pedro, CA 90733