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**REPORT OF  
TESTING OF SEDIMENTS COLLECTED FROM  
MARINA DEL REY HARBOR, CALIFORNIA**

**Volume 2 - APPENDICES**

**FEBRUARY 1998**

24

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**APPENDIX A**

**Sample and Analysis Plan**

**SAMPLING AND ANALYSIS PLAN  
FOR TESTING OF SEDIMENTS  
COLLECTED FROM  
MARINA DEL REY HARBOR**

Submitted to:

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## INTRODUCTION

This Sampling and Analysis Plan (SAP) follows guidelines provided in the Evaluation of Dredged Material Proposed for Ocean Disposal (Green Book; EPA/COE, 1991) and the Draft Regional Implementation Agreement (RIA) (ACOE/EPA, 1993). This SAP also incorporates information received as comments on past studies from the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (COE).

### 1.1 OVERVIEW

The U.S. Army Corps of Engineers (ACOE) plans to dredge the entrance of Marina del Rey Harbor in southern California. Existing depths range from -5 feet MLLW near the southern breakwater and -18 feet MLLW between the southern breakwater and the western breakwater.

### 1.2 SCOPE OF PROPOSED PROJECT

The area has been divided into four spatial areas (Area 3, Area 4, Area 5/6, and Area 9) as shown in Figure 1. Dredge depths are -15 feet MLLW at Areas 3 and 4, and -20 feet MLLW at Areas 5/6 and 9. Samples will be taken to -2 feet overdredge (-17 feet MLLW at Areas 3 and 4, -22 feet MLLW at Areas 5/6 and 9). The sediment from Area 5/6 will be split vertically into top and bottom samples. This will result in five samples for Tier III ocean disposal suitability testing.

**SCOPE OF WORK**

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MEC will conduct Tier III testing to determine if the sediments collected from the Marina del Rey area is suitable for ocean disposal. Tasks include the collection of sediment samples, chemical analysis, suspended particulate phase (SPP) bioassays, solid phase (SP) bioassays, and bioaccumulation tests. Testing will be performed in accordance with the Green Book (EPA/COE 1991) and the RIA for Southern California (ACOE/EPA 1993).

Biological testing will be performed by MEC Analytical Systems, Inc (MEC), Toxicity and Chemistry Division. Laboratories are located in Tiburon, Carlsbad, and San Diego, California. Analytical chemistry will be carried out by West Coast Analytical Services, Inc. (WCAS) in Santa Fe Springs, California. WCAS and MEC have conducted sediment characterization studies for numerous dredge material and contaminated sediment programs and are prepared and qualified to conduct the work described.

**2.1 SITE HISTORY**

Adjacent land uses include a small boat harbor and urban watershed drainage. Recent data indicated the presence of elevated concentrations of lead, total hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), and PCBs. In October 1997 (Toxscan 1997) the ACOE conducted bulk sediment chemistry analysis of the proposed dredged materials at the entrance of Marina del Rey. This analysis followed the Green Book testing guidelines and analyzed the sediments for all the routine chemical analytes (See Section 2.6; Table 3). The ACOE, in coordination with EPA, reviewed the results of this evaluation and identified specific contaminants of concern. The proposed bulk chemistry testing for this study focuses on those specific contaminants (Table 1).

2.2 SEDIMENT COLLECTION

Sediment sampling will be carried out by a boat-mounted vibracorer. Samples will be taken to two feet below the proposed dredge depth to allow for over dredging.

It is proposed that the area to be dredged be divided into five areas (see Figure 1 and Figure 2). The number of cores by area is presented in Table 1.

TABLE 1  
Number of Chemistry Samples by Area

AREA	DEPTH (ft.MLLW)	NUMBER OF CORES	SAMPLE COMPOSITING	CHEMICAL ANALYSIS
3	mudline to-17	2	1 Composite	Pb, pesticides, PCBs, PAHs
4	mudline to-17	5	1 Composite	Pb, PCBs, PAHs
5	-17 to -22	6 bottoms	6 discreet bottom samples	Pb, pesticides, PCBs, PAHs
6	mudline to-17	6 tops	6 discreet top samples	Pb, PAHs
9	Mudline to-17	3 tops	3 discreet top samples	PAHs
9	-17 to -22	3 bottoms	3 discreet bottom samples	PAHs
Referen ce			1 grab	Full suite (Table 3)
Audit	NA	NA	1	Pb, pesticides, PCBs, PAHs
<b>NUMBER OF CHEMISTRY SAMPLES</b>			<b>21</b>	



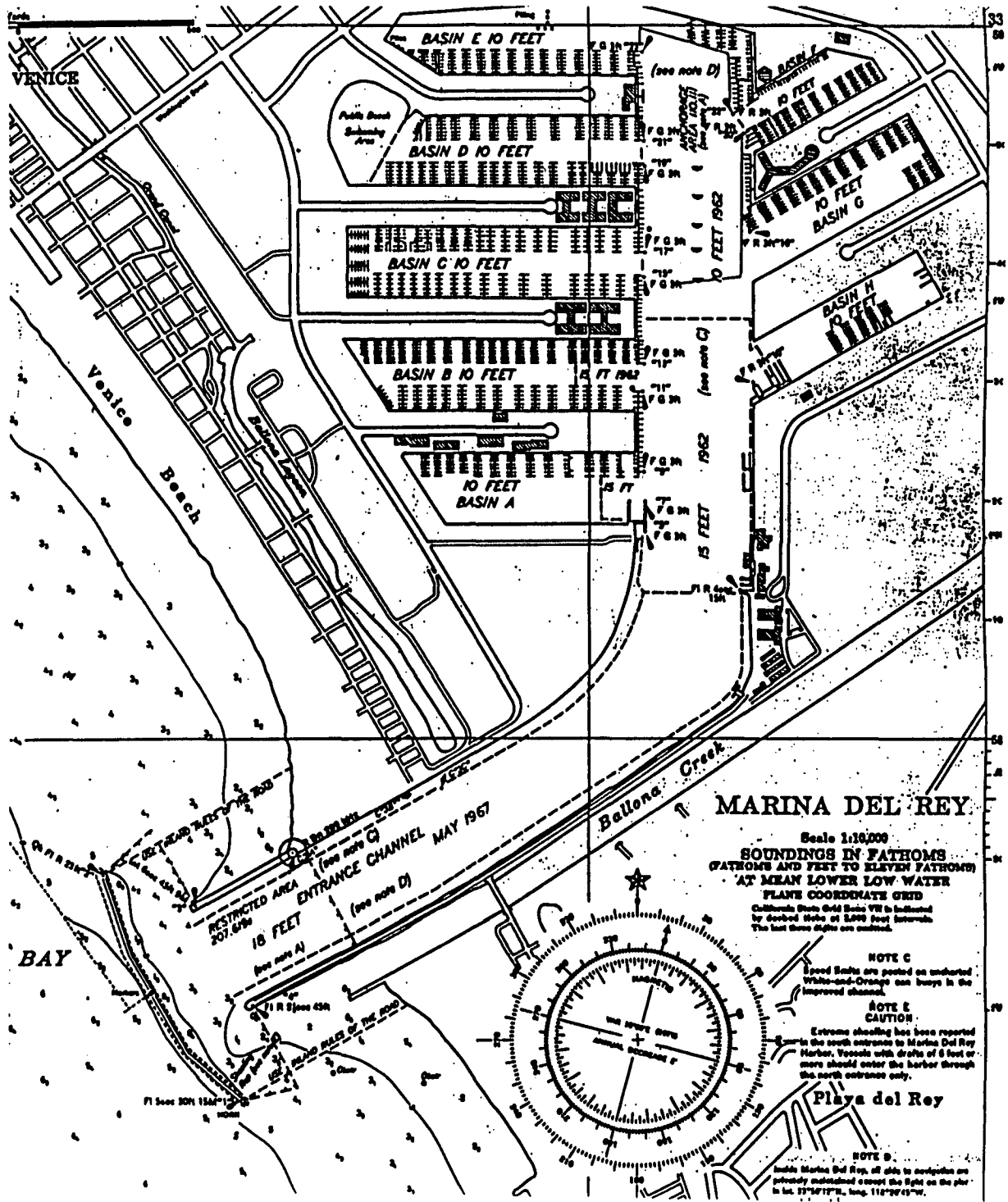


Figure 1  
Location Map Showing Entrance to Marina Del Rey

Marina del Rey, Army Corps of Engineers, Los Angeles

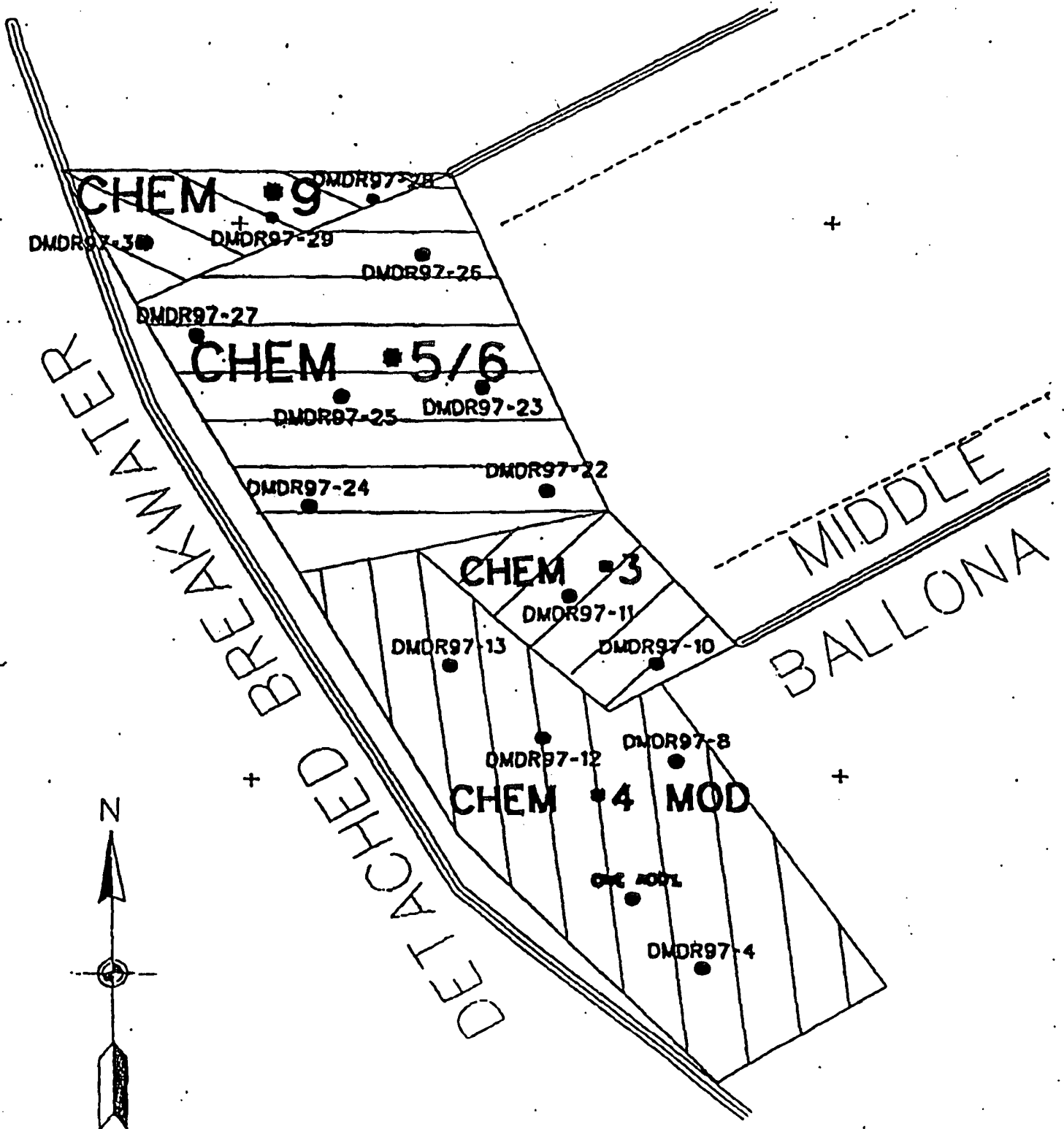


Figure 2  
Site Map Showing Core Locations

Marina del Rey, Army Corps of Engineers, Los Angeles

This strategy will result in a total of 22 analytical samples to be tested. Cores will be split into top and bottom sections at locations in Area 5/6 and 9 for chemistry analyses based on sample depth (Table 1). Cores will be split into top and bottom sections at Area 5/6 for bioassay analyses. Sediment from the surface to -17 feet MLLW will be considered the "top" sample from each split area. Sediment from below -17 feet MLLW to -22 feet MLLW will be considered the "bottom" sample from each split area. Reference sediment will be collected from the LA 2 reference site, and control sediment will be provided with the test organisms. This plan will result in 5 bioassay test samples, one reference and one control sample for analysis (Table 2).

**TABLE 2**  
Number of Toxicity Samples by Area

<b>AREA</b>	<b>DEPTH (ft.MLLW)</b>	<b>NUMBER OF CORES</b>	<b>SAMPLE COMPOSITING</b>	<b>TOXICITY TESTS</b>
3	mudline to -17	2	1 Composite	SPP,SP,Bioaccumulation
4	mudline to -17	5	1 Composite	SPP,SP,Bioaccumulation
5	-17 to -22	6 bottoms	1 Composite	SPP,SP,Bioaccumulation
6	mudline to -17	6 tops	1 Composite	SPP,SP,Bioaccumulation
9	mudline to -17	3 tops	1 Composite	SPP,SP,Bioaccumulation
Reference			1 grab	SP, Bioaccumulation
Control	NA	NA	1	SP, Bioaccumulation
<b>NUMBER OF TOXICITY SAMPLES</b>			<b>7</b>	

As each core is collected it will be examined by a qualified biologist or geologist to log the texture, odor, color and length, and to identify any evident stratification of sediments.

Each collected core section (top, bottom or entire core as detailed in Table 1) will be emptied into individual plastic bags labeled with unique sample identifications, date and time of collection and initialed.

All samples will be stored at 4°C until used, and testing will begin as soon as possible (within two weeks) from the end of collection. The sediments will be thoroughly homogenized to a uniform color and consistency at the laboratory using a stainless steel mixing apparatus. Sub-samples for chemical analysis will be taken from the homogenized sample and placed into clean glass jars with Teflon lined lids. Sediment from each sample (both top and bottom sections as appropriate), as well as each composite used in testing, will be archived at 4° C to be used if further definition of chemical contamination is required.

Seawater used in this study program, including the flow-through studies, will come from either Scripps Institute of Oceanography at La Jolla, San Diego Bay, or from Bodega Bay Marine Laboratory in Bodega Bay, California. These seawater sources have been used successfully on similar bioassay testing programs by MEC. Extensive reference toxicity testing on a wide variety of test species has shown that there is no significant potential for toxicity or bioaccumulation from these water supplies. Good survival of organisms in control sediment has been achieved consistently in previous dredge material testing conducted at these laboratories.

### 2.3 LIQUID/SUSPENDED PHASE TESTING

Suspended-particulate phase (SPP) bioassay tests will be performed to estimate potential impact of ocean disposal on organisms that live in the water column. The SPP test will be performed according to the Green Book (EPA/COE, 1991) using a 4:1 dilution of seawater to test sediment. Three species will be tested, *Mysidopsis bahia* (mysid shrimp),

*Atherinops affinis* (topsmelt) and a bivalve larvae (either *Mytilus edulis* or *Crassostrea gigas*). For the Mysid and the fish, the SPP will be tested at 10, 50 and 100 percent levels against a seawater control under static conditions. Ten animals will be used per replicate with five replicates being tested. The test will be run for 96 hours. If mortality in the control exceeds 10 percent, the test will be rerun. The bivalve larvae test will be run on the test sediment elutriates at 1, 10, 50 and 100 percent dilutions. The test (ASTM, 1992a) will be run for 48 hours, or longer if necessary, for the development of the bivalve larvae to the "D-hinge" stage. The ASTM method uses the test criterion of 70 percent survival of normally developed D-hinge larvae in the control to determine test acceptability. At the termination of the study, survival will be compared between the control and test groups to determine if significant mortality exists.

If mortality in excess of 50 percent occurs in the 100% concentration of any of any of the SPP tests, a calculation of the Limiting Permissible Concentration (LPC) will be carried out. The LPC will be compared to estimated exposure concentrations generated from the mixing zone models used in the Green Book (EPA/COE, 1991). Seawater used in all testing will meet EPA water quality criteria. Daily water quality monitoring of test chambers will be carried out for pH, dissolved oxygen, salinity, and temperature. Ammonia will be analyzed at the start and end of the test for the 100% concentration. Measurements in other concentrations will only be performed if the readings in the 100% concentration are greater than 4 ppm NH<sub>3</sub>. To evaluate the relative sensitivity of the organisms, reference toxicity tests will be performed using standard reference toxicants (Lee, 1980).

#### 2.4 SOLID PHASE TESTING

Solid phase bioassays will be performed to estimate the potential impact of ocean disposal on benthic organisms that attempt to re-colonize the area. Dredge material will be tested in 10-day solid phase tests using three species, the mysid shrimp *Mysidopsis bahia*, the polychaete worm *Neanthys arenaceodentata* and an amphipod (either *Ampelisca abdita* or *Rhepoxynius abronius*). Prior to testing, reference, test, and control

sediments will be sieved to remove organisms. This will be accomplished by press sieving the sediments through a 2.0 mm mesh screen using only the water available in the sediment sample. Each sediment type (test, reference and control) will be run with five replicates. Control sediment will be those sediments in which the organisms have been collected.

Ammonia, pH, and salinity will be tested at the beginning and end of the tests. If there is evidence that ammonia is present at toxicologically important levels prior to the initiation of testing, ammonia in the interstitial water will be reduced to below 20 mg/liter before addition of test organisms.

Testing will be carried out in 1-liter glass test chambers for the amphipod and the worm, and 2 liter polyethylene containers for the mysid shrimp. A single 2-cm layer of test, reference or control material will be placed into each test chamber. Static renewal of the overlying water will be performed every other day. Initial stocking densities in each replicate will be 10 per test chamber for the Neanthes, and 20 for the mysid and the amphipod. Aeration will be provided through glass or plastic pipettes, with care taken to avoid disturbing the sediment. Water quality measurements will be taken in one chamber from each test treatment daily and will include pH, salinity, temperature and dissolved oxygen. Ammonia will be measured at the start and finish of the test for each site. All instruments used will be calibrated and logged daily. After 10 days, the animals will be carefully sieved out to determine if significant mortality occurred in the test using methods described in the Green Book (EPA/COE, 1991). If control survival is below 90 percent for either species, the test will be rerun. The amphipod solid phase bioassay will be run using the ASTM (1992b) methods. To evaluate the relative sensitivity of the organisms, reference toxicity tests will be performed using standard reference toxicants (Lee, 1980).

## 2.5 BIOACCUMULATION TESTING

Assessment of bioaccumulation potential will be carried out using a polychaete worm (either *Nereis virens* or *Nephtys caicoides*), and a bivalve mollusc (*Macoma nasuta*) over a 28-day test period. The test will be initiated using test reference, control, and sediments in the same manner as the 10-day test. A minimum of ten *Nereis* or 75 *Nephtys*, and twenty *Macoma* will be placed in each replicate test chamber. The test chambers will be maintained under flow-through conditions, and daily water quality measurements will be taken on each chamber as specified in the 10-day test. On Day 28, the sediments will be sieved to remove the worms and clams. The surviving animals will be placed in clean flow-through aquaria to depurate for 24 hours and then sent to the chemistry laboratory for analysis. If greater than 25 percent mortality is encountered in reference or test sediments, discussion will ensue regarding reduced tissue volume for chemical analysis (which could result in the necessity of increased chemical detection limits).

The analysis of bioaccumulation will be made by statistically comparing tissue levels from the reference group to those of the test group for each species. The analysis will be conducted using the Analysis of Variance or non-parametric analysis, depending upon the homogeneity of variances, and will be carried out using methods in the Green Book (EPA/COE, 1991).

## 2.6 CHEMICAL ANALYSES OF SEDIMENTS AND TISSUE

The objectives of the sediment chemistry analysis are to characterize the site and provide a selection of analytical targets for the bioaccumulation tests. The control, test and reference sediments will be tested analytically for the list of chemicals shown in Table 1. The methods and target detection limits for sediments (based on dry weight) are presented in Table 3. To minimize salt interference, the following analyses will be performed as recommended by the U.S. EPA/COE (1991). The analysis for priority pollutant metals will involve a nitric acid digestion of the sample and subsequent analysis of the acid extract using Inductively Coupled Plasma (ICP) with mass detector (EPA

method 200.8). Where necessary, the analyses of single elements may also be performed using Atomic Absorption with graphite furnace (EPA 7000 series). The analysis for semi-volatile pollutants (PAHs, phthalates and phenols) will be performed using gas chromatography/mass spectrometry with selective monitoring (GC/MS SIM) following serial extraction with methylene chloride and alumina and gel permeation column cleanup procedures. PCBs and chlorinated pesticides will be run using the EPA method 8080. The PCBs will be identified to the Aroclor level initially. The analysis of organic tin will be carried out using methods described in Unger (1986). Dioxin and Furans will be analyzed by EPA Method 8290. All procedural blanks, reagent blanks, and standard reference materials will be analyzed, and results incorporated into a discussion of the analytical quality assurance and control parameters. All analytical results will be reported in dry weight units.

Two essential chemical analyses, total sulfides (EPA 9030) and ammonia, will also be done. Porewater obtained by centrifugation will be analyzed for ammonia, pH and salinity using the standard laboratory water quality meters (Orion SA-720, Beckman Ø10 and Orion 140, respectively). Ammonia will also be measured in the bioassay waters at the start and end of each test (elutriates or water overlying sediment as described in sections 2.3-2.5).

Tissue analysis will be performed to determine the availability of sediment contaminants to be taken up into the organisms. The tissue from bioaccumulation organisms will be analyzed according to GreenBook (ACOE/EPA 1991) guidelines and tissue analysis (including pre-exposure samples) will be carried out for those constituents listed in Table 3 and to the stated target detection limits (based on dry weight). Tissue composites from each replicate will be analyzed individually.



**TABLE 3  
TARGET DETECTION LIMITS**

Constituent	Method (EPA)	Sediment	Tissue
<b>Metals (mg/kg)</b>	6010/200.8		
Arsenic (As)		0.1	0.1
Cadmium (Cd)		0.1	0.1
Chromium (Cr)		0.1	0.1
Copper (Cu)		0.1	0.1
Lead (Pb)		0.1	0.1
Mercury (Hg)	7471	0.1	0.1
Nickel (Ni)		0.02	0.02
Selenium (Se)		0.1	0.1
Silver (Ag)		0.1	0.1
Zinc (Zn)		0.1	0.1
<b>TRPH (mg/kg)</b>	418.1	5	-----
<b>PCBs (mg/kg)</b>	8080M		
Aroclor1016		0.001	0.001
Aroclor1221		0.001	0.001
Aroclor1232		0.001	0.001
Aroclor1242		0.001	0.001
Aroclor1248		0.001	0.001
Aroclor1254		0.001	0.001
Aroclor1260		0.001	0.001
<b>Pesticides (mg/kg)</b>	8080M		
DDT and Derivatives		0.02	0.02
4,4'- DDE		0.02	0.02
Aldrin		0.02	0.02
Chlordane and Derivatives		0.02	0.02
delta BHC		0.02	0.02
Dieldrin		0.02	0.02
Endosulfan I		0.02	0.02
Endosulfan II		0.02	0.02
Endosulfan Sulfate		0.02	0.02
Endrin		0.02	0.02
Endrin Aldehyde		0.02	0.02
Hexachlorocyclohexane Isomers		0.02	0.02
Toxaphene		0.03	0.03
<b>Phenols (mg/kg)</b>	8080M		
2,4-Dimethylphenol		0.02-0.1	0.02-0.1
2,4-Dichlorophenol		0.02-0.1	0.02-0.1

Constituent	Method (EPA)	Sediment	Tissue
Pentachlorophenol		0.02-0.1	0.02-0.1
Total phenols		0.02-0.1	0.02-0.1
<b>Phthalates (µg/kg)</b>	8270M		
Total	(GC/MS SIM)	0.01	0.01
<b>PAHs (mg/kg)</b>	8270M		
Naphthalene	(GC/MS SIM)	0.02	0.02
Acenaphthylene		0.02	0.02
Acenaphthene		0.02	0.02
Fluorene		0.02	0.02
Phenanthrene		0.02	0.02
Anthracene		0.02	0.02
Fluoranthene		0.02	0.02
Pyrene		0.02	0.02
Chrysene		0.02	0.02
Benzo (A) Anthracene		0.02	0.02
Benzo (K) Fluoranthene		0.02	0.02
Benzo (B) Fluoranthene		0.02	0.02
Benzo (A) Pyrene		0.02	0.02
Ideno (1,2,3-CD) Pyrene		0.02	0.02
Dibenzo (A,H) Anthracene		0.02	0.02
Benzo (G,H,I) Perylen		0.02	0.02
Total PAHs		0.02	0.02
<b>Organotin (mg/kg)</b>	Unger (1986)		
Monobutyltin		0.001	0.001
Dibutyltin		0.001	0.001
Tributyltin		0.001	0.001

## 3.0

## QUALITY ASSURANCE OBJECTIVES

Quality assurance procedures to be used for sediment testing are consistent with methods described in the Green Book (EPA/COE, 1991). For trace analysis, the procedures include documentation of the following criteria for each sample matrix type: analytical reproducibility, analytical detection limits, recovery of in situ metals and organics and sample chain of custody documentation.

### 3.1 BIOASSAY QA/QC

The quality assurance objectives for toxicity testing conducted by MEC Analytical Systems Bioassay Division are those detailed in U.S. EPA (1985a, 1985b) and the Green Book (EPA/COE, 1991). These objectives for accuracy and precision involve all aspects of the testing process, including: (1) water and sediment sampling and handling; (2) source and condition of test organisms; (3) condition of equipment; (4) test conditions; (5) instrument calibration; (6) use of reference toxicants; (7) record keeping; and (8) data evaluation.

A reference toxicant will be tested on each test organism during the test period to establish the validity of the toxicity data. For those species with substantive reference toxicant data available, the LC50 and EC50 should fall within two standard deviations of the laboratory mean. The majority of the species in this testing program do not have reference toxicant data available and the data will be provided for informational purposes. Water quality measurements will be monitored to ensure they fall within prescribed limits, and corrective actions (EPA recommended) will be taken if necessary. All limits established for this program meet or exceed those recommended by EPA.

The methods employed in every phase of the toxicity testing program are detailed in MEC's Laboratory Standard Operating Procedures (SOPs). These SOPs have been audited and approved by an independent, EPA recommended laboratory and placed in the QA files as well as laboratory files. All MEC laboratory staff receive regular documented training in all SOPs and test methods.

Finally, all data collected and produced as a result of analysis will be recorded on approved data sheets which will become the permanent data record for the program.

If any aspect of a test deviates from protocol, the test will be evaluated to determine whether it is valid according to the regulatory agency to which it will be submitted. If it is determined to be invalid, the client will be notified and the test will be rerun, if

necessary, at MEC's expense.

**Data Analysis, Validation and Reporting.** All acute and chronic toxicity tests are performed according to protocols and conditions listed in MEC SOPs. Raw data and study records are checked to ensure that required test conditions are within specifications cited in the SOPs. Major deviations from protocol must be approved by both the client and the quality control manager. Unforeseen circumstances that may affect the integrity of the study are reported with the test results. The data, analysis and report are also reviewed for accuracy by the Quality Control Manager.

**Internal Quality Control.** MEC's quality control staff performs periodic audits to ensure that test conditions, data collection and test procedures are conducted according to Green Book protocol and MEC SOPs. Animal receipt and maintenance log books are used to record the source and health of organisms. Reference toxicant tests act as an internal check on organism health and performance.

**Preventive Maintenance.** Key analytical equipment are maintained routinely to ensure that equipment failure or changes in operational parameters can be prevented. Procedures used to maintain equipment are included in the Maintenance and Calibration Log.

Replacement parts are available for commonly expected repairs and replacement. Spare parts include pH electrodes, dissolved oxygen (DO) probe membrane replacement kits, calibrated thermometers, pipettes, graduated cylinders, etc.

Stock standard solutions are stored in at least two separate containers, so that a fresh standard solution is available in case the stock standard currently in use becomes contaminated. Working standards which are in frequent contact with electrodes, pipettes, etc., are kept in separate working bottles to reduce chances of contamination of stock standards.

**Procedures Used to Assess Data Precision Accuracy and Completeness.** The precision of the LC50 determinations will be shown by calculating the 95 percent confidence intervals. The computer program used to analyze the data is designed in such a way that regardless of the data characteristics, it will calculate an LC50 and corresponding confidence intervals as long as sufficient mortality is observed. Accuracy cannot be determined as a true value but rather must be determined relative to a reference value of the substance being measured.

The precision of all the analytical instruments (DO meter, pH meter, balances, etc.) is assumed to be that stipulated by the manufacturer. The accuracy of the measurements is assessed through calibration each time the instruments are used.

**Sample Storage and Tracking.** Sample chain-of-custody sheets, sample receipt logs, sample holding, and sample labeling procedures are audited periodically by MEC's quality control staff. Sample storage conditions and holding times are adhered to strictly. Samples are analyzed when necessary.

### **3.2 CHEMISTRY/CHEMICAL ANALYSIS QA/QC**

The quality assurance objectives for chemical analysis conducted by Columbia Analytical Sciences (CAS) are detailed in their Laboratory QA Manual. These objectives for accuracy and precision involve all aspects of the testing process including:

- Methods and SOPs;
- Calibration Methods and Frequency;
- Data Analysis, Validation and Reporting;
- Internal Quality Control;
- Preventive Maintenance; and
- Procedures to Assure Data Accuracy and Completeness.

**Laboratory QC Samples.** Environmental sample matrix spike and matrix spike duplicate analysis will be performed at a rate of 5%. In the absence of adequate sample quantity to perform matrix spiking for all matrix types, either the imaginary matrix as described in SW-846 or a laboratory water will be used for preparing matrix spikes. Matrix spikes are an environmental sample which is split into three separate aliquots and one aliquot is analyzed free from matrix spike introduction. A known concentration of the analyte of interest is added to the other two aliquots prior to sample preparation and analysis. Both percent recovery and relative percent difference are reported for matrix spikes/matrix spike duplicates. Spike data can provide an indication of matrix bias or interference on analyte recovery. Duplicate data can provide an indication of laboratory precision.

Method or reagent blanks will be analyzed at a frequency of 5% or for every analytical batch, whichever is greater.

Results of all laboratory QC analyses will be reported with the final data. Any QC samples that fail to meet the QC criteria specified in the methodology or in this SAP will be identified and the corresponding data appropriately qualified in the final report.

An audit or reference sample will be included with the chemical analyses. This will be an EPA, NABS, or other EPA-acceptable source material and will be analyzed and reported in the quality control report. The source material will be of a similar matrix as the test samples and will include analyte concentrations in a similar range.

All Quality Assurance/Quality Control records for the various testing programs will be kept on file for review by regulatory agency personnel. It is also anticipated that COE, RWQCB, and/or EPA personnel will be present during sampling and may visit the laboratory during testing.

### 3.3 REPORT

The field sampling and analytical report will consist of logs of individual cores, a brief discussion of field and laboratory methods, and a summary of the results of the testing program. Appendices of the chemical analysis and quality control and assurance data will be provided. The report will be in a form appropriate for submittal to the Los Angeles District Division COE, and Region 9 of the EPA for their review and approval.

4.0

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**APPENDIX B**

**Core Logs**

Area	Station ID	Latitude (NAD 83)	Longitude (NAD 83)	Depth (MLLW)	Sampling Depth	Target Core Length (ft)	Feet of Core, Top	Feet of Core, Bottom	Chemistry
(6) X5	X 11	33 57.621	118 27.649	-13.5	-17	-3.5			Composite
(X3) 10/11/10/11	X	33 57.641	118 27.677	-16	-17	-1	4.5		
(X2)	X	33 57.531	118 27.635	-16.4	-17	-0.6			Composite
(X2)	X	33 57.615	118 27.659	-19	-17	2			
Rebated	X	33 57.599	118 27.687	-8.5	-17	-8.5			
(X2)	X	33 57.621	118 27.717	-13	-17	-4			
(X2)	X	33 57.592	118 27.643	-7	-17	-10			
						Total 4	21.1		
5/6	X	33 57.672	118 27.684	-16	-22	-6	1	5	to-17 & -17 to -22
	X	33 57.702	118 27.705	-15	-22	-7	2	5	to-17 & -17 to -22
(X2)	X	33 57.667	118 27.762	-10.5	-22	-11.5	6.5	5	to-17 & -17 to -22
	X	33 57.699	118 27.752	-14.5	-22	-7.5	2.5	5	to-17 & -17 to -22
	X	33 57.740	118 27.724	-8	-22	-14	9	5	to-17 & -17 to -22
	X	33 57.716	118 27.798	-12.5	-22	-9.5	4.5	5	to-17 & -17 to -22
						Total 6 and 5	25.5	30	
9	X	33 57.743	118 27.815	-13.5	-22	-8.5	3.5	5	to-17 & -17 to -22
	X	33 57.757	118 27.741	-6.5	-22	-15.5	10.5	5	to-17 & -17 to -22
	X	33 57.751	118 27.774	-16.5	-22	-5.5	1	5	to-17 & -17 to -22
						Total Top and Bottom 9	15	15	

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97		Project: ACOE Marina del Rey			Recorder: PLK	
Station ID: DMDR-97-4				Attempt 1 of 1		
Latitude: 33° 37' 57" S 531		Longitude: 118° 27' 63" W		Nav Datum: WGS 84		
Time: 1244	Depth (ft): 16.0	Tide (ft): -0.3	Dep - Tide = 16.3	Depth MLLW (ft): 16.3		
SAP Dep: 17.0	SAP-MLLW: 17.0-16.3		Target Core Length: 0.7	Final Core Length (ft): 0.9		
Start Tape (ft): N/A		Finish Tape (ft): N/A		Finish-Start Penetration (ft): N/A		
Pen Depth (ft)	Retr Depth (ft)	# GRAB - Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1					
2	2	#1 -				
3	3	Black/sy	none	Sand silt	#1	
4	4					
5	5	#2				
6	6	Black/sy	none	Sand silt	#2	1/2 Peat/algae
7	7					
8	8	#3				
9	9	Black/sy	none	Sand silt.	#3	
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes: Collected w/ Van Veen: Penetration < 1.5'						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97		Project: ACOE Marina del Rey			Recorder: RL	
Station ID: DMDR-97-0A-1 <sup>Additional New Core</sup>				Attempt 1 of 2		
Latitude: 33° 37' 57.575" <sup>7195</sup>		Longitude: 118° 27' 629"		Nav Datum: WGS 84		
Time: 1000	Depth (ft): 15.5	Tide (ft): 5.5	Dep - Tide = 10.0	Depth MLLW (ft): 10.0		
SAP Dep: 17 <sup>1000</sup>	SAP-MLLW = 17-10	Target Core Length: 7.0		Final Core Length (ft): 3.0		
Start Tape (ft) 0		Finish Tape (ft) 10.0		Finish-Start = Penetration (ft) 10.0		
Pen. Depth (ft)	Retrieve Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Black ↓	Hrs ↓	Trash/organic ↓		
2	2			debris w/ sand ↓		
3	3					Refusal @ 3.0 ft
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes: Trash plug in core, pushed through 10' of sand w/o recovery.						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97 Project: ACOE Marina del Rey Recorder: PK

Station ID: DMDR-97-0A-2 Attempt 2 of 2

Latitude: 33 37 57 575 Longitude: 118 27 629 Nav Datum: WGS 84

Time: 1024 Depth (ft): 14.5 Tide (ft): 4.5 Dep - Tide = 10.0 Depth MLLW (ft): 10.0

SAP Dep. 17 SAP-MLLW = 17 - 10 = 7 Target Core Length: 7.0 Final Core Length (ft): 7.0

Start Tape (ft) 0 Finish Tape (ft) 8.0 Finish-Start = 8.0 Penetration (ft)

Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	<u>Dark</u>	<u>H<sub>2</sub>S</u>	<u>organic debris/silt</u>		
2	2			<u>sand</u>		
3	3					
4	4			<u>trash/aluminum</u>		
5	5					
6	6			<u>sand</u>		
7	7					
8	8					<u>Discol</u>
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					

Notes:

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <b>12-13-97</b>		Project: <b>ACOE Marina del Rey</b>			Recorder: <b>PK</b>	
Station ID: <b>DMDR-97-8A</b>				Attempt <b>1</b> of <b>2</b>		
Latitude: <b>33 57 592</b>		Longitude: <b>118 27 642</b>		Nav Datum: <b>WGS 84</b>		
Time: <b>0741</b>	Depth (ft): <b>13.0</b>	Tide (ft): <b>6.3</b>	Dep - Tide = <b>6.7</b>	Depth MLLW (ft): <b>6.7</b>		
SAP Dep. <b>17</b>	SAP-MLLW <b>17 - 6.7 = 10.3</b>		Target Core Length: <b>10.3</b>	Final Core Length (ft): <b>7.0</b>		
Start Tape (ft) <b>0</b>		Finish Tape (ft) <b>12.0</b>		Finish-Start = Penetration (ft) <b>12.0</b>		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Black	H <sub>2</sub> S	Silt / trash		
2	2	↓ grey/black ↓	↓ none ↓	↓ sand w/ shell debris ↓		
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes: <b>Kept whole core no pct. Trash plus on top of core</b>						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97 Project: ACOE Marina del Rey Recorder: PK

Station ID: DMDR-97-8B Attempt 2 of 2

Latitude: 33° 37' 57" S 92° 4' Longitude: 118° 27' 64.8" W 643" Nav Datum: WGS 84

Time: 0852 Depth (ft): 2.0 Tide (ft): 6.3 Dep - Tide = 6.7 Depth MLLW (ft): 6.7

SAP Dep. 17 SAP-MLLW = 17 - 6.7 = 6.3 Target Core Length: 6.3 Final Core Length (ft): 6.3

Start Tape (ft) 0 Finish Tape (ft) 12.0 Finish-Start = Penetration (ft) 12.0

Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.	
1	1	<u>Grey/black</u>	<u>None</u>	<u>Sand</u>			
2	2			<u>w/ shells</u>			
3	3						
4	4						
5	5						
6	6						
7	7						<u>6.7</u>
8	8						
9	9						
10	10						
11	11						
12	12						
13	13						
14	14						
15	15						

Notes: Had to reposition boat due to current change

Penetration to length of barrel

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97 Project: ACOE Marina del Rey Recorder: pl

Station ID: JMOR - 97 ~~12~~ R <sup>relaxer</sup> Attempt 1 of 1

Latitude: 37 57.644 Longitude: 118 27.739 Nav Datum: WGS 84

Time: 1300 Depth (ft): 12.0 Tide (ft): 0.5 Dep - Tide = 12.0 - 0.5 = 11.5 Depth MLLW (ft): 11.5

SAP Dep. 17 SAP-MLLW = 5.5 Target Core Length: 5.5 Final Core Length (ft): 5.5

Start Tape (ft) 0 Finish Tape (ft) 7.0 Finish-Start = Penetration (ft) 7.5

Pen. Depth (ft)	Retrieve Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	black	H <sub>2</sub> S	Silt		
2	2			Sand/silt		
3	3			Organic debris		
4	4					
5	5			Sand		
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					

Notes: Station Relocated due to insufficient depth



**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <u>12-12-97</u>		Project: <u>ACOE Marina del Rey</u>			Recorder: <u>PK</u>	
Station ID: <u>Q MDR-97 - B</u>				Attempt <u>1</u> of <u>1</u>		
Latitude: <u>33 51 621</u>			Longitude: <u>118 27 716</u>		Nav Datum: <u>WGS 84</u>	
Time: <u>1639</u>	Depth (ft): <u><del>20</del> 0.5</u>	Tide (ft): <u>0.5</u>	Dep - Tide = <u>11.5</u>		Depth MLLW (ft): <u>11.5</u>	
SAP Dep: <u>17 BE</u>	SAP-MLLW = <u><del>20</del> 17-12</u>		Target Core Length: <u>5.0</u>		Final Core Length (ft): <u>5.0</u>	
Start Tape (ft) <u>0</u>		Finish Tape (ft) <u>6.0</u>		Finish-Start Penetration (ft) <u>6.0</u>		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1			<u>Silty sand</u>		
2	2	<u>Black</u>	<u>H<sub>2</sub>S</u>			
3	3			<u>Sand</u>		
4	4					
5	5					
6	6					<u>↓</u>
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97		Project: ACOE Marina del Rey			Recorder: PK	
Station ID: DMDR-97-10 A				Attempt 1 of 5		
Latitude: 35 37 57 621		Longitude: 118 27 649		Nav Datum: WGS 84		
Time: 1425	Depth (ft): <del>12.5</del>	Tide (ft): -1	Dep - Tide = <del>11.5</del> 12.0	Depth MLLW (ft): <del>12.5</del> 12.0		
SAP Dep. 17	SAP-MLLW = 13.5 = 5.5 17 - <del>12.5</del> 12.0 = 5.0	Target Core Length: 3.5	Final Core Length (ft): 3.5		Final Core Length (ft): 3.8	
Start Tape (ft) 0		Finish Tape (ft) 6.0		Finish-Start Penetration (ft) 6.0		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Black	HLS	Organic debris		
2	2		petroleum			
3	3			sand		
4	4					3.0
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes: 3 feet of trash and sediment on surface						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97 Project: ACOE Marina del Rey Recorder: PK

Station ID: DMDD-97-10B Attempt 2 of 5

Latitude: 33° 37' 57" 621 Longitude: 118° 27' 649 Nav Datum: WGS 84

Time: 14:40 Depth (ft): 12.5 Tide (ft): -1 Dep - Tide = 13.5 Depth MLLW (ft): 13.5

SAP Dep. 17 SAP-MLLW = 17 - 13.5 = 3.5 Target Core Length: 3.5 Final Core Length (ft): 3.5

Start Tape (ft) 0 Finish Tape (ft) 5 Finish-Start Penetration (ft) 5.28

Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.	
1	1	Black	H2S	Organic debris			
2	2						
3	3			sandy silt			
4	4	-----					3.5
5	5						
6	6						
7	7						
8	8						
9	9						
10	10						
11	11						
12	12						
13	13						
14	14						
15	15						

Notes:

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97		Project: ACOE Marina del Rey			Recorder: pk	
Station ID: DMDR-97-10C				Attempt 3 of 5		
Latitude: 33 27 57 621		Longitude: 118 27 649			Nav Datum: WGS 84	
Time: 1543	Depth (ft): 12.5	Tide (ft): -1	Dep - Tide = 13.5	Depth MLLW (ft): 13.5		
SAP Dep. 17	SAP-MLLW = 17 - 13.5 = 3.5		Target Core Length: 3.5	Final Core Length (ft): 1.5		
Start Tape (ft) 0		Finish Tape (ft) 7.0		Finish-Start Penetration (ft) 7.0		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	black	H <sub>2</sub> S ↓	Organic debris		
<del>2</del>	<del>2</del>					
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97		Project: ACOE Marina del Rey			Recorder: PK	
Station ID: DMDR-97-10D				Attempt 4 of 5		
Latitude: 33° 39' 57" 681		Longitude: 118° 27' 64" 26		Nav Datum: WGS 84		
Time: 1614	Depth (ft): 12.5	Tide (ft): -1	Dep - Tide = 13.5	Depth MLLW (ft): 13.8		
SAP Dep. 17	SAP-MLLW 17 - 13.5 = 3.5		Target Core Length: 3.5	Final Core Length (ft): 3.5 2.0		
Start Tape (ft) 0		Finish Tape (ft) 6		Finish-Start = Penetration (ft) 6-0 = 6		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	black	Hz	Organic debris		
2	2			1/4 silt sand		
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-13-97 Project: ACOE Marina del Rey Recorder: pll

Station ID: DM02-97-10 E Attempt 6 of 5

Latitude: 33° 37' 57.621 Longitude: 118° 27.649 Nav Datum: WGS 84

Time: 1641 Depth (ft): 12.5 Tide (ft): -1 Dep - Tide = 13.5 Depth MLLW (ft): 13.5

SAP Dep: 17 SAP-MLLW = 17 - 13.5 = 3.5 Target Core Length: 3.5 Final Core Length (ft): 3.5

Start Tape (ft): 0 Finish Tape (ft): 5 Finish-Start = Penetration (ft): 5

Perf. Depth (ft)	Retriev. Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.	
1	1	black	H <sub>2</sub> S	Organic debris			
2	2	↓	↓	w/ fine sand			
3	3	↓	↓	↓			
4	4	-----					3.5
5	5						
6	6						
7	7						
8	8						
9	9						
10	10						
11	11						
12	12						
13	13						
14	14						
15	15						

Notes:

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <b>12-14-97</b>		Project: <b>ACOE Marina del Rey</b>			Recorder: <b>PL</b>	
Station ID: <b>DMDR-97-11 A-F</b>				Attempt <b>1</b> of <b>6</b>		
Latitude: <b>33 57 642</b>		Longitude: <b>118 27 678 W</b>		Nav Datum: <b>WGS 84</b>		
Time: <b>0915</b>	Depth (ft): <b>22.3</b>	Tide (ft): <b>6.5</b>	Dep - Tide = <b>15.8</b>	Depth MLLW (ft): <b>15.8</b>		
SAP Dep. <b>17</b>	SAP-MLLW = <b>1.2</b>		Target Core Length: <b>1.2</b>	Final Core Length (ft): <b>1.2</b>		
Start Tape (ft) <b>NA</b>		Finish Tape (ft) <b>NA</b>		Finish-Start = Penetration (ft) <b>NA</b>		
<del>NA</del> Depth (ft)	<del>NA</del> Depth (ft)	Color	Odor	Sediment Type	GMSB Sample ID by Depth	Misc.
1	1	<b>A - Van Veen</b>				
2	2	<b>Black</b>	<b>Hrs</b>	<b>Silt sand</b>	<b>A</b>	
3	3					
4	4	<b>Black</b>	<b>Hrs</b>	<b>Silt sand</b>	<b>B</b>	
5	5	<b>"</b>	<b>"</b>	<b>"</b>	<b>C</b>	
6	6	<b>"</b>	<b>"</b>	<b>" / Trash</b>	<b>D</b>	
7	7	<b>"</b>	<b>"</b>	<b>" / Trash</b>	<b>E</b>	
8	8	<b>"</b>	<b>"</b>	<b>Silt sand</b>	<b>F</b>	
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes: <b>REQUIRED PENETRATION &lt; 1.5' : COLLECTED WITH VAN VEEN</b>						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12/11/97		Project: ACOE Marina del Rey			Recorder: PLK			
Station ID: DMDR-97-22				Attempt 1 of 1				
Latitude: 33 57 673		Longitude: 118 27 684		Nav Datum: WGS 84				
Time: 1653	Depth (ft): 17.0	Tide (ft): 1.5	Dep - Tide = 15.5	Depth MLLW (ft): 15.5				
SAP Dep. #22 #100	SAP-MLLW = 22-15.5	6.5	Target Core Length: 6.5	Final Core Length (ft): 6.5				
Start Tape (ft) 0		Finish Tape (ft) 14.5		Finish-Start = Penetration (ft) 14.5-6 = 8.5				
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.		
1	1	black	H <sub>2</sub> S	wood chips silt				
2	2	↓	↓	organic debris				
3	3			sand/silt				
4	4							
5	5							
6	6					sand		
7	7							
8	8						Discard	6.5
9	9							8.5
10	10							
11	11							
12	12							
13	13							
14	14							
15	15							
Notes:								



**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <b>11 Dec 97</b>		Project: <b>ACOE Marina del Rey</b>			Recorder: <b>Hardin</b>	
Station ID: <b>DMOR97-23</b>				Attempt <b>1</b> of <b>1</b>		
Latitude: <b>33° 57 . 703</b>		Longitude: <b>118° <del>57</del> 27 . 704</b>		Nav Datum: <b>WGS 84</b>		
Time: <b>1615</b>	Depth (ft): <b>15</b>	Tide (ft): <b>2.6</b>	Dep - Tide = <b>15 - 2.6 = 12.4</b>	Depth MLLW (ft): <b>12.4</b>		
SAP Dep. <b>22</b>	SAP-MLLW = <b>22 - 14.4 = 7.6</b>		Target Core Length: <b>7.6</b>	Final Core Length (ft): <b>10.0</b>		
Start Tape (ft) <b>5</b>		Finish Tape (ft) <b>15</b>		Finish-Start = Penetration (ft) <b>15 - 5 = 10</b>		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	<b>black</b>	<b>hrs</b>	<b>Silt sand</b>		
2	2	↓	↓	↓		
3	3					
4	4					
5	5					<b>4.0</b>
6	6					
7	7					
8	8					<b>7.6</b>
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-12-97		Project: ACOE Marina del Rey			Recorder: PIC	
Station ID: DMR-97-24 A				Attempt 1 of 2		
Latitude: 33 57.667		Longitude: 118 27.761		Nav Datum: WGS 84		
Time: 1423	Depth (ft): 9.5	Tide (ft): -1	Dep - Tide = 9.5 - (-1) = 10.5	Depth MLLW (ft): 10.5		
SAP Dep. 22	SAP-MLLW = 22 - 10.5 = 11.5	Target Core Length: 11.5		Final Core Length (ft): 12.0		
Start Tape (ft) 0		Finish Tape (ft) 12.5		Finish-Start = Penetration (ft) 12.5		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Black	AUS	Silt		
2	2			sandy silt		
3	3			w/ organic debris		
4	4					
5	5					
6	6					
7	7					Silty sand
8	8					
9	9					
10	10					
11	11					
12	12					
13	13				f. Disc	
14	14					
15	15					
Notes:						
Will do 2 cores here						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <u>12-12-97</u>		Project: <u>ACOE Marina del Rey</u>			Recorder: <u>PLC</u>	
Station ID: <u>DMDR-97-24 B</u>				Attempt <u>2</u> of <u>2</u>		
Latitude: <u>33 57 667</u>		Longitude: <u>118 27 761</u>		Nav Datum: <u>WGS 84</u>		
Time: <u>1451</u>	Depth (ft): <u>9.5</u>	Tide (ft): <u>-1</u>	Dep - Tide = <u>10.5</u>		Depth MLLW (ft): <u>10.5</u>	
SAP Dep. <u>22</u>	SAP-MLLW = <u>22-10.5 = 11.5</u>		Target Core Length: <u>11.5</u>		Final Core Length (ft): <u>11.5</u>	
Start Tape (ft) <u>0</u>		Finish Tape (ft) <u>12</u>		Finish-Start = Penetration (ft) <u>12.0</u>		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	<u>Black</u>	<u>Ans</u>	<u>Sand</u>		
2	2					
3	3					
4	4		<u>pebbles</u>	<u>Silt sand</u>		
5	5		<u>+ Ans</u>			
6	6					
7	7		<u>Ans</u>	<u>Sand</u>		
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					<u>Discard</u>
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <b>12-12-97</b>		Project: <b>ACOE Marina del Rey</b>			Recorder: <b>pk</b>	
Station ID: <b>DMDR-97-25</b>				Attempt <b>1</b> of <b>1</b>		
Latitude: <b>33:57 699</b>		Longitude: <b>118 27 752</b>		Nav Datum: <b>WGS 84</b>		
Time: <b>1610</b>	Depth (ft): <b>14.8</b>	Tide (ft): <b>0</b>	Dep - Tide = <b>14.8</b>	Depth MLLW (ft): <b>14.8</b>		
SAP Dep. <b>22-</b>	SAP-MLLW = <b>22-14.8</b>		Target Core Length: <b>7.2</b>	Final Core Length (ft): <b>7.2</b>		
Start Tape (ft) <b>0</b>		Finish Tape (ft) <b>8.0</b>		Finish-Start = Penetration (ft) <b>8-0 = 8</b>		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1		<b>HLG</b>	<b>Silt</b>		
2	2	<b>Black</b>	<b>some petroleum</b>	<b>Sand silt</b>		
3	3					
4	4					
5	5			<b>Sand</b>		
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 2-12		Project: ACOE Marina del Rey			Recorder: pk	
Station ID: DMDR-97-26				Attempt 1 of 1 <del>or 12/12/97</del>		
Latitude: 33 57 739		Longitude: 118 27 726		Nav Datum: WGS 84		
Time: 1225	Depth (ft): 7.5 <sup>0.5</sup>	Tide (ft): 0.3	Dep - Tide = 7.2	Depth MLLW (ft): 7.2		
SAP Dep: 7.2	SAP-MLLW = 7.2 - 7.2	14.8	Target Core Length: 14.8	Final Core Length (ft): 14.8		
Start Tape (ft) 0		Finish Tape (ft) 16.0		Finish-Start Penetration (ft) 16.0		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Sig	HCS			
2	2			sand		
3	3					
4	4	Black		wood debris		
5	5					
6	6			sand		
7	7					
8	8			wood		
9	9	Sig				
10	10			sand		
11	11	Black				
12	12	black				
13	13					
14	14			wood chips		
15	15			leaves w/ sand		
Notes: <span style="float:right">↓ down</span>						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-12-97		Project: ACOE Marina del Rey			Recorder: PK	
Station ID: DMOR-97-27				Attempt 1 of 1		
Latitude: 33 57 715		Longitude: 118 27 798		Nav Datum: WGS 84		
Time: 1535	Depth (ft): 13.8	Tide (ft): -0.9	Dep - Tide = 14.7	Depth MLLW (ft): 14.7		
SAP Dep. 22	SAP-MLLW = 22 - 14.7 = 7.3		Target Core Length: 7.3	Final Core Length (ft): 7.3		
Start Tape (ft): 0		Finish Tape (ft): 8		Finish-Start = Penetration (ft): 8-0 = 8		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Black	H2S	Silt w/ organic debris		
2	2					
3	3					
4	4				Sand	
5	5				Silt	
6	6					
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12/12 Project: ACOE Marina del Rey Recorder: PK

Station ID: DMDR-97-28 (A) Attempt 1 of 2

Latitude: 33 57 757 Longitude: 118 27 742 Nav Datum: WGS 84

Time: 0820 Depth (ft): 11 Tide (ft): 5.6 Dep - Tide = 5.4 Depth MLLW (ft): 5.4

SAP Dep. -72 SAP-MLLW = 22 - 5.4 = 16.6 Target Core Length: 16.6 Final Core Length (ft): 6.0

Start Tape (ft) 0 Finish Tape (ft) 6.0 Finish-Start = Penetration (ft) 6 - 0 = 6.0

5.6  
5.4

Pen. Depth (ft)	Retrieval Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	grey	none	sand		
2	2					
3	3					
4	4					
5	5					
6	6	black	H <sub>2</sub> S	Wool chips and debris		Refused
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					

Notes: Refused at 6' w/ sand / wool chips

Sand Refused to.

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-12-97		Project: ACOE Marina del Rey		Recorder: R/L	
Station ID: DMDR 97-28 B			Attempt 2 of 2		
Latitude: 33 57 75.3		Longitude: 118 27 74.7		Nav Datum: WGS 84	
Time: 0942	Depth (ft): 3.2	Tide (ft): 9.7	Dep - Tide = 4.5	Depth MLLW (ft): 4.5	
SAP Dep.: 22	SAP-MLLW = 22.5 17.5		Target Core Length: 17.5	Final Core Length (ft): 17.8	
Start Tape (ft) 0		Finish Tape (ft) 17.8		Finish-Start = Penetration (ft) 17.8	

Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	grey blue		wood debris ↓		
2	2	S/S		sand ↓		
3	3					
4	4	<del>blue</del>		<del>black silt</del>		
5	5					
6	6	S/S				
7	7					
8	8	<del>blue</del>		<del>wood debris</del>		
9	9					
10	10	S/S		sand		
11	11					
12	12					
13	13					→ 12.5
14	14					
15	15					

Notes: moved station slight to west ≈ 4'  
pen = 17.8

12-12-97  
 0942  
 3.2  
 9.7  
 4.5  
 17.5  
 17.8

17.8  
 12.5



**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <b>11 Dec 97</b>		Project: <b>ACOE Marina del Rey</b>			Recorder: <b>Hardin</b>		
Station ID: <b>DMDR97-29</b>				Attempt <b>1</b> of <b>1</b>			
Latitude: <b>33° 57.751</b>		Longitude: <b>118° 27.773'</b>		Nav Datum: <b>WGS 84</b>			
Time: <b>0854</b>	Depth (ft): <b>20.2</b>	Tide (ft): <b>4.8</b>	Dep - Tide = <b>20.2 - 4.8 = 15.4</b>	Depth MLLW (ft): <b>15.4</b>			
SAP Dep: <b>22</b>	SAP-MLLW = <b>22 - 15.4 = 6.6</b>		Target Core Length: <b>6.6</b>	Final Core Length (ft): <b>6.5</b>			
Start Tape (ft) <b>8</b>		Finish Tape (ft) <b>16</b>		Finish-Start = Penetration (ft) <b>8'</b>			
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.	
1	1	<b>Black</b>	<b>Sulfides</b>	<b>Sand/silt/detritus</b>	<b>DMDR97-29 top</b>		
2	2	↓	↓	↓	↓	<b>1.6</b>	
3	3					<b>Sand/detritus</b>	<b>DMDR97-29 bottom</b>
4	4						
5	5						
6	6						
7	7						
8	8						
9	9						
10	10						
11	11						
12	12						
13	13						
14	14						
15	15						
Notes:							

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: <b>11 Dec 97</b>		Project: <b>ACOE Marina del Rey</b>			Recorder: <b>Hardin</b>	
Station ID: <b>DMRD97-30 (A)</b>				Attempt <b>1</b> of <b>2</b>		
Latitude: <b>33° 57.744</b>		Longitude: <b>118° 27.813'</b>		Nav Datum: <b>WGS 84</b>		
Time: <b>1441</b>	Depth (ft): <b>12.3</b>	Tide (ft): <b>-0.5</b>	Dep - Tide = <b>12.3 - (-0.5) = 12.8</b>	Depth MLLW (ft): <b>12.8</b>		
SAP Dep: <b>22</b>	SAP-MLLW = <b>22 - 12.8 = 9.2</b>		Target Core Length: <b>9.2</b>	Final Core Length (ft): <b>5.5</b>		
Start Tape (ft) <b>0</b>		Finish Tape (ft) <b>10</b>		Finish-Start = Penetration (ft) <b>10 - 0 = 10</b>		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	<b>Black</b>	<b>butyric</b>	<b>Sand/silt/detritus</b>	<b>DMRD97-30-1p</b>	
2	2			<b>Sand/detritus</b>		
3	3					
4	4					
5	5				<b>DMRD97-30-2p</b>	<b>4.2' (-17)</b>
6	6					<b>5.5'</b>
7	7					
8	8					
9	9					
10	10					
11	11					
12	12					
13	13					
14	14					
15	15					
Notes:						

**MEC ANALYTICAL SYSTEMS INCORPORATED  
VIBRACORE CORING LOG**

Date: 12-11-97		Project: ACOE Marina del Rey			Recorder: <i>PLC</i>	
Station ID: DMDR 97 30(B)				Attempt 2 of 2		
Latitude: 33 57.744		Longitude: 118 27.813		Nav Datum: WGS 84		
Time: 1531	Depth (ft): 12.6	Tide (ft): -0.1	Dep - Tide = 12.6(-0.1) = 12.7	Depth MLLW (ft): 12.7		
SAP Dep: 22	SAP-MLLW: 22 - 12.7 = 9.3		Target Core Length: 9.3	Final Core Length (ft): 9.3		
Start Tape (ft): 2.5		Finish Tape (ft): 12.5		Finish-Start = Penetration (ft): 12.5 - 2.5 = 10		
Pen. Depth (ft)	Retriev Depth (ft)	Color	Odor	Sediment Type	Sample ID by Depth	Misc.
1	1	Black	#25	Silt/sand		
2	2			Sand		
3	3			w/organic		
4	4			debris		
5	5	-----				8.8
6	6			Sand		
7	7					
8	8					
9	9					
10	10	-----				9.3
11	11					
12	12	-----				12.7
13	13					
14	14					
15	15					
Notes:						

**APPENDIX C**

**Sediment Chemical Analysis**



WEST COAST  
ANALYTICAL  
SERVICE, INC.  
Analytical Chemists

January 9, 1998

MEC ANALYTICAL SYSTEMS  
98 Main Street  
Suite 428  
Tiburon, CA 94920

Attn: Paul Krause

Job No: 36848

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LABORATORY REPORT

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Samples Received: Twenty-Four (24) Sediment Samples  
Date Received: 12/17/97  
Purchase Order No: 0719-009  
Project Name: Aloe-Marina Del Rey

The samples were analyzed as follows:

<u>Analysis</u>	<u>Page</u>
Phthalate Esters by EPA 8060	2 - 4
Organotins by GC/FPD	5 - 7
Organochlorine Pesticides by EPA 8080	8 - 19
Polynuclear Aromatic Hydrocarbons by EPA 8270	20 - 45
Selected Metals by ICPMS	46 - 49
Lead by ICPMS	50 - 66
Total Petroleum Hydrocarbons by EPA 418.1	67
Total Solids by EPA 160.3M	68

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Charles Jacks, Ph. D.  
Senior Staff Chemist

D. J. Northington, Ph.D.  
President

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Page 1 of 68

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

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LABORATORY REPORT

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Sample: LA-2 REFERENCE

Phthalate Esters by EPA 8060

Date Received: 12/17/97	Matrix: Sediment
Date Extracted: 12/22/97	Sample amount: 50g:5mL
Date Analyzed: 12/30/97	
Instrument ID: GC #8	Units: ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
117-81-7	Bis(2-ethylhexyl)phthalate	30	4
85-68-7	Butyl benzyl phthalate	ND	0.8
84-74-2	Di-n-butyl phthalate	ND	5
84-66-2	Diethyl phthalate	ND	8
131-11-3	Dimethyl phthalate	ND	5
117-84-0	Di-n-octyl phthalate	ND	4

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	98	60-150

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Sample: Method Blank

Phthalate Esters by EPA 8060

Date Received: 12/22/97  
 Date Extracted: 12/22/97  
 Date Analyzed: 12/30/97  
 Instrument ID: GC #8

Matrix: Sediment  
 Sample amount: 50g:5mL  
 Units: ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
117-81-7	Bis(2-ethylhexyl)phthalate	9	3
85-68-7	Butyl benzyl phthalate	ND	0.6
84-74-2	Di-n-butyl phthalate	ND	4
84-66-2	Diethyl phthalate	ND	6
131-11-3	Dimethyl phthalate	ND	4
117-84-0	Di-n-octyl phthalate	ND	3

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	104	60-150

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Phthalate Esters by EPA 8060

Matrix Spike/Matrix Spike Duplicate Recovery Summary

QC Batch: 971222S  
Date  
Analyzed: 12/30/97

Matrix: Soil  
Date  
Extracted: 12/22/97  
Units: ppb

Analyte	Sample Result	Amount Spiked	MS Result	% Rec MS	MSD Result	% Rec MSD	RPD
BEHP	ND	2000	1812	91	1960	98	8
Butyl benzy	ND	2000	1540	77	1531	77	1
Di-n-butyl	ND	2000	1722	86	1723	86	0
Diethyl	ND	2000	1524	76	1408	70	8
Dimethyl	ND	2000	1685	84	1442	72	16
Di-n-octyl	ND	2000	1670	84	1640	82	2

Control Limits

Analyte	RPD	% Recovery
Bis(2-ethylhexyl)phthalate	20	50-150
Butyl benzyl phthalate	20	50-150
Di-n-butyl phthalate	20	50-150
Diethyl phthalate	20	50-150
Dimethyl phthalate	20	50-150
Di-n-octyl phthalate	20	50-150

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

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LABORATORY REPORT

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Sample: METHOD BLANK

Organotins by GC/FPD

Date Received: 12-17-97                      Matrix: Sediment  
Date Extracted: 12-24-97                    Sample amount: 50g:5mL  
Date Analyzed: 12-29-97  
Instrument ID: GC #13                        Units: ug/kg (ppb)

Compound	Concentration	Detection Limit
Monobutyltin	ND	1
Dibutyltin	ND	1
Tributyltin	ND	2

Surrogate	Percent Recovery	Control Limits
Tetrapropyltin	55	50-150

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: LA-2 REFERENCE

## Organotins by GC/FPD

Date Received:	12-17-97	Matrix:	Sediment
Date Extracted:	12-24-97	Sample amount:	50g:5mL
Date Analyzed:	12-29-97	Units:	ug/kg (ppb)
Instrument ID:	GC #13		

Compound	Concentration	Detection Limit
Monobutyltin	ND	1
Dibutyltin	ND	1
Tributyltin	ND	2

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrapropyltin	117	50-150

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Organotins by GC/FPD

Matrix Spike/Matrix Spike Duplicate Recovery Summary

QC Batch: 36848MSD  
Date Analyzed: 12-29-97

Matrix: Soil  
Date Extracted: 12-24-97  
Units: ppb

Analyte	Sample Result	Amount Spiked	MS Result	% Rec MS	MSD Result	% Rec MSD	RPD
MBT	ND	12.7	14.2	112 ***	10.8	85	-27
DBT	ND	16.8	12	71	14.2	85	17
TBT	ND	13.9	9.8	71	11.8	85	19

\*\*\* - Result is outside control limits, due to matrix.

QC Limits

Analyte	RPD Control	% Recovery Control
Monobutyltin	35	0 100
Dibutyltin	35	30 110
Tributyltin	35	50 150

## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: LA-2 REFERENCE

Organochlorine Pesticides and PCB's by EPA 8080

Date Received: 12/17/97  
Date Extracted: 12/22/97  
Date Analyzed: 01/03/98  
Instrument ID: GC #8

Matrix: Sediment  
Sample amount: 50g:10mL  
Units: ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
309-00-2	Aldrin	ND	0.3
319-84-6	alpha-BHC	ND	0.3
319-85-7	beta-BHC	ND	0.5
58-89-9	gamma-BHC (Lindane)	ND	0.3
319-86-8	delta-BHC	0.7	0.3
5103-71-9	alpha-Chlordane	ND	0.3
5103-74-2	gamma-Chlordane	ND	0.3
72-54-8	4,4'-DDD	ND	0.5
72-55-9	4,4'-DDE	2	0.5
50-29-3	4,4'-DDT	ND	0.5
60-57-1	Dieldrin	ND	0.5
959-98-8	Endosulfan I	ND	0.3
33213-65-9	Endosulfan II	ND	0.5
1031-07-8	Endosulfan sulfate	ND	0.5
72-20-8	Endrin	ND	0.5
7421-36-3	Endrin aldehyde	ND	0.5
53494-70-5	Endrin ketone	ND	0.5
76-44-8	Heptachlor	ND	0.3
1024-57-3	Heptachlor epoxide	ND	0.3
72-43-5	Methoxychlor	ND	3
8001-35-2	Toxaphene	ND	30
12674-11-2	PCB-1016	ND	10
11104-28-2	PCB-1221	ND	10
11141-16-5	PCB-1232	ND	10
53469-21-9	PCB-1242	ND	10
12672-29-6	PCB-1248	ND	10
11097-69-1	PCB-1254	ND	10
11096-82-5	PCB-1260	ND	10

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	127	60-150
Decachlorobiphenyl	134	60-150

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WCAS

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Sample: AREA 3 COMPOSITE

Organochlorine Pesticides and PCB's by EPA 8080

Date Received: 12/17/97                      Matrix:                      Sediment  
 Date Extracted: 12/22/97                    Sample amount: 50g:10mL  
 Date Analyzed: 01/03/98  
 Instrument ID: GC #8                              Units:                      ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
309-00-2	Aldrin	ND	0.3
319-84-6	alpha-BHC	ND	0.3
319-85-7	beta-BHC	ND	0.6
58-89-9	gamma-BHC (Lindane)	ND	0.3
319-86-8	delta-BHC	0.5	0.3
5103-71-9	alpha-Chlordane	ND	0.3
5103-74-2	gamma-Chlordane	9.9	0.3
72-54-8	4,4'-DDD	5	0.6
72-55-9	4,4'-DDE	13	0.6
50-29-3	4,4'-DDT	ND	0.6
60-57-1	Dieldrin	ND	0.6
959-98-8	Endosulfan I	ND	0.3
33213-65-9	Endosulfan II	5	0.6
1031-07-8	Endosulfan sulfate	1	0.6
72-20-8	Endrin	ND	0.6
7421-36-3	Endrin aldehyde	ND	0.6
53494-70-5	Endrin ketone	ND	0.6
76-44-8	Heptachlor	ND	0.3
1024-57-3	Heptachlor epoxide	ND	0.3
72-43-5	Methoxychlor	ND	3
8001-35-2	Toxaphene	ND	30
12674-11-2	PCB-1016	ND	20
11104-28-2	PCB-1221	ND	20
11141-16-5	PCB-1232	ND	20
53469-21-9	PCB-1242	ND	20
12672-29-6	PCB-1248	ND	20
11097-69-1	PCB-1254	ND	20
11096-82-5	PCB-1260	ND	20

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	71	60-150
Decachlorobiphenyl	100	60-150

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-22 BOTTOM

Organochlorine Pesticides and PCB's by EPA 8080

Date Received: 12/17/97                      Matrix: Sediment  
Date Extracted: 12/22/97                    Sample amount: 50g:10mL  
Date Analyzed: 01/03/98  
Instrument ID: GC #8                            Units: ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
309-00-2	Aldrin	ND	0.3
319-84-6	alpha-BHC	ND	0.3
319-85-7	beta-BHC	ND	0.7
58-89-9	gamma-BHC (Lindane)	ND	0.3
319-86-8	delta-BHC	ND	0.3
5103-71-9	alpha-Chlordane	ND	0.3
5103-74-2	gamma-Chlordane	ND	0.3
72-54-8	4,4'-DDD	ND	0.7
72-55-9	4,4'-DDE	ND	0.7
50-29-3	4,4'-DDT	ND	0.7
60-57-1	Dieldrin	ND	0.7
959-98-8	Endosulfan I	13	0.3
33213-65-9	Endosulfan II	ND	0.7
1031-07-8	Endosulfan sulfate	ND	0.7
72-20-8	Endrin	1	0.7
7421-36-3	Endrin aldehyde	ND	0.7
53494-70-5	Endrin ketone	ND	0.7
76-44-8	Heptachlor	ND	0.3
1024-57-3	Heptachlor epoxide	ND	0.3
72-43-5	Methoxychlor	ND	3
8001-35-2	Toxaphene	ND	30
12674-11-2	PCB-1016	ND	20
11104-28-2	PCB-1221	ND	20
11141-16-5	PCB-1232	ND	20
53469-21-9	PCB-1242	ND	20
12672-29-6	PCB-1248	ND	20
11097-69-1	PCB-1254	ND	20
11096-82-5	PCB-1260	ND	20

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	85	60-150
Decachlorobiphenyl	294 **	60-150

\*\* Outside control limits due to matrix interference

This report is to be reproduced in its entirety.

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-23 BOTTOM

Organochlorine Pesticides and PCB's by EPA 8080

Date Received: 12/17/97  
Date Extracted: 12/22/97  
Date Analyzed: 01/03/98  
Instrument ID: GC #8

Matrix: Sediment  
Sample amount: 50g:10mL  
Units: ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
309-00-2	Aldrin	ND	0.3
319-84-6	alpha-BHC	ND	0.3
319-85-7	beta-BHC	ND	0.6
58-89-9	gamma-BHC (Lindane)	ND	0.3
319-86-8	delta-BHC	ND	0.3
5103-71-9	alpha-Chlordane	ND	0.3
5103-74-2	gamma-Chlordane	12	0.3
72-54-8	4,4'-DDD	5	0.6
72-55-9	4,4'-DDE	ND	0.6
50-29-3	4,4'-DDT	ND	0.6
60-57-1	Dieldrin	ND	0.6
959-98-8	Endosulfan I	7.7	0.3
33213-65-9	Endosulfan II	5	0.6
1031-07-8	Endosulfan sulfate	1	0.6
72-20-8	Endrin	ND	0.6
7421-36-3	Endrin aldehyde	ND	0.6
53494-70-5	Endrin ketone	ND	0.6
76-44-8	Heptachlor	ND	0.3
1024-57-3	Heptachlor epoxide	ND	0.3
72-43-5	Methoxychlor	ND	3
8001-35-2	Toxaphene	ND	30
12674-11-2	PCB-1016	ND	10
11104-28-2	PCB-1221	ND	10
11141-16-5	PCB-1232	ND	10
53469-21-9	PCB-1242	ND	10
12672-29-6	PCB-1248	ND	10
11097-69-1	PCB-1254	ND	10
11096-82-5	PCB-1260	ND	10

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	79	60-150
Decachlorobiphenyl	93	60-150

This report is to be reproduced in its entirety.

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-24 BOTTOM

Organochlorine Pesticides and PCB's by EPA 8080

Date Received: 12/17/97	Matrix: Sediment
Date Extracted: 12/22/97	Sample amount: 50g:10mL
Date Analyzed: 01/03/98	
Instrument ID: GC #8	Units: ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
309-00-2	Aldrin	ND	0.3
319-84-6	alpha-BHC	ND	0.3
319-85-7	beta-BHC	ND	0.6
58-89-9	gamma-BHC (Lindane)	ND	0.3
319-86-8	delta-BHC	ND	0.3
5103-71-9	alpha-Chlordane	ND	0.3
5103-74-2	gamma-Chlordane	ND	0.3
72-54-8	4,4'-DDD	ND	0.6
72-55-9	4,4'-DDE	ND	0.6
50-29-3	4,4'-DDT	8.7	0.6
60-57-1	Dieldrin	ND	0.6
959-98-8	Endosulfan I	ND	0.3
33213-65-9	Endosulfan II	ND	0.6
1031-07-8	Endosulfan sulfate	ND	0.6
72-20-8	Endrin	ND	0.6
7421-36-3	Endrin aldehyde	ND	0.6
53494-70-5	Endrin ketone	ND	0.6
76-44-8	Heptachlor	ND	0.3
1024-57-3	Heptachlor epoxide	ND	0.3
72-43-5	Methoxychlor	7.1	3
8001-35-2	Toxaphene	ND	30
12674-11-2	PCB-1016	ND	10
11104-28-2	PCB-1221	ND	10
11141-16-5	PCB-1232	ND	10
53469-21-9	PCB-1242	ND	10
12672-29-6	PCB-1248	ND	10
11097-69-1	PCB-1254	ND	10
11096-82-5	PCB-1260	ND	10

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	91	60-150
Decachlorobiphenyl	119	60-150

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-26 BOTTOM

Organochlorine Pesticides and PCB's by EPA 8080

Date Received: 12/17/97                      Matrix:                      Sediment  
Date Extracted: 12/22/97                      Sample amount: 50g:10mL  
Date Analyzed: 01/03/98  
Instrument ID: GC #8                              Units:                              ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
309-00-2	Aldrin	ND	0.3
319-84-6	alpha-BHC	ND	0.3
319-85-7	beta-BHC	ND	0.6
58-89-9	gamma-BHC (Lindane)	ND	0.3
319-86-8	delta-BHC	ND	0.3
5103-71-9	alpha-Chlordane	ND	0.3
5103-74-2	gamma-Chlordane	6.5	0.3
72-54-8	4,4'-DDD	ND	0.6
72-55-9	4,4'-DDE	ND	0.6
50-29-3	4,4'-DDT	ND	0.6
60-57-1	Dieldrin	ND	0.6
959-98-8	Endosulfan I	ND	0.3
33213-65-9	Endosulfan II	ND	0.6
1031-07-8	Endosulfan sulfate	2	0.6
72-20-8	Endrin	0.9	0.6
7421-36-3	Endrin aldehyde	ND	0.6
53494-70-5	Endrin ketone	ND	0.6
76-44-8	Heptachlor	ND	0.3
1024-57-3	Heptachlor epoxide	2	0.3
72-43-5	Methoxychlor	ND	3
8001-35-2	Toxaphene	ND	30
12674-11-2	PCB-1016	ND	10
11104-28-2	PCB-1221	ND	10
11141-16-5	PCB-1232	ND	10
53469-21-9	PCB-1242	ND	10
12672-29-6	PCB-1248	ND	10
11097-69-1	PCB-1254	ND	10
11096-82-5	PCB-1260	ND	10

Results reported on a dry weight basis.

Surrogate	Percent Recovery	Control Limits
Tetrachloro-m-xylene	102	60-150
Decachlorobiphenyl	132	60-150

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Organochlorine Pesticides and PCB's

Matrix Spike/Matrix Spike Duplicate Recovery Summary

QC Batch: 971222S  
Date  
Analyzed: 01/03/98

Matrix: Soil  
Date  
Extracted: 01/02/98  
Units: ppb

Analyte	Sample Result	Amount Spiked	MS Result	% Rec MS	MSD Result	% Rec MSD	RPD
Aldrin	ND	7.01	11.5	164 ***	11.3	161 ***	-2
Lindane	ND	7.01	7.58	108	7.51	107	-1
4,4'-DDT	ND	14	57.5	411 ***	78.8	563 ***	31
Dieldrin	ND	14	36.5	261 ***	44.4	317 ***	20
Endrin	2	14	15.8	99	18.3	116	15
Heptachlor	ND	7.01	8.4	120	9.2	131	9

\*\*\* - Result is outside control limits due to matrix interference

QC Limits

Analyte	RPD		% Recovery	
	Warning	Control	Warning	Control
Aldrin	14	21	76	118
Lindane	13	19	77	124
4,4'-DDT	23	34	59	149
Dieldrin	21	32	62	131
Endrin	15	22	78	132
Heptachlor	14	21	75	121

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Sample: METHOD BLANK

Polychlorinated Biphenyls (PCB's) by EPA 8080

Date Received: 12/31/97                      Matrix:                      Sediment  
 Date Extracted: 12/31/97                    Sample amount: 50g:10mL  
 Date Analyzed: 01/06/98  
 Instrument ID: GC #8                              Units:                      ug/kg (ppb)

CAS no.	Compound	Concentration	Detection Limit
12674-11-2	PCB-1016	ND	10
11104-28-2	PCB-1221	ND	10
11141-16-5	PCB-1232	ND	10
53469-21-9	PCB-1242	ND	10
12672-29-6	PCB-1248	ND	10
11097-69-1	PCB-1254	ND	10
11096-82-5	PCB-1260	ND	10

Surrogate	Percent Recovery	Control Limits
Decachlorobiphenyl	123	60-150

## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: LA-2 REFERENCE

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:0.5ml
Date Analyzed:	12/29/97	Run Number:	36848H08
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	0.5
208-96-8	Acenaphthylene	ND	0.5
120-12-7	Anthracene	ND	0.3
56-55-3	Benzo(a)anthracene	ND	0.8
205-99-2	Benzo(b & k)fluoranthenes	ND	1
191-24-2	Benzo(g,h,i)perylene	ND	1
50-32-8	Benzo(a)pyrene	ND	0.7
218-01-9	Chrysene	ND	0.7
53-70-3	Dibenzo(a,h)anthracene	ND	1
204-44-0	Fluoranthene	ND	0.7
86-73-7	Fluorene	ND	0.4
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1
91-20-3	Naphthalene	ND	0.5
85-01-8	Phenanthrene	ND	0.4
129-00-0	Pyrene	0.6	0.5

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	75	30-115
Terphenyl-d14	81	18-137

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: AREA 3 COMPOSITE

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/29/97	Run Number:	36848H09
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	6
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	ND	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	ND	20
218-01-9	Chrysene	ND	20
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	30	20
86-73-7	Fluorene	ND	9
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	20	9
129-00-0	Pyrene	30	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	80	30-115
Terphenyl-d14	92	18-137

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Sample: AREA 4 COMPOSITE

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/29/97	Run Number:	36848H12
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	5
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	ND	30
191-24-2	Benzo(g,h,i)perylene	ND	20
50-32-8	Benzo(a)pyrene	ND	10
218-01-9	Chrysene	ND	10
53-70-3	Dibenzo(a,h)anthracene	ND	20
204-44-0	Fluoranthene	20	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	10	8
129-00-0	Pyrene	20	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	90	30-115
Terphenyl-d14	98	18-137

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MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-22 TOP

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/29/97	Run Number:	36848H04
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	7	7
56-55-3	Benzo(a)anthracene	20	20
205-99-2	Benzo(b & k)fluoranthenes	40	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	20
218-01-9	Chrysene	30	20
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	60	20
86-73-7	Fluorene	ND	10
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	30	10
129-00-0	Pyrene	70	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	130 **	30-115
Terphenyl-d14	136	18-137

\*\* Surrogate is out due to matrix

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-22 BOTTOM

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/29/97	Run Number:	36848H05
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	7
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	40	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	ND	20
218-01-9	Chrysene	20	20
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	50	20
86-73-7	Fluorene	ND	10
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	30	10
129-00-0	Pyrene	60	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	132 **	30-115
Terphenyl-d14	130	18-137

\*\* Surrogate is out due to matrix

## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-23 TOP

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/29/97	Run Number:	36848H06
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	6
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	ND	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	10	10
218-01-9	Chrysene	20	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	30	10
86-73-7	Fluorene	ND	9
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	10	9
129-00-0	Pyrene	30	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	200 **	30-115
Terphenyl-d14	218 **	18-137

\*\* Surrogates are out due to matrix

This report is to be reproduced in its entirety.

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## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-23 BOTTOM

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/29/97	Run Number:	36848H07
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	9	6
56-55-3	Benzo(a)anthracene	20	20
205-99-2	Benzo(b & k)fluoranthenes	40	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	10
218-01-9	Chrysene	30	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	50	10
86-73-7	Fluorene	10	9
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	30	9
129-00-0	Pyrene	60	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	184 **	30-115
Terphenyl-d14	214 **	18-137

\*\* Surrogates are out due to matrix

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-24 TOP

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/29/97	Run Number:	36848H13
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	5
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	ND	30
191-24-2	Benzo(g,h,i)perylene	ND	20
50-32-8	Benzo(a)pyrene	10	10
218-01-9	Chrysene	20	10
53-70-3	Dibenzo(a,h)anthracene	ND	20
204-44-0	Fluoranthene	30	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	20	8
129-00-0	Pyrene	40	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	114	30-115
Terphenyl-d14	134	18-137

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-24 BOTTOM

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/30/97	Run Number:	36848H14
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	10	6
56-55-3	Benzo(a)anthracene	40	20
205-99-2	Benzo(b & k)fluoranthenes	60	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	30	10
218-01-9	Chrysene	40	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	70	10
86-73-7	Fluorene	9	9
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	40	9
129-00-0	Pyrene	90	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	112	30-115
Terphenyl-d14	124	18-137

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-25 TOP

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/30/97	Run Number:	36848H17
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	6
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	30	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	10
218-01-9	Chrysene	20	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	30	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	20	8
129-00-0	Pyrene	40	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	90	30-115
Terphenyl-d14	96	18-137

This report is to be reproduced in its entirety.

## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-25 BOTTOM

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/30/97	Run Number:	36848H18
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	8	6
56-55-3	Benzo(a)anthracene	20	20
205-99-2	Benzo(b & k)fluoranthenes	50	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	20
218-01-9	Chrysene	30	20
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	50	20
86-73-7	Fluorene	30	9
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	30	9
129-00-0	Pyrene	60	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	114	30-115
Terphenyl-d14	122	18-137

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WCA'S

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Sample: DMDR97-26 TOP

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:5
Date Analyzed:	12/30/97	Run Number:	36848H19
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	5
208-96-8	Acenaphthylene	ND	5
120-12-7	Anthracene	ND	3
56-55-3	Benzo(a)anthracene	ND	8
205-99-2	Benzo(b & k)fluoranthenes	ND	10
191-24-2	Benzo(g,h,i)perylene	ND	10
50-32-8	Benzo(a)pyrene	ND	6
218-01-9	Chrysene	ND	6
53-70-3	Dibenzo(a,h)anthracene	ND	10
204-44-0	Fluoranthene	ND	6
86-73-7	Fluorene	ND	4
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10
91-20-3	Naphthalene	ND	5
85-01-8	Phenanthrene	ND	4
129-00-0	Pyrene	ND	5

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	90	30-115
Terphenyl-d14	107	18-137

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-26 BOTTOM

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml,1:5
Date Analyzed:	12/30/97	Run Number:	36848H20
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	6
208-96-8	Acenaphthylene	ND	6
120-12-7	Anthracene	9	3
56-55-3	Benzo(a)anthracene	20	9
205-99-2	Benzo(b & k)fluoranthenes	40	10
191-24-2	Benzo(g,h,i)perylene	ND	10
50-32-8	Benzo(a)pyrene	20	7
218-01-9	Chrysene	20	7
53-70-3	Dibenzo(a,h)anthracene	ND	10
204-44-0	Fluoranthene	50	7
86-73-7	Fluorene	5	4
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10
91-20-3	Naphthalene	ND	6
85-01-8	Phenanthrene	30	4
129-00-0	Pyrene	50	6

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	95	30-115
Terphenyl-d14	103	18-137

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-27 TOP

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/30/97	Run Number:	36848H21
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	9	6
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	40	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	10
218-01-9	Chrysene	20	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	40	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	20	8
129-00-0	Pyrene	50	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	106	30-115
Terphenyl-d14	114	18-137

This report is to be reproduced in its entirety.

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-27 BOTTOM

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/30/97	Run Number:	36848H22
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	9	6
56-55-3	Benzo(a)anthracene	20	20
205-99-2	Benzo(b & k)fluoranthenes	50	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	10
218-01-9	Chrysene	30	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	40	10
86-73-7	Fluorene	10	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	30	8
129-00-0	Pyrene	70	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	112	30-115
Terphenyl-d14	118	18-137

This report is to be reproduced in its entirety.



WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-28 TOP

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:0.5ml
Date Analyzed:	12/30/97	Run Number:	36848H28
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	0.5
208-96-8	Acenaphthylene	ND	0.5
120-12-7	Anthracene	ND	0.3
56-55-3	Benzo(a)anthracene	ND	0.8
205-99-2	Benzo(b & k)fluoranthenes	1	1
191-24-2	Benzo(g,h,i)perylene	ND	1
50-32-8	Benzo(a)pyrene	0.7	0.6
218-01-9	Chrysene	ND	0.6
53-70-3	Dibenzo(a,h)anthracene	ND	1
204-44-0	Fluoranthene	1	0.6
86-73-7	Fluorene	ND	0.4
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1
91-20-3	Naphthalene	ND	0.5
85-01-8	Phenanthrene	0.8	0.4
129-00-0	Pyrene	1	0.5

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	101	30-115
Terphenyl-d14	106	18-137

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-28 BOTTOM

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:0.5ml
Date Analyzed:	12/29/97	Run Number:	36848H03
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	0.7	0.5
208-96-8	Acenaphthylene	ND	0.5
120-12-7	Anthracene	ND	0.3
56-55-3	Benzo(a)anthracene	2	0.8
205-99-2	Benzo(b & k)fluoranthenes	4	1
191-24-2	Benzo(g,h,i)perylene	1	1
50-32-8	Benzo(a)pyrene	2	0.7
218-01-9	Chrysene	2	0.7
53-70-3	Dibenzo(a,h)anthracene	ND	1
204-44-0	Fluoranthene	5	0.7
86-73-7	Fluorene	0.6	0.4
193-39-5	Indeno(1,2,3-cd)pyrene	1	1
91-20-3	Naphthalene	ND	0.5
85-01-8	Phenanthrene	4.1	0.4
129-00-0	Pyrene	6	0.5

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	94	30-115
Terphenyl-d14	91	18-137

This report is to be reproduced in its entirety.

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-29 TOP

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/30/97	Run Number:	36848H23
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	5
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	ND	30
191-24-2	Benzo(g,h,i)perylene	ND	20
50-32-8	Benzo(a)pyrene	10	10
218-01-9	Chrysene	10	10
53-70-3	Dibenzo(a,h)anthracene	ND	20
204-44-0	Fluoranthene	30	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	10	8
129-00-0	Pyrene	30	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	106	30-115
Terphenyl-d14	114	18-137

## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-29 BOTTOM

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/30/97	Run Number:	36848H24
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	5
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	ND	30
191-24-2	Benzo(g,h,i)perylene	ND	20
50-32-8	Benzo(a)pyrene	ND	10
218-01-9	Chrysene	ND	10
53-70-3	Dibenzo(a,h)anthracene	ND	20
204-44-0	Fluoranthene	10	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	ND	8
129-00-0	Pyrene	10	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	98	30-115
Terphenyl-d14	96	18-137

This report is to be reproduced in its entirety.

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## WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: DMDR97-30 TOP

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:1ml,1:10
Date Analyzed:	12/30/97	Run Number:	36848H25
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	7	5
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	40	30
191-24-2	Benzo(g,h,i)perylene	ND	20
50-32-8	Benzo(a)pyrene	20	10
218-01-9	Chrysene	20	10
53-70-3	Dibenzo(a,h)anthracene	ND	20
204-44-0	Fluoranthene	30	10
86-73-7	Fluorene	ND	8
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	20	8
129-00-0	Pyrene	60	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	110	30-115
Terphenyl-d14	120	18-137

This report is to be reproduced in its entirety.

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: DMDR97-30 BOTTOM

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/08/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:1ml, 1:10
Date Analyzed:	12/30/97	Run Number:	36848H26
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	6
56-55-3	Benzo(a)anthracene	ND	20
205-99-2	Benzo(b & k)fluoranthenes	30	30
191-24-2	Benzo(g,h,i)perylene	ND	30
50-32-8	Benzo(a)pyrene	20	10
218-01-9	Chrysene	20	10
53-70-3	Dibenzo(a,h)anthracene	ND	30
204-44-0	Fluoranthene	30	10
86-73-7	Fluorene	ND	9
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30
91-20-3	Naphthalene	ND	10
85-01-8	Phenanthrene	20	9
129-00-0	Pyrene	50	10

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	100	30-115
Terphenyl-d14	112	18-137

This report is to be reproduced in its entirety.



WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Sample: Method Blank

Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/23/97	Matrix:	Sediment
Date Extracted:	12/23/97	Sample Amount:	50g:0.5ml
Date Analyzed:	12/29/97	Run Number:	36848H01
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	0.4
208-96-8	Acenaphthylene	ND	0.4
120-12-7	Anthracene	ND	0.2
56-55-3	Benzo(a)anthracene	ND	0.6
205-99-2	Benzo(b & k)fluoranthenes	ND	1
191-24-2	Benzo(g,h,i)perylene	ND	0.9
50-32-8	Benzo(a)pyrene	ND	0.5
218-01-9	Chrysene	ND	0.5
53-70-3	Dibenzo(a,h)anthracene	ND	0.9
204-44-0	Fluoranthene	ND	0.5
86-73-7	Fluorene	ND	0.3
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.9
91-20-3	Naphthalene	ND	0.4
85-01-8	Phenanthrene	ND	0.3
129-00-0	Pyrene	ND	0.4

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	72	30-115
Terphenyl-d14	74	18-137

This report is to be reproduced in its entirety.

MEC ANALYTICAL SYSTEMS  
Attn: Paul KrauseJob No: 36848  
January 9, 1998

## LABORATORY REPORT

Sample: Method Blank

## Polynuclear Aromatic Hydrocarbons by EPA 8270/SIM

Date Received:	12/24/97	Matrix:	Sediment
Date Extracted:	12/24/97	Sample Amount:	50g:0.5ml
Date Analyzed:	12/30/97	Run Number:	36848H29
Instrument ID:	HP-1 5973	Units:	ug/kg (ppb)

CAS #	Compound	Concentration	Detection Limit
83-32-9	Acenaphthene	ND	0.4
208-96-8	Acenaphthylene	ND	0.4
120-12-7	Anthracene	ND	0.2
56-55-3	Benzo(a)anthracene	ND	0.6
205-99-2	Benzo(b & k)fluoranthenes	ND	1
191-24-2	Benzo(g,h,i)perylene	ND	0.9
50-32-8	Benzo(a)pyrene	ND	0.5
218-01-9	Chrysene	ND	0.5
53-70-3	Dibenzo(a,h)anthracene	ND	0.9
204-44-0	Fluoranthene	ND	0.5
86-73-7	Fluorene	ND	0.3
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.9
91-20-3	Naphthalene	ND	0.4
85-01-8	Phenanthrene	ND	0.3
129-00-0	Pyrene	ND	0.4

Results are reported on a dry weight basis.

Surrogate	Percent Recovery	QC Limits
2-Fluorobiphenyl	73	30-115
Terphenyl-d14	78	18-137

This report is to be reproduced in its entirety.

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WCAS

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Matrix Spike (MS and MSD)  
% Recovery and RPD Summary

Date Analyzed: 12/29/97  
QC Batch 122397w1

Matrix: Sediment  
Units: ug/kg (ppb)

Polynuclear Aromatic Hydrocarbons

Compound	Conc Spiked	Conc Sample	MS	% Rec MS	MSD	% Rec MSD	RPD
Acenaphthene	32.5	ND	13.7	42	18.2	56	-28
Acenaphthylene	32.5	ND	14.3	44	16.9	52	-17
Anthracene	32.5	ND	15	46	19.2	59	-25
Benzo(a)anthracene	32.5	18.2	25	21 **	34.1	49	-31 **
Benzo(b & k)fluoranthene	65	37.7	47.5	15 **	62.4	38	-27
Benzo(g,h,i)perylene	32.5	16.6	22.4	18 **	29.9	41	-29
Benzo(a)pyrene	32.5	17.9	22.4	14 **	29.3	35	-27
Chrysene	32.5	23.7	27	10 **	34.8	34	-25
Dibenzo(a,h)anthracene	32.5	ND	12	37	15.3	47	-24
Fluoranthene	32.5	54.6	50.4	-13 **	56.6	6 **	-12
Fluorene	32.5	ND	16.9	52	20.8	64	-21
Indeno(1,2,3-cd)pyrene	32.5	ND	16.9	52	22.4	69	-28
Naphthalene	32.5	ND	12	37	14.6	45	-20
Phenanthrene	32.5	31.5	29.9	- 5 **	37.4	18 **	-22
Pyrene	32.5	56.9	58.2	4 **	74.8	55	-25

\*\* - Result is outside control limits.

Results are reported on a dry weight basis.

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

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LABORATORY REPORT

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Quality Control Limits

	Recovery	RPD
Acenaphthene	30-150	30
Acenaphthylene	30-150	30
Anthracene	30-150	30
Benzo(a)anthracene	30-150	30
Benzo(b&k)fluoranthenes	30-150	30
Benzo(g,h,i)perylene	30-150	30
Benzo(a)pyrene	30-150	30
Chrysene	30-150	30
Dibenzo(a,h)anthracene	30-150	30
Fluoranthene	30-150	30
Fluorene	30-150	30
Indeno(1,2,3-cd)pyrene	30-150	30
Naphthalene	30-150	30
Phenanthrene	30-150	30
Pyrene	30-150	30

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**WCAS**



WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Matrix Spike (MS and MSD)  
% Recovery and RPD Summary

Date Analyzed: 12/29/97  
QC Batch 122397w

Matrix: Sediment  
Units: ug/kg (ppb)

Polynuclear Aromatic Hydrocarbons

Compound	Conc Spiked	Conc Sample	MS	% Rec MS	MSD	% Rec MSD	RPD
Acenaphthene	26.4	ND	19.5	74	16.6	63	16
Acenaphthylene	26.4	ND	19	72	14.2	54	29
Anthracene	26.4	ND	17.4	66	17.1	65	2
Benzo(a)anthracene	26.4	12.6	26.6	53	26.4	52	1
Benzo(b & k)fluoranthene	52.7	28.5	73.3	85	69.6	78	5
Benzo(g,h,i)perylene	26.4	11.1	31.6	78	26.4	58	18
Benzo(a)pyrene	26.4	13.2	36.1	87	32.7	74	10
Chrysene	26.4	15.5	27.4	45	26.9	43	2
Dibenzo(a,h)anthracene	26.4	ND	19.5	74	15	57	26
Fluoranthene	26.4	30.8	41.4	40	49	69	-17
Fluorene	26.4	ND	18.7	71	16.1	61	15
Indeno(1,2,3-cd)pyrene	26.4	ND	26.1	99	21.6	82	19
Naphthalene	26.4	ND	12.1	46	9.22	35	27
Phenanthrene	26.4	15	26.1	42	34.3	73	-27
Pyrene	26.4	39	52.2	50	59.6	78	-13

Results are reported on a dry weight basis.

Quality Control Limits

	Recovery	RPD
Acenaphthene	30-150	30
Acenaphthylene	30-150	30
Anthracene	30-150	30
Benzo(a)anthracene	30-150	30
Benzo(b&k)fluoranthenes	30-150	30
Benzo(g,h,i)perylene	30-150	30
Benzo(a)pyrene	30-150	30
Chrysene	30-150	30
Dibenzo(a,h)anthracene	30-150	30
Fluoranthene	30-150	30
Fluorene	30-150	30
Indeno(1,2,3-cd)pyrene	30-150	30
Naphthalene	30-150	30
Phenanthrene	30-150	30
Pyrene	30-150	30

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Client:	MEC Analytical Systems	
Sample ID:	BLANK	Lab ID: 6843J27
		Blank ID: 6843J26
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	BL	
QC Batch:	6843J	Detection
Units:	mg/kg dry wt.	Limits

	-----	-----
Arsenic	ND	0.04
Cadmium	ND	0.005
Chromium (total)	ND	0.1
Copper	ND	0.005
Lead	ND	0.005
Mercury	ND	0.005
Nickel	ND	0.007
Selenium	ND	0.4
Silver	ND	0.005
Zinc	ND	0.3

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client: MEC Analytical Systems  
Sample ID: LA-2 Reference Lab ID: 6843J28  
Blank ID: 6843J26  
Job Number: 36848  
Lab Code: WCA  
Method: 200.8  
Matrix: SED  
Date Received: 12-17-97  
Date Extracted: 12-18-97  
Date Analyzed: 12-20-97  
Sample Type: REG  
QC Batch: 6843J  
Units: mg/kg dry wt. Detection Limits

	-----	-----
Arsenic	2.68	0.05
Cadmium	0.108	0.007
Chromium (total)	29.4	0.2
Copper	10.6	0.007
Lead	6.5	0.007
Mercury	0.024	0.007
Nickel	12.3	0.009
Selenium	ND	0.5
Silver	0.108	0.007
Zinc	41	0.3

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Client: MEC Analytical Systems  
 Sample ID: LA-2 Reference

Job Number:	36848	Blank ID:6843J26
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	MS	
QC Batch:	6843J	

	Original 28	Spike Conc	Spike 30	Res Recovery*	%
Arsenic	2.68	6.54	8.6		91
Cadmium	0.108	6.54	6.2		93
Chromium (total)	29.4	6.54	37		-999
Copper	10.6	6.54	16.3		-999
Lead	6.5	6.54	13.5		107
Mercury	0.024	0.654	0.66		97
Nickel	12.3	6.54	18		-999
Selenium	0	65.4	55		84
Silver	0.108	6.54	1.42		20
Zinc	41	6.54	47		-999

\* -999 = Spike recovery not applicable; spike<original concentration

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**WCAS**

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Client:	MEC Analytical Systems	Lab ID: 6843J29
Sample ID:	LA-2 Reference	Blank ID: 6843J26
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	DUP	
QC Batch:	6843J	
Units:	mg/kg dry wt.	Detection Limits

	-----	-----
Arsenic	2.68	0.05
Cadmium	0.105	0.007
Chromium (total)	30.7	0.2
Copper	10.8	0.007
Lead	6.9	0.007
Mercury	0.029	0.007
Nickel	12.9	0.009
Selenium	ND	0.5
Silver	0.108	0.007
Zinc	42	0.3

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	BLANK	Lab ID: 6843j33
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	ND	0.01

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**WCAS**

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client: MEC Analytical Systems  
Sample ID: Area 3 Composite Lab ID: 6843j34  
Blank ID:6843j33  
Job Number: 36848  
Lab Code: WCA  
Method: 200.8  
Matrix: SED  
Date Received: 12-17-97  
Date Extracted: 12-18-97  
Date Analyzed: 12-20-97  
Sample Type: REG  
QC Batch: 6843j  
Units: mg/kg dry wt. Detection Limits

Lead 154 0.02

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	Area 4 Composite	Lab ID: 6843j35
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	111	0.01

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**WCAS**



WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Client: MEC Analytical Systems  
 Sample ID: Area 4 Composite

Job Number: 36848 Blank ID:6843j33  
 Lab Code: WCA  
 Method: 200.8  
 Matrix: SED  
 Date Extracted: 12-18-97  
 Date Analyzed: 12-20-97  
 Sample Type: MS  
 QC Batch: 6843j

	Original 35	Spike Conc	Spike Res 37	% Recovery*
Lead	111	13.26	98	-999

\* -999 = Spike recovery not applicable; spike<original concentration

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	Area 4 Composite	Lab ID: 6843j36
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	DUP	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	125	0.01

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	Lab ID: 6843j39
Sample ID:	DMDR97-22 Top	Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	129	0.02

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client: MEC Analytical Systems  
Sample ID: DMDR97-22 Bottom Lab ID: 6843j40  
Blank ID: 6843j33  
Job Number: 36848  
Lab Code: WCA  
Method: 200.8  
Matrix: SED  
Date Received: 12-17-97  
Date Extracted: 12-18-97  
Date Analyzed: 12-20-97  
Sample Type: REG  
QC Batch: 6843j  
Units: mg/kg dry wt. Detection Limits

Lead 143 0.02

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	DMDR97-23 Top	Lab ID: 6843j41 Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	52	0.02

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	DMDR97-23 Bottom	Lab ID: 6843j42
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	95	0.02

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	Lab ID: 6843j45
Sample ID:	DMDR97-24 Top	Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	144	0.01

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	DMDR97-24 Bottom	Lab ID: 6843j46
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	470	0.02

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WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client: MEC Analytical Systems  
Sample ID: DMDR97-25 Top  
Job Number: 36848  
Lab Code: WCA  
Method: 200.8  
Matrix: SED  
Date Received: 12-17-97  
Date Extracted: 12-18-97  
Date Analyzed: 12-20-97  
Sample Type: REG  
QC Batch: 6843j  
Units: mg/kg dry wt.

Lab ID: 6843j47  
Blank ID: 6843j33

Detection Limits

Lead	115	0.02
------	-----	------

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	DMDR97-25 Bottom	Lab ID: 6843j48
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	287	0.02

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**WCAS**

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	Lab ID: 6843j49
Sample ID:	DMDR97-26 Top	Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	11.9	0.01

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	Lab ID: 6843j50
Sample ID:	DMDR97-26 Bottom	Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	63	0.02

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WCAS

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	DMDR97-27 Top	Lab ID: 6843j51
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	400	0.02

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

---

LABORATORY REPORT

---

Client:	MEC Analytical Systems	
Sample ID:	DMDR97-27 Bottom	Lab ID: 6843j52
		Blank ID:6843j33
Job Number:	36848	
Lab Code:	WCA	
Method:	200.8	
Matrix:	SED	
Date Received:	12-17-97	
Date Extracted:	12-18-97	
Date Analyzed:	12-20-97	
Sample Type:	REG	
QC Batch:	6843j	Detection
Units:	mg/kg dry wt.	Limits
	-----	-----
Lead	440	0.02

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**WCAS**

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
Attn: Paul Krause

Job No: 36848  
January 9, 1998

LABORATORY REPORT

Total Petroleum Hydrocarbons by EPA 418.1

Sample ID	Parts Per Million (mg/Kg)
LA-2 Reference	20
Method Blank	ND
Detection Limit:	4

Results are based upon the dry weight basis.

Date Analyzed: 12-31-97

Matrix Spike/Matrix Spike Duplicate Recovery Summary

QC Batch: Reference	Matrix: Soil
Date Analyzed: 12/31/97	Date Extracted: 12/31/97
	Units: ppm

Analyte	Sample Result	Amount Spiked	MS Result	% Rec MS	MSD Result	% Rec MSD	RPD
Reference Oil	22	128	119	76	125	80	5

QC Limits

Analyte	RPD Warning Control	% Recovery Control
Reference Oil	10      15	75 - 111

WEST COAST ANALYTICAL SERVICE, INC.

MEC ANALYTICAL SYSTEMS  
 Attn: Paul Krause

Job No: 36848  
 January 9, 1998

LABORATORY REPORT

Total Solids by EPA 160.3M

Sample	Weight Percent
Area 3 Composite	64.2%
Area 4 Composite	75.4%
DMDR97-22 Top	61.4%
DMDR97-23 Top	67.2%
DMDR97-24 Top	75.9%
DMDR97-24 Bottom	70.3%
DMDR97-25 Top	71.4%
DMDR97-26 Top	77.9%
DMDR97-27 Top	72.0%
DMDR97-28 Top	79.5%
DMDR97-30 Top	74.1%
DMDR97-30 Bottom	70.2%
LA-2 Reference	76.5%
Area 5 Composite	74.8%
Area 6 Composite	75.2%
Area 9 Composite	78.4%
DMDR97-28 Bottom	74.7%
DMDR97-29 Top	74.0%
DMDR97-29 Bottom	74.8%
DMDR97-22 Bottom	61.5%
DMDR97-23 Bottom	69.8%
DMDR97-25 Bottom	65.5%
DMDR97-26 Bottom	70.0%
DMDR97-27 Bottom	71.3%

Date analyzed: 12-17-97

Duplicate Summary

Sample: Area 9 Composite  
 Units: Weight Percent

Analyte	Sample Result	Duplicate Result	RPD
Solids	78.4%	78.0%	-0

QC Limits

Analyte	RPD	
	Warning	Control
Solids	15	25

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ANALYTICAL SYSTEMS, INC.

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January 30, 1998

Batch No.: 980130A

Dear Paul:

Enclosed are the results of samples submitted to our laboratory on 28Jan98 for analysis of TOC (Method ASTM D2579, modified). For your reference, these samples have been assigned our batch number 980130A.

All analyses were performed consistent with our laboratory's quality assurance program and all samples met the quality control criteria specified in the above methods and/or our internal SOPs.

Please call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'B. Riley', is written over the typed name.

Brian Riley  
Laboratory Manager

Page 1 of 3

Analytical Report

Project: Marina Del Rey  
Contact: Dr. Paul Krause  
Sample Matrix: Soil

Date Received: 28Jan98  
Date Analyzed: 30Jan98  
Batch No.: 980130A

Total Organic Carbon  
Analysis Method: ASTM D2579, modified  
Percent (%)

Sample I.D.	MRL	Result
AREA 5	0.002	1.486
AREA 9	0.002	0.558
LA2 REF	0.002	0.397

Method blank ND

Approved by: *B. J. Kelly*

Date: 30Jan98

Page 2 of 3

QA/QC Report

Project: Marina Del Rey  
Contact: Dr. Paul Krause  
Sample Matrix: Soil

Date Received: 28Jan98  
Date Analyzed: 30Jan98  
Batch No.: 980130A

Duplicate Summary  
Total Organic Carbon  
Percent (%)

Sample I.D.	Sample Result	Duplicate Result	Average	RPD
AREA 9	0.558	0.555	0.557	0.536

ASTM D2579, modified

Approved by: B. J. Ly

Date: 30 Jan 98

Page 3 of 3

GRAIN SIZE ANALYSIS

Contract: Marina Del Rey  
 Contact person: Dr. Paul Krause  
 Date of analysis: 23Jan98  
 Date of report: 05Feb98  
 Analysis method: Sieve/pipette (Plumb, 1981)  
 Sample Identification: AREA 5  
 Total sample weight: 29.095 grams

Size	Phi	Weight grams	Percent	Cumulative Percent
2000.000	-1.0	0.054	0.186	0.186
1414.214	-0.5	0.050	0.172	0.357
1000.000	0.0	0.054	0.186	0.543
707.107	0.5	0.143	0.491	1.035
500.000	1.0	0.238	0.818	1.853
353.553	1.5	1.771	6.087	7.940
250.000	2.0	1.943	6.678	14.618
176.777	2.5	4.611	15.848	30.466
125.000	3.0	6.329	21.753	52.219
88.388	3.5	5.567	19.134	71.353
62.500	4.0	2.420	8.318	79.671
31.250	5.0	1.404	4.826	84.497
15.625	6.0	1.003	3.447	87.944
7.812	7.0	0.883	3.033	90.977
3.906	8.0	0.602	2.068	93.046
1.953	9.0	0.201	0.689	93.735
< 1.953	> 9.0	1.823	6.265	100.000

% < 4 phi = 20.329  
 % > 1 phi = 1.035  
 % gravel = 0.186  
 % sand = 79.485  
 % silt = 13.375  
 % clay = 6.954

Sample Statistics

Median	Mean	Dispersion	Skewness
phi 2.949 microns 129.50	phi 3.470 microns 90.23	1.427	0.365

5th percentile = 1.259  
 16th percentile = 2.044  
 50th percentile = 2.949  
 84th percentile = 4.897  
 95th percentile = .  
 \*\*\* 95th percentile not reached \*\*\*

MEC Analytical Systems, Inc.  
 2433 Impala Dr.  
 Carlsbad, CA 92008

**APPENDIX D**

**Suspended-Particulate Phase Bioassays**

**Bivalve Larval Survival and Development Test-Percent Survival**

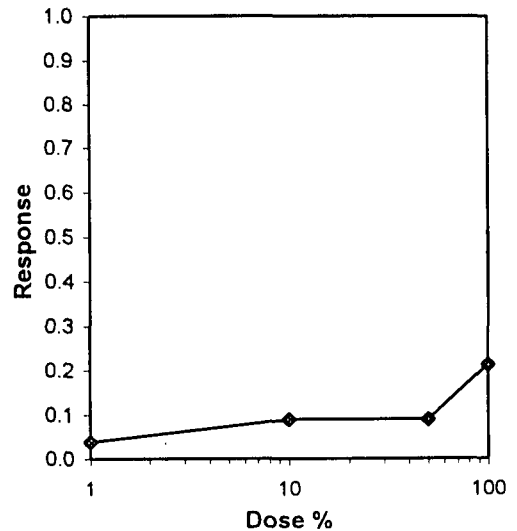
Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR area 3  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

Conc-%	1	2	3	4	5
Control	1.0000✓	1.0000✓	1.0000✓	0.9527✓	1.0000✓
1	1.0000✓	0.8640✓	1.0000✓	0.8968✓	1.0000✓
10	0.9658✓	1.0000✓	0.9625✓	0.7753✓	0.6833✓
50	0.9034✓	0.8936✓	0.9067✓	1.0000✓	0.9231✓
100	0.6406✓	0.9198✓	0.8246✓	0.7194✓	0.7950✓

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's 1-Tailed		Isotonic	
							Exact P	Critical	Mean	N-Mean
Control	1.0096	1.0000	-0.0473	5	4.95269	5			0.9905	1.0000
1	1.0502	1.0403	-0.2392	5	4.76084	5	1.0000	0.0500	0.9522	0.9613
10	0.9118	0.9032	0.38699	4	4.38699	5	1.0000	0.0500	0.9014	0.9100
50	1.0807	1.0704	-0.3732	5	4.62681	5	1.0000	0.0500	0.9014	0.9100
100	1.0258	1.0161	-0.1005	4	3.89947	5	1.0000	0.0500	0.7799	0.7873

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	2.977	12.825	0.000	76.211
IC10	54.072	26.266	0.000	80.764
IC15	74.456			
IC20	94.840			
IC25	>100			
IC40	>100			
IC50	>100			



**Bivalve Larval Survival and Development Test-Proportion Normal**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR area 3  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

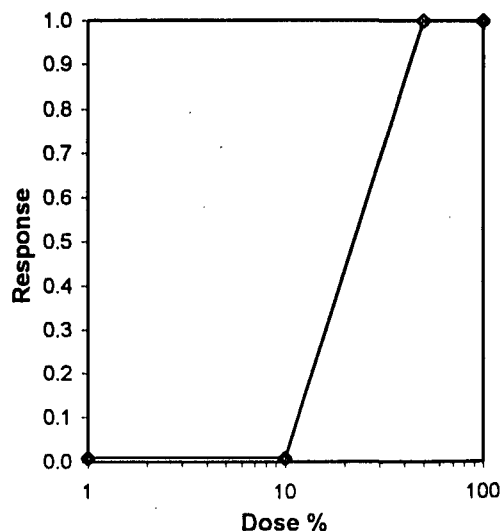
Conc-%	1	2	3	4	5
Control	0.9884 ✓	0.9594 ✓	0.9816 ✓	0.9759 ✓	0.9792 ✓
1	0.9479 ✓	0.9734 ✓	0.9693 ✓	0.9634 ✓	0.9570 ✓
10	0.9626 ✓	0.9564 ✓	0.9932 ✓	0.9746 ✓	0.9808 ✓
50	0.0000	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-%	Transform: Arcsin Square Root							Rank Sum	1-Tailed Critical	Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9769	1.0000	1.4213	1.3678	1.4631	2.449	5			0.9769	1.0000
1	0.9622	0.9849	1.3765	1.3405	1.4069	1.912	5	18.00	17.00	0.9678	0.9907
10	0.9735	0.9965	1.4134	1.3604	1.4881	3.558	5	25.00	17.00	0.9678	0.9907
*50	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	17.00	0.0000	0.0000
*100	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	17.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01) Equality of variance cannot be confirmed	0.88356	0.888	0.29112	1.97521

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	10	50	22.3607	10

Linear Interpolation (80 Resamples)					
Point	%	SE	95% CL(Exp)	Skew	
IC05	11.645	0.222	11.026 12.178	-0.2969	
IC10	13.663	0.210	13.077 14.168	-0.2969	
IC15	15.682	0.198	15.128 16.159	-0.2969	
IC20	17.701	0.187	17.180 18.150	-0.2969	
IC25	19.719	0.175	19.231 20.140	-0.2969	
IC40	25.776	0.140	25.385 26.112	-0.2969	
IC50	29.813	0.117	29.487 30.094	-0.2969	



**Bivalve Larval Survival and Development Test-Percent Survival**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 4  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis

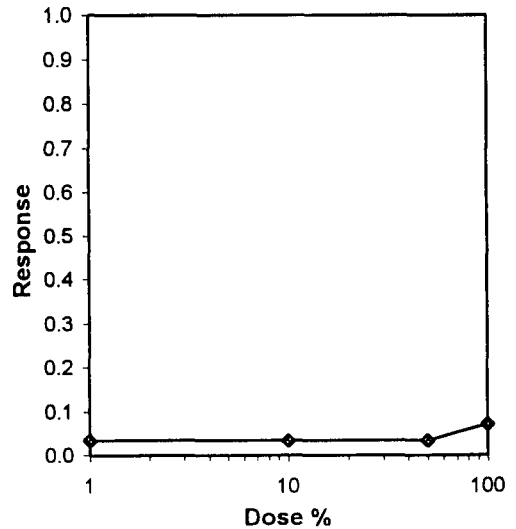
Comments:

Conc-%	1	2	3	4	5
Control	1.0000✓	1.0000✓	1.0000✓	0.9527✓	1.0000✓
1	0.9231✓	0.7589✓	0.9100✓	0.8640✓	1.0000✓
10	1.0000✓	0.9757✓	1.0000✓	0.9527✓	1.0000✓
50	1.0000✓	1.0000	1.0000✓	0.9625✓	0.9921✓
100	0.8541✓	0.9166✓	0.9067✓	0.9724✓	0.9461✓

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's 1-Tailed		Isotonic	
							Exact P	Critical	Mean	N-Mean
Control	1.0096	1.0000	-0.0473	5	4.95269	5			0.9905	1.0000
1	1.0502	1.0403	-0.2392	5	4.76084	5	1.0000	0.0500	0.9559	0.9651
10	1.1397	1.1290	-0.613	5	4.38699	5	1.0000	0.0500	0.9559	0.9651
50	1.0807	1.0704	-0.3732	5	4.62681	5	1.0000	0.0500	0.9559	0.9651
100	1.2822	1.2701	-1.1005	5	3.89947	5	1.0000	0.0500	0.9192	0.9280

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	70.304			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			





**Bivalve Larval Survival and Development Test-Proportion Normal**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 4  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

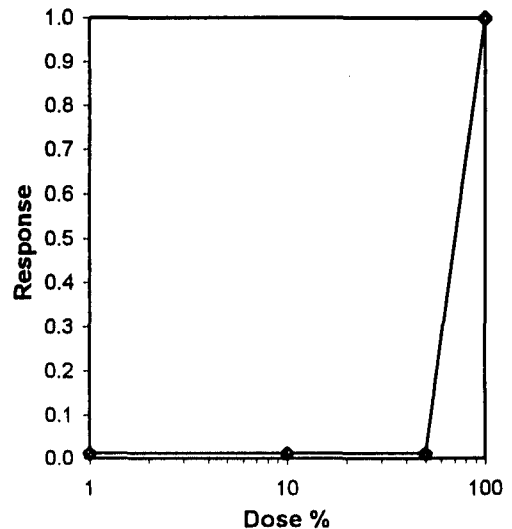
Conc-%	1	2	3	4	5
Control	0.9884 ✓	0.9594 ✓	0.9816 ✓	0.9759 ✓	0.9792 ✓
1	0.9715 ✓	0.9437 ✓	0.9892 ✓	0.9696 ✓	0.9416 ✓
10	0.9819 ✓	0.9428 ✓	0.9560 ✓	0.9448 ✓	0.9644 ✓
50	0.9777 ✓	0.9672 ✓	0.9878 ✓	0.9693 ✓	0.9669 ✓
100	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9769	1.0000	1.4213	1.3678	1.4631	2.449	5			0.9769	1.0000
1	0.9631	0.9859	1.3842	1.3266	1.4665	4.168	5	22.00	17.00	0.9650	0.9878
10	0.9580	0.9806	1.3678	1.3292	1.4360	3.175	5	20.00	17.00	0.9650	0.9878
50	0.9738	0.9968	1.4104	1.3878	1.4600	2.185	5	24.00	17.00	0.9650	0.9878
*100	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	17.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.94906	0.888	0.48707	0.40531
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	50	100	70.7107	2

Linear Interpolation (80 Resamples)					
Point	%	SE	95% CL(Exp)		Skew
IC05	51.912	0.302	51.024	52.760	-0.1708
IC10	54.443	0.286	53.601	55.246	-0.1708
IC15	56.974	0.270	56.179	57.733	-0.1708
IC20	59.505	0.254	58.757	60.219	-0.1708
IC25	62.036	0.238	61.335	62.705	-0.1708
IC40	69.629	0.191	69.068	70.164	-0.1708
IC50	74.691	0.159	74.223	75.137	-0.1708



**Bivalve Larval Survival and Development Test-Percent Survival**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 5  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis

Comments:

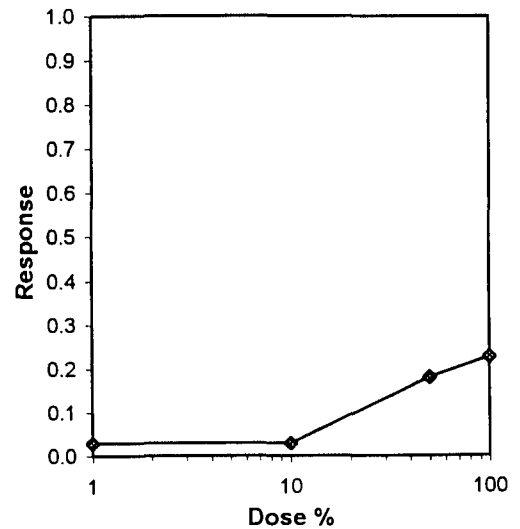
Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	0.9527	1.0000
1	0.8049	0.9855	0.9527	1.0000	1.0000
10	1.0000	1.0000	0.9757	0.9067	1.0000
50	0.5815	0.8640	0.9363	0.8180	0.8541
100	0.6045	0.9330	0.8509	0.8410	0.6012

Conc-%	Mean	N-Mean	Resp	Not		Total	N	Fisher's 1-Tailed		Isotonic	
				Resp	Total			Exact P	Critical	Mean	N-Mean
Control	1.0096	1.0000	-0.0473	5	4.95269	5			0.9905	1.0000	
1	1.0542	1.0442	-0.2569	5	4.7431	5	1.0000	0.0500	0.9625	0.9717	
10	1.0241	1.0144	-0.1176	5	4.88239	5	1.0000	0.0500	0.9625	0.9717	
50	0.9867	0.9774	0.05388	4	4.05388	5	1.0000	0.0500	0.8108	0.8185	
100	0.9618	0.9527	0.159	4	4.159	5	1.0000	0.0500	0.7661	0.7734	

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

**Linear Interpolation (80 Resamples)**

Point	%	SE	95% CL(Exp)		Skew
IC05	15.676	8.102	0.000	32.148	-0.5863
IC10	28.729	9.387	13.246	64.738	0.8348
IC15	41.782				
IC20	70.529				
IC25	>100				
IC40	>100				
IC50	>100				



**Bivalve Larval Survival and Development Test-Proportion Normal**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 5  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

Conc-%	1	2	3	4	5
Control	0.9884✓	0.9594✓	0.9816✓	0.9759✓	0.9792✓
1	0.9673✓	0.9500✓	0.9655✓	0.9847✓	0.9415✓
10	0.9911✓	0.9533✓	0.9731✓	0.8986✓	0.9602✓
50	0.0000	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000	0.0000

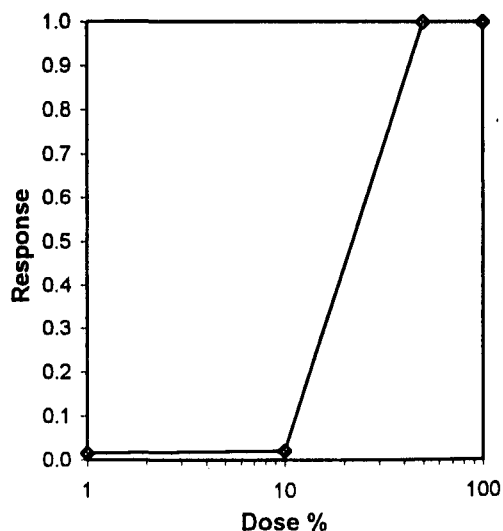
Conc-%	Transform: Arcsin Square Root							Rank Sum	1-Tailed Critical	Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9769	1.0000	1.4213	1.3678	1.4631	2.449	5			0.9769	1.0000
1	0.9618	0.9845	1.3783	1.3265	1.4466	3.362	5	21.00	17.00	0.9618	0.9845
10	0.9552	0.9778	1.3703	1.2466	1.4762	6.113	5	22.00	17.00	0.9552	0.9778
*50	0.0000	0.0000	0.5314	0.5272	0.5334	0.507	5	15.00	17.00	0.0000	0.0000
*100	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	17.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.85627	0.888	-0.3778	3.78056
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	10	50	22.3607	10

**Linear Interpolation (80 Resamples)**

Point	%	SE	95% CL(Exp)		Skew
IC05	11.138	0.633	9.260	12.155	-2.3557
IC10	13.184	0.481	11.547	14.147	-0.9696
IC15	15.229	0.454	13.683	16.139	-0.9696
IC20	17.274	0.428	15.820	18.131	-0.9696
IC25	19.320	0.401	17.956	20.123	-0.9696
IC40	25.456	0.321	24.365	26.098	-0.9696
IC50	29.547	0.267	28.637	30.082	-0.9696



**Bivalve Larval Survival and Development Test-Percent Survival**

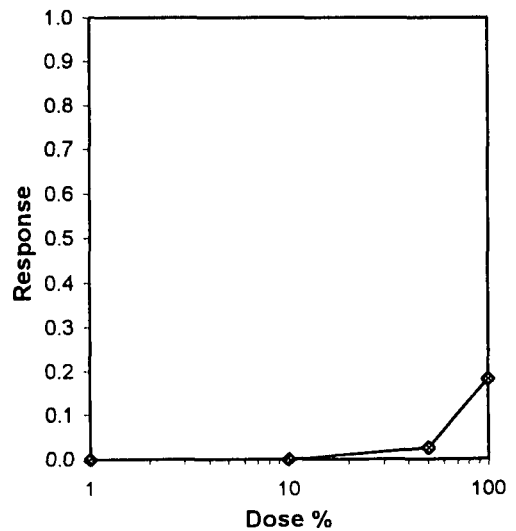
Start Date: 18 Dec-97 12:00	Test ID: 0719-009	Sample ID: ACOE/MDR Area 6
End Date: 20 Dec-97 12:00	Lab ID: CAMEC-MEC Carlsbad	Sample Type: DCS-Discharge cleanup site
Sample Date: 18 Dec-97 00:00	Protocol: ASTM 87	Test Species: ME-Mytilis edulis

Conc-%	1	2	3	4	5
Control	1.0000✓	1.0000✓	1.0000✓	0.9494✓	0.9198✓
1	0.9067✓	1.0000✓	0.9888✓	0.9593✓	1.0000✓
10	0.9921✓	1.0000✓	1.0000✓	0.8903✓	1.0000✓
50	1.0000✓	0.8903✓	0.8968✓	0.9855✓	0.9691✓
100	0.8344✓	0.8180✓	0.9396✓	0.8607✓	0.5289✓

Conc-%	Mean	N-Mean	Resp	Not		N	Fisher's 1-Tailed		Isotonic	
				Resp	Total		Exact P	Critical	Mean	N-Mean
Control	1.0096	1.0000	-0.0473	5	4.95269	5			0.9739	1.0000
1	1.0542	1.0442	-0.2569	5	4.7431	5	1.0000	0.0500	0.9737	0.9999
10	1.0241	1.0144	-0.1176	5	4.88239	5	1.0000	0.0500	0.9737	0.9999
50	1.2334	1.2217	-0.9461	5	4.05388	5	1.0000	0.0500	0.9484	0.9738
100	0.9618	0.9527	0.159	4	4.159	5	1.0000	0.0500	0.7963	0.8177

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

Linear Interpolation (80 Resamples)					
Point	%	SE	95% CL(Exp)		Skew
IC05	57.630	11.416	19.361	76.938	-0.8286
IC10	73.643				
IC15	89.656				
IC20	>100				
IC25	>100				
IC40	>100				
IC50	>100				



**Bivalve Larval Survival and Development Test-Proportion Normal**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 6  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

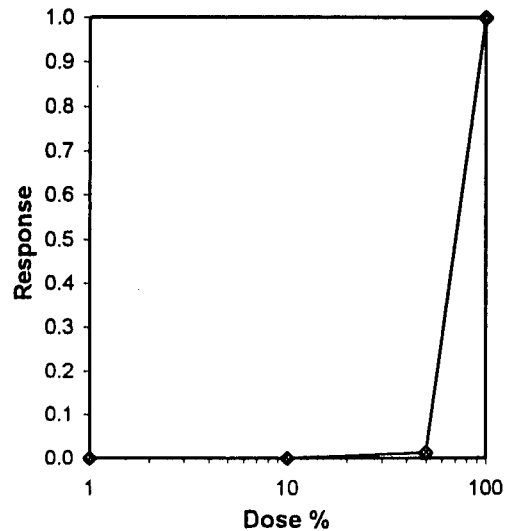
Conc-%	1	2	3	4	5
Control	0.9592✓	0.9578✓	0.9906✓	0.9896✓	0.9679✓
1	0.9022✓	1.0000✓	0.9767✓	0.9863✓	0.9746✓
10	0.9503✓	0.9904✓	0.9614✓	0.9963✓	0.9883✓
50	0.9597✓	0.9742✓	0.9634✓	0.9733✓	0.9322✓
100	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9730	1.0000	1.4129	1.3639	1.4738	3.843	5			0.9730	1.0000
1	0.9680	0.9948	1.3134	1.0321	1.4535	13.340	5	24.00	17.00	0.9727	0.9996
10	0.9774	1.0044	1.4329	1.3460	1.5100	4.876	5	29.00	17.00	0.9727	0.9996
50	0.9606	0.9872	1.3741	1.3074	1.4094	3.003	5	25.00	17.00	0.9606	0.9872
*100	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	17.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.88664	0.888	-1.4859	4.95232
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	50	100	70.7107	2

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	51.883	0.366	50.463 52.403	-0.7598
IC10	54.415	0.347	53.071 54.908	-0.7598
IC15	56.948	0.327	55.678 57.413	-0.7598
IC20	59.480	0.308	58.285 59.919	-0.7598
IC25	62.013	0.289	60.892 62.424	-0.7598
IC40	69.610	0.231	68.714 69.939	-0.7598
IC50	74.675	0.193	73.928 74.949	-0.7598



**Bivalve Larval Survival and Development Test-Percent Survival**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 9  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis

Comments:

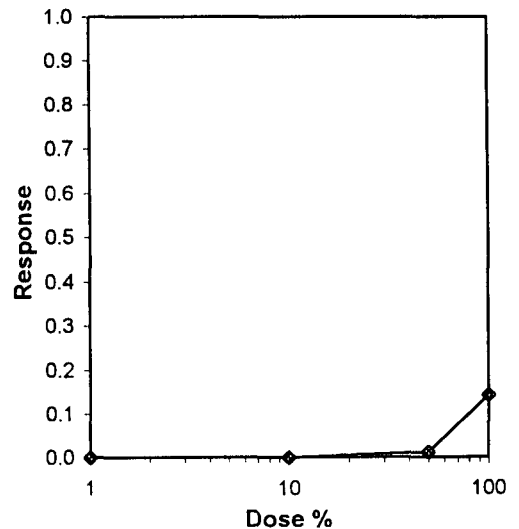
Conc-%	1	2	3	4	5
Control	1.0000 ✓	1.0000 ✓	1.0000 ✓	0.9494 ✓	0.9198 ✓
1	1.0000 ✓	1.0000 ✓	0.8673 ✓	0.9560 ✓	1.0000 ✓
10	1.0000 ✓	0.9855 ✓	1.0000 ✓	1.0000 ✓	1.0000 ✓
50	0.9461 ✓	1.0000 ✓	0.9461 ✓	0.9790 ✓	0.9625 ✓
100	0.8837 ✓	0.7096 ✓	1.0000 ✓	0.8246 ✓	0.7720 ✓

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's 1-Tailed		Isotonic	
							Exact P	Critical	Mean	N-Mean
Control	1.0269	1.0000	-0.1307	5	4.86925	5			0.9785	1.0000
1	1.0299	1.0030	-0.1452	5	4.8548	5	1.0000	0.0500	0.9785	1.0000
10	1.0241	0.9973	-0.1176	5	4.88239	5	1.0000	0.0500	0.9785	1.0000
50	1.0545	1.0269	-0.2582	5	4.74179	5	1.0000	0.0500	0.9668	0.9880
100	1.0046	0.9783	-0.0184	4	3.9816	5	1.0000	0.0500	0.8380	0.8564

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

**Linear Interpolation (80 Resamples)**

Point	%	SE	95% CL(Exp)		Skew
IC05	64.422	6.024	51.651	86.208	1.2213
IC10	83.418				
IC15	>100				
IC20	>100				
IC25	>100				
IC40	>100				
IC50	>100				



**Bivalve Larval Survival and Development Test-Proportion Normal**

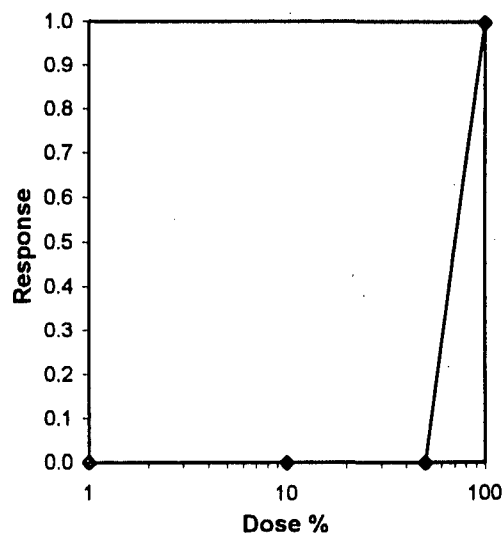
Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: ACOE/MDR Area 9  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: DCS-Discharge cleanup site  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

Conc-%	1	2	3	4	5
Control	0.9592✓	0.9578✓	0.9906✓	0.9896✓	0.9679✓
1	0.9848✓	0.9820✓	0.9773✓	0.9897✓	0.9780✓
10	0.9715✓	0.9900✓	0.9884✓	0.9840✓	0.9479✓
50	0.9688✓	0.9620✓	0.9896✓	1.0000✓	0.9693✓
100	0.0000	0.0000	0.0000	0.0000	0.0043

Conc-%	Mean	N-Mean	Resp	Not		Total	N	Fisher's 1-Tailed		Isotonic	
				Resp	Total			Exact P	Critical	Mean	N-Mean
Control	1.0277	1.0000	-0.1349	5	4.86514	5			0.9777	1.0000	
1	1.0180	0.9905	-0.0883	5	4.91174	5	1.0000	0.0500	0.9777	1.0000	
10	1.0242	0.9966	-0.1182	5	4.88183	5	1.0000	0.0500	0.9771	0.9994	
50	1.0226	0.9950	-0.1104	5	4.88964	5	1.0000	0.0500	0.9771	0.9994	
100	0.0000	0.0000	0.00426	0	0.00426	5	1.0000	0.0500	0.0009	0.0009	

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

Linear Interpolation (80 Resamples)					
Point	%	SE	95% CL(Exp)		Skew
IC05	52.476	0.226	51.353	52.522	-1.1244
IC10	54.979	0.214	53.912	55.030	-1.1218
IC15	57.483	0.202	56.472	57.538	-1.1184
IC20	59.987	0.191	59.031	60.046	-1.1139
IC25	62.490	0.179	61.590	62.554	-1.1079
IC40	70.001	0.144	69.278	70.078	-1.0754
IC50	75.008	0.122	74.405	75.094	-1.0299



**Bivalve Larval Survival and Development Test-Percent Survival**

Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: REF-Ref Toxicant  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: CUSO-Copper sulfate  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

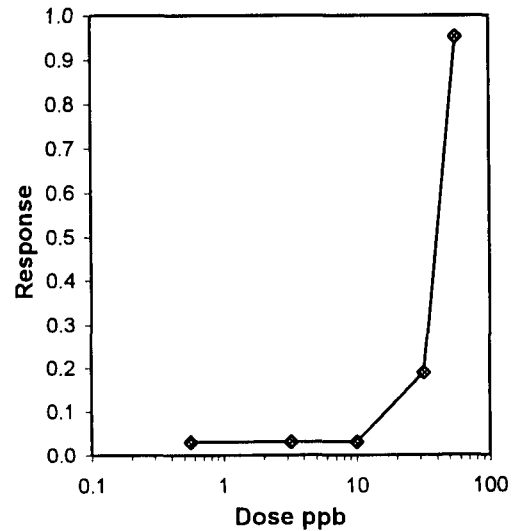
Conc-ppb	1	2	3	4	5
Control	1.0000✓	1.0000✓	1.0000✓	0.9494✓	0.9198✓
0.56	1.0000✓	0.9363✓	0.9001✓	0.9625✓	0.7194✓
3.2	1.0000✓	1.0000✓	0.9001✓	0.9593✓	1.0000✓
10	1.0000✓	0.8870✓	1.0000✓	0.9494✓	0.9527✓
32	0.8804✓	0.6669✓	0.7162✓	0.7884✓	0.9001✓
56	0.0427✓	0.0197✓	0.0526✓	0.0394✓	0.0756✓

Conc-ppb	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's 1-Tailed		Isotonic	
							Exact P	Critical	Mean	N-Mean
Control	1.0269	1.0000	-0.1307	5	4.86925	5			0.9739	1.0000
0.56	1.1066	1.0777	-0.4816	5	4.5184	5	1.0000	0.0500	0.9445	0.9698
3.2	1.0289	1.0020	-0.1406	5	4.8594	5	1.0000	0.0500	0.9445	0.9698
10	1.0440	1.0167	-0.2109	5	4.78909	5	1.0000	0.0500	0.9445	0.9698
32	1.0121	0.9857	-0.048	4	3.95204	5	1.0000	0.0500	0.7904	0.8116
56	0.0000	0.0000	0.22996	0	0.22996	5	1.0000	0.0500	0.0460	0.0472

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	56	>56		

**Linear Interpolation (80 Resamples)**

Point	ppb	SE	95% CL(Exp)		Skew
IC05	12.756	5.105	0.000	19.749	-1.0966
IC10	19.710	3.328	12.805	29.143	1.3023
IC15	26.664	3.629	17.140	35.749	0.3798
IC20	32.365	2.501	20.787	35.074	-0.9895
IC25	33.935	1.383	26.804	36.464	-1.2109
IC40	38.645	0.908	35.234	40.635	-0.2781
IC50	41.784	0.751	39.024	43.416	-0.3070





**Bivalve Larval Survival and Development Test-Proportion Normal**

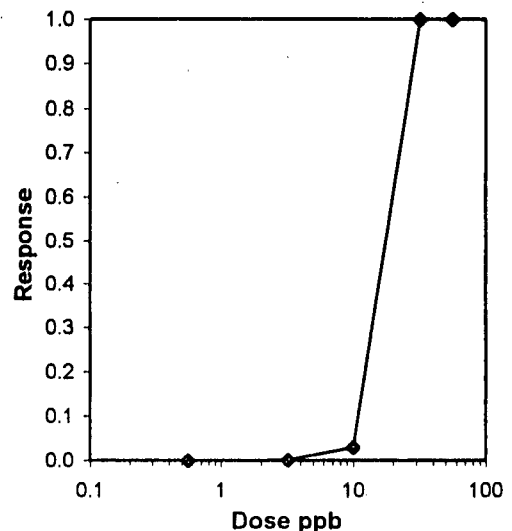
Start Date: 18 Dec-97 12:00 Test ID: 0719-009 Sample ID: REF-Ref Toxicant  
 End Date: 20 Dec-97 12:00 Lab ID: CAMEC-MEC Carlsbad Sample Type: CUSO-Copper sulfate  
 Sample Date: 18 Dec-97 00:00 Protocol: ASTM 87 Test Species: ME-Mytilis edulis  
 Comments:

Conc-ppb	1	2	3	4	5
Control	0.9592 ✓	0.9578 ✓	0.9906 ✓	0.9896 ✓	0.9679 ✓
0.56	0.9837 ✓	0.9860 ✓	0.9599 ✓	0.9693 ✓	0.9817 ✓
3.2	0.9709 ✓	0.9818 ✓	0.9562 ✓	0.9863 ✓	0.9740 ✓
10	0.9747 ✓	0.9815 ✓	0.8075 ✓	0.9862 ✓	0.9724 ✓
32	0.0000	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-ppb	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9730	1.0000	1.4129	1.3639	1.4738	3.843	5			0.9746	1.0000
0.56	0.9761	1.0032	1.4188	1.3691	1.4520	2.495	5	29.00	16.00	0.9746	1.0000
3.2	0.9738	1.0008	1.4114	1.3600	1.4535	2.543	5	27.00	16.00	0.9738	0.9993
10	0.9444	0.9706	1.3637	1.1166	1.4529	10.231	5	27.00	16.00	0.9444	0.9691
*32	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	16.00	0.0000	0.0000
*56	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	5	15.00	16.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.77149	0.9	-2.5291	10.555
Equality of variance cannot be confirmed				
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	10	32	17.8885	

Linear Interpolation (80 Resamples)					
Point	ppb	SE	95% CL(Exp)		Skew
IC05	10.433	1.384	3.688	11.433	-1.2661
IC10	11.568	0.757	8.333	12.516	-2.2413
IC15	12.703	0.611	10.177	13.598	-1.3226
IC20	13.839	0.575	11.461	14.681	-1.3226
IC25	14.974	0.539	12.744	15.763	-1.3226
IC40	18.379	0.431	16.596	19.011	-1.3226
IC50	20.649	0.359	19.163	21.175	-1.3226



0719-009

*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number		Total Number	Avg Number Survived	Percent Survival	Percent	
				Normal	Abnormal				Treatment Mortality	Normal
	Precount		1			315	31.5			
			2			305	30.5			
			3			301	30.1			
			4			304	30.4			
			5			297	29.7			
			AVG			304.4	30.4			
42	Control A		1	342	4	346	34.6	100.0		98.8
7			2	307	13	320	32.0	100.0		95.9
35			3	320	6	326	32.6	100.0		98.2
19			4	283	7	290	29.0	95.3		97.6
49			5	330	7	337	33.7	100.0		97.9
			AVG				32.4	99.1	NA	97.7
2	Area 3	1%	1	291	16	307	30.7	100.0		94.8
45			2	256	7	263	26.3	86.4		97.3
55			3	316	10	326	32.6	100.0		96.9
56			4	263	10	273	27.3	89.7		96.3
36			5	334	15	349	34.9	100.0		95.7
			AVG				30.4	95.2	6.2	96.2
61	Area 3	10%	1	283	11	294	29.4	96.6		96.3
53			2	307	14	321	32.1	100.0		95.6
62			3	291	2	293	29.3	96.3		99.3
38			4	230	6	236	23.6	77.5		97.5
47			5	204	4	208	20.8	68.3		98.1
			AVG				27.0	87.7	16.5	97.3

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*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number		Total Number	Avg Number Survived	Percent Survival	Percent	
				Normal	Abnormal				Treatment Mortality	Normal
33	Area 3	50%	1	0	275	275	27.5	90.3		0.0
25			2	0	272	272	27.2	89.4		0.0
23			3	0	276	276	27.6	90.7		0.0
29			4	0	310	310	31.0	100.0		0.0
24			5	0	281	281	28.1	92.3		0.0
			AVG			28.3	92.5		12.7	0.0
41	Area 3	100%	1	0	195	195	19.5	64.1		0.0
63			2	0	280	280	28.0	92.0		0.0
60			3	0	251	251	25.1	82.5		0.0
16			4	0	219	219	21.9	71.9		0.0
12			5	0	242	242	24.2	79.5		0.0
			AVG			23.7	78.0		26.7	0.0
40	Area 4	1%	1	273	8	281	28.1	92.3		97.2
51			2	218	13	231	23.1	75.9		94.4
57			3	274	3	277	27.7	91.0		98.9
37			4	255	8	263	26.3	86.4		97.0
28			5	290	18	308	30.8	100.0		94.2
			AVG			27.2	89.1		16.0	96.3
15	Area 4	10%	1	326	6	332	33.2	100.0		98.2
10			2	280	17	297	29.7	97.6		94.3
54			3	304	14	318	31.8	100.0		95.6
5			4	274	16	290	29.0	95.3		94.5
30			5	298	11	309	30.9	100.0		96.4
			AVG			30.9	98.6		4.5	95.8

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*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number		Total Number	Avg Number Survived	Percent Survival	Percent	
				Normal	Abnormal				Treatment Mortality	Normal
32	Area 4	50%	1	307	7	314	31.4	100.0		97.8
17			2	295	10	305	30.5	100.0		96.7
65			3	323	4	327	32.7	100.0		98.8
59			4	284	9	293	29.3	96.3		96.9
44			5	292	10	302	30.2	99.2		96.7
			AVG			30.8	99.1		4.8	97.4
4	Area 4	100%	1	0	260	260	26.0	85.4		0.0
58			2	0	279	279	27.9	91.7		0.0
9			3	0	276	276	27.6	90.7		0.0
43			4	0	296	296	29.6	97.2		0.0
46			5	0	288	288	28.8	94.6		0.0
			AVG			28.0	91.9		13.6	0.0
39	Area 5	1%	1	237	8	245	24.5	80.5		96.7
50			2	285	15	300	30.0	98.6		95.0
20			3	280	10	290	29.0	95.3		96.6
6			4	321	5	326	32.6	100.0		98.5
52			5	338	21	359	35.9	100.0		94.2
			AVG			30.4	94.9		6.1	96.2
3	Area 5	10%	1	333	3	336	33.6	100.0		99.1
14			2	306	15	321	32.1	100.0		95.3
11			3	289	8	297	29.7	97.6		97.3
34			4	248	28	276	27.6	90.7		89.9
13			5	314	13	327	32.7	100.0		96.0
			AVG			31.1	97.6		3.8	95.5

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*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number		Total Number	Avg Number Survived	Percent Survival	Percent	
				Normal	Abnormal				Treatment Mortality	Normal
1	Area 5	50%	1	0	177	177	17.7	58.1		0.0
27			0	263	263	26.3	86.4		0.0	
26			0	285	285	28.5	93.6		0.0	
48			0	249	249	24.9	81.8		0.0	
22			0	260	260	26.0	85.4		0.0	
	AVG					24.7	81.1	23.8	0.0	
8	Area 5	100%	1	0	184	184	18.4	60.4		0.0
31			0	284	284	28.4	93.3		0.0	
64			0	259	259	25.9	85.1		0.0	
18			0	256	256	25.6	84.1		0.0	
21			0	183	183	18.3	60.1		0.0	
	AVG					23.3	76.6	28.0	0.0	
66	Control B		1	306	13	319	31.9	100.0		95.9
74		295	13	308	30.8	100.0		95.8		
70		317	3	320	32.0	100.0		99.1		
89		286	3	289	28.9	94.9		99.0		
106		271	9	280	28.0	92.0		96.8		
	AVG					30.3	97.4	NA	97.3	
96	Area 6	1%	1	249	27	276	27.6	90.7		90.2
90			330	0	330	33.0	100.0		100.0	
82			294	7	301	30.1	98.9		97.7	
84			288	4	292	29.2	95.9		98.6	
88			307	8	315	31.5	100.0		97.5	
	AVG					30.3	97.1	0.1	96.8	

0719-009  
*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number		Total Number	Avg Number Survived	Percent		Percent Normal
				Normal	Abnormal			Survival	Treatment Mortality	
99	Area 6	10%	1	287	15	302	30.2	99.2	95.0	
78			2	310	3	313	31.3	100.0	99.0	
67			3	324	13	337	33.7	100.0	96.1	
83			4	270	1	271	27.1	89.0	99.6	
76			5	338	4	342	34.2	100.0	98.8	
			AVG				31.3	97.6	97.7	0.0
95	Area 6	50%	1	357	15	372	37.2	100.0	96.0	
102			2	264	7	271	27.1	89.0	97.4	
100			3	263	10	273	27.3	89.7	96.3	
101			4	292	8	300	30.0	98.6	97.3	
109			5	275	20	295	29.5	96.9	93.2	
			AVG				30.2	94.8	96.1	0.3
77	Area 6	100%	1	0	254	254	25.4	83.4	0.0	
91			2	0	249	249	24.9	81.8	0.0	
69			3	0	286	286	28.6	94.0	0.0	
92			4	0	262	262	26.2	86.1	0.0	
103			5	0	161	161	16.1	52.9	0.0	
			AVG				24.2	79.6	20.1	0.0
107	Area 9	1%	1	323	5	328	32.8	100.0	98.5	
71			2	328	6	334	33.4	100.0	98.2	
86			3	258	6	264	26.4	86.7	97.7	
93			4	288	3	291	29.1	95.6	99.0	
79			5	311	7	318	31.8	100.0	97.8	
			AVG				30.7	96.5	98.2	0.0

0719-009

*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number Normal	Number Abnormal	Total Number	Avg Number Survived	Percent Survival	Percent Treatment Mortality	Percent Normal
104	Area 9	10%	1	307	9	316	31.6	100.0		97.2
110			2	297	3	300	30.0	98.6		99.0
97			3	341	4	345	34.5	100.0		98.8
75			4	308	5	313	31.3	100.0		98.4
105			5	291	16	307	30.7	100.0		94.8
			AVG				31.6	99.7	0.0	97.6
72	Area 9	50%	1	279	9	288	28.8	94.6		96.9
81			2	304	12	316	31.6	100.0		96.2
87			3	285	3	288	28.8	94.6		99.0
85			4	298	0	298	29.8	97.9		100.0
94			5	284	9	293	29.3	96.3		96.9
			AVG				29.7	96.7	2.2	97.8
68	Area 9	100%	1	0	269	269	26.9	88.4		0.0
80			2	0	216	216	21.6	71.0		0.0
73			3	0	371	371	37.1	100.0		0.0
98			4	0	251	251	25.1	82.5		0.0
108			5	1	234	235	23.5	77.2		0.4
			AVG				26.8	83.8	11.5	0.1
125	Copper	0.56	1	302	5	307	30.7	100.0		98.4
123			2	281	4	285	28.5	93.6		98.6
131			3	263	11	274	27.4	90.0		96.0
112			4	284	9	293	29.3	96.3		96.9
129			5	215	4	219	21.9	71.9		98.2
			AVG				27.6	90.4	9.1	97.6

0719-009

*M. edulis*

Test dates: 12/18-12/20/97

#	Site	Conc.	Rep	Number		Total Number	AVG Number Survived	Percent Survival	Percent	
				Normal	Abnormal				Treatment Mortality	Normal
114	Copper	3.2	1	300	9	309	30.9	100.0		97.1
118			2	324	6	330	33.0	100.0		98.2
128			3	262	12	274	27.4	90.0		95.6
126			4	288	4	292	29.2	95.9		98.6
119			5	300	8	308	30.8	100.0		97.4
			AVG				30.3	97.2	0.2	97.4
122	Copper	10	1	308	8	316	31.6	100.0		97.5
130			2	265	5	270	27.0	88.7		98.1
127			3	281	67	348	34.8	100.0		80.7
135			4	285	4	289	28.9	94.9		98.6
113			5	282	8	290	29.0	95.3		97.2
			AVG				30.3	95.8	0.2	94.4
121	Copper	32	1	0	268	268	26.8	88.0		0.0
117			2	0	203	203	20.3	66.7		0.0
133			3	0	218	218	21.8	71.6		0.0
132			4	0	240	240	24.0	78.8		0.0
124			5	0	274	274	27.4	90.0		0.0
			AVG				24.1	79.0	20.6	0.0
116	Copper	56	1	0	13	13	1.3	4.3		0.0
115			2	0	6	6	0.6	2.0		0.0
111			3	0	16	16	1.6	5.3		0.0
134			4	0	12	12	1.2	3.9		0.0
120			5	0	23	23	2.3	7.6		0.0
			AVG				1.4	4.6	95.4	0.0



BIVALVE TEST WORKSHEET

Test Material: Elutriate/Copper Sulfate  
Study No: 0719-009  
Protocol No.: ASTM  
Species: M. edulis  
Study Director: PK

Lab Form: 33  
MEC Analytical Systems, Bioassay Div.  
3150 Paradise Dr., Bldg. 36  
Tiburon, CA 94920

SPAWNING:

Males: 4 Females: 6 Source: MEC West  
Carlsbad, CA

Diluent: 0.2 μm filt. Bodega Time to spawn: 1130-1330  
Seawater

Spawning method: Heat (22°C) or Stripping (Circle one)

Sperm viability: Motile

Condition of eggs: Good, round

Time fertilization starts: 1345 Time fertilization ends: 1530

DENSITY

Dilution: 0.1 Counts: 34, 33, 40, 29 (Count 3-0.1ml portions)

Mean: 34.5 (per 0.1 ml)

Density: = (Mean)( 10)( 1/dilution) =  $3.45 \times 10^3$  embryos/ml

Condition of embryos: Good, dividing

QUANTITY PER FLASK

# mls/flask = (30/ml)(exposure volume) / Density = 0.087

Date/Time Test Initiated: 12-18-97 1550

Date/Time Test Terminated: 12-20-97 1630

Checked by: KL 1-8-98

129590

0719-009  
*M. edulis*  
 Randomization sheet

0.0066	42	Control A		1
0.0237	7			2
0.0299	35			3
0.1290	19			4
0.1409	49			5
0.1430	2	Area 3	1%	1
0.1538	45			2
0.1607	55			3
0.1678	56			4
0.1995	36			5
0.2116	61	Area 3	10%	1
0.2283	53			2
0.2430	62			3
0.2434	38			4
0.2516	47			5
0.2616	33	Area 3	50%	1
0.2715	25			2
0.2795	23			3
0.3103	29			4
0.3152	24			5
0.3355	41	Area 3	100%	1
0.3426	63			2
0.3910	60			3
0.3975	16			4
0.4025	12			5
0.4100	40	Area 4	1%	1
0.4252	51			2
0.4285	57			3
0.4291	37			4
0.4494	28			5
0.4519	15	Area 4	10%	1
0.4610	10			2
0.4638	54			3
0.4770	5			4
0.4841	30			5
0.4858	32	Area 4	50%	1
0.4879	17			2
0.5085	65			3
0.5406	59			4
0.5454	44			5
0.5482	4	Area 4	100%	1
0.5731	58			2
0.5972	9			3
0.6134	43			4
0.6300	46			5

129585

0719-009  
*M. edulis*  
 Randomization sheet

0.6372	39	Area 5	1%	1
0.6663	50			2
0.6721	20			3
0.6773	6			4
0.6778	52			5
0.6862	3	Area 5	10%	1
0.6864	14			2
0.7029	11			3
0.7321	34			4
0.7520	13			5
0.7672	1	Area 5	50%	1
0.7736	27			2
0.7984	26			3
0.8731	48			4
0.8942	22			5
0.9194	8	Area 5	100%	1
0.9295	31			2
0.9422	64			3
0.9738	18			4
0.9750	21			5
0.0345	66	Control B		1
0.0579	74			2
0.0856	70			3
0.0982	89			4
0.1327	106			5
0.1902	96	Area 6	1%	1
0.2179	90			2
0.2294	82			3
0.2410	84			4
0.2487	88			5
0.2509	99	Area 6	10%	1
0.2956	78			2
0.3219	67			3
0.3226	83			4
0.3375	76			5
0.3519	95	Area 6	50%	1
0.3586	102			2
0.3602	100			3
0.3824	101			4
0.4438	109			5
0.4615	77	Area 6	100%	1
0.4726	91			2
0.4980	69			3
0.5112	92			4
0.5220	103			5

129587

0719-009  
*M. edulis*  
 Randomization sheet

0.5304	107	Area 9	1%	1
0.5412	71			2
0.5548	86			3
0.5554	93			4
0.5666	79			5
0.5952	104	Area 9	10%	1
0.6270	110			2
0.6400	97			3
0.6570	75			4
0.6668	105			5
0.6717	72	Area 9	50%	1
0.7023	81			2
0.7216	87			3
0.7251	85			4
0.7388	94			5
0.7423	68	Area 9	100%	1
0.7575	80			2
0.8329	73			3
0.9038	98			4
0.9392	108			5
0.0011	125	Copper	0.56	1
0.0318	123			2
0.0369	131			3
0.0431	112			4
0.0694	129			5
0.0949	114	Copper	3.2	1
0.1499	118			2
0.1755	128			3
0.2431	126			4
0.2644	119			5
0.3288	122	Copper	10	1
0.3500	130			2
0.3921	127			3
0.3974	135			4
0.4447	113			5
0.4986	121	Copper	32	1
0.5545	117			2
0.5619	133			3
0.6435	132			4
0.6737	124			5
0.7487	116	Copper	56	1
0.7757	115			2
0.8163	111			3
0.8731	134			4
0.9017	120			5

129586

WATER QUALITY

Lab Form: 24  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Material: Elutriate/Copper Sulfate  
 Test Species: M. edulis  
 Checked By: C. 1-8-98

Study No: 0719-009  
 Study Director: PK

Conc. %	Date: 12-18-97 Day: 0			Date: 12-19-97 Day: 1			Date: 12-20-97 Day: 2							
	Rep	Temp	D.O.	pH	Sal	Temp	D.O.	pH	Sal	Temp	D.O.	pH	Sal	NH3
Control		15.2	7.8	8.04	32	15.3	8.2	7.99	32	15.2	7.5	7.88	31	
Area 3														
1		15.2	7.8	8.01	32	15.1	8.1	8.02	32	15.2	7.2	7.92	32	
10		15.3	7.8	7.93	32	15.1	8.1	7.99	32	15.2	7.7	7.94	32	
50		16.5	7.5	7.81	31	15.1	7.9	8.00	31	15.2	7.7	8.00	31	
100		16.5	6.7	7.72	31	15.1	7.5	8.00	31	15.2	7.1	8.00	31	7.04
Area 4														
1		15.6	7.7	8.01	32	15.3	8.1	8.01	31	15.2	7.2	7.92	31	
10		15.6	7.7	8.02	32	15.2	8.2	8.02	32	15.1	7.6	7.94	32	
50		16.4	7.2	7.99	31	15.1	7.8	8.03	31	15.0	7.5	7.98	31	
100		16.5	6.6	7.95	31	15.1	7.5	8.07	30	15.0	7.5	8.06	31	3.51
Area 5														
1		15.5	7.7	8.03	32	15.2	8.1	8.01	31	15.1	7.4	7.94	31	0.
10		15.5	7.7	8.04	32	15.2	8.1	8.01	32	15.0	7.6	7.94	31	
50		16.4	7.4	8.01	31	15.1	7.9	8.09	31	15.1	7.6	8.12	31	
100		16.5	4.7	7.97	31	15.1	7.7	8.14	31	15.1	7.4	8.15	31	9.13

Initials: PK MSD PM/UC

WATER QUALITY

Lab Form: 24  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Material: Elutriate/Copper Sulfate  
 Test Species: M. edulis  
 Checked By: YC 1-8-98

Study No: 0719-009  
 Study Director: PK

Conc.	Rep	Date: 12-18-97	Day: 0	Date: 12/19/97	Day: 1	Date: 12/20/97	Day: 2			
%		Temp	D.O.	pH	Sal	Temp	D.O.	pH	Sal	NH3
Area 6										
1		15.3	7.7	7.91	32	15.1	8.2	8.02	31	
10		15.4	7.7	7.91	32	15.1	7.9	8.01	32	
50		16.3	7.5	7.91	31	15.1	7.8	8.05	31	12-20-97 385
100		16.4	7.3	7.93	31	15.1	7.6	8.13	30	385
Area 9										
1		15.3	7.7	8.04 7.91*	32	15.2	8.1	8.02	31	
10		15.4	7.7	8.04 7.91*	32	15.2	8.1	8.02	31	
50		16.5	7.4 7.5*	8.07 7.91*	31	15.1	7.8	8.09	31	
100		16.5	6.4 7.3*	8.04 7.93*	31	15.1	7.7	8.16	30	
Copper (µg/L)										
0.56		16.3	8.1	8.00	32	15.0	8.2	7.80	32	
3.2		16.2	8.0	8.00	32	15.2	8.3	7.91	32	
10		16.1	8.0	8.00	31	15.1	8.2	7.91	32	
32		16.2	8.0	8.01	32	15.1	8.2	7.88	32	
56		16.2	8.0	8.01	32	15.1	8.1	7.99	32	

MSB

Initials: YC

129589

LARVAL OBSERVATIONS SHEET

Study Number: 0719-009  
 Study Director: PK  
 Test Dates: 12/18-12/20/97  
 Species: M. edulis

Form 44B  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Date/ID				
12/20 <sup>97</sup> 1/04/98 KJ/MJB				
Site/Conc./ Rep	Container Number	Number Normal	Number Abnormal	Comments
	Pre 1	316		
	Pre 2	305		
	Pre 3	301		
	Pre 4	304		
	Pre 5	297		
Area 5 50% 1	1	0	177	
Area 3 1% 1	2	291	16	
Area 5 10% 1	3	333	003	
Area 4 100% 1	4	000	260	
Area 4 10% 4	5	274	16	
Area 5 1% 4	6	321	5	
Control A 2	7	307	13	
Area 5 100% 1	8	000	184	
Area 4 100% 3	9	000	276	
Area 4 10% 2	10	280	17	
Area 5 10% 3	11	289	08	
Area 3 100% 5	12	000	242	
Area 5 10% 5	13	314	13	
Area 5 10% 2	14	306	15	
Area 4 10% 1	15	326	06	
Area 3 100% 4	16	000	219	
Area 4 50% 2	17	295	10	
Area 5 100% 4	18	000	256	
Control A 4	19	283	7	
Area 5 1% 3	20	280	10	

Checked by: 16 1-8-98

129591

LARVAL OBSERVATIONS SHEET

Study Number: 0719-009  
 Study Director: PK  
 Test Dates: 12/18-12/20/97  
 Species: M. edulis

Form 44B  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Date/ID		12/23/97 1/05/98		ke/msb	
Site/Conc./ Rep	Container Number	Number Normal	Number Abnormal	Comments	
Area 5 100% 5	21	000	183		
Area 5 50% 5	22	000	260		
Area 3 50% 3	23	000	276		
Area 3 50% 5	24	000	281		
Area 3 50% 2	25	000	272		
Area 5 50% 3	26	000	285		
Area 5 50% 2	27	000	263		
Area 4 1% 5	28	290	018		
Area 3 50% 4	29	000	310		
Area 4 10% 5	30	298	11		
Area 5 100% 2	31	000	284		
Area 4 50% 1	32	307	07		
Area 3 50% 1	33	000	275		
Area 5 10% 4	34	248	28		
Control A	3	320	6		
Area 3 1% 5	36	334	15		
Area 4 1% 4	37	255	08		
Area 3 10% 4	38	230	06		
Area 5 1% 1	39	237	08		
Area 4 1% 1	40	273	08		
Area 3 100% 1	41	000	195		
Control A	1	342	4		
Area 4 100% 4	43	000	296		
Area 4 50% 5	44	292	10		
Area 3 1% 2	45	256	07		

Checked by: ke 1-8-98

129592  
 129592  
 12-18-97



LARVAL OBSERVATIONS SHEET

Study Number: 0719-009  
 Study Director: PK  
 Test Dates: 12/18-12/20/97  
 Species: M. edulis

Form 44B  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Date/ID					12/23/97 - 1/07/98 KJ/mJB				
Site/Conc./ Rep	Container Number	Number Normal	Number Abnormal	Comments					
Area 4 100% 5	46	0	288						
Area 3 10% 5	47	204	4						
Area 5 50% 4	48	000	249						
Control A	5	49	330	7					
Area 5 1% 2	50	285	15						
Area 4 1% 2	51	218	13						
Area 5 1% 5	52	338	21						
Area 3 10% 2	53	307	14						
Area 4 10% 3	54	304	14						
Area 3 1% 3	55	316	10						
Area 3 1% 4	56	263	10						
Area 4 1% 3	57	274	03						
Area 4 100% 2	58	000	279						
Area 4 50% 4	59	284	009						
Area 3 100% 3	60	000	251						
Area 3 10% 1	61	283	11						
Area 3 10% 3	62	291	02						
Area 3 100% 2	63	000	280						
Area 5 100% 3	64	000	259						
Area 4 50% 3	65	323	04						
Control B	1	66	306	13					
Area 6 10% 3	67	324	13						
Area 9 100% 1	68	000	269						
Area 6 100% 3	69	269000	286						
Control B	3	70	317	3					

Checked by: KJ 1-8-98

129593

LARVAL OBSERVATIONS SHEET

Study Number: 0719-009  
 Study Director: PK  
 Test Dates: 12/18 - 12/20/97  
 Species: M. edulis

Form 44B  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Date/ID <u>12/23/97 - 1/07/98</u>				
Site/Conc./ Rep	Container Number	Number Normal	Number Abnormal	Comments
Area 9 1% 2	71	328	11	
Area 9 50% 1	72	279	9	
Area 9 100% 3	73	0	371	
Control B 2	74	295	13	
Area 9 10% 4	75	308	5	
Area 6 10% 5	76	378	4	
Area 6 100% 1	77	0	254	
Area 6 10% 2	78	310	3	
Area 9 1% 5	79	311	7	
Area 9 100% 2	80	0	216	
Area 9 50% 2	81	304	12	
Area 6 1% 3	82	204	7	
Area 6 10% 4	83	270	1	
Area 6 1% 4	84	288	4	
Area 9 50% 4	85	298	0	
Area 9 1% 3	86	258	6	
Area 9 50% 3	87	285	3	
Area 6 1% 5	88	307	8	
Control B 4	89	286	3	
Area 6 1% 2	90	330	0	
Area 6 100% 2	91	000	249	
Area 6 100% 4	92	000	262	
Area 9 1% 4	93	288	3	
Area 9 50% 5	94	284	9	
Area 6 50% 1	95	357	15	

Checked by: ke 1-8-98

128894

LARVAL OBSERVATIONS SHEET

Study Number: 0719-009  
 Study Director: PK  
 Test Dates: 12/18-12/20/97  
 Species: M. edulis

Form 44B  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Date/ID					12/23/97 - 1/08/98 KJ/MSB				
Site/Conc./ Rep	Container Number	Number Normal	Number Abnormal	Comments					
Area 6 1% 1	96	249	27						
Area 9 10% 3	97	341	004						
Area 9 100% 4	98	000	251						
Area 6 10% 1	99	287	15						
Area 6 50% 3	100	263	10						
Area 6 50% 4	101	292	8						
Area 6 50% 2	102	264	7						
Area 6 100% 5	103	0	161						
Area 9 10% 1	104	307	9						
Area 9 10% 5	105	291	14						
Control B	5	106	9						
Area 9 1% 1	107	323	5						
Area 9 100% 5	108	1	234						
Area 6 50% 5	109	275	20						
Area 9 10% 2	110	297	3						
Copper 56 3	111	5	16						
Copper 0.56 4	112	284	9						
Copper 10 5	113	282	8						
Copper 3.2 1	114	300	9						
Copper 56 2	115	0	6						
Copper 56 1	116	0	13						
Copper 32 2	117	9	203						
Copper 3.2 2	118	324	6						
Copper 3.2 5	119	300	0						
Copper 56 5	120	0	23						

Checked by: KJ 1-8-98

129594

LARVAL OBSERVATIONS SHEET

Study Number: 0719-009  
 Study Director: PK  
 Test Dates: 12/18-12/20/97  
 Species: M. edulis

Form 44B  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Date/ID	Site/Conc./ Rep	Container Number	Number Normal	Number Abnormal	Comments
1-8-98 ke	Copper 32 1	121	0	266	
	Copper 10 1	122	308	8	
	Copper 0.56 2	123	281	4	
	Copper 32 5	124	0	214	
	Copper 0.56 1	125	302	5	
	Copper 3.2 4	126	288	4	
	Copper 10 3	127	281	127	
	Copper 3.2 3	128	262	12	
	Copper 0.56 5	129	215	4	
	Copper 10 2	130	265	5	
	Copper 0.56 3	131	263	11	
	Copper 32 4	132	0	240	
	Copper 32 3	133	0	218	
	Copper 56 4	134	0	12	
	Copper 10 4	135	285	4	

Checked by: ke 1-8-98

TEST CONCENTRATION PREPARATION  
(Dilutions)

Study Number 0719-009  
Study Director PK

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Species: M. edulis  
Prepared by: ke

Test Material: Elutriate  
No. of Replicates: 5

Concentration (%)	Diluent 1 0.2µm filtered 30‰ Seawater	Diluent 2 <u>mLs</u>	Salt	100% Test Material	% Test Material
1) Control	200				
2)					
3)					
4) 1	198			2.0	
5) 10	180			20	
6) 50	100			100	
7) 100	0			200	
8)					
9)					
10)					

DAY 0  
Date/ID 12-18-97  
ke

Species: M. edulis  
Prepared by: ke

Test Material: Copper Sulfate-- 1000 µgCu/L  
No. of Replicates: 5

Concentration Copper (µg/L)	Diluent 1 0.2µm filtered 30‰ Seawater	Diluent 2 <u>mLs</u>	Salt	100% Test Material	<u>10,000 µg/L</u> % Test <u>Cu</u> Material <u>(b) ke</u>
1) 0.56	200			0.1	
2) 3.2	199			0.6	
3) 10	198			2.0	
4) 32	194			6.4 <u>(b)</u>	0.6
5) 56	189			11.2 <u>ke</u>	1.1
6)					12-18-97
7)					
8)					
9)					
10)					

DAY 0  
Date/ID 12-18-97  
ke

Checked By: ke 1-8-98

129596

General Test Log

Test Material Elutriate/Copper Sulfate  
Study No. 0719-009  
Species M. edulis  
Study Director PK

Form No: 29  
Bioassay Division  
MEC Analytical Systems  
3150 Paradise Drive, Bldg 36  
Tiburon, CA 94920

METERS:

Date/Initials

pH Beckman  
DO YSI 57  
Temp Orion 140  
Sal Orion 140  
NH3 Orion 720  
Light Intensity Li Cor LI 185-B  
Other: \_\_\_\_\_

TEST CONDITIONS

Photoperiod 14 h light: 10 h dark  
Temperature 16 ± 2 °C  
Feeding None  
Test Containers 20 mL Scintillation vials  
Exposure Volume 10 mLs  
Salinity 30 ± 2 ‰  
Dissolved Oxygen 6.0 mg/L

**Error codes**  
A=Recorded in wrong location  
B=Recording error (e.g. wrong date)  
C=Questioned number, redid reading  
(e.g. meter recalibrated)  
D=Questioned count, recounted  
E=Calculation error  
F=Other--please specify

Checked By: ke 1-8-98

129597

26

24

22

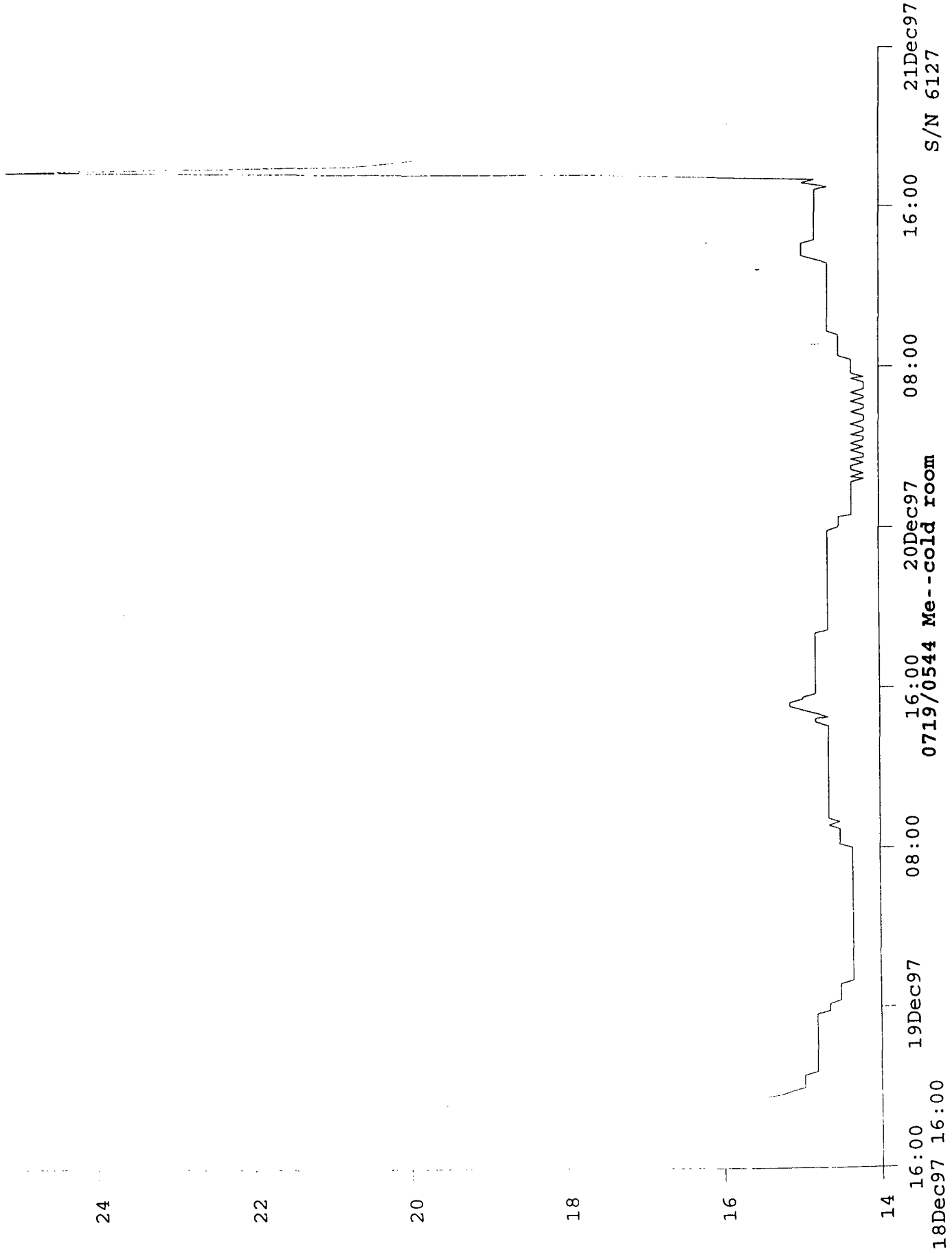
20

18

16

14

T e m p e r a t u r e C



21Dec97

S/N 6127

20Dec97

0719/0544 Me--cold room

08:00

19Dec97

16:00

18Dec97 16:00

**Acute Fish Test-96 Hr Survival**

Start Date: 12/29/98      Test ID: 719-9.04      Sample ID: REF-Ref Toxicant  
 End Date: 1/2/98      Lab ID: CAMEC-MEC Analytical Sys      Sample Type: CUSO-Copper sulfate  
 Sample Date:      Protocol: EPAA 91-EPA Acute      Test Species: AA-Atherinops affinis  
 Comments:

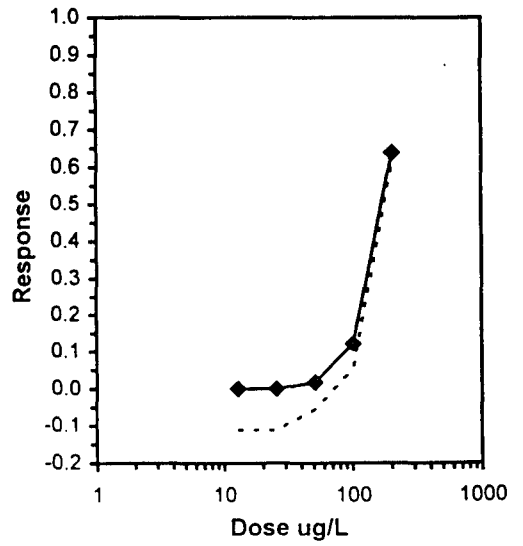
*see 5-6  
54-1-3*

Conc-ug/L	1	2
Control	0.9000	0.9000
12.8	1.0000	1.0000
25.5	1.0000	1.0000
51	0.9000	1.0000
102	0.9000	0.8000
204	0.4000	0.3000

Conc-ug/L	Mean	N-Mean	Transform: Arcsin Square Root					N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%	Mean					N-Mean	
Control	0.9000	1.0000	1.2490	1.2490	1.2490	0.000	2				0.9667	1.0000	
12.8	1.0000	1.1111	1.4120	1.4120	1.4120	0.000	2	-2.350	2.830	0.1963	0.9667	1.0000	
25.5	1.0000	1.1111	1.4120	1.4120	1.4120	0.000	2	-2.350	2.830	0.1963	0.9667	1.0000	
51	0.9500	1.0556	1.3305	1.2490	1.4120	8.661	2	-1.175	2.830	0.1963	0.9500	0.9828	
102	0.8500	0.9444	1.1781	1.1071	1.2490	8.517	2	1.023	2.830	0.1963	0.8500	0.8793	
*204	0.3500	0.3889	0.6322	0.5796	0.6847	11.753	2	8.893	2.830	0.1963	0.3500	0.3621	

Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Normality of the data set cannot be confirmed										
Equality of variance cannot be confirmed										
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	102	204	144.25		0.14521	0.16134	0.17289	0.00481	2.1E-04	5, 6

Linear Interpolation (80 Resamples)					
Point	ug/L	SD	95% CL(Exp)		Skew
IC05	67.15	13.07	0.00	131.84	-0.2393
IC10	91.80	10.97	0.00	157.08	0.0549
IC15	107.78	7.39	40.46	148.58	-0.6953
IC20	117.64	5.74	73.21	158.44	-0.2532
IC25	127.50	5.27	86.70	168.30	-0.1629
IC40	157.08	4.95	116.28	197.88	0.0243
IC50	176.80	5.68	136.00	217.60	0.0755





**Acute Fish Test-96 Hr Survival**

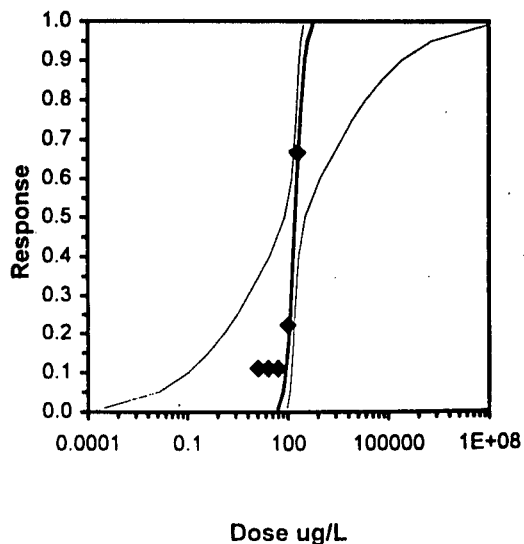
Start Date: 12/19/97      Test ID: 719-9.02      Sample ID:  
 End Date: 12/23/97      Lab ID: CAMEC-MEC Analytical Sys      Sample Type: CUSO-Copper sulfate  
 Sample Date:      Protocol: EPAA 91-EPA Acute      Test Species: AA-Atherinops affinis  
 Comments:

Conc-ug/L	1	2
Control	0.8000	1.0000
12.8	0.9000	0.7000
25.5	0.8000	0.8000
51	0.8000	0.8000
102	0.8000	0.6000
204	0.3000	0.3000

Conc-ug/L	Mean	N-Mean	Transform: Arcsin Square Root					t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
			Mean	Min	Max	CV%	N					
Control	0.9000	1.0000	1.2596	1.1071	1.4120	17.115	2				2	2
12.8	0.8000	0.8889	1.1201	0.9912	1.2490	16.280	2	1.059	2.830	0.3729	4	2
25.5	0.8000	0.8889	1.1071	1.1071	1.1071	0.000	2	1.157	2.830	0.3729	4	20
51	0.8000	0.8889	1.1071	1.1071	1.1071	0.000	2	1.157	2.830	0.3729	4	20
102	0.7000	0.7778	0.9966	0.8861	1.1071	15.685	2	1.996	2.830	0.3729	6	2
*204	0.3000	0.3333	0.5796	0.5796	0.5796	0.000	2	5.161	2.830	0.3729	14	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Normality of the data set cannot be confirmed										
Equality of variance cannot be confirmed										
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	102	204	144.25		0.30562	0.33724	0.11066	0.01736	0.0216	5, 6

Maximum Likelihood-Probit											
Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	4.41392	2.04497	0.40578	8.42207	0.1	0.27941	7.81472	0.96	2.23135	0.22656	9
Intercept	-4.849	4.54335	-13.754	4.05597							
TSCR	0.17179	0.04446	0.08465	0.25894							
Point	Probits	ug/L	95% Fiducial Limits								
EC01	2.674	50.6174	0.00029	94.0463							
EC05	3.355	72.2265	0.0137	115.178							
EC10	3.718	87.2981	0.106	129.209							
EC15	3.964	99.2059	0.41901	140.459							
EC20	4.158	109.818	1.24124	151.058							
EC25	4.326	119.822	3.12561	162.102							
EC40	4.747	149.262	28.9313	214.398							
EC50	5.000	170.352	82.0512	341.141							
EC60	5.253	194.422	134.201	941.221							
EC75	5.674	242.191	179.188	8629.89							
EC80	5.842	264.254	192.463	21711.5							
EC85	6.036	292.521	207.109	64278.2							
EC90	6.282	332.423	225.234	253981							
EC95	6.645	401.79	252.753	1964249							
EC99	7.326	573.318	309.621	9.2E+07							



**Acute Fish Test-96 Hr Survival**

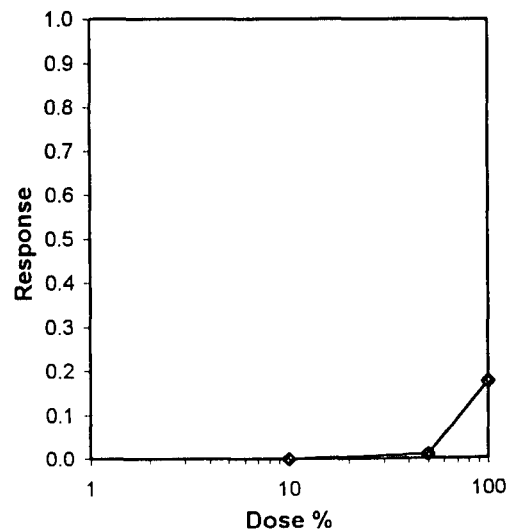
Start Date: 29 Dec-97 00:00	Test ID: 0719-009rr	Sample ID: Area 3
End Date: 02 Jan-98 00:00	Lab ID: CAMECT-Tiburón	Sample Type: Dredge Material-Elutriate
Sample Date:	Protocol: EPAA 91-EPA Acute	Test Species: AA-Atherinops affinis
Comments: At122797		

Conc-%	1	2	3	4	5
Control	0.9000	0.9000	1.0000	1.0000	1.0000
10	1.0000	0.9000	1.0000	1.0000	1.0000
50	0.9000	0.9000	1.0000	1.0000	1.0000
100	1.0000	0.9000	0.8000	1.0000	0.3000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9600	1.0000	1.3468	1.2490	1.4120	6.628	5			0.9700	1.0000
10	0.9800	1.0208	1.3794	1.2490	1.4120	5.284	5	30.00	17.00	0.9700	1.0000
50	0.9600	1.0000	1.3468	1.2490	1.4120	6.628	5	27.50	17.00	0.9600	0.9897
100	0.8000	0.8333	1.1520	0.5796	1.4120	29.890	5	23.00	17.00	0.8000	0.8247

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.79655	0.868	-1.8024	6.24247
Bartlett's Test indicates unequal variances (p = 4.40E-03)	13.113	11.3449		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	62.031			
IC10	77.188			
IC15	92.344			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Acute Fish Test-96 Hr Survival**

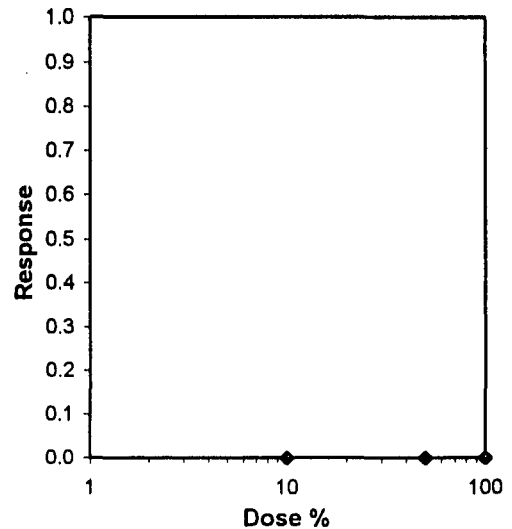
Start Date:	29 Dec-97 00:00	Test ID:	0719-009rr	Sample ID:	Area 4
End Date:	02 Jan-98 00:00	Lab ID:	CAMECT-Tiburon	Sample Type:	Dredge Material-Elutriate
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	AA-Atherinops affinis
Comments:	At122797				

Conc-%	1	2	3	4	5
Control	0.9000	0.9000	1.0000	1.0000	1.0000
10	1.0000	1.0000	0.9000	0.9000	1.0000
50	1.0000	1.0000	1.0000	1.0000	0.9000
100	1.0000	0.9000	1.0000	1.0000	1.0000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank	1-Tailed	Isotonic	
			Mean	Min	Max	CV%	N			Sum	Critical
Control	0.9600	1.0000	1.3468	1.2490	1.4120	6.628	5			0.9700	1.0000
10	0.9600	1.0000	1.3468	1.2490	1.4120	6.628	5	27.50	17.00	0.9700	1.0000
50	0.9800	1.0208	1.3794	1.2490	1.4120	5.284	5	30.00	17.00	0.9700	1.0000
100	0.9800	1.0208	1.3794	1.2490	1.4120	5.284	5	30.00	17.00	0.9700	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.73994	0.868	-0.8718	-1.0878
Bartlett's Test indicates equal variances (p = 0.96)	0.29577	11.3449		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Acute Fish Test-96 Hr Survival**

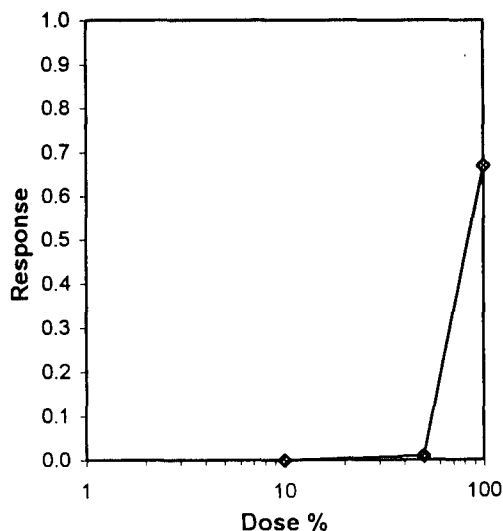
Start Date: 29 Dec-97 00:00 Test ID: 0719-009rr Sample ID: Area 5  
 End Date: 02 Jan-98 00:00 Lab ID: CAMECT-Tiburon Sample Type: Dredge Material-Elutriate  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: AA-Atherinops affinis  
 Comments: At122797

Conc-%	1	2	3	4	5
Control	0.9000	0.9000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	0.9000	1.0000
50	1.0000	0.8000	1.0000	1.0000	1.0000
100	0.0000	0.8000	0.8000	0.0000	0.0000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9600	1.0000	1.3468	1.2490	1.4120	6.628	5			0.9700	1.0000
10	0.9800	1.0208	1.3794	1.2490	1.4120	5.284	5	30.00	17.00	0.9700	1.0000
50	0.9600	1.0000	1.3510	1.1071	1.4120	10.092	5	29.00	17.00	0.9600	0.9897
*100	0.3200	0.3333	0.5381	0.1588	1.1071	96.528	5	15.00	17.00	0.3200	0.3299

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.83763	0.868	0.68683	1.40195
Bartlett's Test indicates unequal variances (p = 3.98E-04)	18.2101	11.3449		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	50	100	70.7107	2

Linear Interpolation (80 Resamples)					
Point	%	SE	95% CL(Exp)		Skew
IC05	53.008	9.655	3.315	59.732	-2.3126
IC10	56.797	4.571	44.095	68.996	1.2500
IC15	60.586	5.499	50.345	78.260	3.3928
IC20	64.375				
IC25	68.164				
IC40	79.531				
IC50	87.109				



**Acute Fish Test-96 Hr Survival**

Start Date: 29 Dec-97 00:00 Test ID: 0719-009rr Sample ID: Area 6  
 End Date: 02 Jan-98 00:00 Lab ID: CAMECT-Tiburon Sample Type: Dredge Material-Elutriate  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: AA-Atherinops affinis  
 Comments: At122797

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	0.9000
50	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	0.9000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	5			1.0000	1.0000
10	0.9800	0.9800	1.3794	1.2490	1.4120	5.284	5	25.00	17.00	0.9900	0.9900
50	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	5	27.50	17.00	0.9900	0.9900
100	0.9800	0.9800	1.3794	1.2490	1.4120	5.284	5	25.00	17.00	0.9800	0.9800

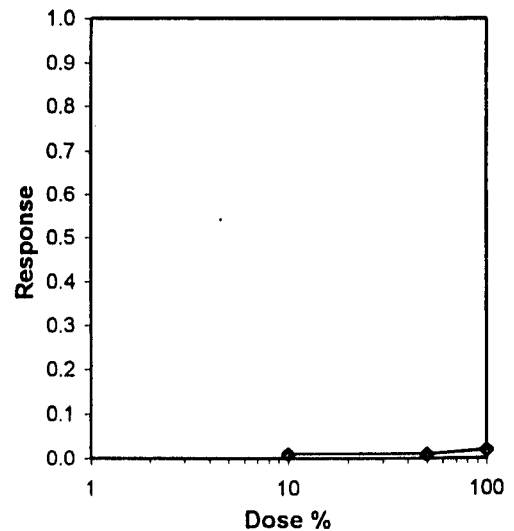
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.60317	0.868	-2.2973	4.93627

Equality of variance cannot be confirmed

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

**Linear Interpolation (80 Resamples)**

Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Acute Fish Test-96 Hr Survival**

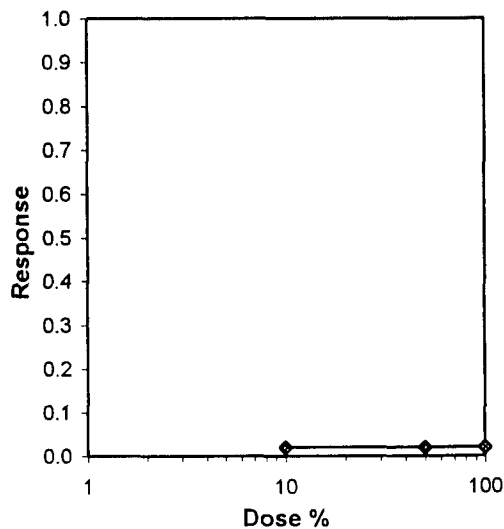
Start Date: 29 Dec-97 00:00 Test ID: 0719-009rr Sample ID: Area 9  
 End Date: 02 Jan-98 00:00 Lab ID: CAMECT-Tiburon Sample Type: Dredge Material-Elutriate  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: AA-Atherinops affinis  
 Comments: At122797

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	0.9000
50	1.0000	1.0000	0.9000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	0.9000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	5			1.0000	1.0000
10	0.9800	0.9800	1.3794	1.2490	1.4120	5.284	5	25.00	17.00	0.9800	0.9800
50	0.9800	0.9800	1.3794	1.2490	1.4120	5.284	5	25.00	17.00	0.9800	0.9800
100	0.9800	0.9800	1.3794	1.2490	1.4120	5.284	5	25.00	17.00	0.9800	0.9800

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01) Equality of variance cannot be confirmed	0.58764	0.868	-1.8758	2.11111
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



## ORGANISM INFORMATION SHEET

**Species:** A.affinis  
**Supplier:** ABS  
**Date Acquired:** 12/27/97  
**Arrival Via:** Fed Ex

Lab Form 30  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

**Organism Data:**

Quantity 950+  
 Age 10 days old  
 Species Code At122797

**Arrival Conditions:**

Temperature NT  
 Hardness/Salinity \_\_\_\_\_  
 DO \_\_\_\_\_  
 pH ↓

**Acclimation/Holding Conditions:**

Date/ID	Temp	DO	(Sal)Cond	pH	# Dead	Comments
12/28/97	13.1	7.5	32	7.64	200	Fed, moved to 20C aerated
12/29/97	20.2	7.1	32	7.84	12	Fed, aerated

Checked by: \_\_\_\_\_

Elutriate Water Quality

Study Number 0719-009rr  
 Date: 12/29/97  
 Day: 0  
 Initials Rm, MSB

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	1	7.95	7.6	19.7	32	0.13
Control B		7.91	8.0	19.6	32	0.10
Area 3						
10%	1	7.87	7.8	19.6	32	1.26
50%	1	7.77	7.5	19.6	32	4.73
100%		7.74	7.2	19.5	32	11.2
Area 4						
10%		7.59	7.6	19.6	32	0.49
50%		7.89	7.6	19.6	32	2.29
100%		7.74	7.0	19.6	32	3.72
Area 5						
10%		7.96	7.7	19.5	32	0.85
50%		7.85	7.4	19.6	32	3.16
100%		7.82	6.9	19.6	32	12.1
Area 6						
10%		7.93	7.6	19.6	31	0.37
50%		7.78	7.6	19.6	32	1.87
100%		7.78	7.5	19.7	32	4.29
Area 9						
10%		7.93	7.9	19.5	32	0.39
50%		7.97	7.7	19.5	32	1.82
100%		7.99	7.6	19.6	32	3.85

Comments:

Checked By: KL 1-3-98



Elutriate Water Quality

Study Number 0719-009rr  
 Date: 12/30/97  
 Day: 1  
 Initials: mm MSB

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	1	8.10	7.4	20.1	33	20.10
Control B		7.92	7.1	20.2	32	20.10
Area 3						
10%	1	8.03	7.4	20.4	32	0.78
50%	1	8.08	7.1	20.4	32	1.49
100%	1	8.27	7.0	20.4	33	1.87
Area 4						
10%	1	8.13	7.2	20.2	32	0.39
50%	1	8.24	7.3	20.2	32	1.68
100%	1	8.13	7.1	20.2	32	3.02
Area 5						
10%	1	8.16	7.3	20.1	32	0.91
50%	1	8.10	6.9	20.2	32	2.78
100%	1	8.28	7.1	20.3	32	9.29
Area 6						
10%	1	7.96	7.2	20.0	32	0.29
50%	1	7.98	7.4	20.1	32	0.96
100%	1	7.95	7.2	20.1	32	2.87
Area 9						
10%	1	7.93	7.0	20.2	32	0.36
50%	1	8.11	7.1	20.1	32	1.14
100%	1	8.11	7.2	20.2	33	2.75

Comments:

Checked By: ku 1-3-98

129677

Elutriate Water Quality

Study Number 0719-009rr  
 Date: 12-31-97  
 Day: 2  
 Initials: ku

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	2	7.97	6.8	19.9	32	0.54
Area 3						
10%	2	8.04	7.0	19.9	32	1.05
50%	2	8.21	7.1	19.8	32	4.14
100%	2	8.36	7.1	19.9	33	8.74
Area 4						
10%	2	8.03	6.9	19.8	32	0.89
50%	2	8.16	7.0	19.7	33	2.32
100%	2	8.31	7.1	19.7	33	4.28
Area 5						
10%	2	8.16	7.2	19.6	32	1.41
50%	2	8.15	7.1	19.7	33	5.91
100%	2	8.25	7.0	19.6	33	10.9
Control B	2	8.08	7.2	19.6	32	0.52
Area 6						
10%	2	8.00	7.1	19.6	32	0.68
50%	2	7.97	7.0	19.6	33	2.26
100%	2	8.10	7.2	19.6	33	4.12
Area 9						
10%	2	8.07	7.1	19.6	32	0.62
50%	2	8.05	7.1	19.6	33	1.98
100%	2	8.13	7.1	19.7	33	3.61

Comments:

Checked By: ku 1-3-98

129673

Elutriate Water Quality

Study Number 0719-009rr  
 Date: 12/01/01/98 MSD(A)  
 Day: 3  
 Initials: MSB

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	3	8.04	6.9	20.2	33	0.29
Control B	3	8.10	7.1	20.0	32	0.36
Area 3						
10%	3	8.05	6.8	20.2	32	0.76
50%	3	8.12	7.2	20.2	33	1.29
100%	3	8.27	7.4	20.1	33	3.59
Area 4						
10%	3	8.11	7.2	20.2	32	1.12
50%	3	8.17	7.1	20.1	33	1.92
100%	3	8.25	7.5	20.1	33	5.10
Area 5						
10%	3	8.15	7.3	20.2	33	1.19
50%	3	8.19	7.4	20.1	33	4.31
100%	3	8.29	7.1	20.1	33	8.79
Area 6						
10%	3	8.07	7.4	20.1	32	0.83
50%	3	8.16	7.2	20.1	33	1.76
100%	3	8.24	7.0	20.1	33	3.75
Area 9						
10%	3	8.09	7.2	20.2	33	0.49
50%	3	8.21	6.9	20.1	33	0.89
100%	3	8.36	6.7	20.1	33	2.89

Comments:

Checked By: 12/1/98

129679

Elutriate Water Quality

Study Number 0719-009rr  
 Date: 1-2-98  
 Day: 4  
 Initials ku

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	4	8.13	7.1	20+9.1 ⑤ re. 1-2-98	34	0.71
Area 3						
10%	4	8.14	6.9	20.0	33	1.45
50%	4	8.27	6.9	20.0	33	4.41
100%	4	8.40	7.0	20.1	33	7.69
Area 4						
10%	4	8.21	7.1	20.0	33	0.90
50%	4	8.27	7.1	20.0	34	2.51
100%	4	8.28	7.0	19.9	33	4.74
Area 5						
10%	4	8.13	6.9	19.9	33	1.63
50%	4	8.26	6.9	19.9	33	5.18
100%	4	8.39	7.1	19.9	34	10.1
Cont B		8.16	7.1	19.8	34	0.72
Area 6						
10%	4	8.20	7.2	19.8	34	1.03
50%	4	8.23	7.2	19.8	34	1.99
100%	4	8.15	7.0	19.9	34	3.35
Area 9						
10%	4	8.17	7.0	19.9	34	0.81
50%	4	8.25	7.1	19.9	34	1.93
100%	4	8.28	7.1	19.9	34	3.32

Comments:

Checked By: ku 1-3-98

129680

MORTALITY AND BEHAVIOR  
X Definitive Range-finder

Test Material: Elutriate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009rr MEC Analytical Systems, Bioassay Div.  
 Protocol No.: EPA 1991 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: A. affinis Lot ID No.: At122797  
 No. / Vessel: 10 Seawater: 32‰ @ 12-31-97  
 Acclimation Mort.: <5% Date Initiated: 12/29/97 Date Terminated: 1/2/98

Conc. (%)	Rep	ID: <u>Kum</u> Date: <u>12/30/97</u> Day: 1		ID: <u>kl</u> Date: <u>12-31-97</u> Day: 2		ID: <u>MSB</u> Date: <u>1/1/98</u> Day: 3		ID: <u>kl</u> Date: <u>1-2-98</u> Day: 4	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Control	1	9-1	<u>N</u>	9	<u>N</u>	9	<u>N</u>	9	<u>N</u>
	2	9-1	<u>N</u>	9	<u>N</u>	9	<u>N</u>	9	<u>N</u>
	3	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	4	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	5	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
Area 3									
10	1	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	2	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	9-1	<u>N</u>
	3	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	4	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	5	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
50	1	9-1	<u>N</u>	9	<u>N</u>	9	<u>N</u>	9	<u>N</u>
	2	10	<u>N</u>	10	<u>N</u>	9-1	<u>N</u>	9	<u>N</u>
	3	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	4	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	5	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
100	1	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	2	10	<u>N</u>	9-0	<u>N</u>	9	<u>N</u>	9	<u>N</u>
	3	10	<u>N</u>	9-0	<u>N</u>	9	<u>N</u>	8-1	<u>N</u>
	4	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>	10	<u>N</u>
	5	10	<u>N</u>	10	<u>N</u>	7-3	<u>N</u>	3-4	<u>N</u>
FEEDING:									
A.M.		<u>MSB</u>		<u>kl</u>		<u>MSB</u>			
P.M.		<u>MSB</u>							

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent

SUR = Surfacing

DC = Discoloration

OB = On Bottom

J = Jumper

NB = No Body

CHECKED BY: kl 1-3-98

129681

MORTALITY AND BEHAVIOR

X

Definitive

Range-finder

Test Material: Elutriate  
 Study No: 0719-009rr  
 Protocol No.: EPA 1991  
 Study Director: PK

Lab Form: 25 (Rev. 9/89)  
 MEC Analytical Systems, Bioassay Div.  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Species: A.affinis  
 No. / Vessel: 10  
 Acclimation Mort...: <5%

Lot ID No.: At122797  
 Seawater: 30% 32% 12/31-97  
 Date Initiated: 12/29/97 Date Terminated: 1/2/98

Conc. (%)	Rep	ID: <u>msb</u> Date: <u>12/30/97</u> Day: <u>1</u>		ID: <u>k</u> Date: <u>12-31-97</u> Day: <u>2</u>		ID: <u>msb</u> Date: <u>1/1/98</u> Day: <u>3</u>		ID: <u>lc</u> Date: <u>1-2-98</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Area 4									
10	1	10	N	10	N	10	N	10	N
	2	10		10		10		10	
	3	10		9-1		9		9	
	4	10		9-0	↓	9		9	
	5	10		10		10		10	
50	1	10		10	N	10		10	N
	2	10		10		10		10	
	3	10		10		10		10	
	4	10		10		10		10	
	5	10		9-0	↓	9		9	↓
100	1	10		10	N	10		10	N
	2	10		9-0		9		9	
	3	10		10		10		10	
	4	10	↓	10		10	↓	10	↓
	5	10	N	10	↓	10	N	10	↓
FEEDING:									
A.M.									
P.M.									

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent  
 DC = Discoloration      OB = On Bottom      J = Jumper

NB = No Body

SUR = Surfacing

CHECKED BY: k 1-3-98

MORTALITY AND BEHAVIOR  
X Definitive Range-finder

Test Material: Elutriate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009rr MEC Analytical Systems, Bioassay Div.  
 Protocol No.: EPA 1991 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: A. affinis Lot ID No.: At122797  
 No. / Vessel: 10 Seawater: 30% to 32% (b) to 12-31-97  
 Acclimation Mort...: <5% Date Initiated: 12/29/97 Date Terminated: 1/2/98

Conc. (%)	Rep	ID: <u>MSB</u> Date: <u>12/30/97</u> Day: 1		ID: <u>ke</u> Date: <u>12-31-97</u> Day: 2		ID: <u>MSB</u> Date: <u>01/01/98</u> Day: 3		ID: <u>ke</u> Date: <u>1-2-98</u> Day: 4		Init acid
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	
Area 5										
10	1	10	N	10	N	10	N	10	N	
	2	10		10		10		10		
	3	10		10		10		10		
	4	10		9-0		9		9		
	5	10		10	↓	10		10	↓	
50	1	10		10	N	10		11	N	11
	2	8-2		8		8		8		
	3	10		10		10		10		
	4	10		10	↓	10	↓	10	↓	
	5	10		10		10	N	10		
100	1	9-1		8-1	N	2-6	Q	0-2		
	2	10		9-1		9	Q	8-1	N	
	3	10		10		10	Q	8-2	N	
	4	10		10	↓	6-4	10B Q	0-6		
	5	10		1-9	↓	0-1				
Control B	1	10		10	N	10	N	10	N	
	2	10		10		10		10		
	3	10		10		10		10		
	4	10		10		10		10		
	5	10	N	10	↓	10	N	10	↓	
FEEDING:										
A.M.										
P.M.										

N=Normal    LOE = Loss of Equilibrium    Q = Quiescent  
 SUR = Surfacing    DC = Discoloration    OB = On Bottom    J = Jumper    NB = No Body  
 CHECKED BY: KL 1-3-98

MORTALITY AND BEHAVIOR

X Definitive Range-finder

Test Material: Elutriate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009rr MEC Analytical Systems, Bioassay Div.  
 Protocol No.: EPA 1991 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: A. affinis Lot ID No.: At122797  
 No. / Vessel: 10 Seawater: 30‰ 32‰ @ KC 1231-97  
 Acclimation Mort.: <5% Date Initiated: 12/29/97 Date Terminated: 1/2/98

Conc. (%)	Rep	ID: MSB Date: 12/30/97 Day: 1		ID: KC Date: 12-31-97 Day: 2		ID: MSB Date: 01/01/98 Day: 3		ID: KC Date: 1-2-98 Day: 4	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Area 6									
10	1	10	N	10	N	10	N	10	N
	2	10	N	10	N	10	N	10	N
	3	10	N	10	N	10	N	10	N
	4	10	N	10	N	10	N	10	N
	5	10	N	9-1	N	9	N	9	N
50	1	10	N	10	N	10	N	10	N
	2	10	N	10	N	10	N	10	N
	3	10	N	10	N	10	N	10	N
	4	10	N	10	N	10	N	10	N
	5	10	N	10	N	10	N	10	N
100	1	10	N	10	N	10	N	10	N
	2	10	N	10	N	10	N	10	N
	3	10	N	10	N	10	N	10	N
	4	10	N	10	N	10	N	10	N
	5	9-1	N	9	N	9	N	9	N
FEEDING:									
A.M.									
P.M.									

N=Normal LOE = Loss of Equilibrium Q = Quiescent  
 SUR = Surfacing DC = Discoloration OR = On Bottom J = Jumper

NB = No Body

CHECKED BY: KC 1-3-98

125684



MORTALITY AND BEHAVIOR  
  X   Definitive                      Range-finder

Test Material: Elutriate  
 Study No.: 0719-009rr  
 Protocol No.: EPA 1991  
 Study Director: PK

Lab Form: 25 (Rev. 9/89)  
 MEC Analytical Systems, Bioassay Div.  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Species: A. affinis  
 No. / Vessel: 10  
 Acclimation Mort...: <5%

Lot ID No.: A1122797  
 Seawater: 30‰ 32‰ Ⓟ ke 12-31-97  
 Date Initiated: 12/29/97 Date Terminated: 1/2/98

Conc. (%)	Rep	ID: <u>MSB</u> Date: <u>12/30/97</u> Day: <u>1</u>		ID: <u>ke</u> Date: <u>12-31-97</u> Day: <u>2</u>		ID: <u>MSB</u> Date: <u>01/01/98</u> Day: <u>3</u>		ID: <u>ke</u> Date: <u>1-2-98</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Area 9									
10	1	10	N	10	N	10	N	10	N
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	9-1	↓	9	↓	9	↓	9	↓
50	1	10	↓	10	N	10	↓	10	N
	2	10	↓	10	↓	10	↓	10	↓
	3	9-1	↓	9	↓	9	↓	9	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	10	↓	10	↓	10	N	10	↓
100	1	10	↓	10	N	10	Q	10	N
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	9-1	N	9	↓	9	Q	9	↓
FEEDING:									
A.M.									
P.M.									

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent

SUR = Surfacing      DC = Discoloration      OB = On Bottom      J = Jumper      NB = No Body

CHECKED BY: ke 1-3-98

129685

WEIGHTS AND LENGTHS

Test Material: Elutriate  
 Study No.: 0719-009rr  
 Study Director: PK

SPECIES: A.affinis

Lab Form: 28  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr., Bldg 36  
 Tiburon, CA 94920

Date		1-2-98		1-3-98			
Conc	Rep	# of fish/ Fish No.	Tare Wt. (mg)	Total Wt. (mg)	Fish Wt.	Weight/Fish (mg)	Length
		10	5.78	13.68		0.790	
Initials		lu		lu			

Checked By: lu 1-3-98

128686

TEST CONCENTRATION PREPARATION  
(Dilutions)

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Study Number: 0719-009rr  
Study Director: PK

Species: A.affinis  
Prepared by: ke

mLs

Test Material: Elutriate  
No. of Replicates: 5

Concentration (%)	Diluent 1 30% Bodega SW	Diluent 2 mLs	Salt	100% Test Material	% Test Material
1) Control	500				
2)					
3) 10	450			50	
4) 50	250			250	
5) 100	0			500	
6)					
7)					
8)					
9)					
10)					

DAY 0  
Date/ID 12/29/97 Rmm

Species: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

Test Material: \_\_\_\_\_  
No. of Replicates: \_\_\_\_\_

Concentration	Diluent 1	Diluent 2 mLs	Salt	100% Test Material	% Test Material
1)					
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					

DAY \_\_\_\_\_  
Date/ID \_\_\_\_\_

Checked By: VL 1-3-98

129687

General Test Log

Test Material Elutriate  
 Study No. 0719-009rr  
 Species A.affinis  
 Study Director PK

Form No: 29  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Drive, Bldg 36  
 Tiburon, CA 94920

METERS:

Date/Initials

pH Beckman  
 DO YSI 57  
 Temp Orion 140  
 Sal Orion 140  
 NH3 Orion 720  
 Light Intensity Li Cor LI 185-B  
 Other: \_\_\_\_\_

TEST CONDITIONS

Photoperiod 16 h light: 8 h dark  
 Temperature 20 ± 2 °C  
 Feeding 2 drops artemia twice daily  
 Test Containers 600 mL beakers  
 Exposure Volume 500 mLs  
 Salinity 30 ± 2 ‰  
 Dissolved Oxygen 6.0 mg/L

**Error codes**  
 A=Recorded in wrong location  
 B=Recording error (e.g. wrong date)  
 C=Questioned number, redid reading  
 (e.g. meter recalibrated)  
 D=Questioned count, recounted  
 E=Calculation error  
 F=Other--please specify

Checked By: lc 1-3-98

Test Material: Copper sulfate  
 Test Species: A. affinis  
 Checked By: K.L. 1-3-08

Study NWATER QUALITY  
 Study Director: PK

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Conc. µgCu/L	Date: 12-21-07 Day: 0			Date: 12-30-07 Day: 1			Date: 12-31-07 Day: 2			Date: 01-01-08 Day: 3			Date: 1-2-08 Day: 4								
	Rep	Temp	D.O.	pH	Sal	Temp	D.O.	pH	Sal	Temp	D.O.	pH	Sal	Temp	D.O.	pH	Sal				
Control A	20.1	7.6	7.95	31	20.7	7.4	8.10	7.82	32	19.9	6.8	7.97	32	20.1	6.5	8.06	32	19.9	7.1	8.12	33
					1-12/12/07																
12.8	20.2	7.6	7.92	32	20.2	6.1	7.80	7.82	32	19.8	6.6	7.92	32	20.2	6.7	8.04	32	19.9	6.6	8.06	33
25.5	20.2	7.6	7.92	31	20.2	6.1	7.82	7.84	32	19.6	6.5	7.91	32	20.2	6.5	8.07	32	19.8	6.6	8.05	33
51	20.2	7.5	7.92	31	20.1	6.3	7.85	7.85	32	19.6	6.4	7.91	32	20.1	6.4	8.05	32	19.9	6.6	8.05	33
102	20.2	7.5	7.92	31	20.1	6.3	7.85	7.85	32	19.6	6.5	7.92	32	20.1	6.4	8.05	32	19.9	6.6	8.03	33
204	20.2	7.5	7.93	31	20.1	6.1	7.82	7.82	32	19.8	6.4	7.89	32	20.0	6.2	8.07	32	19.9	6.4	8.03	33

Initials: M.S.B. / R.M.M. / M.S.B.

129089

X Definitive **MORTALITY AND BEHAVIOR**  
Range-finder

Test Material: Copper sulfate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009rr MEC Analytical Systems, Bioassay Div.  
 Protocol No.: ASTM 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: A. affinis Lot ID No.: At122997 <sup>27</sup> W-1-3-98  
 No. / Vessel: 10 Seawater: 30% W-31-97  
 Acclimation Mort.: <5% Date Initiated: 12/29/97 Date Terminated: 1/2/98

Conc. µgCu/L	Rep	ID: <u>MSB</u> Date: <u>12/30/97</u> Day: <u>1</u>		ID: <u>W</u> Date: <u>12-31-97</u> Day: <u>2</u>		ID: <u>MSB</u> Date: <u>1/1/98</u> Day: <u>3</u>		ID: <u>W</u> Date: <u>1-2-98</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Control	1	9-1	N	9	N	9	N	9	N
	2	9-1	N	9	N	9	N	9	N
12.8	1	10	N	10	N	10	N	10	N
	2	10	N	10	N	10	N	10	N
25.5	1	10	N	10	N	10	N	10	N
	2	10	N	10	N	10	N	10	N
51	1	10	N	10	N	10	N	9-1	N
	2	10	N	10	N	10	N	10	N
102	1	10	N	10	N	9-1	N	9	N
	2	10	N	10	N	8-2	N	8	N
204	1	6-4	N	4	N	4-2	N	4	N
	2	7-3	N	7	N	3-4	N	3	N
FEEDING:									
A.M.									
P.M.									

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent  
 SUR = Surfacing      DC = Discoloration      OB = On Bottom      J = Jumper      NB = No Body

CHECKED BY: W 1-3-98

TEST CONCENTRATION PREPARATION  
(Dilutions)

Study Number 0719-009rr  
Study Director PK

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Species: A. affinis  
Prepared by: ke

Test Material: Copper Sulfate 500 mg/L  
No. of Replicates: 2

Concentration mg Cu/L	Diluent 1 30 ‰ Seawater	<u>mLs</u> Diluent 2	Salt	100% Test Material	% Test Material
1) Control	1000				
2)					
3) 12.8	1000			0.1	
4) 25.5	1000			0.2	
5) 51	1000			0.4	
6) 102	999			0.8	
7) 204	998			1.6	
8)					
9)					
10)					

DAY 0  
Date/ID                      Duplicate page see next sheet

Species: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

Test Material: \_\_\_\_\_  
No. of Replicates: \_\_\_\_\_

Concentration	Diluent 1	mLs Diluent 2	Salt	100% Test Material	% Test Material
1)					
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					

DAY \_\_\_\_\_  
Date/ID \_\_\_\_\_

Checked By: \_\_\_\_\_

TEST CONCENTRATION PREPARATION  
(Dilutions)

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Study Number 0719-009rr  
Study Director PK

Species: A. affinis  
Prepared by: ke

Test Material: Copper Sulfate 500 mg/L  
No. of Replicates: 2

Concentration mg Cu/L	Diluent 1 30 % Seawater	mLs		Salt	100% Test Material	% Test Material
		Diluent 2				
1) Control	1000					
2)						
3) 12.8	1000				0.1	
4) 25.5	1000				0.2	
5) 51	1000				0.4	
6) 102	999				0.8	
7) 204	998				1.6	
8)						
9)						
10)						

DAY \_\_\_\_\_  
Date/ID 12/29/97  
MSB

Species: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

Test Material: \_\_\_\_\_  
No. of Replicates: \_\_\_\_\_

Concentration	Diluent 1	mLs		Salt	100% Test Material	% Test Material
		Diluent 2				
1)						
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						

DAY \_\_\_\_\_  
Date/ID \_\_\_\_\_

Checked By: ke 1-3-98



General Test Log

Test Material Copper sulfate  
 Study No. 0719-009rr  
 Species A. affinis  
 Study Director PK

Form No: 29  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Drive, Bldg 36  
 Tiburon, CA 94920

METERS:

Date/Initials

pH Beckman  
 DO YSI 57  
 Temp Orion 140  
 Sal Orion 140  
 NH3 Orion 720  
 Light Intensity Li Cor LI 185-B  
 Other: \_\_\_\_\_

TEST CONDITIONS

Photoperiod Continuous dark <sup>Ⓟ VL 1-3-98</sup> 16 h light. 8 h dark  
 Temperature 20 ± 2 °C  
 Feeding No Feeding  
 Test Containers 600 mL beakers  
 Exposure Volume 500 mLs  
 Salinity 32.30 ± 2 ‰ <sup>Ⓟ VL 12-31-97</sup>  
 Dissolved Oxygen 6.0 mg/L

**Error codes**

- A=Recorded in wrong location
- B=Recording error (e.g. wrong date)
- C=Questioned number, redid reading  
(e.g. meter recalibrated)
- D=Questioned count, recounted
- E=Calculation error
- F=Other--please specify

Checked By: VL 1-3-98

## A. affinis

Conc.	Site I.D.	Replicate	Initial #	Survival #	% Survival	Mean % Survival	SD Survival
	Control	1	10	9	90		
	Control	2	10	9	90		
	Control	3	10	10	100		
	Control	4	10	10	100		
	Control	5	10	10	100	96	5.48
10	Area 3	1	10	10	100		
10	Area 3	2	10	9	90		
10	Area 3	3	10	10	100		
10	Area 3	4	10	10	100		
10	Area 3	5	10	10	100	98	4.47
50	Area 3	1	10	9	90		
50	Area 3	2	10	9	90		
50	Area 3	3	10	10	100		
50	Area 3	4	10	10	100		
50	Area 3	5	10	10	100	96	5.48
100	Area 3	1	10	10	100		
100	Area 3	2	10	9	90		
100	Area 3	3	10	8	80		
100	Area 3	4	10	10	100		
100	Area 3	5	10	3	30	80	29.15
10	Area 4	1	10	10	100		
10	Area 4	2	10	10	100		
10	Area 4	3	10	9	90		
10	Area 4	4	10	9	90		
10	Area 4	5	10	10	100	96	5.48
50	Area 4	1	10	10	100		
50	Area 4	2	10	10	100		
50	Area 4	3	10	10	100		
50	Area 4	4	10	10	100		
50	Area 4	5	10	9	90	98	4.47
100	Area 4	1	10	10	100		
100	Area 4	2	10	9	90		
100	Area 4	3	10	10	100		
100	Area 4	4	10	10	100		
100	Area 4	5	10	10	100	98	4.47
10	Area 5	1	10	10	100		
10	Area 5	2	10	10	100		
10	Area 5	3	10	10	100		
10	Area 5	4	10	9	90		
10	Area 5	5	10	10	100	98	4.47
50	Area 5	1	11	11	100		
50	Area 5	2	10	8	80		
50	Area 5	3	10	10	100		
50	Area 5	4	10	10	100		
50	Area 5	5	10	10	100	96	8.94
100	Area 5	1	10	0	0		
100	Area 5	2	10	8	80		
100	Area 5	3	10	8	80		
100	Area 5	4	10	0	0		

Marina del Rey Survival

A. affinis

100	Area 5	5	10	0	0	32	43.82
	Control B	1	10	10	100		
	Control B	2	10	10	100		
	Control B	3	10	10	100		
	Control B	4	10	10	100		
	Control B	5	10	10	100	100	0.00
10	Area 6	1	10	10	100		
10	Area 6	2	10	10	100		
10	Area 6	3	10	10	100		
10	Area 6	4	10	10	100		
10	Area 6	5	10	9	90	98	4.47
50	Area 6	1	10	10	100		
50	Area 6	2	10	10	100		
50	Area 6	3	10	10	100		
50	Area 6	4	10	10	100		
50	Area 6	5	10	10	100	100	0.00
100	Area 6	1	10	10	100		
100	Area 6	2	10	10	100		
100	Area 6	3	10	10	100		
100	Area 6	4	10	10	100		
100	Area 6	5	10	9	90	98	4.47
10	Area 9	1	10	10	100		
10	Area 9	2	10	10	100		
10	Area 9	3	10	10	100		
10	Area 9	4	10	10	100		
10	Area 9	5	10	9	90	98	4.47
50	Area 9	1	10	10	100		
50	Area 9	2	10	10	100		
50	Area 9	3	10	9	90		
50	Area 9	4	10	10	100		
50	Area 9	5	10	10	100	98	4.47
100	Area 9	1	10	10	100		
100	Area 9	2	10	10	100		
100	Area 9	3	10	10	100		
100	Area 9	4	10	10	100		
100	Area 9	5	10	9	90	98	4.47

**Acute Fish Test-96 Hr Survival**

Start Date: 12/19/97      Test ID: 719-9.01      Sample ID:  
 End Date: 12/23/97      Lab ID: CAMEC-MEC Analytical Sys      Sample Type: CUSO-Copper sulfate  
 Sample Date:      Protocol: EPAA 91-EPA Acute      Test Species: MY-Mysidopsis bahia  
 Comments: ke  
12/23/97  
SMS

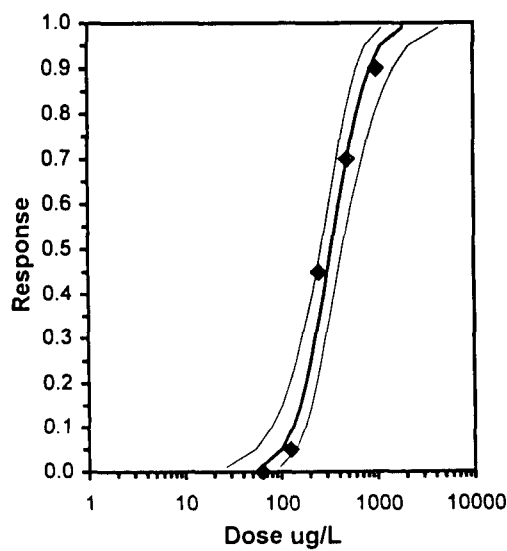
Conc-ug/L	1	2
Control	1.0000	1.0000
63	1.0000	1.0000
125	1.0000	0.9000
250	0.5000	0.6000
500	0.2000	0.4000
1000	0.2000	0.0000

Conc-ug/L	Mean	N-Mean	Transform: Arcsin Square Root					N	t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
			Mean	Min	Max	CV%							
Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20	
63	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0.000	2.830	0.3452	0	20	
125	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	0.668	2.830	0.3452	1	20	
*250	0.5500	0.5500	0.8357	0.7854	0.8861	8.518	2	4.725	2.830	0.3452	9	20	
*500	0.3000	0.3000	0.5742	0.4636	0.6847	27.225	2	6.869	2.830	0.3452	14	20	
*1000	0.1000	0.1000	0.3112	0.1588	0.4636	69.269	2	9.025	2.830	0.3452	18	20	

Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Normality of the data set cannot be confirmed										
Equality of variance cannot be confirmed										
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	125	250	176.777		0.20818	0.21352	0.45157	0.01488	3.5E-04	5, 6

Maximum Likelihood-Probit											
Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	3.13823	0.51643	2.12603	4.15042	0	1.92442	7.81472	0.59	2.52778	0.31865	3
Intercept	-2.9328	1.30364	-5.4879	-0.3776							

Point	Probits	ug/L	95% Fiducial Limits	
EC01	2.674	61.1633	26.4789	96.2577
EC05	3.355	100.844	54.3419	143.201
EC10	3.718	131.649	79.1965	178.153
EC15	3.964	157.588	101.631	207.408
EC20	4.158	181.803	123.41	235.001
EC25	4.326	205.522	145.209	262.609
EC40	4.747	279.934	213.708	355.664
EC50	5.000	337.12	263.945	436.066
EC60	5.253	405.989	320.358	544.047
EC75	5.674	552.983	428.437	810.855
EC80	5.842	625.127	477.188	957.24
EC85	6.036	721.183	539.101	1165.76
EC90	6.282	863.282	626.001	1499.88
EC95	6.645	1126.99	776.881	2191.27
EC99	7.326	1858.14	1153.05	4507.63



*Low mean*  
 EC50 = 403.1 ± 171.0  
 NOEC = 312.5 ± 265.2

**Acute Test-96 Hr Survival**

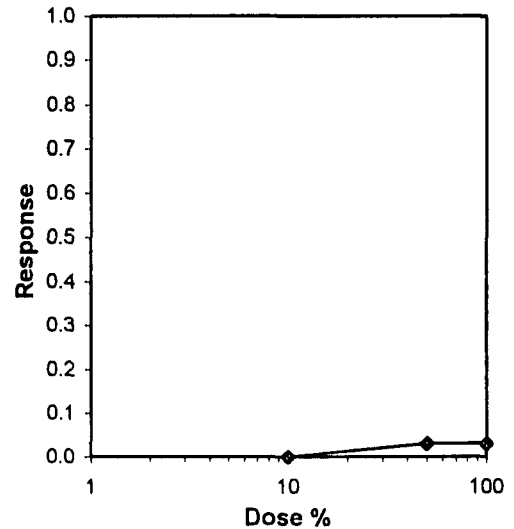
Start Date: 18 Dec-97 00:00	Test ID: 0719-009	Sample ID: Area 3
End Date: 22 Dec-97 00:00	Lab ID: CAMECT-Tiburon	Sample Type: Dredge Material-Elutriate
Sample Date:	Protocol: EPAA 91-EPA Acute	Test Species: MY-Mysidopsis bahia
Comments: MY121797		

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	0.9000
10	1.0000	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	0.8000	1.0000
100	1.0000	0.9000	1.0000	0.9000	1.0000

Conc-%	Transform: Arcsin Square Root							Rank Sum	1-Tailed Critical	Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5			0.9900	1.0000
10	1.0000	1.0204	1.4120	1.4120	1.4120	0.000	5	30.00	17.00	0.9900	1.0000
50	0.9600	0.9796	1.3510	1.1071	1.4120	10.092	5	27.00	17.00	0.9600	0.9697
100	0.9600	0.9796	1.3468	1.2490	1.4120	6.628	5	25.00	17.00	0.9600	0.9697

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.76511	0.868	-1.779	3.07944
Equality of variance cannot be confirmed				
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Acute Fish Test-96 Hr Survival**

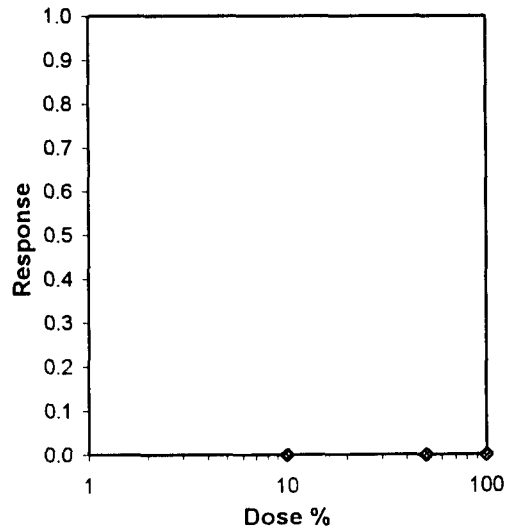
Start Date: 18 Dec-97 00:00 Test ID: 0719-009 Sample ID: Area 4  
 End Date: 22 Dec-97 00:00 Lab ID: CAMECT-Tiburon Sample Type: Dredge Material-Elutriate  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: MY-Mysidopsis bahia  
 Comments: MY121797

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	0.9000
10	0.9000	1.0000	1.0000	1.0000	1.0000
50	1.0000	0.9000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	0.9000

Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5			0.9800	1.0000
10	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	27.50	17.00	0.9800	1.0000
50	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	27.50	17.00	0.9800	1.0000
100	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	27.50	17.00	0.9800	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.49573	0.868	-1.6245	0.69853
Bartlett's Test indicates equal variances (p = 1.00)	0	11.3449		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Acute Fish Test-96 Hr Survival**

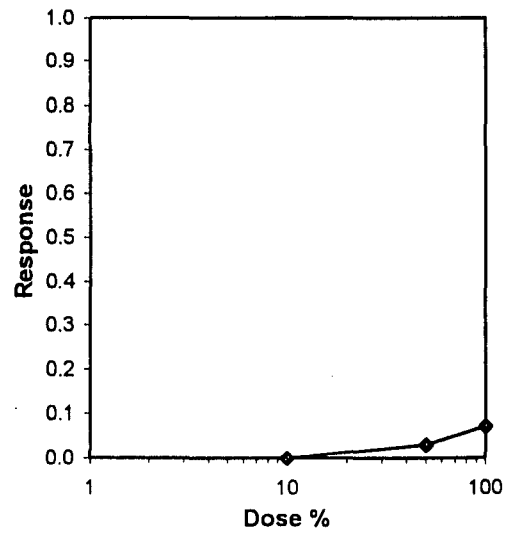
Start Date: 18 Dec-97 00:00 Test ID: 0719-009 Sample ID: Area 5  
 End Date: 22 Dec-97 00:00 Lab ID: CAMECT-Tiburón Sample Type: Dredge Material-Elutriate  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: MY-Mysidopsis bahia  
 Comments: MY121797

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	0.9000
10	1.0000	1.0000	1.0000	1.0000	1.0000
50	1.0000	0.8000	1.0000	1.0000	1.0000
100	0.7000	1.0000	1.0000	1.0000	0.9000

Conc-%	Transform: Arcsin Square Root							Rank Sum	1-Tailed Critical	Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5			0.9900	1.0000
10	1.0000	1.0204	1.4120	1.4120	1.4120	0.000	5	30.00	17.00	0.9900	1.0000
50	0.9600	0.9796	1.3510	1.1071	1.4120	10.092	5	27.00	17.00	0.9600	0.9697
100	0.9200	0.9388	1.2953	0.9912	1.4120	14.210	5	24.50	17.00	0.9200	0.9293

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01) Equality of variance cannot be confirmed	0.79656	0.868	-1.7054	2.80816
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	74.375			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Acute Fish Test-96 Hr Survival**

Start Date: 18 Dec-97 00:00 Test ID: 0719-009 Sample ID: Area 6  
 End Date: 22 Dec-97 00:00 Lab ID: CAMECT-Tiburon Sample Type: Dredge Material-Elutriate  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: MY-Mysidopsis bahia  
 Comments: MY121797

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	0.9000
10	0.9000	1.0000	1.0000	0.9000	0.9000
50	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	0.8000	1.0000	1.0000

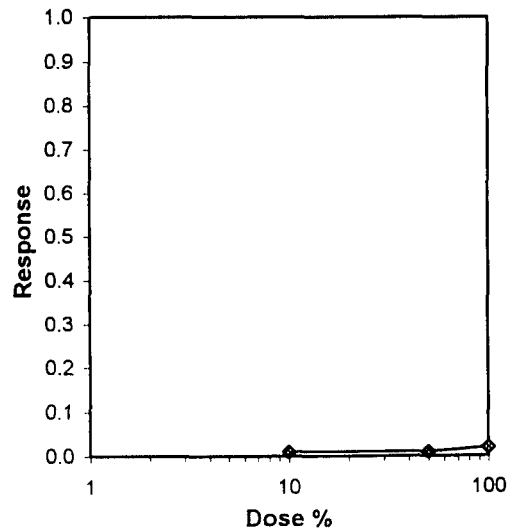


Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5			0.9800	1.0000
10	0.9400	0.9592	1.3142	1.2490	1.4120	6.792	5	22.50	17.00	0.9700	0.9898
50	1.0000	1.0204	1.4120	1.4120	1.4120	0.000	5	30.00	17.00	0.9700	0.9898
100	0.9600	0.9796	1.3510	1.1071	1.4120	10.092	5	27.00	17.00	0.9600	0.9796

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.85705	0.868	-1.5579	3.07944
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			





**Acute Fish Test-96 Hr Survival**

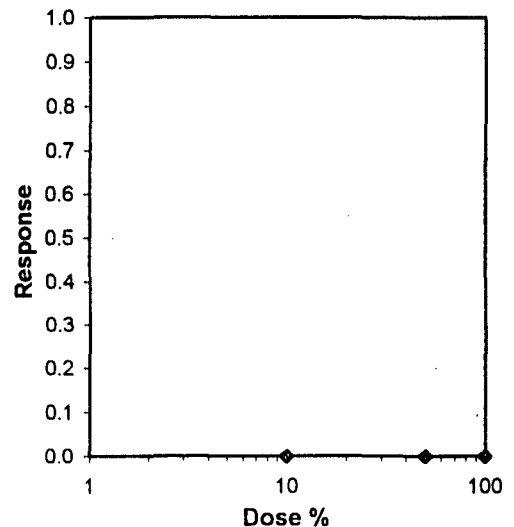
Start Date: 18 Dec-97 00:00	Test ID: 0719-009	Sample ID: Area 9
End Date: 22 Dec-97 00:00	Lab ID: CAMECT-Tiburon	Sample Type: Dredge Material-Elutriate
Sample Date:	Protocol: EPAA 91-EPA Acute	Test Species: MY-Mysidopsis bahia
Comments: MY121797		

Conc-%	1	2	3	4	5
Control	1.0000	1.0000	1.0000	1.0000	0.9000
10	1.0000	1.0000	1.0000	1.0000	0.9000
50	1.0000	1.0000	1.0000	0.9000	1.0000
100	1.0000	1.0000	1.0000	1.0000	0.9000

Conc-%	Transform: Arcsin Square Root							Rank Sum	1-Tailed Critical	Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N			Mean	N-Mean
Control	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5			0.9800	1.0000
10	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	27.50	17.00	0.9800	1.0000
50	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	27.50	17.00	0.9800	1.0000
100	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	27.50	17.00	0.9800	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.49573	0.868	-1.6245	0.69853
Bartlett's Test indicates equal variances (p = 1.00)	0	11.3449		
<b>Hypothesis Test (1-tail, 0.05)</b>	<b>NOEC</b>	<b>LOEC</b>	<b>ChV</b>	<b>TU</b>
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (80 Resamples)				
Point	%	SE	95% CL(Exp)	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



## ORGANISM INFORMATION SHEET

**Species:** M. bahia  
**Supplier:** Aquatox  
**Date Acquired:** 12/17/97  
**Arrival Via:** Fed Ex

Lab Form 30  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

**Organism Data:**

Quantity 950+  
 Age 4 days old  
 Species Code MY121797

**Arrival Conditions:**

Temperature 18.6  
 Hardness/Salinity 24.3  
 DO Saturated  
 pH 8.15

**Acclimation/Holding Conditions:** Fed artemia + held w/aeration @ 20°C

Date/ID	Temp	DO	Sal/Cond	pH	# Dead	Comments
12-18-97 <u>W</u>	20.1	6.6	26.2	8.15		

Checked by: W 12-23-97

129616

Elutriate Water Quality

Study Number 0719-009  
 Date: 12/18/97  
 Day: 0  
 Initials: MSB

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

ASA  
 1/15/97  
 B

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control		8.07 8.07	7.0	20.1	31	0.11 20.10
Area 3						(A) 12-18-97
10%		8.07 8.01	7.1	20.1	31	0.77
50%		8.10 7.84	7.0	20.3	31	4.19
100%		7.70 7.81	6.8	20.2	31	10.4 8.60
Area 4						(A) 12-18-97
10%		8.00 8.05	6.7	20.3	31	0.43
50%		8.02 8.04	7.1	20.3	31	2.05
100%		7.89 7.92	6.8	20.2	31	3.95
Area 5						
10%		8.06 8.02	7.2	20.4	31	1.06
50%		7.99	7.2	20.4	31	5.63
100%		7.95	7.1	20.4	31	14.2
Area 6				20.4	31	
10%		8.09	7.2	20.4 20.5	31	0.48
50%		8.06	7.1	20.5 20.5	31	2.42
100%		8.09	7.0	20.5	31	4.40
Area 9						
10%		8.11	7.2	20.5	31	0.38
50%		8.08	7.1	20.4	31	1.88
100%		8.06	6.6	20.5	31	3.58

Comments:

129617

Checked By: KL 12-23-97

Elutriate Water Quality

Study Number 0719-009  
 Date: 12/19/17  
 Day: 1  
 Initials: SEL/KL

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	2	8.22	7.6	19.6	31	0.11
Area 3						
10%	2	8.11	7.6	19.6	31	0.90
50%	2	8.32	7.6	19.6	31	4.50
100%	2	8.26	7.6	19.6	31	8.20
Area 4						
10%	2	8.20	7.5	19.6	31	0.66
50%	2	8.33	7.6	19.6	31	2.21
100%	2	8.33	7.6	19.6	31	4.01
Area 5						
10%	2	8.26	7.6	19.6	31	1.29
50%	2	8.44	7.6	19.7	31	6.01
100%	2	8.44	7.6	19.8	31	11.7
Area 6						
10%	2	8.21	7.6	19.8	31	0.71
50%	2	8.29	7.6	19.8	31	2.31
100%	2	8.42	7.6	19.8	31	4.99
Area 9						
10%	2	8.28	7.6	19.8	31	0.52
50%	2	8.31	7.6	19.9	31	1.88
100%	2	8.41	7.5	19.5	31	3.67

Comments:

Checked By: KL 12-23-17

129618

Elutriate Water Quality

Study Number 0719-009  
 Date: 12-20-97  
 Day: 2  
 Initials: Rm

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	3	8.06	7.2	18.8	31	0.18
Area 3						
10%	3	8.18	7.3	18.8	31	0.75
50%	3	8.37	7.5	18.9	31	3.33
100%	3	8.46	7.3	19.0	31	7.14
Area 4						
10%	3	8.13	7.3	19.0	31	0.57
50%	3	8.30	7.4	19.0	31	1.68
100%	3	8.28	7.2	19.0	31	3.31
Area 5						
10%	3	8.21	7.3	19.0	31	0.99
50%	3	8.37	7.4	19.1	31	5.26
100%	3	8.43	7.3	19.2	31	9.12 <sup>12</sup> <sub>12-20-97</sub>
Area 6						
10%	3	8.19	7.4	19.1	31	0.52
50%	3	8.28	7.4	19.2	31	1.91
100%	3	8.37	7.4	19.3	31	3.82
Area 9						
10%	3	8.17	7.3	19.2	31	0.49
50%	3	8.31	7.2	19.3	31	1.66
100%	3	8.41	7.4	19.2	31	3.18

Comments:

Checked By: ku 12-23-97

129619

Elutriate Water Quality

Study Number 0719-009  
 Date: 12/21/97  
 Day: 3  
 Initials: MSB

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	4	7.76	7.6	19.0	31	0.42
Area 3						
10%	4	8.09	7.6	19.2	31	0.93
50%	4	8.30	7.6	19.2	31	3.96
100%	4	8.36	7.4	19.3	32	7.56
Area 4						
10%	4	7.79	7.7	19.3	31	6.74
50%	4	7.97	7.7	19.3	31	2.21
100%	4	8.01	7.7	19.2	32	4.07
Area 5						
10%	4	8.19	7.5	19.3	31	1.27
50%	4	8.31	7.5	19.3	32	5.60
100%	4	8.40	7.5	19.3	32	14.2
Area 6						
10%	4	8.13	7.7	19.3	31	0.83
50%	4	8.22	7.8	19.3	32	2.27
100%	4	8.29	7.8	19.3	32	11.90
Area 9						
10%	4	8.09	7.8	19.4	31	0.60
50%	4	8.16	7.5	19.3	32	1.75
100%	4	8.32	7.5	19.3	32	3.50

Comments:

Checked By: W. 12-23-97

129620

my

Elutriate Water Quality

Study Number 0719-009  
 Date: 12/22/97  
 Day: 4  
 Initials MSB

Form No. 15  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Site/Conc	Rep	pH	D.O.	Temp.	Sal.	NH3
Control	5	7.96	7.5	19.1	31	0.36
Area 3						
10%	5	8.04	7.4	19.1	31	1.26
50%	5	8.12	7.6	19.2	31	5.01
100%	5	8.29	7.6	19.1	32	9.46
Area 4						
10%	5	8.05	7.5	19.1	31	1.00
50%	5	8.13	7.6	19.2	31	2.67
100%	5	8.32	7.5	19.2	32	4.70
Area 5						
10%	5	8.03	7.5	19.2	31	1.52
50%	5	8.11	7.4	19.2	32	6.48
100%	5	8.25	7.4	19.2	32	11.5
Area 6						
10%	5	8.09	7.6	19.2	31	0.98
50%	5	8.23	7.6	19.0	31	2.59
100%	5	8.30	7.5	19.1	32	4.53
Area 9						
10%	5	8.11	7.7	19.1	31	0.93
50%	5	8.24	7.6	19.1	32	2.24
100%	5	8.29	7.6	19.2	32	4.29

Comments:

Checked By:

KL 12-23-97

129621

MORTALITY AND BEHAVIOR

X

Definitive

Range-finder

Test Material: Elutriate  
 Study No: 0719-009  
 Protocol No.: EPA 1991  
 Study Director: PK

Lab Form: 25 (Rev. 9/89)  
 MEC Analytical Systems, Bioassay Div.  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Species: M. bahia  
 No. / Vessel: 10  
 Acclimation Mort.: <5%

Lot ID No.: MY121797  
 Seawater: 30‰

Date Initiated: 12/18/97 Date Terminated: 12/22/97

Conc. (%)	Rep	ID: <u>ku</u> Date: <u>12-18-97</u> Day: <u>1</u>		ID: <u>ku</u> Date: <u>12-20-97</u> Day: <u>2</u>		ID: <u>MSB</u> Date: <u>12/21/97</u> Day: <u>3</u>		ID: <u>MSB</u> Date: <u>12/22/97</u> Day: <u>4</u>		
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	
Control	1	10	N	10	N	10	N	10	N	
	2	10	↓	10	↓	10	↓	10	↓	
	3	10	↓	10	↓	10	↓	10	↓	
	4	10	↓	10	↓	10	↓	10	↓	
	5	10	↓	9-0	↓	9	↓	9	↓	
Area 3 10	1	10	N	10	N	10	↓	10	↓	
	2	10	↓	10	↓	10	↓	10	↓	
	3	10	↓	10	↓	10	↓	10	↓	
	4	10	↓	10	↓	10	↓	10	↓	
	5	10	↓	10	↓	10	↓	10	↓	
50	1	Too much →			10	↓	10	↓	10	↓
	2	debris to			10	↓	10	↓	10	↓
	3	count			10	↓	10	↓	10	↓
	4	↓			10	↓	10	↓	8-2	↓
	5	↓			10	↓	10	↓	10	↓
100	1	↓			10	↓	10	↓	10	↓
	2	↓			10	↓	10	↓	9-1	↓
	3	↓			10	↓	10	↓	10	↓
	4	↓			10	↓	10	↓	9-1	↓
	5	↓			10	↓	10	N	10	N
FEEDING:										
A.M.		ku		ku		MSB				
P.M.		ku		ku			MSB			

N=Normal LOE = Loss of Equilibrium Q = Quiescent

SUR = Surfacing

DC = Discoloration

OB = On Bottom

J = Jumper

NB = No Body

CHECKED BY: ku 12-23-97

123622



MORTALITY AND BEHAVIOR

X Definitive

Range-finder

Test Material: Elutriate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009 MEC Analytical Systems, Bioassay Div.  
 Protocol No.: EPA 1991 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: M. bahia Lot ID No.: MY121797  
 No. / Vessel: 10 Seawater: 30‰  
 Acclimation Mort.: <5% Date Initiated: 12/18/97 Date Terminated: 12/22/97

Conc. (%)	Rep	ID: <u>lc</u> Date: <u>12-19-97</u> Day: <u>1</u>		ID: <u>lc</u> Date: <u>12-20-97</u> Day: <u>2</u>		ID: <u>MSB</u> Date: <u>12/21/97</u> Day: <u>3</u>		ID: <u>MSB</u> Date: <u>12/22/97</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Area 4									
10	1	9-1	N	9	N	9	N	9	N
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	10	↓			10		10	
50	1	10	N	10	N	10		10	
	2	10	↓	9-0	↓	9		9	
	3	10	↓	10	↓	10		10	
	4	10	↓	10	↓	10		10	
	5	10	↓	10	↓	10		10	
100	1	Too much	→			10		10	
	2	debris				10		10	
	3	for counts				10		10	
	4	↓				10	↓	10	↓
	5					10	N	9-1	N
FEEDING:									
A.M.									
P.M.									

N=Normal LOE = Loss of Equilibrium Q = Quiescent

SUR = Surfacing

DC = Discoloration

OB = On Bottom

J = Jumper

NB = No Body

CHECKED BY: vl 12-23-97

129623

MORTALITY AND BEHAVIOR

X Definitive

Range-finder

Test Material: Elutriate  
 Study No.: 0719-009  
 Protocol No.: EPA 1991  
 Study Director: PK

Lab Form: 25 (Rev. 9/89)  
 MEC Analytical Systems, Bioassay Div.  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Species: M. bahia  
 No. / Vessel: 10  
 Acclimation Mort...: <5%

Lot ID No.: MY121797  
 Seawater: 30‰  
 Date Initiated: 12/18/97 Date Terminated: 12/22/97

Conc. (%)	Rep	ID: <u>KE</u> Date: <u>12-12-97</u> Day: <u>1</u>		ID: <u>KE</u> Date: <u>12-20-97</u> Day: <u>2</u>		ID: <u>MSB</u> Date: <u>12/21/97</u> Day: <u>3</u>		ID: <u>MSB</u> Date: <u>12/22/97</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Area 5									
10	1	10	N	10	N	10	N	10	N
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	10	↓	10	↓	10	↓	10	↓
50	1	10	N	10	N	10	N	10	N
	2	9-0	↓	9	↓	9	↓	8-1	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	10	↓	10	↓	10	↓	10	↓
100	1	Too much	→			7		7	
	2	much				10		10	
	3	debris for counts				10		10	
	4					10	↓	10	↓
	5					10	N	9-1	N
FEEDING:									
A.M.									
P.M.									

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent  
 DC = Discoloration      OB = On Bottom      J = Jumper

SUR = Surfacing

NB = No Body

CHECKED BY: W 12-23-97

129624

MORTALITY AND BEHAVIOR

X

Definitive

Range-finder

Test Material: Elutriate  
 Study No: 0719-009  
 Protocol No.: EPA 1991  
 Study Director: PK

Lab Form: 25 (Rev. 9/89)  
 MEC Analytical Systems, Bioassay Div.  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Species: M. bahia  
 No. / Vessel: 10  
 Acclimation Mort...: <5%

Lot ID No.: MY121797  
 Seawater: 30%

Date Initiated: 12/18/97 Date Terminated: 12/22/97

Conc. (%)	Rep	ID: <u>10</u> Date: <u>12-19-97</u> Day: <u>1</u>	Obs.	ID: <u>10</u> Date: <u>12-20-97</u> Day: <u>2</u>	Obs.	ID: <u>M5B</u> Date: <u>12/21/97</u> Day: <u>3</u>	Obs.	ID: <u>M5B</u> Date: <u>12/22/97</u> Day: <u>4</u>	Obs.
		# Alive		# Alive		# Alive		# Alive	
Area 6									
10	1	10	N	9-0	N	9	N	9	N
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	9-1	↓	9	↓	9	↓	9	↓
	5	10	↓	9-0	↓	9	↓	9	↓
50	1	10	N	10	N	10	↓	10	↓
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	10	↓	10	↓	10	↓	10	↓
100	1	Too much	↓	10	N	10	↓	10	↓
	2	debris	↓	10	↓	10	↓	10	↓
	3	for	↓	9-0	↓	8	↓	8	↓
	4	obscure	↓	10	↓	10	↓	10	↓
	5		↓	10	↓	10	N	10	N
FEEDING:									
A.M.									
P.M.									

N=Normal LOE = Loss of Equilibrium Q = Quiescent

SUR = Surfacing

DC = Discoloration

OB = On Bottom

J = Jumper

NB = No Body

CHECKED BY: vr 12-23-97

129625

MORTALITY AND BEHAVIOR  
X Definitive Range-finder

Test Material: Elutriate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009 MEC Analytical Systems, Bioassay Div.  
 Protocol No.: EPA 1991 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: M. bahia Lot ID No.: MY121797  
 No. / Vessel: 10 Seawater: 30%  
 Acclimation Mort...: <5% Date Initiated: 12/18/97 Date Terminated: 12/22/97

Conc. (%)	Rep	ID: <u>KL</u> Date: <u>12-19-97</u> Day: <u>1</u>		ID: <u>KL</u> Date: <u>12-20-97</u> Day: <u>2</u>		ID: <u>MSB</u> Date: <u>12/21/97</u> Day: <u>3</u>		ID: <u>MSB</u> Date: <u>12/22/97</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Area 9									
10	1	10	N	10	N	10	N	10	N
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	10	↓
	5	9-1	↓	9	↓	9	↓	9	↓
50	1	10	N	10	N	10	↓	10	↓
	2	10	↓	10	↓	10	↓	10	↓
	3	10	↓	10	↓	10	↓	10	↓
	4	10	↓	10	↓	10	↓	9-1	↓
	5	10	↓	10	↓	10	↓	10	↓
100	1	10	→			10	↓	10	↓
	2	10	→			10	↓	10	↓
	3	10	→			10	↓	10	↓
	4	10	→			10	↓	10	↓
	5	10	→			10	N	9-1	N
FEEDING:									
A.M.									
P.M.									

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent

SUR = Surfacing

DC = Discoloration

OB = On Bottom

J = Jumper

NB = No Body

CHECKED BY: KL 12-23-97

129626

WEIGHTS AND LENGTHS

Test Material: Elutriate  
 Study No.: 0719-009  
 Study Director: PK

SPECIES:  
M. bahia

Lab Form: 28  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr., Bldg 36  
 Tiburon, CA 94920

Date		<u>12/22/97</u>		<u>12/23/97</u>			
Conc	Rep	# of fish/ Fish No.	Tare Wt. (mg)	Total Wt. (mg)	Fish Wt.	Weight/Fish (mg)	Length
		10	3.85	4.75	0.90	0.090	
Initials		MSB		MSB			

Checked By: KL 1223-97

TEST CONCENTRATION PREPARATION  
(Dilutions)

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Study Number: 0719-009  
Study Director: PK

Species: M. bahia  
Prepared by: ke

Test Material: Elutriate  
No. of Replicates: 5

mLs

Concentration (%)	Diluent 1 30% Bodega SW	Diluent 2	Salt	100% Test Material	% Test Material
1) Control	<del>7500</del> 8000				
2)		12/18/97 MSB (8)			
3) 10	<del>6750</del> 740	720		<del>450</del> 80	
4) 50	<del>3750</del> 400			<del>3750</del> 400	
5) 100	0			<del>7500</del> 800	
6)					
7)					
8)					
9)					
10)					

DAY \_\_\_\_\_  
Date/ID 12/18/97 MSB

Species: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

Test Material: \_\_\_\_\_  
No. of Replicates: \_\_\_\_\_

Concentration	Diluent 1	mLs Diluent 2	Salt	100% Test Material	% Test Material
1)					
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					

DAY \_\_\_\_\_  
Date/ID \_\_\_\_\_

Checked By: ke 12-23-97

129628

General Test Log

Test Material Elutriate  
Study No. 0719-009  
Species M. bahia  
Study Director PK

Form No: 29  
Bioassay Division  
MEC Analytical Systems  
3150 Paradise Drive, Bldg 36  
Tiburon, CA 94920

METERS:

Date/Initials

pH Beckman  
DO YSI 57  
Temp Orion 140  
Sal Orion 140  
NH3 Orion 720  
Light Intensity Li Cor LI 185-B  
Other: \_\_\_\_\_

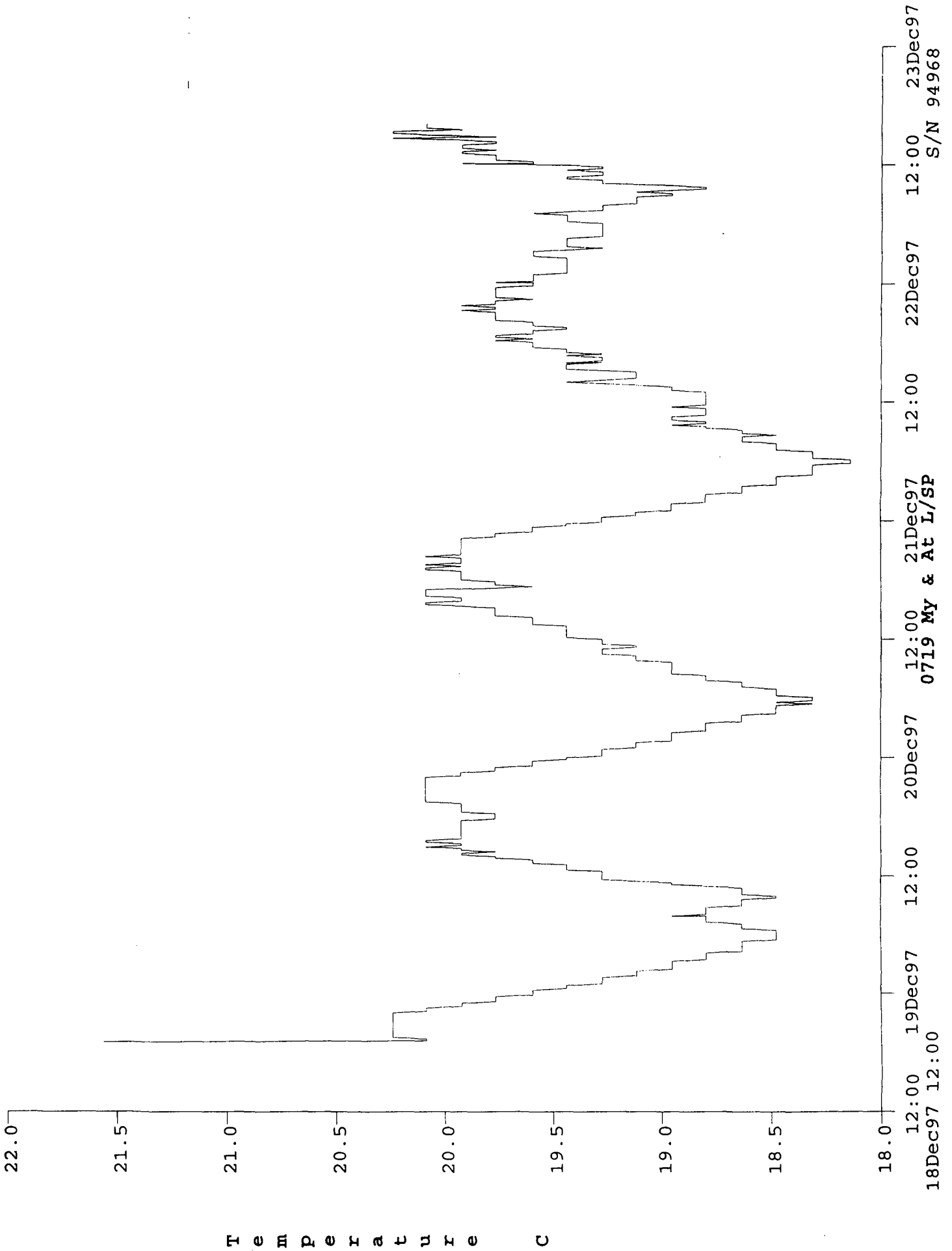
TEST CONDITIONS

Photoperiod 16 h light: 8 h dark  
Temperature 20 ± 2 °C  
Feeding 2 drops artemia twice daily  
Test Containers 1000 mL beakers  
Exposure Volume 1000 mLs  
Salinity 30 ± 2 ‰  
Dissolved Oxygen 6.0 mg/L

**Error codes**  
A=Recorded in wrong location  
B=Recording error (e.g. wrong date)  
C=Questioned number, redid reading  
(e.g. meter recalibrated)  
D=Questioned count, recounted  
E=Calculation error  
F=Other--please specify

Checked By: KL 12-23-97

129629



T e m p e r a t u r e C

18Dec97 12:00

19Dec97 12:00

20Dec97 12:00

21Dec97 12:00

0719 My & At L/SP

22Dec97 12:00

23Dec97 12:00

S/N 94968



**WATER QUALITY**

Lab Form: 24

Study No: 0719-009

Bioassay Division  
MEC Analytical Systems

3150 Paradise Dr., Bldg. 36

Tiburon, CA. 94920

Test Material: Copper sulfate  
Test Species: M. bahia

Study Director: PK

Checked By: ku 12-23-97

Repl

Conc. µgCu/L	Date: 12/18/97			Date: 12/20/97			Date: 12/21/97			Date: 12/22/97							
	Temp	D.O.	pH	Temp	D.O.	pH	Temp	D.O.	pH	Temp	D.O.	pH					
Control	20.1	7.0	8.07	19.6	7.6	8.28	18.8	7.2	8.06	31	31	7.76	31	19.1	7.5	7.94	31
63	20.6	7.0	8.02	19.8	7.5	8.16	19.0	7.2	8.02	31	31	7.77	31	19.1	7.2	7.85	31
125	20.3	7.5	8.02	19.8	7.5	8.17	19.2	6.9	8.03	31	31	7.4	31	19.2	7.2	8.01	31
250	20.3	7.5	8.02	19.7	7.5	8.17	19.0	7.0	8.03	31	31	7.4	31	19.2	7.1	7.97	31
500	20.3	7.6	8.02	19.2	7.5	8.17	19.0	6.8	8.02	31	31	7.4	31	19.1	7.2	7.95	31
1000	20.3	7.5	7.98	19.8	7.6	8.17	19.0	7.0	8.00	31	31	7.5	31	19.1	7.1	7.98	31

125030

Initials: ASB MSB MSB

X Definitive MORTALITY AND BEHAVIOR Range-Index

Test Material: Copper sulfate Lab Form: 25 (Rev. 9/89)  
 Study No: 0719-009 MEC Analytical Systems, Bioassay Div.  
 Protocol No.: ASTM 3150 Paradise Dr., Bldg. 36  
 Study Director: PK Tiburon, CA 94920

Test Species: M. bahia Lot ID No.: MY121797  
 No. / Vessel: 10 Seawater: 30‰  
 Acclimation Mort.: <5% Date Initiated: 12/19/97 Date Terminated: 12/23/97

Conc. µgCu/L	Rep	ID: <u>Kc</u> Date: <u>12-19-97</u> Day: <u>1</u>		ID: <u>Kc</u> Date: <u>12-20-97</u> Day: <u>2</u>		ID: <u>MS1B</u> Date: <u>12/21/97</u> Day: <u>3</u>		ID: <u>MS1B</u> Date: <u>12/22/97</u> Day: <u>4</u>	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Control	1	10	N	10	N	10	N	10	N
	2	10	N	10	N	10	N	10	N
63	1	10	N	10	N	10	N	10	N
	2	10	N	4-10	N	10	N	10	N
125	1	10	N	10-3	N	10	N	10	N
	2	10	N	10-7-3-1	N	9	N	9	N
250	1	10	N	10-7-3	N	7	N	5-2	N
	2	10	N	10-7-3	N	6-1	N	6	N
500	1	9-1	N	5-3	N	3-2	Q	2-1	Q
	2	9-1	N	8-1	N	6-2	Q	4-2	Q
1000	1	8-2	Q	4-4	Q	4	Q, OB	2-2	OB/Q, OE
	2	9-1	N	1-7	N	0-1			
FEEDING:									
A.M.		<u>Kc</u>		<u>Kc</u>					
P.M.		<u>Kc</u>		<u>Kc</u>					

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent  
 SUR = Surfacing      DC = Discoloration      OB = On Bottom      J = Jumper      NB = No Body

CHECKED BY: Kc 12-23-97

129631

TEST CONCENTRATION PREPARATION  
(Dilutions)

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Study Number 0719-009  
Study Director PK

Species: M. bahia  
Prepared by: ke

Test Material: Copper sulfate-- 500 mg/L  
No. of Replicates: 32

mLs

Concentration µgCu/L	Diluent 1 30 % Seawater	Diluent 2 mLs	Salt	100% Test Material	% Test Material
1) Control	1000				
2)					
3) 63	1000			0.5	
4) 125	999			1.0	
5) 250	998			2.0	
6) 500	996			3.9	
7) 1000	992			7.9	
8)					
9)					
10)					

DAY \_\_\_\_\_  
Date/ID 0  
12-18-97  
ke

Species: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

Test Material: \_\_\_\_\_  
No. of Replicates: \_\_\_\_\_

Concentration	Diluent 1	Diluent 2 mLs	Salt	100% Test Material	% Test Material
1)					
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					

DAY \_\_\_\_\_  
Date/ID \_\_\_\_\_

Checked By: ke 12-23-97

129632

General Test Log

Test Material Copper sulfate  
Study No. 0719-009  
Species M. bahia  
Study Director PK

Form No: 29  
Bioassay Division  
MEC Analytical Systems  
3150 Paradise Drive, Bldg 36  
Tiburon, CA 94920

METERS:

Date/Initials

pH Beckman  
DO YSI 57  
Temp Orion 140  
Sal Orion 140  
NH3 Orion 720  
Light Intensity Li Cor LI 185-B  
Other: \_\_\_\_\_

TEST CONDITIONS

Photoperiod 16 h light: 8 h dark  
Temperature 20 ± 2 °C  
Feeding 2 drops artemia twice daily  
Test Containers 1000 mL beakers  
Exposure Volume <sup>1000</sup> 500 mLs (D) *W* 12-18-97  
Salinity 30 ± 2 ‰  
Dissolved Oxygen 6.0 mg/L

**Error codes**  
A=Recorded in wrong location  
B=Recording error (e.g. wrong date)  
C=Questioned number, redid reading  
(e.g. meter recalibrated)  
D=Questioned count, recounted  
E=Calculation error  
F=Other--please specify

Checked By: *W* 12-23-97

129633

M. bahia

Conc.	Site I.D.	Replicate	Initial #	Survival #	% Survival	Mean % Survival	SD Survival
	Control	1	10	10	100		
	Control	2	10	10	100		
	Control	3	10	10	100		
	Control	4	10	10	100		
	Control	5	10	9	90	98	4.47
10	Area 3	1	10	10	100		
10	Area 3	2	10	10	100		
10	Area 3	3	10	10	100		
10	Area 3	4	10	10	100		
10	Area 3	5	10	10	100	100	0.00
50	Area 3	1	10	10	100		
50	Area 3	2	10	10	100		
50	Area 3	3	10	10	100		
50	Area 3	4	10	8	80		
50	Area 3	5	10	10	100	96	8.94
100	Area 3	1	10	10	100		
100	Area 3	2	10	9	90		
100	Area 3	3	10	10	100		
100	Area 3	4	10	9	90		
100	Area 3	5	10	10	100	96	5.48
10	Area 4	1	10	9	90		
10	Area 4	2	10	10	100		
10	Area 4	3	10	10	100		
10	Area 4	4	10	10	100		
10	Area 4	5	10	10	100	98	4.47
50	Area 4	1	10	10	100		
50	Area 4	2	10	9	90		
50	Area 4	3	10	10	100		
50	Area 4	4	10	10	100		
50	Area 4	5	10	10	100	98	4.47
100	Area 4	1	10	10	100		
100	Area 4	2	10	10	100		
100	Area 4	3	10	10	100		
100	Area 4	4	10	10	100		
100	Area 4	5	10	9	90	98	4.47
10	Area 5	1	10	10	100		
10	Area 5	2	10	10	100		
10	Area 5	3	10	10	100		
10	Area 5	4	10	10	100		
10	Area 5	5	10	10	100	100	0.00
50	Area 5	1	10	10	100		
50	Area 5	2	10	8	80		
50	Area 5	3	10	10	100		
50	Area 5	4	10	10	100		
50	Area 5	5	10	10	100	96	8.94
100	Area 5	1	10	7	70		
100	Area 5	2	10	10	100		
100	Area 5	3	10	10	100		
100	Area 5	4	10	10	100		

MdR survival

M. bahia

100	Area 5	5	10	9	90	92	13.04
10	Area 6	1	10	9	90		
10	Area 6	2	10	10	100		
10	Area 6	3	10	10	100		
10	Area 6	4	10	9	90		
10	Area 6	5	10	9	90	94	5.48
50	Area 6	1	10	10	100		
50	Area 6	2	10	10	100		
50	Area 6	3	10	10	100		
50	Area 6	4	10	10	100		
50	Area 6	5	10	10	100	100	0.00
100	Area 6	1	10	10	100		
100	Area 6	2	10	10	100		
100	Area 6	3	10	8	80		
100	Area 6	4	10	10	100		
100	Area 6	5	10	10	100	96	8.94
10	Area 9	1	10	10	100		
10	Area 9	2	10	10	100		
10	Area 9	3	10	10	100		
10	Area 9	4	10	10	100		
10	Area 9	5	10	9	90	98	4.47
50	Area 9	1	10	10	100		
50	Area 9	2	10	10	100		
50	Area 9	3	10	10	100		
50	Area 9	4	10	9	90		
50	Area 9	5	10	10	100	98	4.47
100	Area 9	1	10	10	100		
100	Area 9	2	10	10	100		
100	Area 9	3	10	10	100		
100	Area 9	4	10	10	100		
100	Area 9	5	10	9	90	98	4.47

MdR survival

**APPENDIX E**

**Solid Phase Bioassays**

Mysid Survival, Growth and Fecundity Test-96 Hr Survival

Start Date: 09 Jan-98 17:20 Test ID: 193 Sample ID: REF-Ref Toxicant  
 End Date: 13 Jan-98 15:35 Lab ID: CAMEC-MEC Carlsbad Sample Type: CUSO-Copper sulfate  
 Sample Date: Protocol: EPAM 87-EPA Marine Test Species: MY-Mysidopsis bahia  
 Comments: ABS 7483 for Marina del Rey

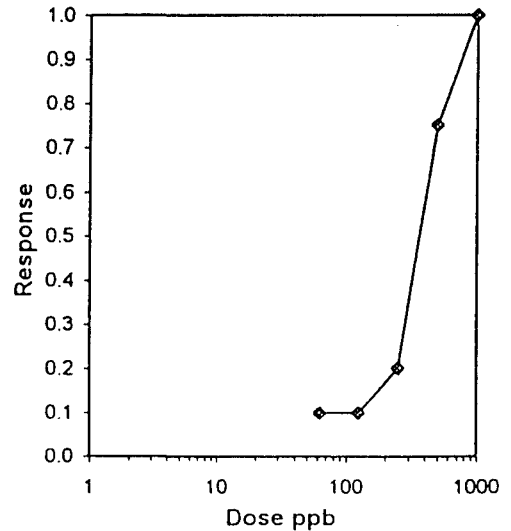
Conc-ppb	1	2
control	1.0000	1.0000
62.5	0.8000	1.0000
125	0.9000	0.9000
250	0.6000	1.0000
500	0.1000	0.4000
1000	0.0000	0.0000

Conc-ppb	Mean	N-Mean	Transform: Arcsin Square Root				N	t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
			Mean	Min	Max	CV%						
control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2				0	20
62.5	0.9000	0.9000	1.2596	1.1071	1.4120	17.115	2	0.746	2.830	0.5784	2	20
125	0.9000	0.9000	1.2490	1.2490	1.2490	0.000	2	0.797	2.830	0.5784	2	20
250	0.8000	0.8000	1.1490	0.8861	1.4120	32.366	2	1.287	2.830	0.5784	4	20
*500	0.2500	0.2500	0.5032	0.3218	0.6847	51.002	2	4.446	2.830	0.5784	15	20
*1000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	6.132	2.830	0.5784	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Normality of the data set cannot be confirmed										
Equality of variance cannot be confirmed										
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	250	500	353.553		0.42688	0.50552	0.04178	12.101	0.00434	5, 6

Trim Level	EC50	95% CL	
0.0%	268.26	182.84	393.59
5.0%	322.45	224.53	463.08
10.0%	359.73	286.87	451.10
20.0%	366.02	304.54	439.92
Auto-0.0%	268.26	182.84	393.59

Trimmed Spearman-Kärber





ACOE Marina Del Rey  
Mysid Summary

Lab ID	Sample ID	Sample Type	Organism	Initial Organism	Lab Replicate	Survival	Replicate Survival	Mean Survival	Standard Dev
	Control 2	Sediment	M. bahia	20	1	18 ✓	90		
	Control 2	Sediment	M. bahia	20	2	18 ✓	90		
	Control 2	Sediment	M. bahia	20	3	17 ✓	85		
	Control 2	Sediment	M. bahia	20	4	20 ✓	100		
	Control 2	Sediment	M. bahia	20	5	19 ✓	95	92	5.70
	Reference	Sediment	M. bahia	20	1	18 ✓	90		
	Reference	Sediment	M. bahia	20	2	13 ✓	65		
	Reference	Sediment	M. bahia	20	3	17 ✓	85		
	Reference	Sediment	M. bahia	20	4	13 ✓	65		
	Reference	Sediment	M. bahia	20	5	16 ✓	80	77	11.51
	Area 4	Sediment	M. bahia	20	1	18 ✓	90		
	Area 4	Sediment	M. bahia	20	2	17 ✓	85		
	Area 4	Sediment	M. bahia	20	3	15 ✓	75		
	Area 4	Sediment	M. bahia	20	4	15 ✓	75		
	Area 4	Sediment	M. bahia	20	5	16 ✓	80	81	6.52
	Area 5	Sediment	M. bahia	20	1	17 ✓	85		
	Area 5	Sediment	M. bahia	20	2	13 ✓	65		
	Area 5	Sediment	M. bahia	20	3	17 ✓	85		
	Area 5	Sediment	M. bahia	20	4	18 ✓	90		
	Area 5	Sediment	M. bahia	20	5	20 ✓	100	85	12.75
	Area 9	Sediment	M. bahia	20	1	16 ✓	80		
	Area 9	Sediment	M. bahia	20	2	16 ✓	80		
	Area 9	Sediment	M. bahia	20	3	17 ✓	85		
	Area 9	Sediment	M. bahia	20	4	17 ✓	85		
	Area 9	Sediment	M. bahia	20	5	16 ✓	80	82	2.74

CC  
1/9/98

Site	pH	Temp.	D.O.	Sal.	Sample ID		
					Statistic	Mean	Minimum
Site 5	8.1 ✓	20.3 ✓	93 ✓	33.1 ✓			
Site 5	8.1 ✓	19.6 ✓	96 ✓	31.6 ✓			
Site 5	8.2 ✓	20.2 ✓	96 ✓	31.5 ✓			
Site 5	8.0 ✓	19.9 ✓	96 ✓	31.6 ✓			
Site 5	8.0 ✓	20.2 ✓	94 ✓	31.7 ✓			
Site 5	8.1 ✓	20.2 ✓	94 ✓	31.8 ✓			
Site 5	8.1 ✓	20.6 ✓	94 ✓	31.9 ✓			
Site 5	8.1 ✓	20.7 ✓	96 ✓	31.9 ✓			
Site 5	8.0 ✓	20.7 ✓	94 ✓	31.8 ✓			
Site 5	8.0 ✓	20.8 ✓	91 ✓	31.8 ✓			
Site 9	8.1 ✓	19.6 ✓	88 ✓	33.0 ✓			
Site 9	8.1 ✓	19.7 ✓	87 ✓	32.9 ✓			
Site 9	8.1 ✓	19.7 ✓	86 ✓	33.0 ✓			
Site 9	8.1 ✓	19.5 ✓	86 ✓	32.9 ✓			
Site 9	8.1 ✓	19.3 ✓	89 ✓	32.9 ✓			
Site 9	8.1 ✓	20.2 ✓	103 ✓	32.9 ✓			
Site 9	8.0 ✓	19.9 ✓	89 ✓	32.8 ✓			
Site 9	8.0 ✓	20.1 ✓	70 ✓	33.0 ✓			
Site 9	8.1 ✓	20.3 ✓	94 ✓	33.2 ✓			
Site 9	8.0 ✓	19.7 ✓	94 ✓	32.0 ✓			
Site 9	8.1 ✓	19.6 ✓	89 ✓	31.4 ✓			
Site 9	8.0 ✓	19.8 ✓	96 ✓	31.4 ✓			
Site 9	8.0 ✓	20.1 ✓	94 ✓	31.7 ✓			
Site 9	8.1 ✓	20.3 ✓	95 ✓	32.0 ✓			
Site 9	8.1 ✓	20.2 ✓	95 ✓	31.8 ✓			
Site 9	8.1 ✓	20.6 ✓	96 ✓	31.9 ✓			
Site 9	8.1 ✓	20.6 ✓	93 ✓	31.9 ✓			
Site 9	8.1 ✓	20.4 ✓	94 ✓	31.8 ✓			

CC  
1/2/08

Reference	7.9 ✓	95 ✓	20.4 ✓	31.6 ✓
Reference	8.1 ✓	96 ✓	20.6 ✓	31.9 ✓
Reference	8.1 ✓	96 ✓	20.8 ✓	31.8 ✓
Reference	8.0 ✓	94 ✓	20.5 ✓	31.8 ✓
Reference	8.0 ✓	95 ✓	20.7 ✓	31.8 ✓
Reference	8.1 ✓	96 ✓	20.3 ✓	31.8 ✓
Site 4	8.1 ✓	86 ✓	19.7 ✓	32.9 ✓
Site 4	8.0 ✓	87 ✓	19.6 ✓	32.9 ✓
Site 4	8.1 ✓	88 ✓	19.7 ✓	32.9 ✓
Site 4	8.1 ✓	91 ✓	19.3 ✓	33.0 ✓
Site 4	8.1 ✓	89 ✓	19.7 ✓	33.0 ✓
Site 4	8.0 ✓	97 ✓	20.4 ✓	32.9 ✓
Site 4	8.1 ✓	93 ✓	20.0 ✓	32.9 ✓
Site 4	8.2 ✓	96 ✓	19.9 ✓	33.2 ✓
Site 4	8.3 ✓	94 ✓	20.1 ✓	33.1 ✓
Site 4	8.3 ✓	95 ✓	20.1 ✓	31.9 ✓
Site 4	8.5 ✓	93 ✓	19.7 ✓	31.4 ✓
Site 4	8.2 ✓	96 ✓	19.6 ✓	31.6 ✓
Site 4	8.2 ✓	94 ✓	20.0 ✓	31.7 ✓
Site 4	8.3 ✓	93 ✓	20.4 ✓	31.9 ✓
Site 4	8.3 ✓	95 ✓	20.2 ✓	31.8 ✓
Site 4	8.3 ✓	95 ✓	20.3 ✓	32.0 ✓
Site 4	8.3 ✓	94 ✓	20.4 ✓	31.9 ✓
Site 4	8.3 ✓	95 ✓	20.2 ✓	31.8 ✓
Site 5	8.0 ✓	89 ✓	19.3 ✓	33.0 ✓
Site 5	8.0 ✓	87 ✓	19.7 ✓	32.9 ✓
Site 5	8.0 ✓	88 ✓	19.6 ✓	33.1 ✓
Site 5	8.1 ✓	86 ✓	19.7 ✓	32.9 ✓
Site 5	8.1 ✓	87 ✓	19.7 ✓	33.0 ✓
Site 5	8.1 ✓	104 ✓	20.1 ✓	32.9 ✓
Site 5	8.1 ✓	94 ✓	20.5 ✓	32.9 ✓
Site 5	8.0 ✓	75 ✓	20.2 ✓	33.0 ✓

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 4	Mean	8.2	93	20.0	32.4
Site 4	Minimum	8.0	86	19.3	31.4
Site 4	Maximum	8.5	97	20.4	33.2

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 5	Mean	8.1	92	20.1	32.4
Site 5	Minimum	8.0	75	19.3	31.5
Site 5	Maximum	8.2	104	20.8	33.1

Sample ID	pH.	D.O.	Temp.	Sal.	Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Control 2	8.0 ✓	97 ✓	19.7 ✓	32.9 ✓	Control 2	Mean	8.1	95	20.1	32.3
Control 2	8.1 ✓	91 ✓	19.6 ✓	33.0 ✓	Control 2	Minimum	8.0	86	19.3	31.3
Control 2	8.0 ✓	89 ✓	19.6 ✓	33.0 ✓	Control 2	Maximum	8.2	104	20.6	33.1
Control 2	8.1 ✓	87 ✓	19.3 ✓	32.9 ✓						
Control 2	8.1 ✓	86 ✓	19.7 ✓	32.9 ✓						
Control 2	8.0 ✓	104 ✓	20.6 ✓	33.1 ✓						
Control 2	8.0 ✓	95 ✓	20.2 ✓	32.9 ✓						
Control 2	8.1 ✓	95 ✓	20.1 ✓	33.1 ✓						
Control 2	8.1 ✓	96 ✓	20.2 ✓	33.1 ✓						
Control 2										
Control 2	8.0 ✓	97 ✓	20.3 ✓	31.5 ✓						
Control 2	8.2 ✓	96 ✓	19.8 ✓	31.3 ✓						
Control 2	8.0 ✓	95 ✓	19.8 ✓	31.5 ✓						
Control 2	8.0 ✓	97 ✓	20.1 ✓	31.7 ✓						
Control 2	8.1 ✓	96 ✓	20.6 ✓	31.6 ✓						
Control 2	8.1 ✓	96 ✓	20.5 ✓	31.8 ✓						
Control 2	8.1 ✓	97 ✓	20.3 ✓	31.9 ✓						
Control 2	8.1 ✓	96 ✓	20.4 ✓	31.8 ✓						
Control 2	8.1 ✓	97 ✓	20.6 ✓	32.0 ✓						
Reference	8.1 ✓	88 ✓	19.7 ✓	33.0 ✓	Reference	Mean	8.1	94	20.2	32.4
Reference	8.1 ✓	89 ✓	19.6 ✓	33.1 ✓	Reference	Minimum	7.9	87	19.4	31.4
Reference	8.1 ✓	87 ✓	19.6 ✓	33.0 ✓	Reference	Maximum	8.2	105	20.8	33.1
Reference	8.0 ✓	88 ✓	19.5 ✓	33.0 ✓						
Reference	8.0 ✓	87 ✓	19.4 ✓	32.9 ✓						
Reference	8.1 ✓	105 ✓	20.7 ✓	32.8 ✓						
Reference	8.2 ✓	96 ✓	20.5 ✓	32.9 ✓						
Reference	8.1 ✓	96 ✓	20.0 ✓	33.1 ✓						
Reference	8.1 ✓	94 ✓	20.5 ✓	33.1 ✓						
Reference										
Reference	8.0 ✓	97 ✓	20.4 ✓	31.8 ✓						
Reference	8.1 ✓	95 ✓	20.1 ✓	31.5 ✓						
Reference	7.9 ✓	95 ✓	19.8 ✓	31.4 ✓						

## SHORT TERM CULTURE LOG

ORGANISM: *Mysid*

DATE RECEIVED: 12.18.97

MEC BATCH NUMBER: A12626

LOCATION: Room 3

Date	Feed AM/PM	Tub #	D.O.	Temp	Cond/ Salinity	pH	H <sub>2</sub> O Change	# Dead	Initials
12.18.97	X	1			30.3		Y	1	MAI
12.18.97	X	2			30.4		Y	0	
12.19.97	X X	1	86	20.0	31.7	7.9	Y	0	MAI
12.19.97	X X	2	87	20.2	31.9	7.9	Y		
12.19.97	X X	3*	82	20.5	31.5	8.0	Y		

\* split mysids again: now in 3 tubs 12.19.97 MAI

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FedEx Tracking Number

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0200 Form ID No

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Ray... Phone 904 292 7800

company AQUATIC INDICATORS

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City SAINT AUGUSTINE State FL ZIP 32086

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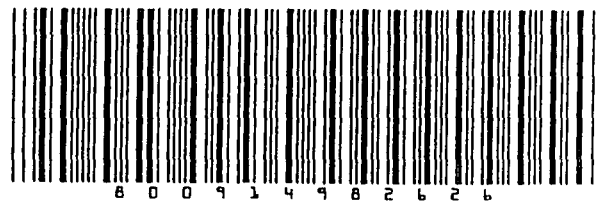
3 To Recipient's Name J. Mary Ann Johnson Phone 407 951-7225

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City Cambridge State CA ZIP 92009

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# Aquatic Indicators, Inc.

P.O. Box 632 • St. Augustine, FL 32085-0632 • (904) 829-2780

Date 12 17 97

Species:

1. M. bahia
- 2.
- 3.

Total Supplied:

1. 850
- 2.
- 3.

Brood Description:

1. EPA
- 2.
- 3.

Age:

1. 2
- 2.
- 3.

Environmental Regime

Feeding: Zooplankton  
Artemia NH

Photo: L D  
16 8

P.H.: 8.1

Temp: 25°C

Salinity: 30‰

Comments:

Thanks!  
Ray

### ORGANISM RECEIPT LOG

Date: 12.18.97		Time: 11:05		MEC Batch No. A12626	
Organism: Mysid			Source: Aquatic Indicators		
Address: Same				Invoice Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Phone: Same			Contact: Ray		
No. Ordered: 850		No. Received: 850		Source Batch: N/A	
Condition of Organisms: Good			Approximate Size or Age: 3d.o.		
Shipper: FedEx			B of L (Tracking No.): 800914982626		
Condition of Container: Good			Received by: MAI		
Notes:					
WATER QUALITY					
pH (Units)	Temp. (°C)	D.O. (% Sat)	Conductivity or Salinity (Include Units)	Technician (initials)	
7.7	18.6	288	29	MAI	
Notes:					



Mysidopsis bahia 10 Day Solid Phase Test Data Sheet

MDR

Sample ID SITE 9	Start 12/20/97 Date/Time 1000	End Date/Time	Species/Common Name Mysidopsis bahia	Study Director JK
Organism Batch A1 2626	Seawater 510 Batch No 120597	HOBO 119281	Bath/Room ID RM 3	No. Organisms/Chamber 25 20

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12/20/97	1600	1	8.1	88	19.6	33.0	JK
0	↓	↓	2	8.1	87	19.7	32.9	
0	↓	↓	3	8.1	86	19.7	33.0	
0	↓	↓	4	8.1	86	19.5	32.9	
0	↓	↓	5	8.1	89	19.3	32.9	
1	12-21-97	1245	1	8.1	103	20.2	32.9	DB
2	12-22-97	1010	2	8.0	89	19.9	32.8	DB
3	12-23-97	0900	3	8.0	70	20.1	33.0	DB
4	12-24-97	0920	4	8.1	94	20.3	33.2	DB
5	122597	—	5					
6	12/26/97	1155	1	8.0	94	19.7	32.0	MAI
7	12/27/97	1020	2	8.1	89	19.6	31.4	MAI
8	12-28-97	0910	3	8.0	96	19.8	31.4	DB
9	12-29-97	0855	4	8.0	94	20.1	31.7	DB
10	12/30/97	11:00	1	8.1	95	20.3	32.0	AM/DB
10	↓	↓	2	8.1	95	20.2	31.8	↓
10	↓	↓	3	8.1	96	20.6	31.9	
10	↓	↓	4	8.1	93	20.6	31.9	
10	↓	↓	5	8.1	94	20.4	31.8	↓

Survival DATA - END

Date	Rep	No. Animals Alive	Initials
12/30/97	1	16	DB
↓	2	16	DB
↓	3	17	DB
↓	4	17	DB
↓	5	16	DB

Notes: OK I.e 12/20/97

Mysidopsis bahia 10 Day Solid Phase Test Data Sheet

MDR

Sample ID SITES	Start Date/Time 12/20/97	End Date/Time 12/20/97	Species/Common Name Mysidopsis bahia	Study Director PK
Organism Batch A12626	Seawater S/D Batch No. 120599	HOBO 119281	Bath/Room ID RM 3	No. Organisms/Chamber Off 520

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12/20/97	1050	1	8.0	89	19.7	33.0	KP
0	↓	↓	2	8.0	87	19.7	32.9	↓
0	↓	↓	3	8.0	88	19.6	33.1	↓
0	↓	↓	4	8.1	86	19.7	32.9	↓
0	↓	↓	5	8.1	87	19.7	33.0	↓
1	12-21-97	1245	1	8.1	104	20.1	32.9	DB
2	12-22-97	1010	2	8.1	94	20.5	32.9	DB
3	12-23-97	0900	3	8.0	75	20.2	33.0	DB
4	12-24-97	0920	4	8.1	93	20.3	33.1	DB
5	12-25-97		5					
6	12-26-97	1150	1	8.1	96	19.6	31.6	MAI
7	12-27-97	1015	2	8.2	96	20.2	31.5	MAI
8	12-28-97	0910	3	8.0	96	19.9	31.6	DB
9	12-29-97	0855	4	8.0	94	20.2	31.7	DB
10	12/30/97	10:55	1	8.1	94	20.2	31.8	AM/DB
10	↓	↓	2	8.1	94	20.6	31.9	↓
10	↓	↓	3	8.1	96	20.7	31.9	↓
10	↓	↓	4	8.0	94	20.7	31.8	↓
10	↓	↓	5	8.0	91	20.8	31.8	↓

Survival DATA - END

Date	Rep	No. Animals Alive	Initials
12/30/97	1	17	TS
↓	2	13	AM
↓	3	17	MAI
↓	4	18	DB
↓	5	20	TS

Notes: ① KR IE 12/20/97

Mysidopsis bahia 10 Day Solid Phase Test Data Sheet

MDR

Sample ID SITE 4		Start 122097 Date/Time	End Date/Time	Species/Common Name Mysidopsis bahia	Study Director PK			
Organism Batch A12626	Seawater Batch No. 120597	HOBO 119281		Bath/Room ID RM3	No. Organisms/Chamber 0 KR 820			
WATER QUALITY								
Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12/20/97	956	1	8.1	86	OKR 16 19.7	32.9	KR
0	↓	↓	2	8.0	87	19.6	32.9	↓
0			3	8.1	88	19.7	32.9	
0			4	8.1	91	19.3	33.0	
0			5	8.1	89	19.7	33.0	
1			12-21-97	1245	1	8.0	97	
2	12-22-97	1010	2	8.1	93	20.0	32.9	DB
3	12-23-97	0900	3	8.2	96	19.9	33.2	DB
4	12-24-97	0920	4	8.3	94	20.1	33.1	BS
5	12-25-97		5					
6	12-26-97	1150	1	8.3	95	20.1	31.9	MAI
7	12-27-97	1015	2	8.5	93	19.7	31.4	MAI
8	12-28-97	0910	3	8.2	96	19.6	31.6	BS
9	12-29-97	0855	4	8.2	94	20.0	31.7	RS
10	12/30/97	10:50	1	8.3	93	20.4	31.9	AM/DB
10	↓	↓	2	8.3	95	20.2	31.8	↓
10			3	8.3	95	20.3	32.0	
10			4	8.3	94	20.4	31.9	
10			5	8.3	95	20.2	31.8	
10								

Survival DATA - END			
Date	Rep	No. Animals Alive	Initials
12/30/97	1	18	AM
↓	2	17	TS
	3	15	MAI
	4	15	AM
	5	16	BS

Notes: OKR IE 12/20/97

Mysidopsis bahia 10 Day Solid Phase Test Data Sheet

MDR

Sample ID <i>Reference</i>	Start <i>12/20/97</i> Date/Time <i>200</i>	End <i>12/30/97</i> Date/Time <i>300</i>	Species/Common Name <i>Mysidopsis bahia</i>	Study Director <i>PK</i>
Organism Batch <i>A12626</i>	Seawater Source Batch No. <i>124597</i>	HOBO <i>119281</i>	Bath/Room ID <i>PM 3</i>	No. Organisms/Chamber <i>20</i>

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	<i>12/20/97</i>	<i>1030</i>	1	<i>8.1</i>	<i>88</i>	<i>19.7</i>	<i>33.0</i>	<i>PK</i>
0	↓	↓	2	<i>8.1</i>	<i>89</i>	<i>19.6</i>	<i>33.1</i>	↓
0	↓	↓	3	<i>8.1</i>	<i>87</i>	<i>19.6</i>	<i>33.0</i>	↓
0	↓	↓	4	<i>8.0</i>	<i>88</i>	<i>19.5</i>	<i>33.0</i>	↓
0	↓	↓	5	<i>8.0</i>	<i>87</i>	<i>19.4</i>	<i>32.9</i>	↓
1	<i>12-21-97</i>	<i>1245</i>	1	<i>8.1</i>	<i>105</i>	<i>20.7</i>	<i>32.8</i>	<i>DB</i>
2	<i>12-22-97</i>	<i>1010</i>	2	<i>8.2</i>	<i>96</i>	<i>20.5</i>	<i>32.9</i>	<i>DB</i>
3	<i>12-23-97</i>	<i>0900</i>	3	<i>8.1</i>	<i>96</i>	<i>20.0</i>	<i>33.1</i>	<i>DB</i>
4	<i>12-24-97</i>	<i>0920</i>	4	<i>8.1</i>	<i>94</i>	<i>20.5</i>	<i>33.1</i>	<i>DB</i>
5	<i>12-25-97</i>		5					
6	<i>12-26-97</i>	<i>1150</i>	1	<i>8.0</i>	<i>97</i>	<i>20.4</i>	<i>31.8</i>	<i>MAI</i>
7	<i>12-27-97</i>	<i>1010</i>	2	<i>8.1</i>	<i>95</i>	<i>20.1</i>	<i>31.5</i>	<i>MAI</i>
8	<i>12-28-97</i>	<i>0910</i>	3	<i>7.9</i>	<i>95</i>	<i>19.8</i>	<i>31.4</i>	<i>DB</i>
9	<i>12-29-97</i>	<i>0855</i>	4	<i>7.9</i>	<i>95</i>	<i>20.4</i>	<i>31.6</i>	<i>DB</i>
10	<i>12/30/97</i>	<i>10:45</i>	1	<i>8.1</i>	<i>96</i>	<i>20.6</i>	<i>31.9</i>	<i>AM/DB</i>
10	↓	↓	2	<i>8.1</i>	<i>96</i>	<i>20.8</i>	<i>31.8</i>	↓
10	↓	↓	3	<i>8.0</i>	<i>94</i>	<i>20.5</i>	<i>31.8</i>	↓
10	↓	↓	4	<i>8.0</i>	<i>95</i>	<i>20.7</i>	<i>31.8</i>	↓
10	↓	↓	5	<i>8.1</i>	<i>96</i>	<i>20.3</i>	<i>31.8</i>	↓

Survival DATA - END

Date	Rep	No. Animals Alive	Initials
<i>12/30/97</i>	1	<i>18</i>	<i>AM</i>
↓	2	<i>13</i>	<i>AM</i>
↓	3	<i>17</i>	<i>MAI</i>
↓	4	<i>13</i>	<i>JS</i>
↓	5	<i>16</i>	<i>AM</i>

Notes: *0 PK I.e 12/20/97*

MD12

Mysidopsis bahia 10 Day Solid Phase Test Data Sheet

Sample ID <b>CONTROL 2</b>	Start Date/Time <b>12/20/97</b>	End Date/Time <b>12/30/97</b>	Species/Common Name <b>Mysidopsis bahia</b>	Study Director <b>DK</b>
Organism Batch <b>A1 2626</b>	Seawater Batch No. <b>510</b>	HOBO <b>119281</b>	Bath/Room ID <b>PM 3</b>	No. Organisms/Chamber <b>OK 520</b>

WATER QUALITY

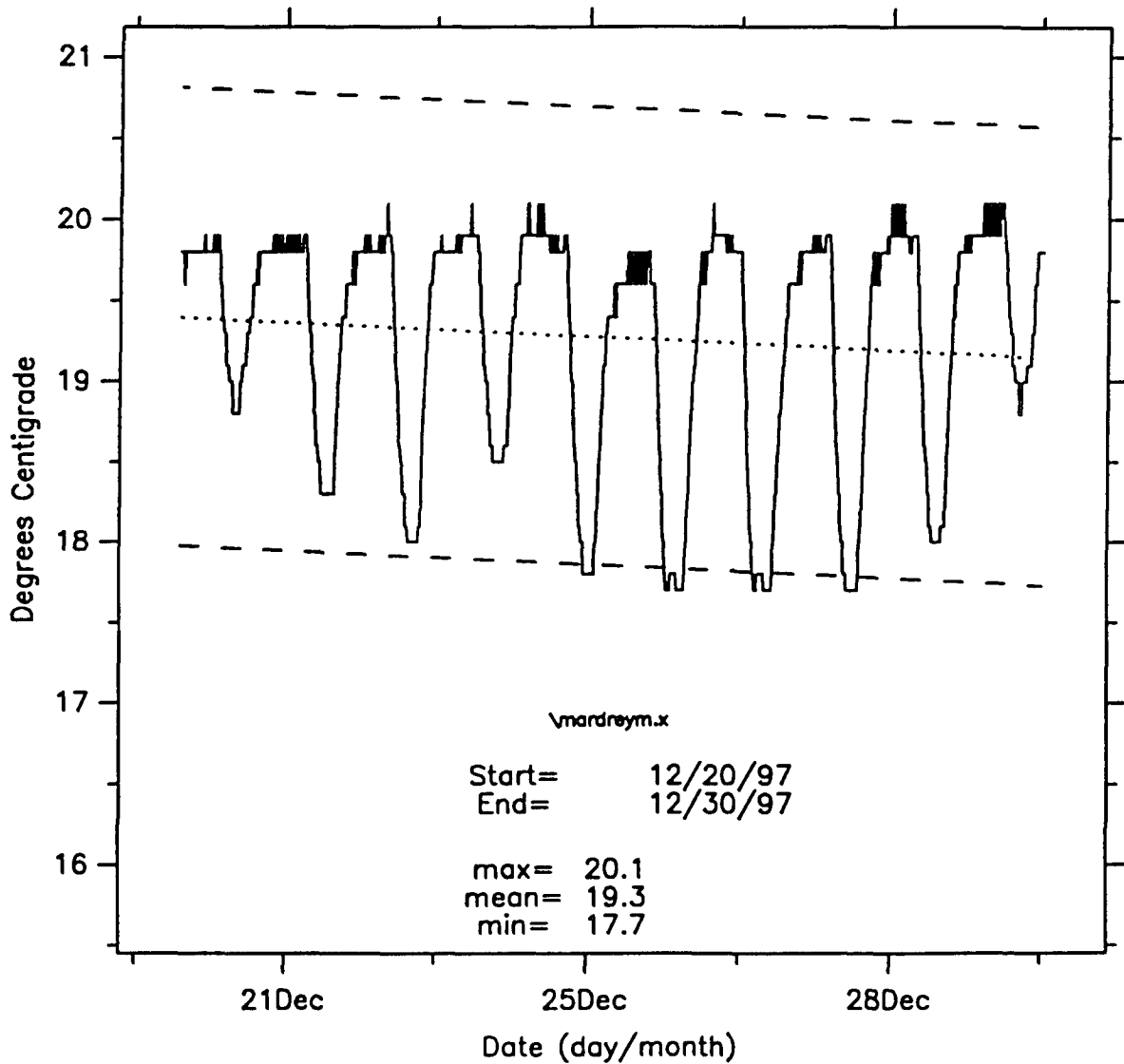
Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	1115	1	8.0	97	19.7	32.9	DK
0			2	8.1	91	19.6	33.0	
0			3	8.0	89	19.6	33.0	
0			4	8.1	87	19.3	32.9	
0			5	8.1	86	19.7	32.9	
1	12-21-97	1245	1	8.0	104	20.6	33.1	DB
2	12-22-97	1010	2	8.0	95	20.2	32.9	DB
3	12-23-97	0900	3	8.1	95	20.1	33.1	DB
4	12-24-97	0920	4	8.1	96	20.2	33.1	DB
5	12-25-97		5					
6	12-26-97	1145	1	8.0	97	20.3	31.5	MAI
7	12-27-97	1010	2	8.2	96	19.8	31.6313	MAI
8	12-28-97	0916	3	8.0	95	19.8	31.5	DB
9	12-29-97	0855	4	8.0	97	20.1	31.7	DB
10	12/30/97	1040	1	8.1	96	20.6	31.6	AM/DB
10			2	8.1	96	20.5	31.8	
10			3	8.1	97	20.3	31.9	
10			4	8.1	96	20.4	31.8	
10			5	8.1	97	20.6	32.0	

Survival DATA - END

Date	Rep	No. Animals Alive	Initials
12/30/97	1	18	DB
	2	18	DB
	3	17	DB
	4	20	DB
	5	19	DB

Notes: ① DK IE 12/20/97  
② KR WC 12/26/97

③ Wrong data sheet 12.27.97 MAI



Test Temperature Recorded At 5 Minute Intervals  
 (dotted line = predicted mean temperature, dashed line = 95% confidence bounds)

SULFIDE

Project ALOE Marina del Rey

Sample ID	Initial Sulfide (ppm) (1)	Final Sulfide (ppm) (2)	Date	Initials
Control 1 Rep 1	-0.008		12-19-97	MAI
Control 2 Rep 1	-0.032			
Area 3 Rep 1	0.030			
Area 4 Rep 1	-0.072			
Area 5 Rep 1	-0.104			
Area 6 Rep 1	0.016			
Area 9 Rep 1	0.012			
Ref Rep 1	0.052		12-19-97	MAI

(1) Samples not stored properly  
(2) Holding time expired; did not measure

FINAL OVERLYING  
Ammonia Analysis (ppm)  
Mysids/Neanthes

Marina Del Rey Project

<u>Sample ID</u>	<u>Rep</u>	<u>Meter Reading</u>	<u>Date</u> <sup>Initial</sup> <u>Sampled</u>	<u>Date</u> <u>Measured</u>	<u>Initials</u>
A5	1	1.93	12-30-97	1-7-98	LR
	2	1.97			
	3	1.77			
	4	2.06			
	5	2.07			
A6	1	1.97			
	2	1.65			
	3	2.23			
	4	1.83			
	5	1.82			
A9	1	1.94		1-6-98	DS
	2	2.02			
	3	1.70			
	4	1.79			
	5	1.74			



FINAL OVERLYING  
Ammonia Analysis (ppm)  
Mysids/Neanthes

Marina Del Rey Project

<u>Sample ID</u>	<u>Rep</u>	<u>Meter Reading</u>	<u>Date</u> <sup>Initial</sup> <u>Sampled</u>	<u>Date</u> <u>Measured</u>	<u>Initials</u>
Control	1	1.32	12-30-97	1-7-98	JL
	2	1.30			
	3	1.26			
	4	1.69			
	5	1.41			
REFERENCE	1	2.40			
	2	2.15			
	3	1.65			
	4	1.91			
	5	1.53			
A3	1	2.02			
	2	1.90			
	3	2.41			
	4	1.77			
	5	1.89			
A4	1	1.88			
	2	1.48			
	3	1.38			
	4	1.01			
	5	1.09			

① WD for 1/7/98



INITIAL OVERLYING  
Ammonia Analysis (ppm)  
Mysids/Neanthes

Marina Del Rey Project

Sample ID	Rep	Meter Reading	Date Sampled	Date Measured	Initials
Control 1	1	0.0370	12.20.97	12.23.97	MY
↓	2	0.0389	↓	↓	↓
↓	3	0.0404	↓	↓	↓
↓	4	0.0391	↓	↓	↓
↓	5	0.0375	↓	↓	↓
Reference	1	<del>0.0492</del> 0.0492	12.20.97	12.23.97	MY
↓	2	0.0512	↓	↓	↓
↓	3	0.0514	↓	↓	↓
↓	4	0.0515	↓	↓	↓
↓	5	0.0560	↓	↓	↓
Area 3	1	0.212	12.20.97	12.23.97	MY
↓	2	0.231	↓	↓	↓
↓	3	0.229	↓	↓	↓
↓	4	0.300	↓	↓	↓
↓	5	0.271	↓	↓	↓
Area 4	1	0.155	12.20.97	12.29.97	MY
↓	2	0.139	↓	↓	↓
↓	3	0.136	↓	↓	↓
↓	4	0.129	↓	↓	↓
↓	5	0.137	↓	↓	↓
Area 5	1	0.334	12.20.97	12.29.97	MY
↓	2	0.365	↓	↓	↓
↓	3	0.539	↓	↓	↓

① UN 12.25.97 MY

12/19/97

# Initial Ammonia Analysis (ppm)

Marina del Rey Project Mysids Neanthes

Overlying H<sub>2</sub>O

Sample ID	pH	Meter reading	Normalized Value	Initials
Control 1	8.0	2.0		my
Control 2	8.0	1.7		↓
Area 3	7.8	23.0		
Area 4	8.0	1.6		
Area 5	8.0	38.1		
Area 6	8.0	18.3		
Area 9	8.0	10.7		
Ref	8.0	4.35		

Area 5 #2

15.3

Samples were renewed 3 times 12/19/97

Test started 12/20/97





Test: 10-10 Day Acute Solid Phase

Test ID: 191

Species: MY-Mysidopsis bahia

Protocol: EPAA 91-EPA Acute

Sample ID: REF-Ref Toxicant

Sample Type: CUCL-Copper chloride

Start Date: 20 Dec-97

End Date: 24 Dec-97

Lab ID: CAMEC-MEC Carlsbad

Pos	ID	Rep	Group	Start	24 Hr	48 Hr	72 Hr	96 Hr	Notes
	1	1	control	5				4	
	2	2	control	5				5	
	3	1	62.500	5				4	
	4	2	62.500	5				5	
	5	1	125.000	5				4	
	6	2	125.000	5				4	
	7	1	250.000	5				1	
	8	2	250.000	5				1	
	9	1	500.000	5				0	
	10	2	500.000	5				0	
	11	1	1000.000	5				0	
	12	2	1000.000	5				0	

Comments: AI 2626 for ACOE Marina del Rey

10 Day Acute Solid Phase-96 Hr Survival

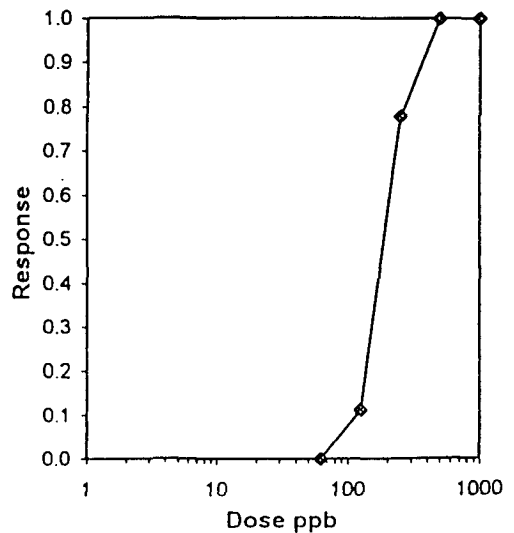
Start Date: 20 Dec-97 12:45 Test ID: 191 Sample ID: ~~REPERF~~ REPERF  
 End Date: 24 Dec-97 14:15 Lab ID: CAMEC-MEC Carlsbad Sample Type: CUCL-Copper chloride  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: MY-Mysidopsis bahia  
 Comments: AI 2626 for ACOE Marina del Rey

Conc-ppb	1	2
control	0.8000	1.0000
62.5	0.8000	1.0000
125	0.8000	0.8000
250	0.2000	0.2000
500	0.0000	0.0000
1000	0.0000	0.0000

Conc-ppb	Transform: Arcsin Square Root							t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
	Mean	N-Mean	Mean	Min	Max	CV%	N					
control	0.9000	1.0000	1.2262	1.1071	1.3453	13.732	2				1	10
62.5	0.9000	1.0000	1.2262	1.1071	1.3453	13.732	2	0.000	2.830	0.2751	1	10
125	0.8000	0.8889	1.1071	1.1071	1.1071	0.000	2	1.225	2.830	0.2751	2	10
*250	0.2000	0.2222	0.4636	0.4636	0.4636	0.000	2	7.844	2.830	0.2751	8	10
*500	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	2	10.293	2.830	0.2751	10	10
*1000	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	2	10.293	2.830	0.2751	10	10

Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Normality of the data set cannot be confirmed										
Equality of variance cannot be confirmed										
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	125	250	176.777		0.22321	0.48527	0.00945	51.3443	7.6E-05	5, 6

Trimmed Spearman-Kärber			
Trim Level	EC50	95% CL	
0.0%	190.93	151.93	239.94
5.0%	191.74	150.74	243.89
10.0%	190.88	151.82	240.00
20.0%	187.45	153.06	229.57
Auto-0.0%	190.93	151.93	239.94





Marina del Rey Data Analyses - MEC Job #0719-009  
 Summary of One-Tailed T-Test Results

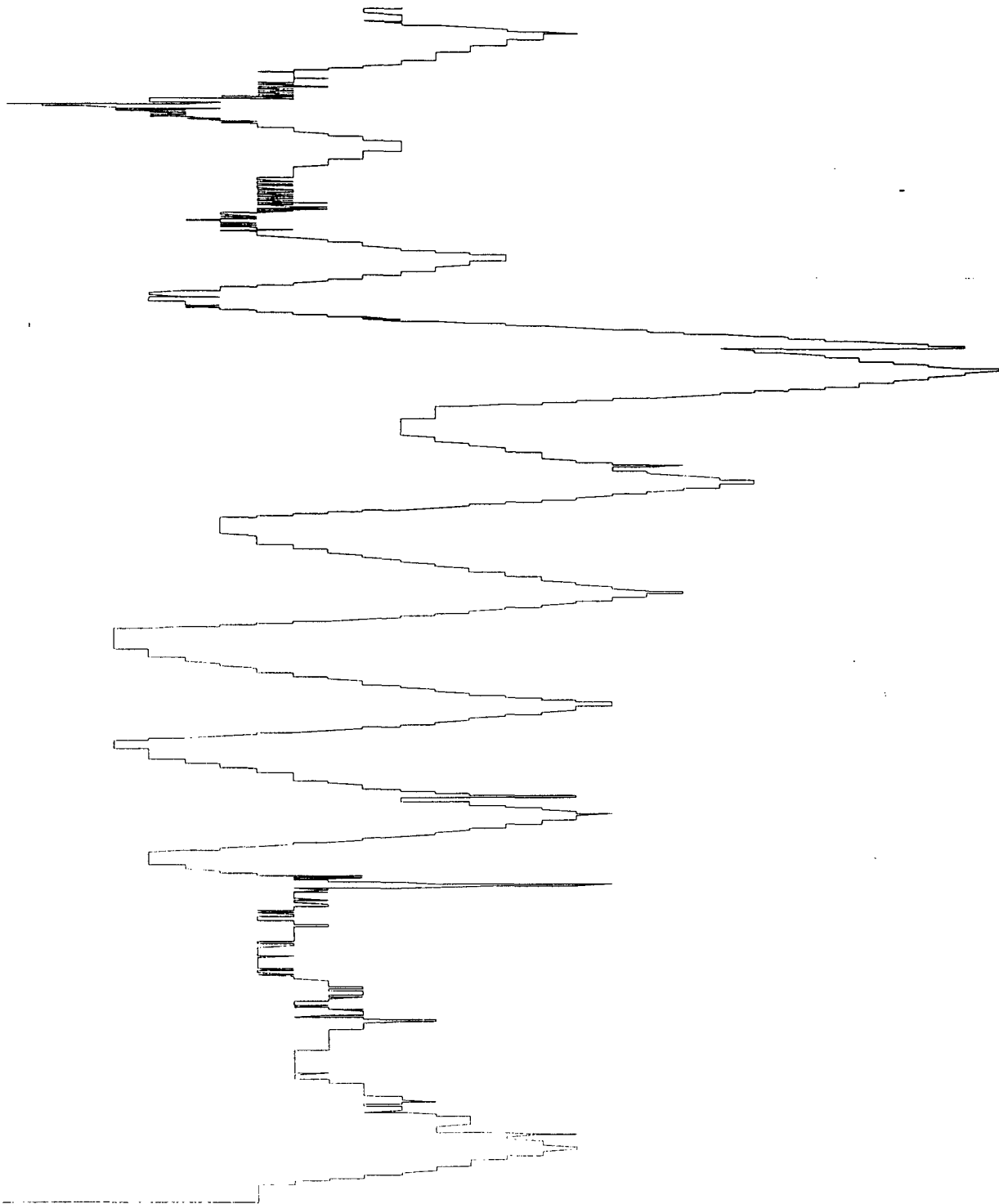
ORGANISM	MEASURE	TRANS	SITE	Test Variable	VARIANCE	Prob 1-tail	Sig Result
mysid	Survival	Arcsine	Area4	RESULT	Equal	0.31520	
mysid	Survival	Arcsine	Area5	RESULT	Unequal	0.73555	
mysid	Survival	Arcsine	Area9	RESULT	Equal	0.32610	
mysid	Survival	Arcsine	Reference	RESULT	Equal	0.17630	
mysid	Survival	None	Area4	RESULT	Equal	0.29355	
mysid	Survival	None	Area5	RESULT	Equal	0.62545	
mysid	Survival	None	Area9	RESULT	Equal	0.34055	
mysid	Survival	None	Reference	RESULT	Equal	0.15445	

0719-009  
*A. abdita*  
 Randomization sheet

Number	Site	Rep	Number Survived	Percent Survival
11	Control	1	17	85.0
20		2	20	100.0
34		3	19	95.0
14		4	18	90.0
26		5	20	100.0
		AVG		94.0
12	Reference	1	10	50.0
2		2	17	85.0
15		3	16	80.0
10		4	15	75.0
31		5	15	75.0
		AVG		73.0
4	Area 3	1	9	45.0
22		2	3	15.0
30		3	2	10.0
16		4	5	25.0
8		5	5	25.0
		AVG		24.0
23	Area 4	1	8	40.0
17		2	4	20.0
7		3	6	30.0
35		4	8	40.0
21		5	10	50.0
		AVG		36.0
6	Area 5	1	0	0.0
27		2	0	0.0
18		3	0	0.0
29		4	0	0.0
32		5	0	0.0
		AVG		0.0
5	Area 6	1	11	55.0
19		2	13	65.0
9		3	9	45.0
13		4	14	70.0
33		5	7	35.0
		AVG		54.0
1	Area 9	1	15	75.0
25		2	8	40.0
3		3	10	50.0
24		4	11	55.0
28		5	6	30.0
		AVG		50.0

22.0  
21.5  
21.0  
20.5  
20.0  
19.5  
19.0  
18.5  
18.0  
17.5  
17.0

T e m p e r a t u r e C



12/31  
1997

01/02

01/04

01/06

01/08

01/10

01/12

0719-009 A. abdita

S/N 87564

General Test Log

Test Material Sediment  
 Study No. 0719-009  
 Species A. abdita  
 Study Director PK

Form No: 29  
 Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Drive, Bldg 36  
 Tiburon, CA 94920

METERS:

pH Beckman  
 DO YSI 57  
 Temp Orion 140  
 Sal Orion 140  
 NH3 Orion 720  
 Light Intensity Li Cor LI 185-B  
 Other: \_\_\_\_\_

Date/Initials

Test site sediment was added to test chambers (including porewater blanks) on 12-17-97. Overlying water was changed 3 times on 12-18-97 & once on 12-19-97 before porewater NH<sub>3</sub> was checked. After that time porewater ammonia was checked for Areas 3 & 5. NH<sub>3</sub> for Area 3 was ~23µM & for Area 5 was ~42µM. After another water change Area 5 porewater was still above 35 & area 9 porewater was ~28 µM <sup>18</sup> <sub>12-20-97</sub>. Water was changed once more for all test sites & another time for sites 3, 5, & 6 on 12-19-97. Water was changed for Area 5 twice - once before porewater NH<sub>3</sub> was checked & once after on 12-20-97 before test initiation. Control & Ref test chambers <sup>129661</sup> were set up on 12-18-97 & water was changed on 12-18-97.

TEST CONDITIONS

Photoperiod Continuous light  
 Temperature 20 ± 2 °C  
 Feeding None  
 Test Containers 950 mL Mason jars  
 Exposure Volume 4 cm  
 Salinity 30 ± 2 ‰  
 Dissolved Oxygen 6.0 mg/L

Error codes  
 A=Recorded in wrong location  
 B=Recording error (e.g. wrong date)  
 C=Questioned number, redid reading (e.g. meter recalibrated)  
 D=Questioned count, recounted  
 E=Calculation error  
 F=Other--please specify

Checked By: vk 12-31-97



**MORTALITY AND BEHAVIOR**  
x Definitive Range-finder

Test Material: Sediment  
 Study No: 0719-009  
 Protocol No.: ASTM  
 Study Director: PK

Lab Form: 25 (Rev. 9/89)  
 MEC Analytical Systems, Bioassay Div.  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

Test Species: A. abdita  
 No. / Vessel: 20  
 Acclimation Mort.: <5%

Lot ID No.: AA121797  
 Seawater: 30 ‰  
 Date Init.: 12/19/97 Date Term.: 12/29/97  
20 (b) KL 12-20-97

Site	Rep	#	ID: <u>M5B</u> Date: <u>12/21/97</u> Day: 1		ID: <u>M5B</u> Date: <u>12/22/97</u> Day: 2		ID: <u>M5B</u> Date: <u>12/23/97</u> Day: 3		ID: <u>M5B</u> Date: <u>12/24/97</u> Day: 4		ID: <u>M5B</u> Date: <u>12/25/97</u> Day: 5	
			# Dead	Sur.	# Dead	Sur.	# Dead	Sur.	# Dead	Sur.	# Dead	Sur.
Area 9	1	1	0	0	0	0	0	0	0	0	0	0
Reference	2	2	↓	0	↓	0	↓	0	↓	0	↓	0
Area 9	3	3	↓	2	↓	0	↓	0	↓	1	↓	0
Area 3	1	4	↓	0	↓	0	↓	0	↓	0	↓	0
Area 6	1	5	↓	0	↓	0	↓	0	↓	0	↓	0
Area 5	1	6	↓	5	↓	1	↓	0	↓	0	↓	0
Area 4	3	7	↓	0	↓	0	↓	0	↓	2	↓	0
Area 3	5	8	↓	1	↓	0	↓	1	↓	0	↓	0
Area 6	3	9	↓	0	↓	0	↓	0	↓	0	↓	0
Reference	4	10	↓	0	↓	0	↓	0	↓	2	↓	2
Control	1	11	↓	2	↓	0	↓	0	↓	0	↓	0
Reference	1	12	↓	0	↓	1	↓	0	↓	0	↓	0
Area 6	4	13	↓	2	↓	0	↓	2	↓	0	↓	0
Control	4	14	↓	1	↓	0	↓	0	↓	0	↓	1
Reference	3	15	↓	0	↓	0	↓	0	↓	0	↓	0
Area 3	4	16	↓	0	↓	0	↓	0	↓	0	↓	0
Area 4	2	17	↓	1	↓	0	↓	0	↓	0	↓	0
Area 5	3	18	↓	1	↓	0	↓	4	↓	2	↓	0
Area 6	2	19	↓	0	↓	0	↓	0	↓	0	↓	0
Control	2	20	↓	0	↓	0	↓	0	↓	0	↓	0
Area 4	5	21	↓	2	↓	0	↓	0	↓	0	↓	1
Area 3	2	22	↓	0	↓	0	↓	0	↓	0	↓	0
Area 4	1	23	↓	0	↓	0	↓	0	↓	0	↓	0
Area 9	4	24	↓	2	↓	0	↓	0	↓	0	↓	0
Area 9	2	25	↓	0	↓	0	↓	0	↓	0	↓	0
Control	5	26	↓	0	↓	0	↓	0	↓	0	↓	0
Area 5	2	27	↓	0	↓	0	↓	2	↓	1	↓	0
Area 9	5	28	↓	0	↓	0	↓	0	↓	0	↓	2
Area 5	4	29	↓	2	↓	0	↓	1	↓	0	↓	0
Area 3	3	30	↓	2	↓	0	↓	0	↓	1	↓	0
Reference	5	31	↓	0	↓	0	↓	0	↓	0	↓	0
Area 5	5	32	↓	0	↓	0	↓	0	↓	0	↓	0
Area 6	5	33	↓	4	↓	0	↓	0	↓	0	↓	0
Control	3	34	↓	0	↓	0	↓	0	↓	0	↓	0
Area 4	4	35	0	0	0	0	0	0	0	0	0	0

CHECKED BY: KL 12-31-97

129659

Form No. 16b  
 Porewater Quality  
 Study Number 0719-009  
 Date: 12/30/97  
 Day: 10

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Sulfide	Sal	NH3
Control			7.62	4.6	20.10	31	2.15
Reference			7.54	5.1	20.10	31	1.34
Area 3			7.72	5.4	0.118	32	4.76
Area 4			7.86	5.2	0.139	32	3.89
Area 5			7.97	4.7	0.127	32	13.9
Area 6			7.71	5.0	20.10	32	5.16
Area 9			7.68	4.6	0.155	32	3.29

Comments:

Initials WMB

Study Number \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Day: \_\_\_\_\_

Sample	Rep	Number	pH	D.O.	Sulfide	Sal	NH3

Comments:

Initials \_\_\_\_\_ Checked ka 12-31-97

129658

Porewater Quality

Study Number 0719-009

Date: 12-20-97

Day: 0

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Sulfide	Sal	NH3
Control			7.47	4.1	40.10	29.7	3.03
Reference			7.57	5.4	40.10	29.7	2.70
Area 3			7.09	2.5	0.757	30.4	4.89
Area 4			7.42	2.5	1.17	30.8	8.42
Area 5			7.77	4.8	40.10	29.1	18.6
Area 6			8.32	3.9	1.31	30.6	9.04
Area 9			7.66	2.8	2.30	29.8	6.74

Comments:

Initials W

Study Number 0719-009

Date: 12/25/97

Day: 5

Sample	Rep	Number	pH	D.O.	Sulfide	Sal	NH3
Control			7.59	5.0	40.10	30	4.00
Reference			7.67	4.6	40.10	29	1.16
Area 3			7.52	3.5	0.135	30	3.81
Area 4			7.49	4.2	0.165	31	2.76
Area 5			7.65	4.0	0.127	31	11.7
Area 6			7.61	3.7	0.635	31	5.01
Area 9			7.46	3.5	0.817	31	2.53

Comments:

Initials MSB

Checked W 12-21-97

129657



Form No. 16b  
 10/20 Day Water Quality  
 Study Number 0719-009  
 Date: 12/30/97  
 Day: 10

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 9	1	1	8.06	7.1	19.7	31	0.76
Area 3	1	4	8.21	7.0	19.9	31	0.59
Area 6	1	5	8.11	7.4	20.0	31	0.41
Area 5	1	6	8.16	7.0	20.1	31	1.73
Control	1	11	8.03	6.7	19.9	31	0.26
Reference	1	12	8.27	6.9	19.8	30	0.19
Area 4	1	23	8.19	6.6	19.9	31	0.67

Comments:

Initials MSB

Study Number \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Day: \_\_\_\_\_

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3

Comments:

Initials \_\_\_\_\_ Checked KL 12-31-97 129656

Form No. 16b  
 10/20 Day Water Quality  
 Study Number 0719-009  
 Date: 12/28/97  
 Day: 8

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Reference	4	10	8.11	6.8	18.6	30	0.16
Area 6	4	13	8.21	6.7	18.7	31	0.46
Control	4	14	8.13	6.5	18.6	31	0.12
Area 3	4	16	8.09	7.0	18.5	31	0.51
Area 9	4	24	8.15	6.6	18.6	31	0.39
Area 5	4	29	8.19	6.4	18.6	31	1.64
Area 4	4	35	8.10	6.8	18.6	31	0.75

Comments:

Initials MSB

Study Number 0719-009  
 Date: 12/29/97  
 Day: 9

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 3	5	8	8.13	6.7	20.8	31	0.65
Area 4	5	21	8.19	6.5	20.9	32	0.76
Control	5	26	8.26	6.9	20.9	31	0.10
Area 9	5	28	8.11	7.0	20.8	31	0.56
Reference	5	31	8.14	6.8	20.7	31	0.23
Area 5	5	32	8.26	6.6	20.9	31	1.37
Area 6	5	33	8.31	6.7	20.8	31	0.51

Comments:

Initials MSB

Checked 16 12-31-97

129655

Form No. 16b  
 10/20 Day Water Quality  
 Study Number 0719-009  
 Date: 12/26/97  
 Day: 6

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Reference	2	2	8.49	6.9	20.0	31	0.10
Area 4	2	17	8.56	7.0	20.3	31	0.61
Area 6	2	19	8.56	7.1	19.2	32	0.96
Control	2	20	8.44	7.0	19.4	30	0.14
Area 3	2	22	8.63	7.1	19.7	32	0.53
Area 9	2	25	8.55	7.3	19.6	31	1.12
Area 5	2	27	8.43	7.0	19.6	31	1.67

Comments:

Initials AMM, msB

Study Number 0719-009  
 Date: 12/27/97  
 Day: 7

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 9	3	3	8.10	7.3	19.5	31	0.75
Area 4	3	7	8.07	7.2	19.6	31	0.34
Area 6	3	9	8.15	7.2	19.4	31	0.52
Reference	3	15	8.15	7.4	19.5	31	0.10
Area 5	3	18	8.04	7.2	19.7	31	0.92
Area 3	3	30	8.23	7.2	19.7	32	0.66
Control	3	34	8.06	7.4	19.6	30	0.13

Comments:

Initials AMM, msB

Checked 12-31-97

129654

Form No. 16b  
 10/20 Day Water Quality  
 Study Number 0719-009  
 Date: 12/23/97  
 Day: 4 24

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 3	5	8	7.84	7.2	20.1	31	1.96
Area 4	5	21	7.89	7.1	20.1	31	1.75
Control	5	26	7.93	7.3	20.0	29	0.13
Area 9	5	28	7.99	7.2	19.9	31	1.86
Reference	5	31	8.02	7.0	19.9	30	0.21
Area 5	5	32	7.98	6.8	19.9	31	2.13
Area 6	5	33	8.00	6.9	19.9	31	0.76

Comments:

Initials MSB

Study Number 0719-009  
 Date: 12/25/97  
 Day: 5

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 9	1	1	8.03	7.0	19.4	31	0.83
Area 3	1	4	8.11	6.8	19.4	31	1.16
Area 6	1	5	7.87	6.7	19.3	31	1.09
Area 5	1	6	7.95	7.2	19.6	32	1.74
Control	1	11	7.87	7.0	19.5	31	0.26
Reference	1	12	8.15	6.7	19.4	31	0.45
Area 4	1	23	8.06	7.5	19.4	31	1.35

Comments:

Initials MSB

Checked KL 12-31-97

129653

Form No. 16b  
10/20 Day Water Quality  
Study Number 0719-009  
Date: 12/22/97  
Day: 2

Bioassay Division  
MEC Analytical Systems  
3150 Paradise Dr. Bldg 36  
Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 9	3	3	8.26	7.7	19.4	31	0.79
Area 4	3	7	8.31	7.8	19.4	30	0.85
Area 6	3	9	8.19	7.7	19.3	31	1.39
Reference	3	15	8.21	7.6	19.2	30	1.36
Area 5	3	18	8.34	7.6	19.3	30	2.02
Area 3	3	30	8.26	7.5	19.3	31	2.49
Control	3	34	8.29	7.7	19.4	30	0.25

Comments:

Initials MSB

Study Number 0719-009  
Date: 12/23/97  
Day: 3

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Reference	4	10	8.19	7.5	19.5	30	1.12
Area 6	4	13	8.32	7.2	19.5	31	1.68
Control	4	14	8.17	7.2	19.6	30	0.17
Area 3	4	16	8.25	7.5	19.5	31	2.17
Area 9	4	24	8.29	7.6	19.6	31	1.23
Area 5	4	29	8.21	7.5	19.6	31	1.96
Area 4	4	35	8.17	7.1	19.6	31	0.75

Comments:

Initials MSB

Checked 12-31-97

129652

Form No. 16b  
 10/20 Day Water Quality  
 Study Number 0719-009  
 Date: 12-20-97  
 Day: 0

Bioassay Division  
 MEC Analytical Systems  
 3150 Paradise Dr. Bldg 36  
 Tiburon, CA 94920

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Area 9	1	1	7.63	6.9	20.3	30	0.36
Area 3	1	4	7.60	7.0	20.1	31	0.58
Area 6	1	5	7.61	7.1	20.0	31	0.35
Area 5	1	6	7.63	7.3	20.1	31	0.86
Control	1	11	7.64	7.1	20.3	30	0.30
Reference	1	12	7.70	7.1	20.4	30	0.35
Area 4	1	23	7.65	7.0	20.1	30	0.42

Comments:

Initials ke

Study Number 0719-009  
 Date: 12/21/97  
 Day: 1

Sample	Rep	Number	pH	D.O.	Temp.	Sal	NH3
Reference	2	2	8.13	7.3	19.5	30	0.74
Area 4	2	17	7.98	7.2	19.7	31	0.84
Area 6	2	19	7.91	7.3	19.6	31	0.96
Control	2	20	8.06	7.5	19.6	30	0.34
Area 3	2	22	8.10	7.4	19.7	31	0.82
Area 9	2	25	7.82	7.4	19.7	31	0.94
Area 5	2	27	8.01	7.2	19.7	31	2.32

Comments:

Initials MSB

Checked

ke 12-21-97  
 (b)  
ke 12-21-97

129651

# ORGANISM INFORMATION SHEET

**Species:** A. abdita  
**Supplier:** Brezina & Assoc.  
**Date Acquired:** 12/17/97  
**Arrival Via:** MEC

Lab Form 30  
 MEC Analytical Systems, Inc.  
 Bioassay Division  
 3150 Paradise Dr., Bldg. 36  
 Tiburon, CA 94920

**Organism Data:**

Quantity 900+  
 Age Immature  
 Species Code AA121797

**Arrival Conditions:**

Temperature 12.9  
 Salinity 28.8  
 DO Saturated  
 pH 7.93

**Acclimation/Holding Conditions:** Held in sediment & seawater @ ~20°C

Date/ID	Temp	DO	Sal/Cond	pH	# Dead	Comments
12-18-97k	19.1	7.4	29.8	7.74		
12-19-97k	19.6	7.6	30.2	8.15		
12-20-97k	19.8	7.1	30.2	7.69		

*w/ aeration & continuous light*

Checked by: kk 12-31-97

0719-009  
*A. abdita*  
Randomization sheet

0.0244	11	Control	1
0.0564	20		2
0.0793	34		3
0.0910	14		4
0.1017	26		5
0.1453	12	Reference	1
0.1624	2		2
0.1812	15		3
0.1887	10		4
0.2235	31		5
0.2308	4	Area 3	1
0.2838	22		2
0.3200	30		3
0.3360	16		4
0.3421	8		5
0.3764	23	Area 4	1
0.4250	17		2
0.4294	7		3
0.4494	35		4
0.4943	21		5
0.4974	6	Area 5	1
0.5057	27		2
0.5094	18		3
0.5206	29		4
0.5911	32		5
0.6542	5	Area 6	1
0.6683	19		2
0.6977	9		3
0.7361	13		4
0.8029	33		5
0.8441	1	Area 9	1
0.8525	25		2
0.8772	3		3
0.9023	24		4
0.9867	28		5

129649



General Test Log

Test Material Cadmium chloride  
Study No. 0719-009  
Species A. abdita  
Study Director PK

Form No: 29  
Bioassay Division  
MEC Analytical Systems  
3150 Paradise Drive, Bldg 36  
Tiburon, CA 94920

METERS:

Date/Initials

pH Beckman  
DO YSI 57  
Temp Orion 140  
Sal Orion 140  
NH3 Orion 720  
Light Intensity Li Cor LI 185-B  
Other: \_\_\_\_\_

TEST CONDITIONS

Photoperiod Continuous dark  
Temperature 20 ± 2 °C  
Feeding No Feeding  
Test Containers 250 mL beakers  
Exposure Volume 200 mLs  
Salinity 30 ± 2 ‰  
Dissolved Oxygen 6.0 mg/L

*12-31-97*  
*200 ml plastic cups*

**Error codes**  
A=Recorded in wrong location  
B=Recording error (e.g. wrong date)  
C=Questioned number, redid reading  
(e.g. meter recalibrated)  
D=Questioned count, recounted  
E=Calculation error  
F=Other--please specify

Checked By: 1cc 12-31-97

**TEST CONCENTRATION PREPARATION**  
(Dilutions)

Study Number 0719-009  
Study Director PK

Lab Form 59 (rev. 9/89)  
MEC Analytical Systems  
3150 Paradise Dr., Bldg 36  
Tiburon, CA 94920

Species: A. abdita  
Prepared by: ke

Test Material: Cadmium chloride-- 1000 mg/L  
No. of Replicates: 3

Concentration mg Cd/L	Diluent 1 30 ‰ Seawater	mLs		Salt	100% Test Material	% Test Material
		Diluent 2				
1) Control	600					
2)						
3) 0.25	600				0.2	
4) 0.5	600				0.3	
5) 1	599				0.6	
6) 2	599				1.2	
7) 4	598				2.4	
8)						
9)						
10)						

DAY 0  
Date/ID 12-20-97

Species: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

Test Material: \_\_\_\_\_  
No. of Replicates: \_\_\_\_\_

Concentration	Diluent 1	mLs		Salt	100% Test Material	% Test Material
		Diluent 2				
1)						
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						

DAY \_\_\_\_\_  
Date/ID \_\_\_\_\_

Checked By: \_\_\_\_\_

129664

X Definitive

MORTALITY AND BEHAVIOR  
Range-finder

Test Material: Cadmium chloride  
Study No: 0719-009  
Protocol No.: ASTM  
Study Director: PK

Lab Form: 25 (Rev. 9/89)  
MEC Analytical Systems, Bioassay Div.  
3150 Paradise Dr., Bldg. 36  
Tiburon, CA 94920

Test Species: A. abdita  
No. / Vessel: 10  
Acclimation Mort.: <5%

Lot ID No.: AA121797  
Seawater: 30‰  
Date Initiated: 12/19/97  
Date Terminated: 12/23/97  
24  
Ke 12-20-97

Conc. (mgCd/L)	Rep	ID: MSB Date: 12/21/97 Day: 1		ID: MSB Date: 12/22/97 Day: 2		ID: MSB Date: 12/23/97 Day: 3		ID: MSB Date: 12/24/97 Day: 4	
		# Alive	Obs.	# Alive	Obs.	# Alive	Obs.	# Alive	Obs.
Control	1	10	N	10	N	10	N	10	N
	2	10		10		10		10	
	3	10		10		10		10	
0.25	1	10		10		10		10	
	2	10		10		10		10	
	3	10		10		10		10	
0.5	1	10		10		10		9-1	
	2	10		10		10		10	
	3	10		10		10		10	
1	1	10		10		10		8-2	
	2	10		9-1		9		7-2	
	3	10	N	9-1	N	9		8-1	N
2	1	10	Q	10	Q	10		8-2	Q
	2	5-3		5		4-1	N	4	
	3	10		9-1		8-1	N	6-2	
4	1	9-1		9		8-1	Q	3-5	
	2	10		7-3		7		3-4	
	3	9-1	Q	7-2	Q	5-2		2-3	
FEEDING:									
A.M.									
P.M.									

N=Normal      LOE = Loss of Equilibrium      Q = Quiescent  
SUR = Surfacing      DC = Discoloration      OB = On Bottom      J = Jumper      NB = No Body

CHECKED BY: Ke 12-31-97

129663



Acute Fish Test-96 Hr Survival

Start Date: 12/20/97 Test ID: 719-9.03 Sample ID: REF-Ref Toxicant  
 End Date: 12/24/97 Lab ID: CAMEC-MEC Analytical Sys Sample Type: CDCL-Cadmium chloride  
 Sample Date: Protocol: EPAA 91-EPA Acute Test Species: AM  
 Comments:

12-21-97  
5455

Conc-mg/L	1	2	3
D-Control	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000
0.5	0.9000	1.0000	1.0000
1	0.8000	0.7000	0.8000
2	0.8000	0.4000	0.6000
4	0.3000	0.3000	0.2000

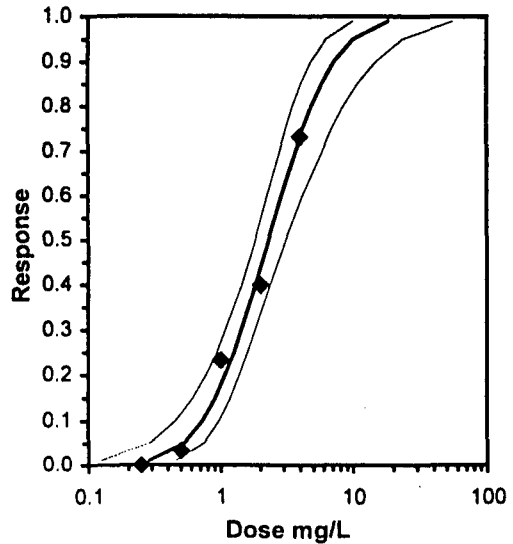
Conc-mg/L	Transform: Arcsin Square Root							t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
	Mean	N-Mean	Mean	Min	Max	CV%	N					
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	3				0	30
0.25	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	3	0.000	2.500	0.2083	0	30
0.5	0.9667	0.9667	1.3577	1.2490	1.4120	6.930	3	0.652	2.500	0.2083	1	30
*1	0.7667	0.7667	1.0685	0.9912	1.1071	6.268	3	4.123	2.500	0.2083	7	30
*2	0.6000	0.6000	0.8926	0.6847	1.1071	23.670	3	6.234	2.500	0.2083	12	30
*4	0.2667	0.2667	0.5410	0.4636	0.5796	12.379	3	10.455	2.500	0.2083	22	30

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.88003	0.858	-0.0815	2.94244
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	0.5	1	0.70711		0.10379	0.10645	0.36986	0.01041	8.7E-07	5, 12

Parameter	Value	SE	95% Fiducial Limits		Maximum Likelihood-Probit						
			Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter		
Slope	2.57897	0.41061	1.77418	3.38375	0	1.13913	7.81472	0.77	0.36107	0.38775	3
Intercept	4.06882	0.16164	3.752	4.38564							

Point	Probits	mg/L	95% Fiducial Limits	
EC01	2.674	0.28775	0.12325	0.45896
EC05	3.355	0.52877	0.29211	0.74566
EC10	3.718	0.73138	0.45839	0.97497
EC15	3.964	0.91031	0.61659	1.17714
EC20	4.158	1.08324	0.77495	1.37699
EC25	4.326	1.25757	0.93615	1.58655
EC40	4.747	1.8316	1.44594	2.36309
EC50	5.000	2.2965	1.81928	3.10027
EC60	5.253	2.8794	2.24567	4.14593
EC75	5.674	4.19373	3.10545	6.89725
EC80	5.842	4.86863	3.51315	8.48589
EC85	6.036	5.79356	4.04704	10.8301
EC90	6.282	7.21092	4.82333	14.7578
EC95	6.645	9.97382	6.23452	23.4263
EC99	7.326	18.3279	10.0257	56.0938



lab mean LC50 = 1.3 ± 0.9  
 NOEC = 0.6 ± 0.4

ORGANISM	MEASURE	TRANS	SITE	Test Variable	VARIANCE	Prob 1-tail	Sig Result
amphipod	Survival	Arcsine	Area3	RESULT	Equal	.00000	**
amphipod	Survival	Arcsine	Area4	RESULT	Equal	.00005	**
amphipod	Survival	Arcsine	Area6	RESULT	Equal	.00035	**
amphipod	Survival	Arcsine	Area9	RESULT	Equal	.00040	**
amphipod	Survival	Arcsine	Reference	RESULT	Equal	.00520	**
amphipod	Survival	None	Area3	RESULT	Equal	.00000	**
amphipod	Survival	None	Area4	RESULT	Equal	.00000	**
amphipod	Survival	None	Area6	RESULT	Equal	.00025	**
amphipod	Survival	None	Area9	RESULT	Equal	.00030	**
amphipod	Survival	None	Reference	RESULT	Equal	.00700	**

Test: MS-Mysid Survival, Growth and Fecundity Test Test ID: 193																
Species: MY-Mysidopsis bahia Protocol: EPAM 87-EPA Marine																
Sample ID: REF-Ref Toxicant Sample Type: CUSO-Copper sulfate																
Start Date: 09 Jan-98 End Date: 13 Jan-98 Lab ID: CAMEC-MEC Carlsbad																
Pos ID	Rep	Group	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Female Count	Females w/ Eggs	Notes
1	1	control	10				10									
2	2	control	10				10									
3	1	62.500	10				8									
4	2	62.500	10				10									
5	1	125.000	10				9									
6	2	125.000	10				9									
7	1	250.000	10				6									
8	2	250.000	10				10									
9	1	500.000	10				1									
10	2	500.000	10				4									
11	1	1000.000	10				0									
12	2	1000.000	10				0									

Comments: ABS 7483 for Marina del Rey

Ammonia Analysis  
Mysids Run II

Marina Del Rey Project

Initial Overlaying

Sample ID	Rep	Meter Reading (ppm)	Date Sampled/ Initials	Date Measured	Initials
① & Control Reference	1	0.0772	1/9/98/KR	1/14/98	Jc
	2	0.0759			
	3	0.0744			
	4	0.0732			
	5	0.0667			
① & Reference Control	1	0.0794			
	2	0.0781			
	3	0.0791			
	4	0.0781			
	5	0.0780			
Site 3	1	0.131			
	2	0.137			
	3	0.135			
	4	0.131			
	5	0.132			
Site 6	1	0.102		1/14/98	Jc
	2	0.0968			
	3	0.0956			
	4	0.0934			
	5	0.0896			

① IE Jc 1/14/98



Ammonia Analysis  
Mysids Run II

Marina Del Rey Project  
Final Overlaying

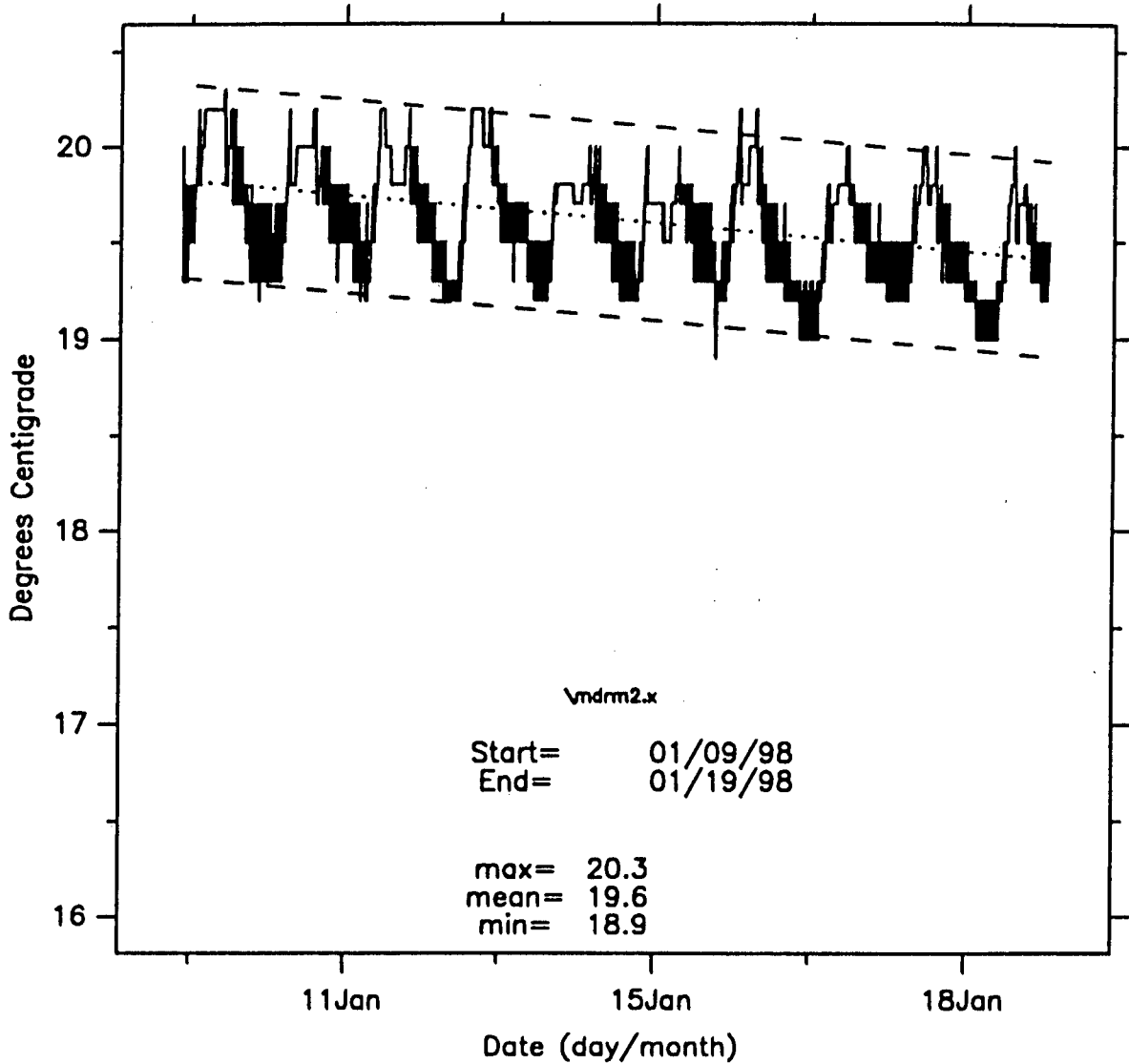
<u>Sample ID</u>	<u>Rep</u>	<u>Meter Reading</u> (ppm)	<u>Date Sampled</u> <small>Initials</small>	<u>Date Measured</u>	<u>Initials</u>
Reference	1	0.1056	1/19/98 / KR	1/21/98	OEW
	2	0.1028			
	3	0.579			
	4	0.572			
	5	0.497			
Control	1	0.561			
	2	0.570			
	3	0.530			
	4	0.489			
	5	0.534			
Site 3	1	0.646			
	2	0.563			
	3	0.753			
	4	0.623			
	5	0.735			
Site 6	1	1.00			
	2	0.930			
	3	0.941			
	4	0.800			
	5	0.915	↓	↓	↓



Project Alarma del Rey Mysids II SULFIDE

Sample ID	Initial Sulfide (ppm)	Final Sulfide (ppm)	Date		Initials	
			Initial	Final	Initial	Final
Control	0.034	0.008 *	1.9.98	1/19/98	MAI	Je
Reference	0.106	0.008	↓	↓	↓	↓
A3	0.121	0.000	↓	↓	↓	↓
A6	0.114	0.004 ↓	↓	↓	↓	↓

\* Rep 1 used for final sulfide Je 1/19/98



Test Temperature Recorded At 5 Minute Intervals  
 (dotted line = predicted mean temperature, dashed line = 95% confidence bounds)

Mysidopsis bahia 10 Day Test Data Sheet

Sample ID		Start Date/Time	End Date/Time	Species/Common Name	Study Director			
Control		1-9-98	1-19-98	Mysidopsis bahia	PK			
Seawater Batch No.			Organism Batch:	Bath/Room ID	No. Organisms/Chamber			
S10 123197			ABS 7483	3	20			
WATER QUALITY								
Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	1-9-98	1505	1	8.1	82	20.8	32.6	KR
0	/	/	2	8.1	81	20.6	32.6	/
0			3	8.1	81	20.7	32.7	
0			4	8.0	82	20.6	32.7	
0			5	8.0	81	20.7	32.6	
1			1-10-98	1025	1	7.9	92	
2	1-11-98	0915	2	7.9	92	20.3	32.8	DB
3	1-12-98	1236	3	7.9	94	20.4	32.7	KR
4	1-13-98	0935	4	8.0	95	20.4	32.6	BS
5	1-14-98	1050	5	7.9	93	20.4	32.8	DB
6	1-15-98	940	1	7.9	91	20.3	32.8	KR
7	1-16-98	1135	2	7.9	92	20.1	32.9	KR
8	1-17-98	1000	3	7.7	88	20.2	32.9	MAI
9	1-18-98	1110	4	7.9	97	20.2	32.6	DB
10	1-19-98	915	1	7.9	90	20.2	32.7	KR
10	/	/	2	7.9	90	20.1	32.7	/
10			3	7.9	93	20.1	32.7	
10			4	8.0	95	20.1	32.7	
10			5	8.0	97	20.0	32.7	
10								

Notes:

Mysidopsis bahia 10 Day Test Data Sheet

Sample ID	Start Date/Time	End Date/Time	Species/Common Name	Study Director				
Reference	1-9-98 15	1-19-98 1100	Mysidopsis bahia	PK				
Seawater Batch No.	Organism Batch:		Bath Room ID	No. Organisms/Chamber				
SIO 123197	ABS 7483		3	20				
WATER QUALITY								
Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	1-9-98	1505	1	8.1	82	20.7	32.7	KR
0			2	8.1	81	20.6	32.7	
0			3	8.1	81	20.7	32.7	
0			4	8.1	81	20.6	32.7	
0			5	8.1	81	20.6	32.7	
1	1-10-98	1025	1	8.0	93	20.2	32.7	MAI
2	1-11-98	0915	2	8.1	96	20.3	32.7	DS
3	1-12-98	1230	3	8.0	95	20.6	32.7	KR
4	1-13-98	0935	4	8.0	96	20.6	32.6	RS
5	1-14-98	1050	5	8.0	96	20.7	32.8	DS
6	1-15-98	940	1	8.0	94	20.1	32.9	KR
7	1-16-98	1135	2	7.9 8.0	99	19.9	32.9	KR
8	1-17-98	1000	3	7.9	96	20.4	33.0	MAI
9	1-18-98	1110	4	7.9	96	20.5	32.6	DS
10	1-19-98	920	1	8.0	96	20.1	32.7	KR
10			2	8.0	97	20.0	32.7	
10			3	8.1	98	20.3	32.8	
10			4	8.1	98	20.3	32.7	
10			5	8.1	97	20.2	32.7	

Notes: OKR MR 1/16/98

Mysidopsis bahia 10 Day Test Data Sheet

Sample ID <b>A3</b>		Start <b>1-9-98</b> Date/Time <b>1715</b>	End <b>1-19-98</b> Date/Time <b>1107</b>	Species/Common Name <b>Mysidopsis bahia</b>		Study Director <b>PK</b>		
Seawater Batch No. <b>S1023197</b>			Organism Batch: <b>ABS 7483</b>	Bath/Room ID <b>3</b>	No. Organisms/Chamber <b>20</b>			
WATER QUALITY								
Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	1-9-98	1510	1	8.1	80	20.6	32.6	KR
0	/	/	2	8.1	80	20.7	32.6	/
0			3	8.1	81	20.7	32.6	
0			4	8.1	80	20.8	32.6	
0			5	8.1	80	20.6	32.7	
1			1-10-98	1030	1	7.8	89	
2	1-11-98	0915	2	8.1	95	20.4	32.8	DS
3	1-12-98	1235	3	7.8	91	20.5	32.8	KR
4	1-13-98	0935	4	8.1	94	20.6	32.7	DS
5	1-14-98	1050	5	8.1	93	20.5	32.8	DS
6	1-15-98	945	1	8.3	93	20.4	32.9	KR
7	1-16-98	1130	2	8.3	95	20.5	32.8	KR
8	1-17-98	1000	3	8.4	85	20.3	32.9	MAI
9	1-18-98	1110	4	8.5	93	20.3	32.7	DS
10	1-19-98	920	1	8.6	90	20.1	32.8	KR
10	/	/	2	8.6	93	20.2	32.8	/
10			3	8.5	90	20.2	32.6	
10			4	8.6	92	20.2	32.7	
10			5	8.5	94	20.1	32.7	
10								

Notes:

Mysidopsis bahia 10 Day Test Data Sheet

Sample ID		Start Date/Time	End Date/Time	Species/Common Name	Study Director			
A6		1-9-98 1115	1-19-98 1030	Mysidopsis bahia	PK			
Seawater Batch No.			Organism Batch:	Bath/Room ID	No. Organisms/Chamber			
S10123197			ABS 7483	3	20			
WATER QUALITY								
Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	1-9-98	1510	1	8.2	81	20.7	32.6	KR
0			2	8.2	80	20.6	32.6	
0			3	8.2	81	20.6	32.6	
0			4	8.2	80	20.6	32.6	
0	↓	↓	5	8.2	80	20.5	32.6	↓
1	1-10-98	1030	1	8.0	93	20.4	32.6	MAI
2	1-11-98	0915	2	8.0	94	20.6	32.7	DB
3	1-12-98	1235	3	8.0	95	20.5	32.8	KR
4	1-13-98	0935	4	7.9	92	20.6	32.6	DB
5	1-14-98	1050	5	8.0	94	20.3	32.8	DB
6	1-15-98	945	1	7.9	90	20.6	32.8	KR
7	1-16-98	1130	2	7.9	94	20.4	32.9	KR
8	1-17-98	1005	3	8.0	96	20.3	33.0	MAI
9	1-18-98	1110	4	8.0	98	20.4	32.7	DB
10	1-19-98	925	1	8.2	95	19.9	32.8	KR
10			2	8.0	94	20.3	32.7	
10			3	8.2	97	20.3	32.7	
10			4	8.2	99	20.3	32.7	
10			5	8.2	99	20.1	32.7	

Notes:



## ORGANISM RECEIPT LOG

Date: 1.7.18	Time: 1050	MEC Batch No. ABS 7483		
Organism: Mysid		Source: ABS		
Address: Same		Invoice Attached <input checked="" type="radio"/> Yes <input type="radio"/> No		
Phone: Same		Contact: Scott		
No. Ordered: 850	No. Received: 935	Source Batch: N/A		
Condition of Organisms: Good		Approximate Size or Age: 3 days old		
Shipper: Fedex		B of L (Tracking No.): 416558017483		
Condition of Container: Good		Received by: MAI		
Notes:				
<b>WATER QUALITY</b>				
pH (Units)	Temp. (°C)	D.O. (% Sat)	Conductivity or Salinity (Include Units)	Technician (initials)
7.9	16.3	164	29.8	MAI
Notes:				
--				

**Aquatic BioSystems, Inc.**  
 1300 BLUE SPRUCE DRIVE, SUITE C  
 FORT COLLINS, COLORADO 80524  
 970-484-5091

11/10

INVOICE DATE	INVOICE NO.	
01/06/98	27629	1

SOLD TO  
 MEC  
 2433 Impala Drive  
 Carlsbad, CA 92008

SHIPPED TO  
 MEC Analytical  
 6060 Corte del Cedro  
 Carlsbad, CA 92009

ACCOUNT NUMBER	SALES REP	CUSTOMER P.O. NUMBER	TERMS	SHIP VIA	F.O.B.
03073	SK		Net 30	FEDERAL EXPRESS	Fort Collins

QUANTITY		DESCRIPTION	UNIT	UNIT PRICE	DISCOUNT	AMOUNT
ORDERED	SHIPPED					
850.0	850.0	Mysid Juveniles		0.30		255.0
85.0	85.0	Extra Mysid Juveniles				
INVOICE TOTAL						255.0
BALANCE DUE						255.0

# SHORT TERM CULTURE LOG

ORGANISM: *Mysid*

DATE RECEIVED: 1-7-98

MEC BATCH NUMBER: ABS 7483

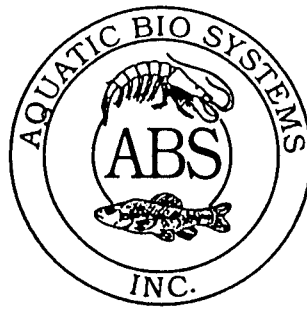
LOCATION: Room 3

Date	Feed		Tub #	D.O.	Temp	Cond/ Salinity	pH	H <sub>2</sub> O Change		# Dead	Initials
	AM	PM						AM	PM		
12.7.98	x	x	1	96	19.1	31.0	8.1	x	x	2	MAI
↓	x	x	2	95	19.0	30.7	8.1	x	x	1	↓
↓	x	x	3	96	18.8	30.7	8.1	x	x	0	↓
↓	x	x	4	96	18.7	30.9	8.1	x	x	0	↓
1.8.98	x	x	1	90	20.3	31.8	8.0	x	x	1	MAI
↓	x	x	2	93	20.3	31.9	8.0	x	x	1	↓
↓	x	x	3	93	20.2	31.9	8.1	x	x	0	↓
↓	x	x	4	88	20.2	31.9	8.1	x	x	0	↓
1.9.98	x	x	1	89	20.1	32.5	7.8	x		0	MAI
↓	x	x	2	88	20.2	32.4	7.8	x		↓	↓
↓	x	x	3	93	20.1	32.4	7.9	x		↓	↓
↓	x	x	4	87	20.1	32.4	7.8	x		↓	↓

Renew Twice a day

① WD 1.8.98 MAI      ② 16 1.7.98 MAI

1300 Blue Spruce Drive, Suite C  
Fort Collins, Colorado 80524



Toll Free: 800/331-5916  
Tel: 970/484-5091 Fax: 970/484-2511

### ORGANISM HISTORY

DATE: 1/6/98

SPECIES: Mysidopsis bahia

AGE: 2 day

LIFE STAGE: Juvenile

HATCH DATE: 1/4/98

BEGAN FEEDING: Immediately

FOOD: Artemia

Water Chemistry Record:	Mean	Range
TEMPERATURE:	<u>25°C</u>	<u>--</u>
SALINITY / CONDUCTIVITY:	<u>25 ppt</u>	<u>--</u>
TOTAL HARDNESS (as CaCO <sub>3</sub> ):	<u>--</u>	<u>--</u>
TOTAL ALKALINITY (as CaCO <sub>3</sub> ):	<u>170 mg/l</u>	<u>--</u>
pH:	<u>7.95</u>	<u>--</u>

Comments:

  
\_\_\_\_\_  
Facility Supervisor

### SURVIVAL DATA SHEET

Sample I.D.: 0971215.01, -.06	Test Organism: <i>Mysidopsis bahia</i>	
Test Type: 10-Day Solid Phase Test	Project: ACOE	
Test Start: 1-9-98	Test End: 1-19-98	Study Director: PK

Sample/Site I.D.	Number Alive	Number Dead	Initials
Control R <sub>1</sub>	20	0	KR
Control R <sub>2</sub>	20	0	 ↓
Control R <sub>3</sub>	20	0	
Control R <sub>4</sub>	20	0	
<sup>D</sup> Control R <sub>5</sub>	20	0	
Reference R <sub>1</sub>	20	0	
Reference R <sub>2</sub>	20	0	
Reference R <sub>3</sub>	20	0	
Reference R <sub>4</sub>	20	0	
Reference R <sub>5</sub>	19	0	
A3 R <sub>1</sub>	19	0	
A3 R <sub>2</sub>	20	0	
A3 R <sub>3</sub>	18	0	
A3 R <sub>4</sub>	19	0	
A3 R <sub>5</sub>	19	0	

Notes: OKR SM 1/22/98

### SURVIVAL DATA SHEET

Sample I.D. 2971215.04	Test Organism: <i>Hysterothylacium</i>	
Test Type: 10-Day Solid Phase	Project: ACDF	
Test Start: 1-9-98	Test End: 1-19-98	Study Director: PK

Sample/Site I.D.	Number Alive	Number Dead	Initials
A6 R1	19	0	KR
A6 R2	20	0	↓
A6 R3	18	0	
A6 R4	20	0	
A6 R5	19	0	

Notes: \_\_\_\_\_

\_\_\_\_\_

Sample ID	pH.	D.O.	Temp.	Sal.	Sample ID Statistic			pH.	D.O.	Temp.	Sal.
					Mean	Minimum	Maximum				
Control	8.1	82	20.8	32.6	Control	7.9	90	20.3	32.7		
Control	8.1	81	20.6	32.6	Control	7.7	81	20.0	32.6		
Control	8.1	81	20.7	32.7	Control	8.1	97	20.8	32.9		
Control	8.0	82	20.6	32.7							
Control	8.0	81	20.7	32.6							
Control	7.9	92	20.3	32.7							
Control	7.9	92	20.3	32.8							
Control	7.9	94	20.4	32.7							
Control	8.0	95	20.4	32.6							
Control	7.9	93	20.4	32.8							
Control	7.9	91	20.3	32.8							
Control	7.9	92	20.1	32.9							
Control	7.7	88	20.2	32.9							
Control	7.9	97	20.2	32.6							
Control	7.9	90	20.2	32.7							
Control	7.9	90	20.1	32.7							
Control	7.9	93	20.1	32.7							
Control	8.0	95	20.1	32.7							
Control	8.0	97	20.0	32.7							

Sample ID	pH.	D.O.	Temp.	Sal.	Sample ID Statistic			pH.	D.O.	Temp.	Sal.
					Mean	Minimum	Maximum				
Reference	8.1	82	20.7	32.7	Reference	8.0	92	20.4	32.8		
Reference	8.1	81	20.6	32.7	Reference	7.9	81	19.9	32.6		
Reference	8.1	81	20.7	32.7	Reference	8.1	99	20.7	33.8		
Reference	8.1	81	20.6	32.7							
Reference	8.1	81	20.6	32.7							
Reference	8.0	93	20.2	32.7							
Reference	8.1	96	20.3	32.7							
Reference	8.0	95	20.6	32.7							
Reference	8.0	96	20.6	32.6							
Reference	8.0	96	20.7	32.8							
Reference	8.0	94	20.1	32.9							
Reference	8.0	99	19.9	32.9							
Reference	7.9	96	20.4	33.0							

Reference	7.9	96	20.5	32.6
Reference	8.0	96	20.1	32.7
Reference	8.0	97	20.0	32.7
Reference	8.1	98	20.3	33.8
Reference	8.1	98	20.3	32.7
Reference	8.1	97	20.2	32.7
Site 3	8.1	80	20.6	32.6
Site 3	8.1	80	20.7	32.6
Site 3	8.1	81	20.7	32.6
Site 3	8.1	80	20.8	32.6
Site 3	8.1	80	20.6	32.7
Site 3	7.8	89	20.4	32.7
Site 3	8.1	95	20.4	32.8
Site 3	7.8	91	20.5	32.8
Site 3	8.1	94	20.6	32.7
Site 3	8.1	93	20.5	32.8
Site 3	8.3	93	20.4	32.9
Site 3	8.3	95	20.5	32.8
Site 3	8.4	85	20.3	32.9
Site 3	8.5	93	20.3	32.7
Site 3	8.6	90	20.1	32.8
Site 3	8.6	93	20.2	32.8
Site 3	8.5	90	20.2	32.6
Site 3	8.6	92	20.2	32.7
Site 3	8.5	94	20.1	32.7
Site 6	8.2	81	20.7	32.6
Site 6	8.2	80	20.6	32.6
Site 6	8.2	81	20.6	32.6
Site 6	8.2	80	20.6	32.6
Site 6	8.2	80	20.5	32.6
Site 6	8.0	93	20.4	32.6
Site 6	8.0	94	20.6	32.7
Site 6	8.0	95	20.5	32.8

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 3	Mean	8.2	89	20.4	32.7
Site 3	Minimum	7.8	80	20.1	32.6
Site 3	Maximum	8.6	95	20.8	32.9

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 6	Mean	8.1	91	20.4	32.7
Site 6	Minimum	7.9	80	19.9	32.6
Site 6	Maximum	8.2	99	20.7	33.0



Site 6	7.9	92	20.6	32.6
Site 6	8.0	94	20.3	32.8
Site 6	7.9	90	20.6	32.8
Site 6	7.9	94	20.4	32.9
Site 6	8.0	96	20.3	33.0
Site 6	8.0	98	20.4	32.7
Site 6	8.2	95	19.9	32.8
Site 6	8.0	94	20.3	32.7
Site 6	8.2	97	20.3	32.7
Site 6	8.2	99	20.3	32.7
Site 6	8.2	99	20.1	32.7

Site I.D.	Sample Type	Organism	Initial #	Replicate	Survival #	% Survival	Mean % Survival	SD Survival
Control	Sediment	M. Bahia	20	1	20	100		
Control	Sediment	M. Bahia	20	2	20	100		
Control	Sediment	M. Bahia	20	3	20	100		
Control	Sediment	M. Bahia	20	4	20	100		
Control	Sediment	M. Bahia	20	5	20	100	100	0.00
Reference	Sediment	M. Bahia	20	1	20	100		
Reference	Sediment	M. Bahia	20	2	20	100		
Reference	Sediment	M. Bahia	20	3	20	100		
Reference	Sediment	M. Bahia	20	4	20	100		
Reference	Sediment	M. Bahia	20	5	19	95	99	2.24
Area 3	Sediment	M. Bahia	20	1	19	95		
Area 3	Sediment	M. Bahia	20	2	20	100		
Area 3	Sediment	M. Bahia	20	3	18	90		
Area 3	Sediment	M. Bahia	20	4	19	95		
Area 3	Sediment	M. Bahia	20	5	19	95	95	3.54
Area 6	Sediment	M. Bahia	20	1	19	95		
Area 6	Sediment	M. Bahia	20	2	20	100		
Area 6	Sediment	M. Bahia	20	3	18	90		
Area 6	Sediment	M. Bahia	20	4	20	100		
Area 6	Sediment	M. Bahia	20	5	19	95	96	4.18

Marina del Rey Data Analyses - MEC Job #0719-009  
 Summary of One-Tailed T-Test Results

ORGANISM	MEASURE	TRANS	SITE	Test Variable	VARIANCE	Prob 1-tail	Sig Result
neanthes	Survival	Arcsine	Area3	RESULT	Equal	0.41395	
neanthes	Survival	Arcsine	Area5	RESULT	Equal	0.72765	
neanthes	Survival	Arcsine	Area6	RESULT	Equal	0.72765	
neanthes	Survival	None	Area3	RESULT	Equal	0.34055	
neanthes	Survival	None	Area5	RESULT	Equal	0.72765	
neanthes	Survival	None	Area6	RESULT	Equal	0.72765	

**10 Day Acute Solid Phase-Survival**

Start Date: 20 Dec-97 11:00	Test ID: 141	Sample ID: REF-Ref Toxicant
End Date: 24 Dec-97 14:20	Lab ID: CAMEC-MEC Carlsbad	Sample Type: CDCL-Cadmium chloride
Sample Date:	Protocol: ASTM 87	Test Species: NA-Neanthes arenaceodenta
Comments: DR 5557 For ACOE Marina del Rey		

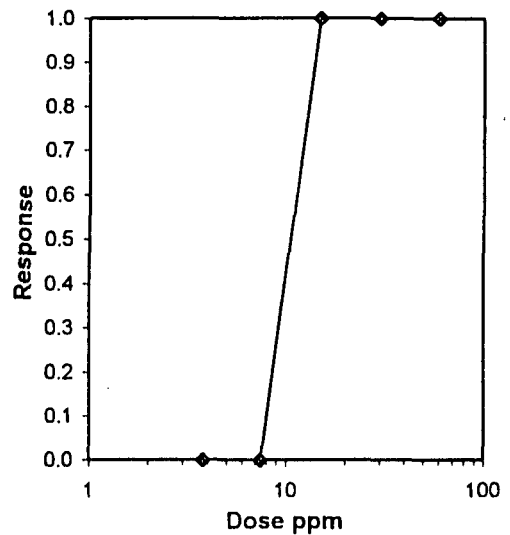
Conc-ppm	1	2
Control	1.0000	1.0000
3.8	1.0000	1.0000
7.5	1.0000	1.0000
15	0.0000	0.0000
30	0.0000	0.0000
60	0.0000	0.0000

Conc-ppm	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
Control	1.0000	1.0000	0	10	10	2			0	10
3.8	1.0000	1.0000	0	10	10	2	1.0000	0.0500	0	10
7.5	1.0000	1.0000	0	10	10	2	1.0000	0.0500	0	10
15	0.0000	0.0000	10	0	10	2			10	10
30	0.0000	0.0000	10	0	10	2			10	10
60	0.0000	0.0000	10	0	10	2			10	10

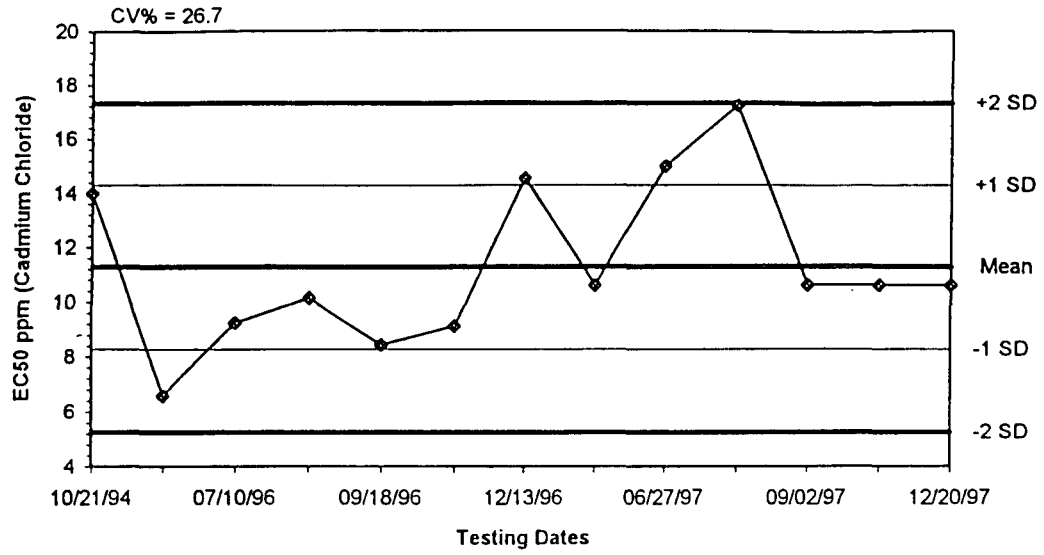
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	7.5	15	10.6066	

**Graphical Method**

Trim Level	EC50
0.0%	10.607



96 Hour *Neanthes arenaceodenta* Reference Toxicant Control Chart



Dates	Values	Mean	-1 SD	-2 SD	+1 SD	+2 SD
10/21/94	13.9950	11.2912	8.2753	5.2594	14.3071	17.3230
06/27/95	6.5940	11.2912	8.2753	5.2594	14.3071	17.3230
07/10/96	9.2450	11.2912	8.2753	5.2594	14.3071	17.3230
07/24/96	10.1670	11.2912	8.2753	5.2594	14.3071	17.3230
09/18/96	8.4300	11.2912	8.2753	5.2594	14.3071	17.3230
10/04/96	9.1400	11.2912	8.2753	5.2594	14.3071	17.3230
12/13/96	14.5500	11.2912	8.2753	5.2594	14.3071	17.3230
03/27/97	10.6100	11.2912	8.2753	5.2594	14.3071	17.3230
06/27/97	15.0000	11.2912	8.2753	5.2594	14.3071	17.3230
08/28/97	17.2300	11.2912	8.2753	5.2594	14.3071	17.3230
09/02/97	10.6100	11.2912	8.2753	5.2594	14.3071	17.3230
10/10/97	10.6070	11.2912	8.2753	5.2594	14.3071	17.3230
12/20/97	10.6070	11.2912	8.2753	5.2594	14.3071	17.3230

updated 7 Jan 98 - DB

## SULFIDE

Project ALOE Marina del Rey

Sample ID	Initial Sulfide (ppm) (1)	Final Sulfide (ppm) (2)	Date	Initials
Control 1 Rep 1	-0.008		12.19.97	MAI
Control 2 Rep 1	-0.032		↓	↓
Area 3 Rep 1	0.030			
Area 4 Rep 1	-0.072			
Area 5 Rep 1	-0.104			
Area 6 Rep 1	0.016			
Area 9 Rep 1	0.012		↓	↓
Ref Rep 1.	0.052		12.19.97	MAI.

① Samples not stored properly

② Holding time expired; did not measure







12/19/97

Initial Ammonia Analysis (ppm)

Marina del Rey Project Mysids Neanthes

Overlying H<sub>2</sub>O

Sample ID	pH	Meter reading	Normalized Value	Initials
Control 1	8.0	2.0		my
Control 2	8.0	1.7		↑ ↓
Area 3	7.8	23.0		
Area 4	8.0	9.6		
Area 5	8.0	38.1		
Area 6	8.0	18.3		
Area 9	8.0	10.7		
Ref	8.0	4.35		

Area 5 #2

15.3

Samples were renewed 3 times 12/19/97

Test started 12/20/97

INITIAL OVERLYING  
Ammonia Analysis (ppm)  
Mysids/Neanthes

## Marina Del Rey Project

<u>Sample ID</u>	<u>Rep</u>	<u>Meter Reading</u>	<u>Date Sampled</u>	<u>Date Measured</u>	<u>Initials</u>
Control 1	1	0.0370	12.20.97	12.23.97	MY
↓	2	0.0389	↓	↓	↓
↓	3	0.0404	↓	↓	↓
↓	4	0.0391	↓	↓	↓
↓	5	0.0375	↓	↓	↓
Reference	1	<del>0.0492</del> 0.0492	12.20.97	12.23.97	MY
↓	2	0.0512	↓	↓	↓
↓	3	0.0514	↓	↓	↓
↓	4	0.0515	↓	↓	↓
↓	5	0.0560	↓	↓	↓
Area 3	1	0.212	12.20.97	12.23.97	MY
↓	2	0.231	↓	↓	↓
↓	3	0.229	↓	↓	↓
↓	4	0.300	↓	↓	↓
↓	5	0.271	↓	↓	↓
Area 4	1	0.155	12.20.97	12.29.97	MY
↓	2	0.139	↓	↓	↓
↓	3	0.136	↓	↓	↓
↓	4	0.129	↓	↓	↓
↓	5	0.137	↓	↓	↓
Area 5	1	0.334	12.20.97	12.29.97	MY
↓	2	0.365	↓	↓	↓
↓	3	0.539	↓	↓	↓

① WY 12.23.97 MY



FINAL OVERLYING  
 Ammonia Analysis (ppm)  
 Mysids/Neanthes

Marina Del Rey Project

<u>Sample ID</u>	<u>Rep</u>	<u>Meter Reading</u>	<u>Date</u> <sup>Initial</sup> <u>Sampled</u>	<u>Date</u> <u>Measured</u>	<u>Initials</u>
Control	1	1.32	12-30-97	12-7-98	JC
	2	1.30			
	3	1.26			
	4	1.69			
	5	1.41			
REFERENCE	1	2.40			
	2	2.15			
	3	1.65			
	4	1.91			
	5	1.53			
A3	1	2.02			
	2	1.90			
	3	2.41			
	4	1.77			
	5	1.89			
A4	1	1.88			
	2	1.48			
	3	1.38			
	4	1.01			
	5	1.09			

① WD for 11/7/98

FINAL OVERLYING  
 Ammonia Analysis (ppm)  
 Mysids/Neanthes

Marina Del Rey Project

<u>Sample ID</u>	<u>Rep</u>	<u>Meter Reading</u>	<u>Date</u> <sup>Initials</sup> <u>Sampled</u>	<u>Date</u> <u>Measured</u>	<u>Initials</u>
A5	1	1.93	12-30-97	1-7-98	L
	2	1.97			
	3	1.77			
	4	2.06			
	5	2.07			
A6	1	1.97			
	2	1.65			
	3	2.23			
	4	1.83			
	5	1.82			
A9	1	1.94		1-6-98	DS
	2	2.02			
	3	1.70			
	4	1.79			
	5	1.74			

# SHORT TERM CULTURE LOG

ORGANISM: <sup>Opus 1</sup> ~~Argyroteta~~ Neanthes

DATE RECEIVED: 12.18.97

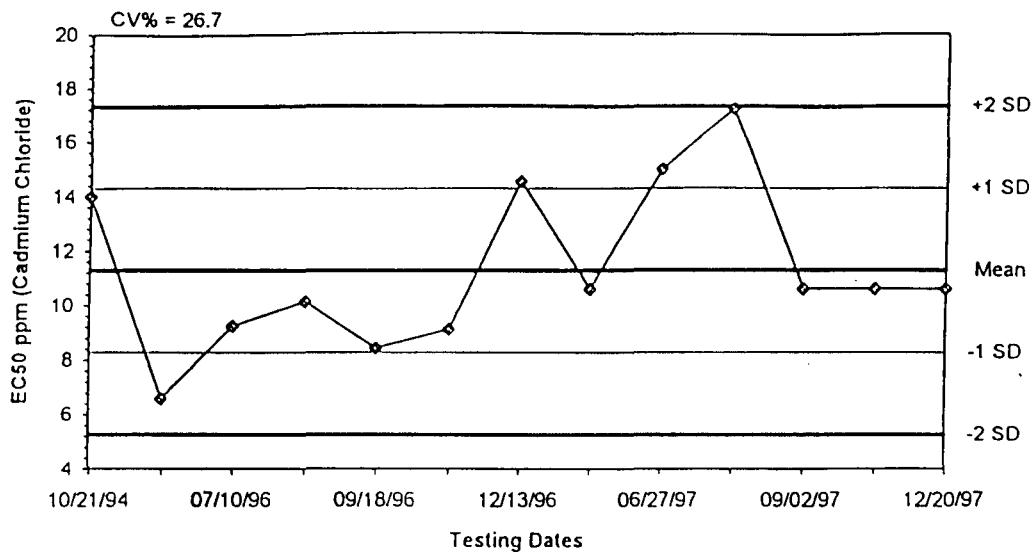
MEC BATCH NUMBER: DR 7775

LOCATION: Room 3

Date	Feed AM/PM	Tub #	D.O.	Temp	Cond/ Salinity	pH	H <sub>2</sub> O Change	# Dead	Initials
12.18.97	X	1	89	19.7	33.2	8.0	N	0	KR
12.19.97	X	<del>1</del> <sup>OPUS 1</sup> 2	93	19.9	33.2	8.0	Y	0	KR

① 12.19.97 MAI

96 Hour *Neanthes arenaceodenta* Reference Toxicant Control Chart



Dates	Values	Mean	-1 SD	-2 SD	+1 SD	+2 SD
10/21/94	13.9950	11.2912	8.2753	5.2594	14.3071	17.3230
06/27/95	6.5940	11.2912	8.2753	5.2594	14.3071	17.3230
07/10/96	9.2450	11.2912	8.2753	5.2594	14.3071	17.3230
07/24/96	10.1670	11.2912	8.2753	5.2594	14.3071	17.3230
09/18/96	8.4300	11.2912	8.2753	5.2594	14.3071	17.3230
10/04/96	9.1400	11.2912	8.2753	5.2594	14.3071	17.3230
12/13/96	14.5500	11.2912	8.2753	5.2594	14.3071	17.3230
03/27/97	10.6100	11.2912	8.2753	5.2594	14.3071	17.3230
06/27/97	15.0000	11.2912	8.2753	5.2594	14.3071	17.3230
08/28/97	17.2300	11.2912	8.2753	5.2594	14.3071	17.3230
09/02/97	10.6100	11.2912	8.2753	5.2594	14.3071	17.3230
10/10/97	10.6070	11.2912	8.2753	5.2594	14.3071	17.3230
12/20/97	10.6070	11.2912	8.2753	5.2594	14.3071	17.3230

updated 7 Jan 98 - DB

10 Day Acute Solid Phase-Survival

Start Date: 20 Dec-97 11:00 Test ID: 141 Sample ID: REF-Ref Toxicant  
 End Date: 24 Dec-97 14:20 Lab ID: CAMEC-MEC Carlsbad Sample Type: CDCL-Cadmium chloride  
 Sample Date: Protocol: ASTM 87 Test Species: NA-Neanthes arenaceodenta  
 Comments: DR 5557 For ACOE Marina del Rey

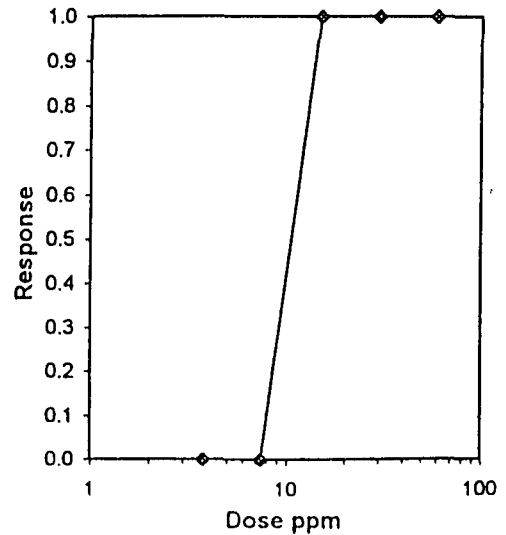
Conc-ppm	1	2
Control	1.0000	1.0000
3.8	1.0000	1.0000
7.5	1.0000	1.0000
15	0.0000	0.0000
30	0.0000	0.0000
60	0.0000	0.0000

Conc-ppm	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
Control	1.0000	1.0000	0	10	10	2			0	10
3.8	1.0000	1.0000	0	10	10	2	1.0000	0.0500	0	10
7.5	1.0000	1.0000	0	10	10	2	1.0000	0.0500	0	10
15	0.0000	0.0000	10	0	10	2			10	10
30	0.0000	0.0000	10	0	10	2			10	10
60	0.0000	0.0000	10	0	10	2			10	10

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	7.5	15	10.6066	

Graphical Method

Trim Level	EC50
0.0%	10.607





**96 HOUR NEANTHES REFERENCE TOXICANT BIOASSAY**

Test I.D. C950628-141	Replicates: 2	Study Director: DB	Location: RM 3
Dilution Water Batch: S10 120597	Organism Batch: DR5557	Associated Test: MDRcy	No. Organisms: 5

**REFERENCE TOXICANT DILUTION WORKSHEET**

Toxicant: Cadmium	Stock Solution: 10mg/L Cd	Date Prepared: 12-19-97	Initials: my
Target Concentrations: (mg/l) ppm	Quantity of Stock: Target: 6 mL	Quantity of Diluent: Target: 1000 mL	Final Concentration: A/(A + B)
60	(A)Actual: 5.9986	(B)Actual: 1000.03	$5.96 \times 10^{-3}$
30	Serial Dilute by 1/2		
15			
7.5			
3.8			

**0 HOURS**    Date: 12-20-97    Time: 1100 Start    Initials: RL/MSI  
 STOCK 1145 WQ

Concentration	Control	3.8	7.5	15	30	60
DO (%)	94	96	96	97	96	97
Temperature	19.7	19.6	19.8	19.7	19.7	19.7
Salinity	33	33	33	33	33	33
pH	8.1	8.1	8.1	8.1	8.1	8.1

**24 HOURS**    Date: 12-21-97    Time: 1335    Initials: DB

Rep	Control	3.8	7.5	15	30	60
No. Alive R1	5	5	5	5	0	0
No. Dead R1	0	0	6	0	5	5
No. Alive R2	5	5	5	5	0	0
No. Dead R2	0	0	0	0	5	5

**48 HOURS**    Date: 12-22-97    Time: 1055    Initials: DB

Rep	Control	3.8	7.5	15	30	60
No. Alive R1	5	5	5	5		
No. Dead R1	0	0	0	0		
No. Alive R2	5	5	5	0		
No. Dead R2	0	0	0	0		

Sample I.D.:	Study Director:
--------------	-----------------

72 HOURS Date: 12-23-97 Time: 1000 Initials: DB

Rep	Control	3.8	7.5	15	30	60
No. Alive R1	5	5	5	① 4 1		
No. Dead R1	0	0	0	4		
No. Alive R2	5	5	5	0		
No. Dead R2	0	0	0	5		

96 HOURS Date: 12-24-97 Time: 1420 Initials: DB

Rep	Control	3.8	7.5	15	30	60
No. Alive R1	5	5	5	0		
No. Dead R1	0	0	0	1		
No. Alive R2	5	5	5			
No. Dead R2	0	0	0			

① IE/WC DB 12-23-97

Neanthes arenaceodonta 10 Day Chronic Test Data Sheet

MDR

Sample ID CONTROL	Start Date/Time 12-20-97 1100	END 0900	Species/Common Name Neanthes arenaceodonta	Study Director PK
Seawater Batch No. S10 120597	#OBD # 2298	Bath/Room ID RM 3	ORGANISM DR 7775	No. Organisms/Chamber 0 5 10

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	830	1	8.0	92	19.8	32.9	KR
0			2	8.0	92	19.5	32.9	
0			3	8.0	93	19.7	33.0	
0			4	8.0	92	19.9	32.8	
0			5	8.0	93	19.9	32.9	
1	12-21-97	1310	1	7.7	94	20.0	33.0	DS
2	12-22-97	1030	2	8.1	94	20.2	33.2	DS
3	12-23-97	0930	3	8.0	93	20.2	32.4	DS
4	12-24-97	0940	4	8.0	95	20.1	32.6	DS
5			5					
6	12-25-97 <sup>26 PM</sup>	1125	1	7.9	92	20.3	31.4	MAI
7	12-27-97	0930	2	7.8-7.9	91	19.9	31.2	MAI
8	12-28-97	0930	3	7.9	93	20.0	31.5	DS
9	12-29-97	0915	4	7.9	93	20.2	31.7	DS
10	12-30-97	0900	1	7.8	85	20.1	32.0	TS/MW
10			2	8.0	89	20.1	32.0	
10			3	8.0	85	21.2	31.9	
10			4	8.1	88	20.2	31.9	
10			5	8.0	84	20.2	31.9	

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Tare ID Cup #	Initials
12-30-97	1	10	1	DS
	2	10	2	MAI
	3	4	3	TS
	4	10	4	MAI
	5	4	5	TS

Notes: OK IE 12/20/97 (2) FE 12/26/97 MAI (3) MR 12/27/97 MAI

Neanthes arenaceodenta 10 Day Chronic Test Data Sheet

MOR

Sample ID Reference	Start Date/Time 12-21-97 1100	END 10:00	Species/Common Name Neanthes arenaceodenta	Study Director PK
Seawater Batch No. SID 120597	HOB0 # 2298	Bath/Room ID RM 3	ORGANISM DR 7775	No. Organisms/Chamber 0125 10

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	0850	1	8.1	91	19.6	33.2	LR
0			2	8.1	91	19.7	33.0	
0			3	8.1	89	19.4	33.0	
0			4	8.1	91	19.6	33.0	
0			5	8.1	91	19.4	33.0	
1	12-21-97	1310	1	8.0	103	20.4	33.3	DS
2	12-22-97	1030	2	8.2	96	20.2	33.1	DS
3	12-23-97	0930	3	8.1	94	19.9	32.8	DS
4	12-24-97	0940	4	8.1	96	20.4	32.4	DS
5	12-25-97		5					
6	12-26-97	1125	1	8.0	98	20.2	31.6	MAI
7	12-27-97	0930	2	7.981	96	19.8	31.3	MAI
8	12-28-97	0930	3	7.9	94	19.9	31.6	DS
9	12-29-97	0915	4	7.9	94	20.2	31.8	DS
10	12-30-97	0910	1	8.1	88	20.1	32.1	TS/MAI
10			2	8.1	87	20.2	32.0	
10			3	8.0	87	20.2	32.0	
10			4	8.1	89	20.2	31.9	
10			5	8.0	87	20.5	32.0	

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Tare ID	Cup #	Initials
12-30-97	1	10		6	MAI
	2	10		7	TS
	3	10		8	TS
	4	10		9	TS
	5	10		10	TS

Notes: OK IE 12/20/97 (2) MR 12/27/97 MAI

*Neanthes arenaceodonta* 10 Day Chronic Test Data Sheet

HDR

Sample ID <b>SITE 3</b>	Start Date/Time 12/20/97 1100	ENV U:UO	Species/Common Name <i>Neanthes arenaceodonta</i>	Study Director PK
Seawater Batch No. SID 120597	HOB 2298	Bath/Room ID RM 3	ORGANISM: DR 7775	No. Organisms/Chamber OH 5/10

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	900	1	8.0	87	19.5	32.9	KA
0	↓	↓	2	8.0	86	19.6	32.9	↓
0	↓	↓	3	8.0	86	19.6	33.1	↓
0	↓	↓	4	8.0	87	19.7	33.0	↓
0	↓	↓	5	8.1	86	19.8	33.0	↓
1	12-21-97	1310	1	7.8	96	19.7	33.0	DS
2	12-22-97	1030	2	7.9	80	20.7	33.1	DS
3	12-23-97	0930	3	8.2	93	20.0	32.8	DS
4	12-24-97	0940	4	8.1	91	20.1	32.4	DS
5	12-25-97	—	5	—	—	—	—	—
6	12-26-97	1130	1	8.0	83	20.3	31.7	MAI
7	12-27-97	0935	2	(2) 7.7	60	20.2	31.2	MAI
8	12-28-97	0930	3	8.3	93	19.7	31.7	DS
9	12-29-97	0915	4	8.2	87	20.0	31.9	DS
10	12-30-97	0915	1	8.5	83	20.0	31.8	TS/MY
10	↓	↓	2	8.5	85	20.1	32.1	↓
10	↓	↓	3	8.4	85	20.1	32.2	↓
10	↓	↓	4	8.4	82	20.1	32.0	↓
10	↓	↓	5	8.3	78	20.2	32.1	↓

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Core ID Cup #	Initials
12-30-97	1	10	11	TS
↓	2	10	12	MY
↓	3	8	13	MAI
↓	4	10	14	TS
↓	5	9	15	MY

Notes: OK IE 12/20/97 (2)MP 12.27.97 MAI

Neanthes arenaceodonta 10 Day Chronic Test Data Sheet

MDR

Sample ID SITE 4	Site ID 1180	Date/Time 12/20/97	ENO 10:00	Species/Common Name Neanthes arenaceodonta	Study Director PK
Seawater Batch No. SIO 120597	HOBO 2298	Bath/Room ID RM 3	ORGANISM DR 7775	No. Organisms/Chamber ① 4510	

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	915	1	8.1	86	19.6	32.9	KR
0	↓	↓	2	8.1	88	19.5	32.9	↓
0			3	8.1	91	19.5	32.9	
0			4	8.1	90	19.7	33.0	
0			5	8.0	87	19.6	33.0	
1			12-21-97	1310	1	8.0	103	
2	12-22-97	1030	2	8.1	92	20.2	33.2	DB
3	12-23-97	0930	3	7.9	82	20.3	32.4	DB
4	12-24-97	0940	4	8.0	87	20.2	32.2	DB
5	12-25-97	-	5					
6	12-26-97	1130	1	8.3	94	20.3	31.6	MAI
7	12-27-97	0935	2	② MAI 8.2	89	19.9	31.2	MAI
8	12-28-97	0930	3	8.2	82	20.1	31.3	DB
9	12-29-97	0915	4	8.1	88	20.1	31.9	DB
10	12-30-97	0920	1	8.2	85	20.0	32.1	TS/ny
10	↓	↓	2	8.3	83	20.2	32.0	↓
10			3	8.3	83	20.2	31.9	
10			4	8.3	84	20.2	31.8	
10			5	8.1	65	20.3	31.9	

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Tare ID Cup #	Initials
12-30-97	1	10	16	TS
↓	2	10	17	TS
	3	10	18	TS
	4	10	③ 1920	MAI
	5	10	2049	ny

Notes: ① use 1420/97 (2) MR 12-27-97 MAI (3) LC 12-30-97 MAI

Neanthes arenaceodonta 10 Day Chronic Test Data Sheet

MOR

Sample ID SITE 5	Start Date/Time / END 12-20-97 1100 / 0:00	Species/Common Name Neanthes arenaceodonta	Study Director PK
Seawater Batch No. / HOB SID 120597 / 2298	Bath/Room ID RM 3	ORGANISM DR 7775	No. Organisms/Chamber OK 5 10

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	840	1	8.0	89	19.3	33.0	KR
0			2	8.0	88	19.7	32.9	
0			3	8.0	80	19.7	32.9	
0			4	8.0	88	19.0	33.0	
0			5	8.0	88	19.7	33.0	
1	12-21-97	1310	1	7.9	94	21.0	33.1	
2	12-22-97	1030	2	8.2	92	20.7	33.1	OS
3	12-23-97	0930	3	8.1	91	20.1	32.5	OS
4	12-24-97	0940	4	8.0	87	20.3	32.4	OS
5	12-25-97	-	5					
6	12-26-97	1130	1	7.9	89	21.1	31.4	MAI
7	12-27-97	0940	2	② 7.9 80	91	20.0	31.2	MAI
8	12-28-97	0930	3	8.0	94	19.9	31.4	OS
9	12-29-97	0915	4	7.9	91	20.3	31.8	OS
10	12-30-97	0925	1	7.9	78	20.2	31.9	TS/MLY
10	↓	↓	2	8.1	86	20.3	32.1	↓
10			3	8.1	84	20.2	32.0	
10			4	8.1	③ 84 84	20.2	31.9	
10			5	8.1	86	20.2	32.1	
10								

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Tare ID Cup #	Initials	
12-30-97	1	10	/	TS	
↓	2	10		22	MAI
	3	10		23	TS
	4	10		24	TS
	5	9		25	MLY

Notes: ① KR IE 12/20/97 ② MR 12-27-97 MAI ③ TS WN 12-30-97

*Neanthes arenaceodonta* 10 Day Chronic Test Data Sheet

MDR

Sample ID SITE 16	Start Date/Time 12-20-97 10:00	END 10:00	Species/Common Name <i>Neanthes arenaceodonta</i>	Study Director PK
Seawater Batch No. SIO 120597 / H080	2298	Bath/Room ID RM 3	ORGANISM DR 7775	No. Organisms/Chamber MR 5/10

WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	930	1	8.1	88	19.7	33.1	KE
0	↓	↓	2	8.1	85	19.7	32.9	↓
0			3	8.1	80	19.7	32.9	
0			4	8.1	84	19.7	32.9	
0			5	8.1	84	19.6	33.0	
1			12-21-97	1310	1	7.8	92	
2	12-22-97	1030	2	8.1	90	20.4	33.0	DB
3	12-23-97	0930	3	8.0	99	20.5	32.2	DB
4	12-24-97	0940	4	8.0	89	20.2	32.4	DB
5	12-25-97		5					
6	12-26-97	1135	1	7.9	89	21.0	31.3	MAI
7	12-27-97	0940	2	② 7.879	87	19.7	31.2	MAI
8	12-28-97	0930	3	7.9	88	20.3	31.3	DB
9	12-29-97	0915	4	7.8	83	20.2	31.8	DB
10	12-30-97	0930	1	8.0	78	20.2	31.9	TS/ml
10	↓	↓	2	8.0	81	20.3	32.0	↓
10			3	8.1	78	20.4	31.9	
10			4	8.0	79	20.2	31.9	
10			5	8.0	78	20.2	31.9	

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Fare ID Cup #	Initials	
12.30-97	1	10	/	MAI	
↓	2	10		26	TS
	3	10		27	TS
	4	9		28	MY
	5	10		29	MY
				30	

Notes: Over 20 12/20/97 ② MR 12.27.97 MAI



*Neanthes arenaceodonta* 10 Day Chronic Test Data Sheet

MDR

Sample ID SITE 9	Start Date/Time/END 12-20-97 / 10:00	Species/Common Name <i>Neanthes arenaceodonta</i>	Study Director PK
Seawater Batch No. S10 12.05.97	#BOD # 2299	Bath/Room ID RM 3	ORGANISM DR 7775
		No. Organisms/Chamber 25/10	

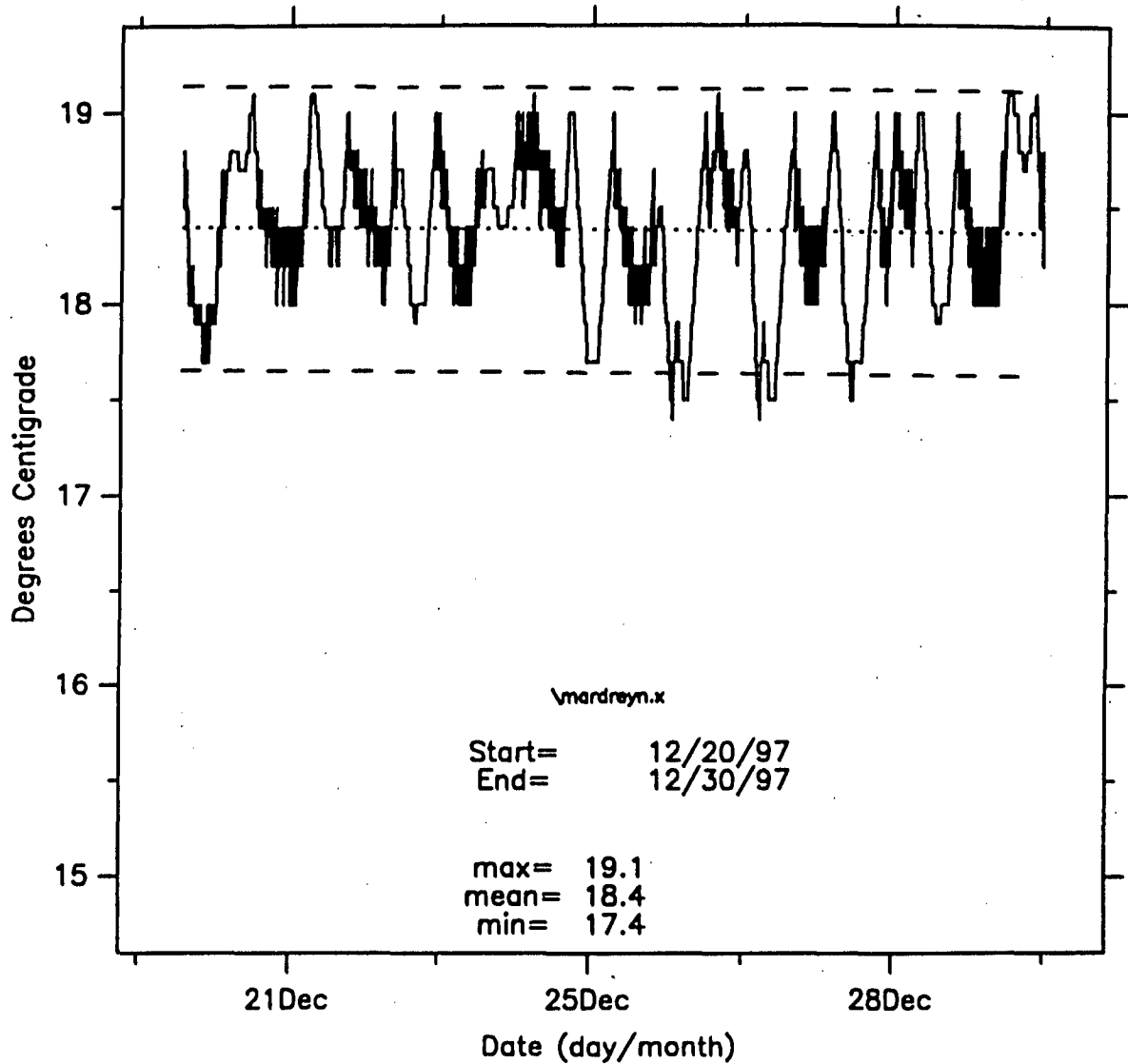
WATER QUALITY

Day	Date	Time	Rep	pH	D.O. (% Sat.)	Temp (°C)	Salinity (‰)	Initials
0	12-20-97	910	1	8.1	88	19.5	33.0	KZ
0			2	8.1	87	19.6	32.8	↓
0			3	8.1	87	19.7	32.9	
0			4	8.1	86	19.6	33.0	
0			5	8.1	85	19.8	33.0	
1	12-21-97	1310	1	8.0	100	20.3	33.0	
2	12-22-97	1030	2	8.2	94	20.2	33.1	DS
3	12-23-97	0930	3	8.0	89	20.1	32.5	DS
4	12-24-97	0940	4	8.1	93	20.5	32.4	DS
5	12-25-97		5					
6	12-26-97	1135	1	8.0	94	20.3	31.3	MAI
7	12-27-97	0940	2	8.0	91	19.9	31.3	MAI
8	12-28-97	0930	3	7.9	92	20.2	31.4	DS
9	12-29-97	0915	4	7.9	90	20.3	31.9	DS
10	12-30-97	0935	1	8.0	81	20.2	31.9	TS/My
10			2	8.1	83	20.3	32.0	↓
10			3	8.0	82	20.2	31.9	
10			4	8.1	82	20.3	32.1	
10			5	8.0	80	20.4	32.0	
10								

BIOMASS DATA - END

Date	Rep	No. Worms Alive	Tare ID Cup #	Initials
12-30-97	1	10	31	TS
	2	10	32	My
	3	10	33	TS
	4	10	34	TS
	5	10	35	My

Notes: DER IC 12/20/97



Test Temperature Recorded At 5 Minute Intervals  
 (dotted line = predicted mean temperature, dashed line = 95% confidence bounds)

## ORGANISM RECEIPT LOG

Date: 12.18.97	Time: 11:10	MEC Batch No. DR 7775		
Organism: Neanthes		Source: Don Reish		
Address: Same		Invoice Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Phone: Same		Contact: Don		
No. Ordered: 400	No. Received: 400+	Source Batch: N/A.		
Condition of Organisms: Good		Approximate Size or Age: 2 wks.		
Shipper: Fed ex		B of L (Tracking No.): 800769587775		
Condition of Container: Good		Received by: KR		
Notes:				
WATER QUALITY				
pH (Units)	Temp. (°C)	D.O. (% Sat)	Conductivity or Salinity (Include Units)	Technician (initials)
7.5	19.2	93	35	MAI
Notes:				

Sample ID	pH.	D.O.	Temp.	Sal.	Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Control	8.0 ✓	92 ✓	19.8 ✓	32.9 ✓	Control	Mean	8.0	91	20.1	32.3
Control	8.0 ✓	92 ✓	19.5 ✓	32.9 ✓	Control	Minimum	7.7	84	19.5	31.2
Control	8.0 ✓	93 ✓	19.7 ✓	33.0 ✓	Control	Maximum	8.1	95	21.2	33.4
Control	8.0 ✓	92 ✓	19.9 ✓	32.8 ✓						
Control	8.0 ✓	93 ✓	19.9 ✓	32.9 ✓						
Control	7.7 ✓	94 ✓	20.0 ✓	33.0 ✓						
Control	8.1 ✓	94 ✓	20.2 ✓	33.2 ✓						
Control	8.0 ✓	93 ✓	20.2 ✓	<del>33.4</del> 32.4						
Control	8.0 ✓	95 ✓	20.1 ✓	32.6 ✓						
Control										
Control	7.9 ✓	92 ✓	20.3 ✓	31.4 ✓						
Control	7.9 ✓	91 ✓	19.9 ✓	31.2 ✓						
Control	7.9 ✓	93 ✓	20.0 ✓	31.5 ✓						
Control	7.9 ✓	93 ✓	20.2 ✓	31.7 ✓						
Control	7.8 ✓	85 ✓	20.1 ✓	32.0 ✓						
Control	8.0 ✓	89 ✓	20.1 ✓	32.0 ✓						
Control	8.0 ✓	85 ✓	21.2 ✓	31.9 ✓						
Control	8.1 ✓	88 ✓	20.2 ✓	31.9 ✓						
Control	8.0 ✓	84 ✓	20.2 ✓	31.9 ✓						

Sample ID	pH.	D.O.	Temp.	Sal.	Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Reference	8.1 ✓	91 ✓	19.6 ✓	33.2 ✓	Reference	Mean	8.1	92	20.0	32.4
Reference	8.1 ✓	91 ✓	19.7 ✓	33.0 ✓	Reference	Minimum	7.9	87	19.4	31.3
Reference	8.1 ✓	89 ✓	19.4 ✓	33.0 ✓	Reference	Maximum	8.2	103	20.5	33.3
Reference	8.1 ✓	91 ✓	19.6 ✓	33.0 ✓						
Reference	8.1 ✓	91 ✓	19.4 ✓	33.0 ✓						
Reference	8.0 ✓	103 ✓	20.4 ✓	33.3 ✓						
Reference	8.2 ✓	96 ✓	20.2 ✓	33.1 ✓						
Reference	8.1 ✓	94 ✓	19.9 ✓	32.8 ✓						
Reference	8.1 ✓	96 ✓	20.4 ✓	32.4 ✓						
Reference										
Reference	8.0 ✓	98 ✓	20.2 ✓	31.6 ✓						
Reference	8.1 ✓	96 ✓	19.8 ✓	31.3 ✓						
Reference	7.9 ✓	94 ✓	19.9 ✓	31.6 ✓						
Reference	7.9 ✓	94 ✓	20.2 ✓	31.8 ✓						

Reference	8.1 ✓	88 ✓	20.1 ✓	32.1 ✓
Reference	8.1 ✓	87 ✓	20.2 ✓	32.0 ✓
Reference	8.0 ✓	87 ✓	20.2 ✓	32.0 ✓
Reference	8.1 ✓	89 ✓	20.2 ✓	31.9 ✓
Reference	8.0 ✓	87 ✓	20.5 ✓	32.0 ✓
Site 3	8.0 ✓	87 ✓	19.5 ✓	32.9 ✓
Site 3	8.0 ✓	86 ✓	19.6 ✓	32.9 ✓
Site 3	8.0 ✓	86 ✓	19.6 ✓	33.1 ✓
Site 3	8.0 ✓	87 ✓	19.7 ✓	33.0 ✓
Site 3	8.1 ✓	86 ✓	19.8 ✓	33.0 ✓
Site 3	7.8 ✓	96 ✓	19.7 ✓	33.0 ✓
Site 3	7.9 ✓	80 ✓	20.7 ✓	33.1 ✓
Site 3	8.2 ✓	93 ✓	20.0 ✓	32.8 ✓
Site 3	8.1 ✓	91 ✓	20.1 ✓	32.4 ✓
Site 3				
Site 3	8.0 ✓	83 ✓	20.3 ✓	31.7 ✓
Site 3	7.9 ✓	60 ✓	20.2 ✓	31.2 ✓
Site 3	8.3 ✓	93 ✓	19.7 ✓	31.7 ✓
Site 3	8.2 ✓	87 ✓	20.0 ✓	31.9 ✓
Site 3	8.5 ✓	83 ✓	20.0 ✓	31.8 ✓
Site 3	8.5 ✓	85 ✓	20.1 ✓	32.1 ✓
Site 3	8.4 ✓	85 ✓	20.1 ✓	32.2 ✓
Site 3	8.4 ✓	82 ✓	20.1 ✓	32.0 ✓
Site 3	8.3 ✓	78 ✓	20.2 ✓	32.1 ✓
Site 4	8.1 ✓	86 ✓	19.6 ✓	32.9 ✓
Site 4	8.1 ✓	88 ✓	19.5 ✓	32.9 ✓
Site 4	8.1 ✓	91 ✓	19.5 ✓	32.9 ✓
Site 4	8.1 ✓	90 ✓	19.7 ✓	33.0 ✓
Site 4	8.0 ✓	87 ✓	19.6 ✓	33.0 ✓
Site 4	8.0 ✓	103 ✓	20.2 ✓	33.0 ✓
Site 4	8.1 ✓	92 ✓	20.2 ✓	33.2 ✓
Site 4	7.9 ✓	82 ✓	20.3 ✓	32.4 ✓
Site 4	8.0 ✓	87 ✓	20.2 ✓	32.2 ✓

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 3	Mean	8.1	85	20.0	32.4
Site 3	Minimum	7.8	60	19.5	31.2
Site 3	Maximum	8.5	96	20.7	33.1

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 4	Mean	8.1	87	20.0	32.3
Site 4	Minimum	7.9	65	19.5	31.2
Site 4	Maximum	8.3	103	20.3	33.2

Site 4	8.3 ✓	94 ✓	20.3 ✓	31.6 ✓
Site 4	8.2 ✓	89 ✓	19.9 ✓	31.2 ✓
Site 4	8.2 ✓	82 ✓	20.1 ✓	31.3 ✓
Site 4	8.1 ✓	88 ✓	20.1 ✓	31.9 ✓
Site 4	8.2 ✓	85 ✓	20.0 ✓	32.1 ✓
Site 4	8.3 ✓	83 ✓	20.2 ✓	32.0 ✓
Site 4	8.3 ✓	83 ✓	20.2 ✓	31.9 ✓
Site 4	8.3 ✓	84 ✓	20.2 ✓	31.8 ✓
Site 4	8.1 ✓	65 ✓	20.3 ✓	31.9 ✓

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 5	Mean	8.0	88	20.1	32.3
Site 5	Minimum	7.9	78	19.0	31.2
Site 5	Maximum	8.2	94	21.1	33.1

Site 5	8.0 ✓	89 ✓	19.3 ✓	33.0 ✓
Site 5	8.0 ✓	88 ✓	19.7 ✓	32.9 ✓
Site 5	8.0 ✓	80 ✓	19.7 ✓	32.9 ✓
Site 5	8.0 ✓	88 ✓	19.0 ✓	33.0 ✓
Site 5	8.0 ✓	88 ✓	19.7 ✓	33.0 ✓
Site 5	7.9 ✓	94 ✓	21.0 ✓	33.1 ✓
Site 5	8.2 ✓	92 ✓	20.7 ✓	33.1 ✓
Site 5	8.1 ✓	91 ✓	20.1 ✓	32.5 ✓
Site 5	8.0 ✓	87 ✓	20.3 ✓	32.4 ✓

Site 5	7.9 ✓	89 ✓	21.1 ✓	31.4 ✓
Site 5	8.0 ✓	91 ✓	20.0 ✓	31.2 ✓
Site 5	8.0 ✓	94 ✓	19.9 ✓	31.4 ✓
Site 5	7.9 ✓	91 ✓	20.3 ✓	31.8 ✓
Site 5	7.9 ✓	78 ✓	20.2 ✓	31.9 ✓
Site 5	8.1 ✓	86 ✓	20.3 ✓	32.1 ✓
Site 5	8.1 ✓	84 ✓	20.2 ✓	32.0 ✓
Site 5	8.1 ✓	84 ✓	20.2 ✓	31.9 ✓
Site 5	8.1 ✓	86 ✓	20.2 ✓	32.1 ✓

Sample ID	Statistic	pH.	D.O.	Temp.	Sal.
Site 6	Mean	8.0	85	20.2	32.3
Site 6	Minimum	7.8	78	19.6	31.2
Site 6	Maximum	8.1	92	21.0	33.1

Site 6	8.1 ✓	88 ✓	19.7 ✓	33.1 ✓
Site 6	8.1 ✓	85 ✓	19.7 ✓	32.9 ✓
Site 6	8.1 ✓	88 ✓	19.7 ✓	32.9 ✓
Site 6	8.1 ✓	84 ✓	19.7 ✓	32.9 ✓

Sample ID	Statistic			pH.	D.O.	Temp.	Sal.
	Mean	Minimum	Maximum				
Site 6	8.1✓	19.6✓	33.0✓	8.0	88	20.1	32.3
Site 6	7.8✓	20.7✓	33.0✓	7.9	80	19.5	31.3
Site 6	8.1✓	20.4✓	33.0✓	8.2	100	20.5	33.1
Site 6	8.0✓	20.5✓	32.2✓				
Site 6	8.0✓	20.2✓	32.4✓				
Site 6							
Site 6	7.9✓	21.0✓	31.3✓				
Site 6	7.9✓	19.7✓	31.2✓				
Site 6	7.9✓	20.3✓	31.3✓				
Site 6	7.8✓	20.2✓	31.8✓				
Site 6	8.0✓	20.2✓	31.9✓				
Site 6	8.0✓	20.3✓	32.0✓				
Site 6	8.1✓	20.4✓	31.9✓				
Site 6	8.0✓	20.2✓	31.9✓				
Site 6	8.0✓	20.2✓	31.9✓				
Site 9	8.1✓	19.5✓	33.0✓				
Site 9	8.1✓	19.6✓	32.8✓				
Site 9	8.1✓	19.7✓	32.9✓				
Site 9	8.1✓	19.6✓	33.0✓				
Site 9	8.1✓	19.8✓	33.0✓				
Site 9	8.0✓	20.3✓	33.0✓				
Site 9	8.2✓	20.2✓	33.1✓				
Site 9	8.0✓	20.1✓	32.5✓				
Site 9	8.1✓	20.5✓	32.4✓				
Site 9							
Site 9	8.0✓	20.3✓	31.3✓				
Site 9	8.0✓	19.9✓	31.3✓				
Site 9	7.9✓	20.2✓	31.4✓				
Site 9	7.9✓	20.3✓	31.9✓				
Site 9	8.0✓	20.2✓	31.9✓				
Site 9	8.1✓	20.3✓	32.0✓				
Site 9	8.0✓	20.2✓	31.9✓				
Site 9	8.1✓	20.3✓	32.1✓				
Site 9	8.0✓	20.4✓	32.0✓				

ACOE Marina Del Rey  
Neanthes SP Summary

LabID	SampleID	Sample Type	Organism	Initial # Organisms	Lab Replicate	# Survival	Replicate survival	Mean Survival	Standard Dev
	Control 1	Sediment	Neanthes	10	1	10	100		
	Control 1	Sediment	Neanthes	10	2	10	100		
	Control 1	Sediment	Neanthes	10	3	8	90		
	Control 1	Sediment	Neanthes	10	4	10	100		
	Control 1	Sediment	Neanthes	10	5	9	90	96	5.48
	Control 2	Sediment	Neanthes	10	1	0	0		
	Control 2	Sediment	Neanthes	10	2	0	0		
	Control 2	Sediment	Neanthes	10	3	0	0		
	Control 2	Sediment	Neanthes	10	4	0	0		
	Control 2	Sediment	Neanthes	10	5	0	0	0	0.00
	Reference	Sediment	Neanthes	10	1	10	100		
	Reference	Sediment	Neanthes	10	2	10	100		
	Reference	Sediment	Neanthes	10	3	10	100		
	Reference	Sediment	Neanthes	10	4	10	100		
	Reference	Sediment	Neanthes	10	5	10	100	100	0.00
	Area 3	Sediment	Neanthes	10	1	10	100		
	Area 3	Sediment	Neanthes	10	2	10	100		
	Area 3	Sediment	Neanthes	10	3	8	80		
	Area 3	Sediment	Neanthes	10	4	10	100		
	Area 3	Sediment	Neanthes	10	5	9	90	94	8.94
	Area 4	Sediment	Neanthes	10	1	10	100		
	Area 4	Sediment	Neanthes	10	2	10	100		
	Area 4	Sediment	Neanthes	10	3	10	100		
	Area 4	Sediment	Neanthes	10	4	10	100		
	Area 4	Sediment	Neanthes	10	5	10	100	100	0.00
	Area 5	Sediment	Neanthes	10	1	10	100		
	Area 5	Sediment	Neanthes	10	2	10	100		
	Area 5	Sediment	Neanthes	10	3	10	100		
	Area 5	Sediment	Neanthes	10	4	10	100		
	Area 5	Sediment	Neanthes	10	5	9	90	98	4.47
	Area 6	Sediment	Neanthes	10	1	10	100		
	Area 6	Sediment	Neanthes	10	2	10	100		
	Area 6	Sediment	Neanthes	10	3	10	100		
	Area 6	Sediment	Neanthes	10	4	9	90		
	Area 6	Sediment	Neanthes	10	5	10	100	98	4.47
	Area 9	Sediment	Neanthes	10	1	10	100		
	Area 9	Sediment	Neanthes	10	2	10	100		
	Area 9	Sediment	Neanthes	10	3	10	100		
	Area 9	Sediment	Neanthes	10	4	10	100		
	Area 9	Sediment	Neanthes	10	5	10	100	100	0.00



**APPENDIX F**

**Tissue Bioaccumulation Tests**





Marina Del Rey 28 day Bioaccumulation  
Survival Data  
Date: 1/15/98

Start time/date of depuration:	1/15/98 18:30
End time/date of depuration:	1/16/98 17:30

Control + Reference sit  
Completed 1/15/98 12:00  
Put in jars 1/16/98 14:00

### MACOMA Survival

Area/Site	Rep1	Rep2	Rep3	Rep4	Rep5	Total
Control	29	29	29	30	29	146
Reference	30	27	30	30	30	147
3	27	29	29	29	28	142
4	30	29	29	29	30	147
5	30	30	30	30	29	149
6	30	30	30	30	29	149
9	30	30	30	30	30	150

Start: 30 Clams / Rep → 150 Worms / site

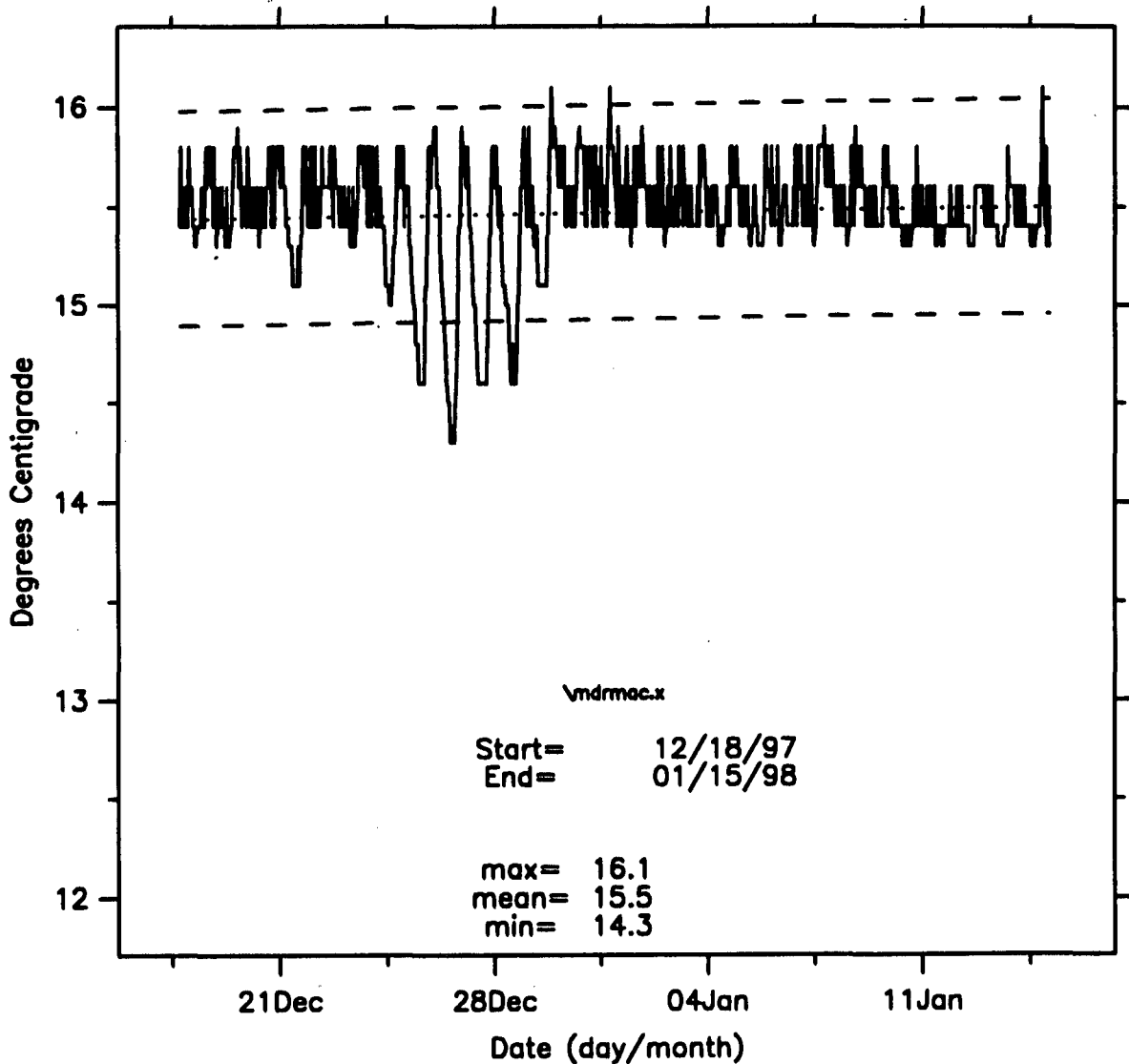
### NEPHTYS Survival

Area/Site	Rep1	Rep2	Rep3	Rep4	Rep5	Total
Control	67	62	75 <sup>4</sup>	72	74	350
Reference	78	75	74	73	69	369
3	50 <sup>4</sup> (2)	71	72	62	52	307
4	74	71	71 <sup>2</sup> (3)	75	69	360
5	71	70	71	70	76	358
6	70	73	71	53	69	336
9	67	74	75	66	72	354

COMMENTS: DIE 1.15.98 AM  
 (2) Lost 1 worm 1/15/98 AM  
 (3) DIE 1.15.98 AM

Start: 75 Worms/Rep  
or 375 Worms/site

TECHNICIANS: AM, MI, DB



**Test Temperature Recorded At 5 Minute Intervals**  
 (dotted line = predicted mean temperature, dashed line = 95% confidence bounds)

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Control

Sample ID: C471216.01	Species/Common Name: Macoma Nephthys	Study Director Krause	Test Location: Harbour
QA Batch # :	Organism Batch No. KS 2960 JBS 1414	No. Organisms/Rep: Rep: 15 Mac: 30	Hobo SN: 2296

Day 0		Date: 12/18/97	Time: 0940			Initials: DB	
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	
Temp (°C)	① <del>15.7</del> 4	15.7	15.7	15.7	15.6	15.8	
D.O. (%Sat)	① <del>86</del> 4	88	89	89	89	89	
Salinity	4	32.6	32.6	32.6	32.6	32.6	
pH	8	8.1	8.0	8.2	8.2	8.3	
Flow Rate (sec/50cc)		8	8	8	8	8	

Day 1		Date: 12/19/97	Time: 0910			Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)		
Meter ID	4	4	4	8			
Rep 1	16.0	98	33.0	8.1	8		

Day 2		Date: 12/20/97	Time: 10:30			Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)		
Meter ID	4	4	4	8			
Rep 2	16.0	②	32.5	7.7	8		

Day 3		Date: 12-21-97	Time: 1000			Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)		
Meter ID	③ <del>3</del> 3	3	4	8			
Rep 3	15.9	106	32.6	8.1	8		

Time Animals in Macoma 11:30  
 Nephthys 16:30

① WC DB 12-18-97  
 ② NR AM 12/20/97 Meter malfunction  
 MEC Analytical Systems Inc.

③ brought meter #3 cal @ 0.79 DB 12-21-97

Control

Day 4		Date: 12/22/97	Time: 0800		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.0	10	32.6	8.2	8

Day 5		Date: 12.23.97	Time: 1000		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.3	96	32.6	8.1	8

Day 6		Date: 12.12/24/97	Time: 0845		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	95	32.5	8.2	8

Day 7		Date: 12/25/97	Time: 10:00		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.1	99	32.5	8.2	8

Day 8		Date: 12.26.97	Time: 1455		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	10 <sup>min</sup>	1	4	8	
Rep 3	15.7	95	32.5	8.2	8

Day 9		Date: 12.27.97	Time: 1255		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.3	95	32.6	8.1	8

(1) NR - Meter malfunction AM 12/22/97  
 (2) IE AM 12/22/97 (3) SM 12.26.97 MAI

Sample I.D.:

Control

Day 10		Date: 12.28.97	Time: 1105	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.0	102	32.6	8.0	8

Day 11		Date: 12/29/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	14.8	105	32.6	8.2	8

Day 12		Date: 12/30/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.1	100	32.5	8.2	8

Day 13		Date: 12.31.97	Time: 0955	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	98	32.4	8.1	8

Day 14		Date: 1/1/98	Time: 1425	Initials: VLD	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.8	95	32.5	8.2	8 (VLD)

Day 15		Date: 1.2.98	Time: 0955	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	96	32.5	8.2	8

1/1/98 ME VLD



Sample I.D.: Control

Day 16		Date: 1-3-98	Time: 1100	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.6	96	32.5	7.9	8

Day 17		Date: 1-4-98	Time: 0955	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6	91	32.5	8.1	8

Day 18		Date: 1-5-98	Time: 1500	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.4	98	32.6	8.1	8

Day 19		Date: <sup>⊕</sup> 1/5 AM 1/5/98	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	14.9	95	32.3	8.2	8

Day 20		Date: 1-7-98	Time: 1000	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.6	100	32.5	8.2	8

Day 21		Date: 1-8-98	Time: 1025	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.6	97	32.4	8.3	8

⊕ FE AM 1/6/98

Sample I.D.: Control

<b>Day 22</b>		Date: <u>1.9.98</u>	Time: <u>1155</u>		Initials: <u>MAI</u>	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	<u>1</u>	<u>1</u>	<u>4</u>	<u>8</u>		
Rep 2	<u>15.6</u>	<u>96</u>	<u>32.5</u>	<u>8.3</u>	<u>8</u>	

<b>Day 23</b>		Date: <u>1.10.98</u>	Time: <u>1450</u>		Initials: <u>MAI</u>	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	<u>1</u>	<u>1</u>	<u>4</u>	<u>8</u>		
Rep 3	<u>15.6</u>	<u>99</u>	<u>32.4</u>	<u>8.2</u>	<u>8</u>	

<b>Day 24</b>		Date: <u>1-11-98</u>	Time: <u>1200</u>		Initials: <u>DB</u>	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	<u>1</u>	<u>1</u>	<u>4</u>	<u>8</u>		
Rep 4	<u>15.7</u>	<u>111</u>	<u>32.3</u>	<u>8.1</u>	<u>8</u>	

<b>Day 25</b>		Date: <u>1-12-98</u>	Time: <u>1010</u>		Initials: <u>DB</u>	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	<u>1</u>	<u>1</u>	<u>4</u>	<u>8</u>		
Rep 5	<u>15.5</u>	<u>97</u>	<u>32.2</u>	<u>8.1</u>	<u>8</u>	

<b>Day 26</b>		Date: <u>1.13.98</u>	Time: <u>0940</u>		Initials: <u>MAI</u>	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	<u>1</u>	<u>1</u>	<u>4</u>	<u>8</u>		
Rep 1	<u>15.5</u>	<u>100</u>	<u>32.2</u>	<u>8.2</u>	<u>8</u>	

<b>Day 27</b>		Date: <u>1.14.98</u>	Time: <u>1025</u>		Initials: <u>MAI</u>	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	<u>1</u>	<u>1</u>	<u>4</u>	<u>8</u>		
Rep 2	<u>15.7</u>	<u>98</u>	<u>32.1</u>	<u>8.3</u>	<u>8</u>	

Sample I.D.:

Day 28		Date: 1-15-98	Time: 0835	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
rep 3	15.6	102	32.2	8.1	8
# Survivors/Mac	Rep 1 = 29	Rep 2 = 29	Rep 3 = 29	Rep 4 = 30	Rep 5 = 29
# Survivors/Nep	Rep 1 = 67	Rep 2 = 62	Rep 3 = 75	Rep 4 = 72	Rep 5 = 74

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Reference

Sample ID: C971216.06	Species/Common Name: Macoma Nephys	Study Director Krause	Test Location: Harbor
QA Batch # :	Organism Batch No. JD1414/KS7960	No.Organisms/Rep: Nep: 75 Mac: 30	Hobo SN: 2296

<b>Day 0</b>	Date: 12/18/97	Time: 0945	Initials: AM			
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Temp (°C)	4	15.8	15.8	15.8	16.0	15.9
D.O. (%Sat)	4	90	90	91	91	90
Salinity	4	32.6	32.6	32.6	32.6	32.6
pH	8	8.4	8.4	8.4	8.4	8.4
Flow Rate (sec/50cc)		8	8	8	8	8

<b>Day 1</b>	Date: 12/19/97	Time: 0910	Initials: AM		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 1	15.9	98	32.6	8.2	8

<b>Day 2</b>	Date: 12/20/97	Time: 1030	Initials: AM		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 2	16.0	(5) AM	32.6	7.8	8

<b>Day 3</b>	Date: 12-21-97	Time: 1000	Initials: DB		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	3	3	4	8	
Rep 3	15.8	104	32.6	8.1	8

(5) NR Meter mal function 12/20/97 AM

Ref

Day 4		Date: 12/22/97	Time: 0800	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.2	0	32.7	8.1	8

Day 5		Date: 12.23.97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.3	93	32.6	8.1	8

Day 6		Date: 12/24/97	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.6	94	32.5	8.2	8

Day 7		Date: 12/25/97	Time: 1000	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.3	95	32.5	7.8	8

Day 8		Date: 12.26.97	Time: 1505	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.5	100	32.5	8.3	8

Day 9		Date: 12.27.97	Time: 1245	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.4	95	32.5	8.1	8

0 NR - Meter malfunction AM 12/22/97

Sample I.D.:

Ref

Day 10		Date: 12-28-97	Time: 1105	Initials: 83	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	14.9	101	32.6	8.1	8

Day 11		Date: 12/29/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	14.8	100	32.6	8.2	8

Day 12		Date: 12/30/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.0	96	32.5	8.3	8

Day 13		Date: 12.31.97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	98	32.5	8.2	8

Day 14		Date: 1-1-98	Time: 1335	Initials: VLD	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.8	96	32.5	8.2	8

Day 15		Date: 1.2.98	Time: 0950	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	95	32.5	8.2	8

Sample I.D.:

Rel

Day 16		Date: 1.3.98	Time: 1105	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.4	97	32.4	7.9	8

Day 17		Date: 1-4-98	Time: 0955	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.8	99	32.5	8.2	8

Day 18		Date: 1-5-98	Time: 1500	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.3	100	32.4	8.2	8

Day 19		Date: 1/6/98	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.2	98	32.4	8.1	8

Day 20		Date: 1-7-98	Time: 1000	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.5	100	32.4	8.3	8

Day 21		Date: 1-8-98	Time: 1030	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.6	97	32.4	8.3	8

Sample I.D.:

Ref

Day 22		Date: 1.9.98	Time: 1150	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6	97	32.4	8.3	8

Day 23		Date: 1.10.98	Time: 1455	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	95	32.3	8.3	8

Day 24		Date: 1-11-98	Time: 1200	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.8	97	32.4	8.1	8

Day 25		Date: 1-12-98	Time: 1010	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.5	97	32.3	8.1	8

Day 26		Date: 1.13.98	Time: 0945	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.3	93	32.2	8.3	8

Day 27		Date: 1.14.98	Time: 1025	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.8	96	32.1	8.3	8



Sample I.D.:

Day 28		Date: 1-15-98	Time: 0835	Initials: JB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
rep 3	15.4	105	32.1	8.1	8
# Survivors/Mac	Rep 1 = 30	Rep 2 = 27	Rep 3 = 30	Rep 4 = 30	Rep 5 = 30
# Survivors/Nep	Rep 1 = 78	Rep 2 = 75	Rep 3 = 74	Rep 4 = 73	Rep 5 = 69

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Area 3

Sample ID: C971215.01	Species/Common Name: Maloma/Nephtys	Study Director Krause	Test Location: Harbor
QA Batch # :	Organism Batch No. KS7960	No. Organisms/Rep: Rep: 75 Mac: 30	Hobo SN: 2296

JD 1414

Day 0	Date: 12/18/97	Time: 0945	Initials: AM			
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Temp (°C)	4	15.8	15.8	15.7	15.8	15.7
D.O. (%Sat)	4	88	88	89	89	87
Salinity	4	32.6	32.6	32.6	32.6	32.6
pH	8	8.3	8.3	8.2	8.3	8.0
Flow Rate (sec/50cc)		8	8	8	8	8

Day 1	Date: 12/19/97	Time: 0910	Initials: AM		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 1	16.0	95	33.0	8.1	8

Day 2	Date: 12/20/97	Time: 1030	Initials: AM		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 2	16.2	(2)	32.5	7.9	8

Day 3	Date: 12-21-97	Time: 1000	Initials: B3		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	3	3	4	8	
Rep 3	15.9	104	32.5	8.2	8

(5) NR Meter malfunction AM 12/20/97

A-3

Day 4		Date: 12/22/97	Time: 0800	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.2	10	32.6	7.7	8

Day 5		Date: 12.23-97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.3	91	32.6	7.9	8

Day 6		Date: 12/24/97	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.4	92	32.2	7.9	8

Day 7		Date: 12/25/97	Time: 10:00	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.2	88	32.5	8.1	8

Day 8		Date: 12.26.97	Time: 1455	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.6	95	32.6	8.2	8

Day 9		Date: 12.27.97	Time: 1250	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.4	92	32.5	8.1	8

Ⓟ NR meter malfunction 12/22/97 AM

Sample I.D.:

A-3

Day 10		Date: 12-28-97	Time: 1105		Initials: DB
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	14.9	98	32.5	8.1	8

Day 11		Date: 12/29/97	Time: 0830		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	14.8	100	32.6	8.1	8

Day 12		Date: 12/30/97	Time: 0830		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.1	95	32.6	8.2	8

Day 13		Date: 12.31.97	Time: 0955		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	98	32.5	8.1	8

Day 14		Date: 1-1-98	Time: 1339		Initials: VLD
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.9	96	32.5	8.2	8

Day 15		Date: 1.2.98	Time: 0945		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	93	32.4	8.1	8

Sample I.D.: A3

Day 16		Date: 1.3.98	Time: 1100		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.8	96	32.4	7.9	8	

Day 17		Date: 1-4-98	Time: 0955		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.7	109	32.5	8.2	8	

Day 18		Date: 1-5-98	Time: 1500		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 3	15.3	98	32.5	8.2	8	

Day 19		Date: 1/6/98	Time: 0845		Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 4	15.3	88	32.4	8.1	8	

Day 20		Date: 1-7-98	Time: 1000		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	15.4	95	32.4	8.1	8	

Day 21		Date: 1.8.98	Time: 1025		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.7	95	32.4	8.3	8	

Sample I.D.:

A3

Day 22		Date: 1.9.98	Time: 1150	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6 <sup>15.7</sup>	98 <sup>95</sup>	32.4	8.3	8

Day 23		Date: 1.10.98	Time: 1445	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.6	94	32.4	8.1	8

Day 24		Date: 1-11-98	Time: 1200	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.8	95	32.3	8.1	8

Day 25		Date: 1-12-98	Time: 1010	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.5	103	32.3	8.2	8

Day 26		Date: 1.13.98	Time: 0940	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	98	32.1	8.2	8

Day 27		Date: 1.14.98	Time: 1020	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.8	96	32.2	8.3	8

① Wrong data sheet 1.9.98 MAI

Sample I.D.:

Day 28		Date: 1-15-98	Time: 0835	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
14p 3	15.5	101	321	8.1	8
# Survivors/Mac	Rep 1 = 27	Rep 2 = 29	Rep 3 = 29	Rep 4 = 29	Rep 5 = 28
# Survivors/Nep	Rep 1 = 51	Rep 2 = 71	Rep 3 = 72	Rep 4 = 62	Rep 5 = 52

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Area 4

Sample ID: C471215.02	Species/Common Name: Macoma Nephys	Study Director Krause	Test Location: Harbor
QA Batch # :	Organism Batch No. KS7460	No. Organisms/Rep: Rep: 75 Mac: 30	Hobo SN: 2296

JB 1414

Day 0	Date: 12/18/97	Time: 0950	Initials: AM/DB			
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Temp (°C)	4	15.8	15.8	15.8	15.8	15.8
D.O. (%Sat)	4	88	88	88	89	89
Salinity	4	32.6	32.6	32.6	32.6	32.6
pH	8	8.3	8.3	8.3	8.3	8.3
Flow Rate (sec/50cc)		8	8	8	8	8

Day 1	Date: 12/19/97	Time: 0910	Initials: AM		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 1	16.0	95	33.0	8.2	8

Day 2	Date: 12/20/97	Time: 10:30	Initials: AM		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 2	16.1	⊗ AM	32.5	8.0	8

Day 3	Date: 12-21-97	Time: 1015	Initials: DB		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	3	3	4	8	
Rep 3	15.8	103	32.6	8.3	8

⊗ NR Meter malfunction, AM 12/20/97



A-4

Day 4		Date: 12/22/97	Time: 0800	Initials: <sup>D</sup> AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.1	⊕	32.6	7.7	8

Day 5		Date: 12.23.97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.3	96	32.6	8.1	8

Day 6		Date: 12/24/97	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.3	88	32.4	8.2	8

Day 7		Date: 12/25/97	Time: 1000	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	14.9	97	32.5	7.8	8

Day 8		Date: 12.26.97	Time: 1500	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.6	96	32.5	8.2	8

Day 9		Date: 12.27.97	Time: 1250	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.4	97	32.5	8.1	8

⊕ IE AM 12/22/97  
 ⊕ NR Meter mal function 12/22/97  
 MEC Analytical Systems Inc.

Sample I.D.:

A-4

Day 10		Date: 12-29-97	Time: 1105		Initials: DS
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	14.9	102	32.6	8.1	8

Day 11		Date: 12/29/97	Time: 0830		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	14.8	100	32.6	7.8	8

Day 12		Date: 12/30/97	Time: 0830		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.0	95	32.5	7.8	8

Day 13		Date: 12.31.97	Time: 0955		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	97	32.5	8.1	8

Day 14		Date: 1.1.98	Time: 1340		Initials: VLD
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.8	93	32.5	8.2	8

Day 15		Date: 1.2.98	Time: 0955		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	97	32.5	8.2	8

Sample I.D.: A 4

Day 16		Date: 1-3-98	Time: 1100	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.5	96	32.5	7.9	8

Day 17		Date: 1-4-98	Time: 1000	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6	92	32.5	8.2	8

Day 18		Date: 1-5-98	Time: 1505	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.3	100	32.4	8.1	8

Day 19		Date: 1/6/98	Time: 0815	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	14.9	98	32.4	8.3	8

Day 20		Date: 1-7-98	Time: 1005	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.6	98	32.4	8.3	8

Day 21		Date: 1-8-98	Time: 1030	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.6	95	32.4	8.3	8

Sample I.D.: A4

Day 22		Date: 1-9-98	Time: 1150	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6	98	32.4	8.3	8

Day 23		Date: 1-10-98	Time: 1450	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.6	94	32.4	8.2	8

Day 24		Date: 1-11-98	Time: 1200	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.8	93	32.4	8.1	8

Day 25		Date: 1-12-98	Time: 1010	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.6	99	32.3	8.2	8

Day 26		Date: 1-13-98	Time: 0945	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.3	98	32.3	8.3	8

Day 27		Date: 1-14-98	Time: 1020	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.7	96	32.1	8.3	8

Sample I.D.:

Day 28		Date: 1.15.98	Time: 0840		Initials: DB/MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	1	8	
Rep 3	15.4	103	32.1	8.1	8
# Survivors/Mac	Rep 1 = 30	Rep 2 = 29	Rep 3 = 29	Rep 4 = 29	Rep 5 = 30
# Survivors/Nep	Rep 1 = 74	Rep 2 = 71	Rep 3 = 71	Rep 4 = 75	Rep 5 = 69

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Area 5

Sample ID: C971215.03	Species/Common Name: Macoma / Nereis	Study Director Krause	Test Location: Harbor
QA Batch # :	Organism Batch No. K57960	No. Organisms/Rep: Rep: 75 Mac: 30	Hobo SN: 2296

JB1414

<b>Day 0</b>	Date: 12/18/97	Time: 0950	Initials: AN/DB			
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Temp (°C)	4	15.9	15.8	15.8	15.9	15.8
D.O. (%Sat)	4	89	88	88	88	89
Salinity	4	32.6	32.6	32.6	32.5	32.6
pH	8	8.3	8.3	8.4	8.4	8.4
Flow Rate (sec/50cc)		8	8	8	8	8

<b>Day 1</b>	Date: 12/19/97	Time: 0910	Initials: AN			
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	4	4	4	8		
Rep 1	16.0	93	33.0	8.2	8	

<b>Day 2</b>	Date: 12/20/97	Time: 10:30	Initials: AN			
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	4	4	4	8		
Rep 2	16.1	79.0	32.6	7.9	8	

<b>Day 3</b>	Date: 12-21-97	Time: 1015	Initials: DB			
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	3	3	4	8		
Rep 3	15.9	104	32.5	8.3	8	

② NR Meter malfunction 12/20/97 AN

A-5

Day 4		Date: 12/22/97	Time: 0810	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.2	94.8 AM	32.5	8.0	8

Day 5		Date: 12.23.97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.5	95	32.6	8.1	8

Day 6		Date: 12/24/97	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	94	32.5	7.9	8

Day 7		Date: 12/25/97	Time: 1000	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6	89	32.5	8.0	8

Day 8		Date: 12.26.97	Time: 1505	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.6	96	32.4	8.3	8

Day 9		Date: 12.27.97	Time: 1245	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.4	94	32.6	8.0	8

① NR/IE Meter malfunction, 12/22/97 AM

Sample I.D.:

A-5

Day 10		Date: 12-28-97	Time: 1110	Initials: BS	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.0	102	32.6	8.1	8

Day 11		Date: 12/29/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	14.8	100	32.6	8.1	8

Day 12		Date: 12/30/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.1	93	32.4	7.7	8

Day 13		Date: 12.31.97	Time: 1005	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	96	32.5	8.2	8

Day 14		Date: 1-1-98	Time: 1345	Initials: VLD	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.7	92	32.5	8.3	8

Day 15		Date: 1-2-98	Time: 0950	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	94	32.5	8.1	8



Sample I.D.:

AS

Day 16		Date: 1.3.98	Time: 1045		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.6	96	32.5	7.9	8	

Day 17		Date: 1-4-98	Time: 1000		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.7	98	32.4	8.2	8	

Day 18		Date: 1-5-98	Time: 1505		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 3	15.4	99	32.5	8.2	8	

Day 19		Date: 1/6/98	Time: 0845		Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 4	15.3	98	32.5	8.0	8	

Day 20		Date: 1-7-98	Time: 1005		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	15.4	100	32.5	8.3	8	

Day 21		Date: 1.8.98	Time: 1020		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.6	92	32.4	8.2	8	

Sample I.D.: AS

Day 22		Date: 1.9.98	Time: 1150	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.6	98	32.4	8.2	8

Day 23		Date: 1.9.98	Time: 1455	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	93	32.4	8.3	8

Day 24		Date: 1-11-98	Time: 1205	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.7	103	32.3	8.2	② <del>8</del> 8

Day 25		Date: 1-12-98	Time: 1015	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	105	32.3	8.2	8

Day 26		Date: 1-13-98	Time: 0935	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	96	32.2	8.2	8

Day 27		Date: 1-14-98	Time: 1015	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.7	93	32.1	8.2	8

① WDS 1-10-98 MAI  
 ② WC DB 1-11-98

Sample I.D.:

Day 28	Date:	Time:	Initials:		
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.5	99	32.1	8.2	8
# Survivors/Mac	Rep 1 = 30	Rep 2 = 30	Rep 3 = 30	Rep 4 = 30	Rep 5 = 29
# Survivors/Nep	Rep 1 = 71	Rep 2 = 70	Rep 3 = 71	Rep 4 = 70	Rep 5 = 76

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Area 6

Sample ID: C971215.04	Species/Common Name: Macoma Nephys	Study Director Krause	Test Location: Harbour
QA Batch # :	Organism Batch No. K57960	No. Organisms/Rep: Nep: 75 Mac: 30	Hobo SN: 2296

JB 12/14/97

Day 0	Date: 12/18/97	Time: 0955	Initials: AM/DB			
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Temp (°C)	4	15.9	15.9	15.8	16.0	15.9
D.O. (%Sat)	4	89	88	87	89	89
Salinity	4	32.6	32.6	32.6	32.6	32.6
pH	8	8.3	8.4	8.4	8.4	8.4
Flow Rate (sec/50cc)		8	8	8	8	8

Day 1	Date: 12/14/97	Time: 0910	Initials: AM			
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	4	4	4	8		
Rep 1	16.0	97.98.38	33.0	8.2	8	

Day 2	Date: 12/20/97	Time: 1030	Initials: AM			
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	4	4	4	8		
Rep 2	16.1	② AM	32.5	7.8	8	

Day 3	Date: 12-21-97	Time: 1015	Initials: DB			
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	3	3	4	8		
Rep 3	16.0	104	32.5	8.3	8	

- ① JE AM 12/16/97
- ② NE Meter not function, 12/20/97 AM
- ③ IE AM 12/18/97

A-6

Day 4		Date: 12/22/97	Time: 0810	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.4	①	32.6	8.0	8

Day 5		Date: 12.23.97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.3	96	32.6	8.1	8

Day 6		Date: 12/24/97	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	94	32.5	8.1	8

Day 7		Date: 12/25/97	Time: 1000	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.1	88	32.5	8.0	② AM 8

Day 8		Date: 12.26.97	Time: 1505	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	92	32.4	8.3	8

Day 9		Date: 12.27.97	Time: 1245	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	③ <del>15.7</del>	① <del>97</del>	4	8	
Rep 4	15.4	94	32.5	8.1	8

① NR Meter malfunction 12/22/97 AM  
 ② SM 12/25/97 AM  
 ③ WC 12.27.97 MAI

Sample I.D.:

A-6

Day 10		Date: 12-28-97	Time: 1110		Initials: DS	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	14.9	99	32.6	8.1	8	

Day 11		Date: 12/29/97	Time: 0830		Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	14.6	102	32.4	7.8	8	

Day 12		Date: 12/30/97	Time: 0830		Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.2	94	32.6	7.9	8	

Day 13		Date: 12.31.97	Time: 1000		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 3	15.7	94	32.4	8.2	8	

Day 14		Date: 1-1-98	Time: 1345		Initials: VLD	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 4	15.5	95	32.5	8.3	8	

Day 15		Date: 1.2.98	Time: 0950		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	15.7	94	32.4	8.2	8	

Sample I.D.:

A6

Day 16		Date: 1.3.98	Time: 1055	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	100	32.4	7.9	8

Day 17		Date: 1-4-98	Time: 1005	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.8	99	32.6	8.3	8

Day 18		Date: 1-5-98	Time: 1505	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.6	97	32.5	8.3	8

Day 19		Date: 1/6/98	Time: 0845	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.3	90	32.5	7.7	8

Day 20		Date: 1-7-98	Time: 1010	Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.5	97	32.4	8.4	8

Day 21		Date: 1.8.98	Time: 1025	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.6	95	32.4	8.2	8

Sample I.D.:

A6

Day 22		Date: 1-9-98	Time: 1145		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID		1	4	8		
Rep 2	15.6	101	32.4	8.2	8	

Day 23		Date: 1-10-98	Time: 1450		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 3	15.7	94	32.3	8.3	8	

Day 24		Date: 1-11-98	Time: 1205		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 4	15.6	98	32.3	8.2	8	

Day 25		Date: 1-12-98	Time: 1015		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	15.6	98	32.3	8.2	8	

Day 26		Date: 1-13-98	Time: 0940		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.7	95	32.2	8.2	8	

Day 27		Date: 1-14-98	Time: 1010		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.6	98	32.1	8.1	8	



Sample I.D.:

Day 28		Date: 1.15.98	Time: 0840	Initials: MAI/DA	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	98	32.1	8.2	8
# Survivors/Mac	Rep 1 = 30	Rep 2 = 30	Rep 3 = 30	Rep 4 = 30	Rep 5 = 29
# Survivors/Nep	Rep 1 = <del>30</del> 30	Rep 2 = <del>30</del> 30	Rep 3 = 71	Rep 4 = 53	Rep 5 = 69

① IE AM 1/21/98

**MEC Analytical Systems Inc.**  
**28-DAY BIOACCUMULATION DATA SHEET**

Area 9

Sample ID: C171216.05	Species/Common Name: Macoma / Nephys	Study Director Krause	Test Location: Harbor
QA Batch # :	Organism Batch No. K57960 JB1414	No.Organisms/Rep: Rep: 75 Mac:30	Hobo SN: 2296

Day 0		Date: 12/18/97	Time: 0955			Initials: AM / DB	
	Meter ID	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	
Temp (°C)	4	15.9	15.8	15.9	15.8	15.8	
D.O. (% Sat)	4	89	90	90	90	89	
Salinity	4	32.6	32.6	32.6	32.6	32.6	
pH	8	8.4	8.4	8.4	8.4	8.4	
Flow Rate (sec/50cc)		8	8	8	8	8	

Day 1		Date: 12/19/97	Time: 0910			Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)		
Meter ID	4	4	4	8			
Rep 1	16.0	96	32.6	8.2	8		

Day 2		Date: 12/20/97	Time: 10:30			Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)		
Meter ID	4	4	4	8			
Rep 2	15.9	(2) AM	32.6	7.9	8		

Day 3		Date: 12-21-97	Time: 1015			Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)		
Meter ID	3	3	4	8			
Rep 3	16.0	105	32.5	8.3	8		

(2) NR Meter malfunction 12/20/97 AM

A-9

Day 4		Date: 12/22/97	Time: 0810		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	4	4	4	8	
Rep 4	15.1	10	32.6	8.1	8

Day 5		Date: 1223.97	Time: 1000		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.3	94	32.6	8.2	8

Day 6		Date: 12/24/97	Time: 0845		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	15.7	100	32.6	7.7	8

Day 7		Date: 12/25/97	Time: 1000		Initials: AM
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	14.7	96	32.6	8.2	8

Day 8		Date: 12.26.97	Time: 1500		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	100	32.4	8.2	8

Day 9		Date: 12.27.97	Time: 1255		Initials: MAI
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.3	96	32.5	8.1	8

① NR Meter malfunction, AM 12/22/97

Sample I.D.:

A-9

Day 10		Date: 12-28-97	Time: 1110	Initials: DJ	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	14.9	99	32.6	8.1	8

Day 11		Date: 12/29/97	Time: 0830	Initials: AL	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 1	14.8	102	32.6	8.1	8

Day 12		Date: 12/30/97	Time: 0830	Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 2	15.0	94	32.6	8.2	8

Day 13		Date: 12.31.97	Time: 1000	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	98	32.4	8.2	8

Day 14		Date: 1-1-98	Time: 1349	Initials: VLD	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 4	15.3	96	32.4	8.3	8

Day 15		Date: 1.2.98	Time: 0955	Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 5	15.7	98	32.4	8.2	8

① 12-31-97 MAI

Sample I.D.:

A9

<b>Day 16</b>		Date: 1-3-98	Time: 1040		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.5	95	32.5	8.0	8	

<b>Day 17</b>		Date: 1-4-98	Time: 1005		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.7	102	32.5	8.2	8	

<b>Day 18</b>		Date: 1-5-98	Time: 1505		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 3	15.5	100	32.6	8.3	8	

<b>Day 19</b>		Date: 1/6/98	Time: 0845		Initials: AM	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 4	15.1	98	32.4	8.2	8	

<b>Day 20</b>		Date: 1-7-98	Time: 1010		Initials: DB	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	15.4	100	32.4	8.4	8	

<b>Day 21</b>		Date: 1-8-98	Time: 1020		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.6	94	32.4	8.2	8	

Sample I.D.:

A9

Day 22		Date: 1.9.98	Time: 1200		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.6	94	32.4	8.3	8	

Day 23		Date: 1.10.98	Time: 1450		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 3	15.7	97	32.4	8.2	8	

Day 24		Date: 1-11-98	Time: 1205		Initials: DS	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 4	15.3	97	32.3	8.1	8	

Day 25		Date: 1-12-98	Time: 1015		Initials: DS	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 5	15.6	97	32.3	8.2	8	

Day 26		Date: 1.13.98	Time: 0935		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 1	15.7	98	32.2	8.3	8	

Day 27		Date: 1.14.98	Time: 1030		Initials: MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)	
Meter ID	1	1	4	8		
Rep 2	15.7	97	32.1	8.3	8	

Sample I.D.:

Day 28		Date: 1.15.98	Time: 0840	Initials: DB/MAI	
Parameter (Units)	Temp (°C)	D.O. (% Sat)	Salinity(‰)	pH	Flow (sec/50cc)
Meter ID	1	1	4	8	
Rep 3	15.7	10%	32.1	8.2	8
# Survivors/Mac	Rep 1 = 30	Rep 2 = 30	Rep 3 = 30	Rep 4 = 30	Rep 5 = 30
# Survivors/Nep	Rep 1 = 67	Rep 2 = 74	Rep 3 = 75	Rep 4 = 66	Rep 5 = 72

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	KS7960
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	JB1414
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971216.01
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Station	Control
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Data Entry by:	Watts
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Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer
		Meter	DEG C	Meter	%SAT	Meter	PPT	Meter	pH				
0	1	4	15.7	4	88	4	32.6	8	8.1	8	12/18/97	940	Budris
0	2	4	15.7	4	89	4	32.6	8	8	8	12/18/97	940	Budris
0	3	4	15.7	4	89	4	32.6	8	8.2	8	12/18/97	940	Budris
0	4	4	15.6	4	89	4	32.6	8	8.2	8	12/18/97	940	Budris
0	5	4	15.8	4	89	4	32.6	8	8.3	8	12/18/97	940	Budris
1	1	4	16	4	98	4	33	8	8.1	8	12/19/97	910	Monji
2	2	4	16	4		4	32.5	8	7.7	8	12/20/97	1030	Monji
3	3	3	15.9	3	106	4	32.6	8	8.1	8	12/21/97	1000	Budris
4	4	1	15	1		4	32.6	8	8.2	8	12/22/97	800	Monji
5	5	1	15.3	1	96	4	32.6	8	8.1	8	12/23/97	1000	Irwin
6	1	1	15.7	1	95	4	32.5	8	8.2	8	12/24/97	845	Monji
7	2	1	15.1	1	99	4	32.5	8	8.2	8	12/25/97	1000	Monji
8	3	1	15.7	1	95	4	32.5	8	8.2	8	12/26/97	1455	Irwin
9	4	1	15.3	1	95	4	32.6	8	8.1	8	12/27/97	1255	Irwin
10	5	1	15	1	102	4	32.6	8	8	8	12/28/97	1105	Budris
11	1	1	14.8	1	105	4	32.6	8	8.2	8	12/29/97	830	Monji
12	2	1	15.1	1	100	4	32.5	8	8.2	8	12/30/97	830	Monji
13	3	1	15.7	1	98	4	32.4	8	8.1	8	12/31/97	1000	Irwin



**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	KS7960
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	JB1414
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971216.01
Station	Control
Data Entry by:	Watts

Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH	Flow sec/50cc	Date	Time	Observer
		Meter	DEG C	Meter	%SAT	Meter	PPT					
14	4	1	15.8	1	95	4	32.5	8	8.2	01/01/98	1425	Dove
15	5	1	15.7	1	96	4	32.5	8	8.2	01/02/98	955	Irwin
16	1	1	15.6	1	96	4	32.5	8	7.9	01/03/98	1100	Irwin
17	2	1	15.6	1	91	4	32.5	8	8.1	01/04/98	955	Budris
18	3	1	15.4	1	98	4	32.6	8	8.1	01/05/98	1500	Budris
19	4	1	14.9	1	95	4	32.3	8	8.2	01/06/98	845	Monji
20	5	1	15.6	1	100	4	32.5	8	8.2	01/07/98	1000	Budris
21	1	1	15.6	1	97	4	32.4	8	8.3	01/08/98	1025	Irwin
22	2	1	15.6	1	96	4	32.5	8	8.3	01/09/98	1155	Irwin
23	3	1	15.6	1	99	4	32.4	8	8.2	01/10/98	1450	Irwin
24	4	1	15.7	1	111	4	32.3	8	8.1	01/11/98	1200	Budris
25	5	1	15.5	1	97	4	32.2	8	8.1	01/12/98	1010	Budris
26	1	1	15.5	1	100	4	32.2	8	8.2	01/13/98	940	Irwin
27	2	1	15.7	1	98	4	32.1	8	8.3	01/14/98	1025	Irwin
28	3	1	15.6	1	102	4	32.2	8	8.1	01/15/98	835	Budris

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Macoma	29	29	29	30	29

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971216.06
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Station	Reference
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Data Entry by:	Clemens
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Day	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer
	Meter	DEG C	Meter	%SAT	Meter	PPT	Meter	pH				
0	1	4	15.8	4	90	4	32.6	8	8.4	8	945	Monji
0	2	4	15.8	4	90	4	32.6	8	8.4	8	945	Monji
0	3	4	15.8	4	91	4	32.6	8	8.4	8	945	Monji
0	4	4	16	4	91	4	32.6	8	8.4	8	945	Monji
0	5	4	15.9	4	90	4	32.6	8	8.4	8	945	Monji
1	1	4	15.9	4	98	4	32.6	8	8.2	8	910	Monji
2	2	4	16	4		4	32.6	8	7.8	8	1030	Monji
3	3	3	15.8	3	104	4	32.6	8	8.1	8	1000	Budris
4	4	4	15.2	4		4	32.7	8	8.1	8	800	Monji
5	5	1	15.3	1	93	4	32.6	8	8.1	8	1000	Irwin
6	1	1	15.6	1	94	4	32.5	8	8.2	8	845	Monji
7	2	1	15.3	1	95	4	32.5	8	7.8	8	1000	Monji
8	3	1	15.5	1	100	4	32.5	8	8.3	8	1505	Irwin
9	4	1	15.4	1	95	4	32.5	8	8.1	8	1245	Irwin
10	5	1	14.9	1	101	4	32.6	8	8.1	8	1105	Budris
11	1	1	14.8	1	100	4	32.6	8	8.2	8	830	Monji
12	2	1	15	1	96	4	32.5	8	8.3	8	830	Monji
13	3	1	15.7	1	98	4	32.5	8	8.2	8	1000	Irwin

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971216.06
Station	
Reference	
Data Entry by:	Clemens

Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH	Flow sec/50cc	Date	Time	Observer
		Meter	DEG C	Meter	%SAT	Meter	PPT					
14	4	1	15.8	1	96	4	32.5	8	8	01/01/98	1335	Dove
15	5	1	15.7	1	95	4	32.5	8	8	01/02/98	950	Inwin
16	1	1	15.4	1	97	4	32.4	8	8	01/03/98	1105	Inwin
17	2	1	15.8	1	99	4	32.5	8	8	01/04/98	955	Budris
18	3	1	15.3	1	100	4	32.4	8	8	01/05/98	1500	Budris
19	4	1	15.2	1	98	4	32.4	8	8	01/06/98	845	Monji
20	5	1	15.5	1	100	4	32.4	8	8	01/07/98	1000	Budris
21	1	1	15.6	1	97	4	32.4	8	8	01/08/98	1025	Inwin
22	2	1	15.6	1	97	4	32.4	8	8	01/09/98	1150	Inwin
23	3	1	15.7	1	95	4	32.3	8	8	01/10/98	1455	Inwin
24	4	1	15.8	1	97	4	32.4	8	8	01/11/98	1200	Budris
25	5	1	15.5	1	97	4	32.3	8	8	01/12/98	1010	Budris
26	1	1	15.3	1	93	4	32.2	8	8	01/13/98	945	Inwin
27	2	1	15.8	1	96	4	32.1	8	8	01/14/98	1025	Inwin
28	3	1	15.4	1	105	4	32.1	8	8	01/15/98	835	Budris

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Macoma	30	27	30	30	30

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009	Species	Macoma	Species	Nephtys
Job Name	Marina del Rey	Organism Batch #	JD1414	Organism Batch #	KS7960
Project Manager	Krause	Number of Organism/Rep	30	Number of Organism/Rep	75
Test Location	SD Harbor	QA Batch #		QA Batch #	
Hobo Serial Number	2296	Time animals in	11:30	Time animals in	16:30

Sample ID	C971216.06	Station	Area 3	Data Entry by:	Clemens
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Day	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer	
	Replicate	Meter	DEG C	Meter	%SAT	Meter	PPT	Meter					pH
0	1	4	15.8	4	88	4	32.6	8	8.3	8	12/18/97	945	Monji
0	2	4	15.8	4	88	4	32.6	8	8.3	8	12/18/97	945	Monji
0	3	4	15.7	4	89	4	32.6	8	8.2	8	12/18/97	945	Monji
0	4	4	15.8	4	89	4	32.6	8	8.3	8	12/18/97	945	Monji
0	5	4	15.7	4	87	4	32.6	8	8	8	12/18/97	945	Monji
1	1	4	16	4	95	4	33	8	8.1	8	12/19/97	910	Monji
2	2	4	16.2	3		4	32.5	8	7.9	8	12/20/97	1030	Monji
3	3	3	15.9	4	104	4	32.5	8	8.2	8	12/21/97	1000	Budris
4	4	4	15.2	1		4	32.6	8	7.7	8	12/22/97	800	Monji
5	5	1	15.3	1	91	4	32.6	8	7.9	8	12/23/97	1000	Irwin
6	1	1	15.4	1	92	4	32.2	8	7.9	8	12/24/97	845	Monji
7	2	1	15.2	1	88	4	32.5	8	8.1	8	12/25/97	1000	Monji
8	3	1	15.6	1	95	4	32.6	8	8.2	8	12/26/97	1455	Irwin
9	4	1	15.4	1	92	4	32.5	8	8.1	8	12/27/97	1250	Irwin
10	5	1	14.9	1	98	4	32.5	8	8.1	8	12/28/97	1105	Budris
11	1	1	14.8	1	100	4	32.6	8	8.1	8	12/29/97	830	Monji
12	2	1	15.1	1	95	4	32.6	8	8.2	8	12/30/97	830	Monji
13	3	1	15.7	1	98	4	32.5	8	8.1	8	12/31/97	955	Irwin

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971216.06
Station	Area 3
Data Entry by:	Clemens

Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec50cc	Date	Time	Observer
		Meter	DEGC	Meter	%SAT	Meter	PPT	Meter	pH				
14	4	1	15.9	1	96	4	32.5	8	8.2	8	01/01/98	1339	Dove
15	5	1	15.7	1	93	4	32.4	8	8.1	8	01/02/98	945	Irwin
16	1	1	15.8	1	96	4	32.4	8	7.9	8	01/03/98	1100	Irwin
17	2	1	15.7	1	109	4	32.5	8	8.2	8	01/04/98	955	Budris
18	3	1	15.3	1	98	4	32.5	8	8.2	8	01/05/98	1500	Budris
19	4	1	15.3	1	88	4	32.4	8	8.1	8	01/06/98	845	Morji
20	5	1	15.4	1	95	4	32.4	8	8.1	8	01/07/98	1000	Budris
21	1	1	15.7	1	95	4	32.4	8	8.3	8	01/08/98	1025	Irwin
22	2	1	15.7	1	95	4	32.4	8	8.3	8	01/09/98	1150	Irwin
23	3	1	15.6	1	94	4	32.4	8	8.1	8	01/10/98	1445	Irwin
24	4	1	15.8	1	95	4	32.3	8	8.1	8	01/11/98	1200	Budris
25	5	1	15.5	1	103	4	32.3	8	8.2	8	01/12/98	1010	Budris
26	1	1	15.7	1	98	4	32.1	8	8.2	8	01/13/98	940	Irwin
27	2	1	15.8	1	96	4	32.2	8	8.3	8	01/14/98	1020	Irwin
28	3	1	15.5	1	101	4	32.1	8	8.1	8	01/15/98	835	Budris

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Macoma	27	29	29	29	28

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID C971215.02

Station Area 4

Data Entry by: Clemens

Day	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer
	Replicate	Meter	DEG C	Meter	%SAT	Meter	PPT	Meter				
0	1	4	15.8	4	88	4	32.6	8	8.3	8	950	AM/DB
0	2	4	15.8	4	88	4	32.6	8	8.3	8	950	AM/DB
0	3	4	15.8	4	88	4	32.6	8	8.3	8	950	AM/DB
0	4	4	15.8	4	89	4	32.6	8	8.3	8	950	AM/DB
0	5	4	15.8	4	89	4	32.6	8	8.3	8	950	AM/DB
1	1	4	16	4	95	4	33	8	8.2	8	910	Monji
2	2	4	16.1	4		4	32.5	8	8	8	1030	Monji
3	3	3	15.8	3	103	4	32.6	8	8.3	8	1015	Budris
4	4	4	15.1	4		4	32.6	8	7.7	8	800	Monji
5	5	1	15.3	1	96	4	32.6	8	8.1	8	1000	Irwin
6	1	1	15.3	1	88	4	32.4	8	8.2	8	845	Monji
7	2	1	14.9	1	97	4	32.5	8	7.8	8	1000	Monji
8	3	1	15.6	1	96	4	32.5	8	8.2	8	1500	Irwin
9	4	1	15.4	1	97	4	32.5	8	8.1	8	1250	Irwin
10	5	1	14.9	1	102	4	32.6	8	8.1	8	1105	Budris
11	1	1	14.8	1	100	4	32.6	8	7.8	8	830	Monji
12	2	1	15	1	95	4	32.5	8	7.8	8	830	Monji
13	3	1	15.7	1	97	4	32.5	8	8.1	8	955	Irwin

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971215.02
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Station	Area 4
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Data Entry by:	Clemens
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Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer
		Meter	DEG C	Meter	%SAT	Meter	PPT	Meter	pH				
14	4	1	15.8	1	93	4	32.5	8	8.2	8	01/01/98	1340	Dove
15	5	1	15.7	1	97	4	32.5	8	8.2	8	01/02/98	955	Irwin
16	1	1	15.5	1	96	4	32.5	8	7.9	8	01/03/98	1100	Irwin
17	2	1	15.6	1	92	4	32.5	8	8.2	8	01/04/98	1000	Budris
18	3	1	15.3	1	100	4	32.4	8	8.1	8	01/05/98	1505	Budris
19	4	1	14.9	1	98	4	32.4	8	8.3	8	01/06/98	845	Moriji
20	5	1	15.6	1	98	4	32.4	8	8.3	8	01/07/98	1005	Budris
21	1	1	15.6	1	95	4	32.4	8	8.3	8	01/08/98	1030	Irwin
22	2	1	15.6	1	98	4	32.4	8	8.3	8	01/09/98	1150	Irwin
23	3	1	15.6	1	94	4	32.4	8	8.2	8	01/10/98	1450	Irwin
24	4	1	15.8	1	93	4	32.4	8	8.1	8	01/11/98	1200	Budris
25	5	1	15.6	1	99	4	32.3	8	8.2	8	01/12/98	1010	Budris
26	1	1	15.3	1	98	4	32.3	8	8.3	8	01/13/98	945	Irwin
27	2	1	15.7	1	96	4	32.1	8	8.3	8	01/14/98	1020	Irwin
28	3	1	15.4	1	103	4	32.1	8	8.1	8	01/15/98	840	DB/MAI

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Macoma	30	29	29	29	30

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971215.03
Station	Area 5
Data Entry by:	Clemens

Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH	Flow sec/50cc	Date	Time	Observer
		Meter	DEG C	Meter	%SAT	Meter	PPT					
0	1	4	15.9	4	89	4	32.6	8	8.3	12/18/97	950	AM/DB
0	2	4	15.8	4	88	4	32.6	8	8.3	12/18/97	950	AM/DB
0	3	4	15.8	4	88	4	32.6	8	8.4	12/18/97	950	AM/DB
0	4	4	15.9	4	88	4	32.5	8	8.4	12/18/97	950	AM/DB
0	5	4	15.8	4	89	4	32.6	8	8.4	12/18/97	950	AM/DB
1	1	4	16	4	93	4	33	8	8.2	12/19/97	910	Monji
2	2	4	16.1	4		4	32.6	8	7.9	12/20/97	1030	Monji
3	3	3	15.9	3	104	4	32.5	8	8.3	12/21/97	1015	Budris
4	4	4	15.2	4		4	32.5	8	8	12/22/97	810	Monji
5	5	1	15.5	1	95	4	32.6	8	8.1	12/23/97	1000	Irwin
6	1	1	15.7	1	94	4	32.5	8	7.9	12/24/97	845	Monji
7	2	1	15.6	1	89	4	32.5	8	8	12/25/97	1000	Monji
8	3	1	15.6	1	96	4	32.4	8	8.3	12/26/97	1505	Irwin
9	4	1	15.4	1	94	4	32.6	8	8	12/27/97	1245	Irwin
10	5	1	15	1	102	4	32.6	8	8.1	12/28/97	1110	Budris
11	1	1	14.8	1	100	4	32.6	8	8.1	12/29/97	830	Monji
12	2	1	15.1	1	93	4	32.4	8	7.7	12/30/97	830	Monji
13	3	1	15.7	1	96	4	32.5	8	8.2	12/31/97	1005	Irwin



**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971215.03
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Station	Area 5
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Data Entry by:	Clemens
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Day	Replicate	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer
		Meter	DEG C	Meter	%SAT	Meter	PPT	Meter	pH				
14	4	1	15.7	1	92	4	32.5	8	8.3	8	01/01/98	1345	Dove
15	5	1	15.7	1	94	4	32.5	8	8.1	8	01/02/98	950	Irwin
16	1	1	15.6	1	96	4	32.5	8	7.9	8	01/03/98	1045	Irwin
17	2	1	15.7	1	98	4	32.4	8	8.2	8	01/04/98	1000	Budris
18	3	1	15.4	1	99	4	32.5	8	8.2	8	01/05/98	1505	Budris
19	4	1	15.3	1	98	4	32.5	8	8	8	01/06/98	845	Monji
20	5	1	15.6	1	100	4	32.5	8	8.3	8	01/07/98	1005	Budris
21	1	1	15.6	1	92	4	32.4	8	8.2	8	01/08/98	1020	Irwin
22	2	1	15.6	1	98	4	32.4	8	8.2	8	01/09/98	1150	Irwin
23	3	1	15.7	1	93	4	32.4	8	8.3	8	01/10/98	1455	Irwin
24	4	1	15.7	1	103	4	32.3	8	8.2	8	01/11/98	1205	Budris
25	5	1	15.7	1	105	4	32.3	8	8.2	8	01/12/98	1015	Budris
26	1	1	15.7	1	96	4	32.2	8	8.2	8	01/13/98	935	Irwin
27	2	1	15.7	1	93	4	32.1	8	8.2	8	01/14/98	1015	Irwin
28	3	1	15.5	1	99	4	32.1	8	8.2	8	01/15/98	840	Budris

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Micro	30	30	30	30	29

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009	Species	Macoma	Species	Nephtys
Job Name	Marina del Rey	Organism Batch #	JD1414	Organism Batch #	KS7960
Project Manager	Krause	Number of Organism/Rep	30	Number of Organism/Rep	75
Test Location	SD Harbor	QA Batch #		QA Batch #	
Hobo Serial Number	2296	Time animals in	11:30	Time animals in	16:30

Sample ID	C971215.04	Station	Area 6	Data Entry by:	Clemens
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Day	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer	
	Replicate	Meter	DEGC	Meter	%SAT	Meter	PPT	Meter					pH
0	1	4	15.9	4	89	4	32.6	8	8.3	8	12/18/97	955	AM/DB
0	2	4	15.9	4	88	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	3	4	15.8	4	87	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	4	4	16	4	89	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	5	4	15.9	4	89	4	32.6	8	8.4	8	12/18/97	955	AM/DB
1	1	4	16	4	97	4	33	8	8.2	8	12/19/97	910	Monji
2	2	4	16.1	4		4	32.5	8	7.8	8	12/20/97	1030	Monji
3	3	3	16	3	104	4	32.5	8	8.3	8	12/21/97	1015	Budris
4	4	4	15.4	1		4	32.6	8	8	8	12/22/97	810	Monji
5	5	1	15.3	1	96	4	32.6	8	8.1	8	12/23/97	1000	Irwin
6	1	1	15.7	1	94	4	32.5	8	8.1	8	12/24/97	845	Monji
7	2	1	15.1	1	88	4	32.5	8	8	8	12/25/97	1000	Monji
8	3	1	15.7	1	92	4	32.4	8	8.3	8	12/26/97	1505	Irwin
9	4	1	15.4	1	94	4	32.5	8	8.1	8	12/27/97	1245	Irwin
10	5	1	14.9	1	99	4	32.6	8	8.1	8	12/28/97	1110	Budris
11	1	1	14.6	1	102	4	32.4	8	7.8	8	12/29/97	830	Monji
12	2	1	15.2	1	94	4	32.6	8	7.9	8	12/30/97	830	Monji
13	3	1	15.7	1	94	4	32.4	8	8.2	8	12/31/97	1000	Irwin

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID	C971215.04
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Station	Area 6
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Data Entry by:	Clemens
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Day	Replicate	Temperature Meter	DEG C	Dissolved Oxygen Meter	%SAT	Salinity		pH	pH	Flow sec/50cc	Date	Time	Observer
						Meter	PPT						
14	4	1	15.5	1	95	4	32.5	8	8.3	8	01/01/98	1335	Dove
15	5	1	15.7	1	94	4	32.4	8	8.2	8	01/02/98	950	Irwin
16	1	1	15.7	1	100	4	32.4	8	7.9	8	01/03/98	1055	Irwin
17	2	1	15.8	1	99	4	32.6	8	8.3	8	01/04/98	1005	Budris
18	3	1	15.6	1	97	4	32.5	8	8.3	8	01/05/98	1505	Budris
19	4	1	15.3	1	90	4	32.5	8	7.7	8	01/06/98	845	Monji
20	5	1	15.5	1	97	4	32.4	8	8.4	8	01/07/98	1010	Budris
21	1	1	15.6	1	95	4	32.4	8	8.2	8	01/08/98	1025	Irwin
22	2	1	15.6	1	101	4	32.4	8	8.2	8	01/09/98	1145	Irwin
23	3	1	15.7	1	94	4	32.3	8	8.3	8	01/10/98	1450	Irwin
24	4	1	15.6	1	98	4	32.3	8	8.2	8	01/11/98	1205	Budris
25	5	1	15.6	1	98	4	32.3	8	8.2	8	01/12/98	1015	Budris
26	1	1	15.7	1	95	4	32.2	8	8.2	8	01/13/98	940	Irwin
27	2	1	15.6	1	98	4	32.1	8	8.1	8	01/14/98	1010	Irwin
28	3	1	15.7	1	98	4	32.1	8	8.2	8	01/15/98	840	DB/MAJ

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Macoma	30	30	30	30	29

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009	Species	Macoma	Species	Nephtys
Job Name	Marina del Rey	Organism Batch #	JD1414	Organism Batch #	KS7960
Project Manager	Krause	Number of Organism/Rep	30	Number of Organism/Rep	75
Test Location	SD Harbor	QA Batch #		QA Batch #	
Hobo Serial Number	2296	Time animals in	11:30	Time animals in	16:30

Sample ID	C971216.05	Station	Area 9	Data Entry by:	Clemens
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Day	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer	
	Replicate	Meter	DEGC	Meter	%SAT	Meter	PPT	Meter					
0	1	4	15.9	4	89	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	2	4	15.8	4	90	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	3	4	15.9	4	90	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	4	4	15.8	4	90	4	32.6	8	8.4	8	12/18/97	955	AM/DB
0	5	4	15.8	4	89	4	32.6	8	8.4	8	12/18/97	955	AM/DB
1	1	4	16	4	96	4	32.6	8	8.2	8	12/19/97	910	Monji
2	2	4	15.9	4		4	32.6	8	7.9	8	12/20/97	1030	Monji
3	3	3	16	3	105	4	32.5	8	8.3	8	12/21/97	1015	Budris
4	4	4	15.1	4		4	32.6	8	8.1	8	12/22/97	810	Monji
5	5	1	15.3	1	94	4	32.6	8	8.2	8	12/23/97	1000	Irwin
6	1	1	15.7	1	100	4	32.6	8	7.7	8	12/24/97	845	Monji
7	2	1	14.7	1	96	4	32.6	8	8.2	8	12/25/97	1000	Monji
8	3	1	15.7	1	100	4	32.4	8	8.2	8	12/26/97	1500	Irwin
9	4	1	15.3	1	96	4	32.5	8	8.1	8	12/27/97	1255	Irwin
10	5	1	14.9	1	99	4	32.6	8	8.1	8	12/28/97	1110	Budris
11	1	1	14.8	1	102	4	32.6	8	8.1	8	12/29/97	830	Monji
12	2	1	15	1	94	4	32.6	8	8.2	8	12/30/97	830	Monji
13	3	1	15.7	1	98	4	32.4	8	8.2	8	12/31/97	1000	Irwin

**MEC Analytical Systems, Inc.  
28-DAY BIOACCUMULATION DATA SHEET**

MEC Job Number	0719-009
Job Name	Marina del Rey
Project Manager	Krause
Test Location	SD Harbor
Hobo Serial Number	2296

Species	Macoma
Organism Batch #	JD1414
Number of Organism/Rep	30
QA Batch #	
Time animals in	11:30

Species	Nephtys
Organism Batch #	KS7960
Number of Organism/Rep	75
QA Batch #	
Time animals in	16:30

Sample ID C971216.05

Station Area 9

Data Entry by: Clemens

Day	Temperature		Dissolved Oxygen		Salinity		pH		Flow sec/50cc	Date	Time	Observer
	Meter	DEGC	Meter	%SAT	Meter	PPT	Meter	pH				
14	4	1	15.3	1	96	32.4	4	8.3	8	01/01/98	1349	Dove
15	5	1	15.7	1	98	32.4	4	8.2	8	01/02/98	955	Irwin
16	1	1	15.5	1	95	32.5	4	8	8	01/03/98	1040	Irwin
17	2	1	15.7	1	102	32.5	4	8.2	8	01/04/98	1005	Budris
18	3	1	15.5	1	100	32.6	4	8.3	8	01/05/98	1505	Budris
19	4	1	15.1	1	98	32.4	4	8.2	8	01/06/98	845	Monji
20	5	1	15.4	1	100	32.4	4	8.4	8	01/07/98	1010	Budris
21	1	1	15.6	1	94	32.4	4	8.2	8	01/08/98	1020	Irwin
22	2	1	15.6	1	94	32.4	4	8.3	8	01/09/98	1200	Irwin
23	3	1	15.7	1	97	32.4	4	8.2	8	01/10/98	1450	Irwin
24	4	1	15.3	1	97	32.3	4	8.1	8	01/11/98	1205	Budris
25	5	1	15.6	1	97	32.3	4	8.2	8	01/12/98	1015	Budris
26	1	1	15.7	1	98	32.2	4	8.3	8	01/13/98	935	Irwin
27	2	1	15.7	1	97	32.1	4	8.3	8	01/14/98	1030	Irwin
28	3	1	15.7	1	108	32.1	4	8.2	8	01/15/98	840	DB/MAI

Survival Data	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
Macoma	30	30	30	30	30

8-Day Bioaccumulation Data  
 Marina del Rey  
 Macoma

Station	Statistic	Temp. (°C)	DO (%)	Salinity (ppt)	pH	Flow (ml/15sec)	% Mortality
Control	Mean	15.5	97	32.5	8.1	94	2.7
	Min	14.8	88	32.1	7.7	94	0.0
	Max	16.0	111	33.0	8.3	94	3.3
Reference	Mean	15.5	96	32.5	8.2	94	2.0
	Min	14.8	90	32.1	7.8	94	0.0
	Max	16.0	105	32.7	8.4	94	10.0
Area 3	Mean	15.6	95	32.5	8.1	94	5.3
	Min	14.8	87	32.1	7.7	94	3.3
	Max	16.2	109	33.0	8.3	94	10.0
Area 4	Mean	15.5	95	32.5	8.1	94	2.0
	Min	14.8	88	32.1	7.7	94	0.0
	Max	16.1	103	33.0	8.3	94	3.3
Area 5	Mean	15.6	95	32.5	8.2	94	0.7
	Min	14.8	88	32.1	7.7	94	0.0
	Max	16.1	105	33.0	8.4	94	3.3
Area 6	Mean	15.6	95	32.5	8.2	94	0.7
	Min	14.6	87	32.1	7.7	94	0.0
	Max	16.1	104	33.0	8.4	94	3.3
Area 9	Mean	15.5	97	32.5	8.2	94	0.0
	Min	14.7	89	32.1	7.7	94	0.0
	Max	16.0	108	32.6	8.4	94	0.0

28-Day Bioaccumulation Data  
 Marina del Rey  
 Nephtys

Station	Statistic	Temp. (°C)	DO (%)	Salinity (ppt)	pH	Flow (ml/15sec)	% Mortality
Control	Mean	15.5	97	32.5	8.1	94	6.7
	Min	14.8	88	32.1	7.7	94	0.0
	Max	16.0	111	33.0	8.3	94	17.3
Reference	Mean	15.5	96	32.5	8.2	94	1.6
	Min	14.8	90	32.1	7.8	94	-4.0
	Max	16.0	105	32.7	8.4	94	8.0
Area 3	Mean	15.6	95	32.5	8.1	94	17.9
	Min	14.8	87	32.1	7.7	94	4.0
	Max	16.2	109	33.0	8.3	94	32.0
Area 4	Mean	15.5	95	32.5	8.1	94	4.0
	Min	14.8	88	32.1	7.7	94	0.0
	Max	16.1	103	33.0	8.3	94	8.0
Area 5	Mean	15.6	95	32.5	8.2	94	4.5
	Min	14.8	88	32.1	7.7	94	-1.3
	Max	16.1	105	33.0	8.4	94	6.7
Area 6	Mean	15.6	95	32.5	8.2	94	10.4
	Min	14.6	87	32.1	7.7	94	2.7
	Max	16.1	104	33.0	8.4	94	29.3
Area 9	Mean	15.5	97	32.5	8.2	94	5.6
	Min	14.7	89	32.1	7.7	94	0.0
	Max	16.0	108	32.6	8.4	94	12.0

**APPENDIX G**

**Tissue Chemistry**





February 5, 1998

MEC Analytical Systems, Inc.  
Attn: Paul Krause/Lisa Kay  
2433 Impala Drive  
Carlsbad, California 92008

Project Name/No.: Marina del Rey  
Laboratory Log No.: 0139-98  
Date Received: 01/21/98  
Sample Matrix: Sixty tissue samples  
PO No.: None

Please find the following enclosures for the above referenced project identified:

- 1) Analytical Report
- 2) QA/QC Report
- 3) Chain of Custody Form

Comment: TBT and Metals results to follow.

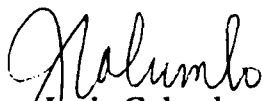
.....*Certificate of Analysis*.....

Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Date of extraction, date of analysis, detection limits and dilution factor are reported for each compound analyzed.

A minimum of 90% of the data for each analytical method is associated with acceptable quality control criteria. Determinations of completion were made by assessing the following QA/QC functions, as applicable to methodology:

- Surrogate Percent Recovery, Laboratory Control Sample (LCS) percent recoveries for all analyses,
- Matrix Spike Recovery/Matrix Spike Duplicate Recovery (MSR & MS DR) and Relative Percent Difference (RPD from MSR & MS DR).

*I certify that this data report is in compliance both technically and for completeness. Release of the data contained in this hardcopy data report has been authorized by the following signature.*

  
Janis Columbo

Vice President/Laboratory Director

## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY	DATE SAMPLED: 01/16/98	01/16/98
ANALYSIS METHOD: SMEWW 2540 G	DATE RECEIVED: 01/21/98	01/21/98
ANALYSIS: PERCENT SOLIDS	DATE ANALYZED: 01/28-29/98	01/28-29/98
	MATRIX: WORM TISSUE	WORM TISSUE

SAMPLE ID	PTAS LOG #	REPORTING LIMIT %	DF	RESULTS %
REFERENCE REP 1	0139-98-1	0.1	1	18.2
REFERENCE REP 2	0139-98-2	0.1	1	18.5
REFERENCE REP 3	0139-98-3	0.1	1	17.9
REFERENCE REP 4	0139-98-4	0.1	1	19.5
REFERENCE REP 5	0139-98-5	0.1	1	18.6
AREA 3 REP 1	0139-98-6	0.1	1	18.8
AREA 3 REP 2	0139-98-7	0.1	1	19.2
AREA 3 REP 3	0139-98-8	0.1	1	20.2
AREA 3 REP 4	0139-98-9	0.1	1	19.8
AREA 3 REP 5	0139-98-10	0.1	1	19.7
AREA 4 REP 1	0139-98-11	0.1	1	19.4
AREA 4 REP 2	0139-98-12	0.1	1	18.7
AREA 4 REP 3	0139-98-13	0.1	1	18.8
AREA 4 REP 4	0139-98-14	0.1	1	19.3
AREA 4 REP 5	0139-98-15	0.1	1	19.3
AREA 5 REP 1	0139-98-16	0.1	1	18.7
AREA 5 REP 2	0139-98-17	0.1	1	19.3
AREA 5 REP 3	0139-98-18	0.1	1	20.9
AREA 5 REP 4	0139-98-19	0.1	1	19.6
AREA 5 REP 5	0139-98-20	0.1	1	20.9
AREA 5 REP 5 (DUP.)	0139-98-20 (DUP.)	0.1	1	20.6
AREA 6 REP 1	0139-98-21	0.1	1	21.1
AREA 6 REP 2	0139-98-22	0.1	1	21.1
AREA 6 REP 3	0139-98-23	0.1	1	21.5
AREA 6 REP 4	0139-98-24	0.1	1	20.3
AREA 6 REP 5	0139-98-25	0.1	1	18.5
AREA 9 REP 1	0139-98-26	0.1	1	21.0
AREA 9 REP 2	0139-98-27	0.1	1	18.3
AREA 9 REP 3	0139-98-28	0.1	1	20.1
AREA 9 REP 4	0139-98-29	0.1	1	19.6
AREA 9 REP 5	0139-98-30	0.1	1	19.1

DF = DILUTION FACTOR

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

DUP. = DUPLICATE

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY	DATE SAMPLED: 01/16/98
ANALYSIS METHOD: SMEWW 2540 G	DATE RECEIVED: 01/21/98
ANALYSIS: PERCENT SOLIDS	DATE ANALYZED: 01/29/98
	MATRIX: CLAM TISSUE

SAMPLE ID	PTAS LOG #	REPORTING LIMIT %	DF	RESULTS %
REFERENCE REP 1	0139-98-31	0.1	1	6.2
REFERENCE REP 2	0139-98-32	0.1	1	7.6
REFERENCE REP 3	0139-98-33	0.1	1	8.4
REFERENCE REP 4	0139-98-34	0.1	1	8.5
REFERENCE REP 5	0139-98-35	0.1	1	9.8
AREA 3 REP 1	0139-98-36	0.1	1	8.9
AREA 3 REP 2	0139-98-37	0.1	1	8.5
AREA 3 REP 3	0139-98-38	0.1	1	8.8
AREA 3 REP 4	0139-98-39	0.1	1	8.9
AREA 3 REP 5	0139-98-40	0.1	1	9.7
AREA 3 REP 5 (DUP.)	0139-98-40 (DUP.)	0.1	1	9.3
AREA 4 REP 1	0139-98-41	0.1	1	8.7
AREA 4 REP 2	0139-98-42	0.1	1	7.6
AREA 4 REP 3	0139-98-43	0.1	1	8.3
AREA 4 REP 4	0139-98-44	0.1	1	8.1
AREA 4 REP 5	0139-98-45	0.1	1	7.7
AREA 5 REP 1	0139-98-46	0.1	1	7.4
AREA 5 REP 2	0139-98-47	0.1	1	8.4
AREA 5 REP 3	0139-98-48	0.1	1	8.1
AREA 5 REP 4	0139-98-49	0.1	1	7.4
AREA 5 REP 5	0139-98-50	0.1	1	7.7
AREA 6 REP 1	0139-98-51	0.1	1	6.9
AREA 6 REP 2	0139-98-52	0.1	1	8.1
AREA 6 REP 3	0139-98-53	0.1	1	7.4
AREA 6 REP 4	0139-98-54	0.1	1	7.8
AREA 6 REP 5	0139-98-55	0.1	1	8.0
AREA 9 REP 1	0139-98-56	0.1	1	7.6
AREA 9 REP 2	0139-98-57	0.1	1	7.5
AREA 9 REP 3	0139-98-58	0.1	1	7.3
AREA 9 REP 4	0139-98-59	0.1	1	7.7
AREA 9 REP 5	0139-98-60	0.1	1	8.1
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.1	1	8.2

DF = DILUTION FACTOR

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

DUP. = DUPLICATE

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7131  
 ANALYSIS: CADMIUM

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/30-02/02/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	0.20	0.5	1.21
REFERENCE REP 2	0139-98-2	0.1	0.24	0.5	1.28
REFERENCE REP 3	0139-98-3	0.1	0.30	0.6	1.69
REFERENCE REP 4	0139-98-4	0.1	0.19	0.5	0.98
REFERENCE REP 5	0139-98-5	0.1	0.18	0.5	0.99
AREA 3 REP 1	0139-98-6	0.1	0.15	0.5	0.81
AREA 3 REP 2	0139-98-7	0.1	0.23	0.5	1.20
AREA 3 REP 3	0139-98-8	0.1	0.54	0.5	2.68
AREA 3 REP 4	0139-98-9	0.1	0.22	0.5	1.12
AREA 3 REP 5	0139-98-10	0.1	0.19	0.5	0.96
AREA 4 REP 1	0139-98-11	0.1	0.24	0.5	1.25
AREA 4 REP 2	0139-98-12	0.1	0.18	0.5	0.98
AREA 4 REP 3	0139-98-13	0.1	0.20	0.5	1.05
AREA 4 REP 4	0139-98-14	0.1	0.20	0.5	1.02
AREA 4 REP 5	0139-98-15	0.1	0.20	0.5	1.05
AREA 5 REP 1	0139-98-16	0.1	0.17	0.5	0.93
AREA 5 REP 2	0139-98-17	0.1	0.26	0.5	1.33
AREA 5 REP 3	0139-98-18	0.1	0.20	0.5	0.95
AREA 5 REP 4	0139-98-19	0.1	0.18	0.5	0.92
AREA 5 REP 5	0139-98-20	0.1	0.22	0.5	1.06
AREA 6 REP 1	0139-98-21	0.1	0.19	0.5	0.90
AREA 6 REP 2	0139-98-22	0.1	0.18	0.5	0.84
AREA 6 REP 3	0139-98-23	0.1	0.16	0.5	0.72
AREA 6 REP 4	0139-98-24	0.1	0.15	0.5	0.76
AREA 6 REP 5	0139-98-25	0.1	0.15	0.5	0.83
AREA 9 REP 1	0139-98-26	0.1	0.18	0.5	0.87
AREA 9 REP 2	0139-98-27	0.1	0.14	0.5	0.79
AREA 9 REP 3	0139-98-28	0.1	0.18	0.5	0.91
AREA 9 REP 4	0139-98-29	0.1	0.15	0.5	0.75
AREA 9 REP 5	0139-98-30	0.1	0.16	0.5	0.83

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7131  
 ANALYSIS: CADMIUM

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/30-02/02/98  
 MATRIX: CLAM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.1	ND	1.6	ND
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	ND	1.6	ND
REFERENCE REP 2	0139-98-32	0.1	ND	1.3	ND
REFERENCE REP 3	0139-98-33	0.1	ND	1.2	ND
REFERENCE REP 4	0139-98-34	0.1	ND	1.2	ND
REFERENCE REP 5	0139-98-35	0.1	ND	1.0	ND
AREA 3 REP 1	0139-98-36	0.1	ND	1.1	ND
AREA 3 REP 2	0139-98-37	0.1	ND	1.2	ND
AREA 3 REP 3	0139-98-38	0.1	ND	1.1	ND
AREA 3 REP 4	0139-98-39	0.1	ND	1.1	ND
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.1	ND	1.1	ND
AREA 3 REP 5	0139-98-40	0.1	ND	1.1	ND
AREA 4 REP 1	0139-98-41	0.1	ND	1.2	ND
AREA 4 REP 2	0139-98-42	0.1	ND	1.3	ND
AREA 4 REP 3	0139-98-43	0.1	ND	1.2	ND
AREA 4 REP 4	0139-98-44	0.1	ND	1.2	ND
AREA 4 REP 5	0139-98-45	0.1	ND	1.3	ND
AREA 5 REP 1	0139-98-46	0.1	ND	1.4	ND
AREA 5 REP 2	0139-98-47	0.1	ND	1.2	ND
AREA 5 REP 3	0139-98-48	0.1	ND	1.2	ND
AREA 5 REP 4	0139-98-49	0.1	ND	1.4	ND
AREA 5 REP 5	0139-98-50	0.1	ND	1.3	ND
AREA 6 REP 1	0139-98-51	0.1	ND	1.5	ND
AREA 6 REP 2	0139-98-52	0.1	ND	1.2	ND
AREA 6 REP 3	0139-98-53	0.1	ND	1.4	ND
AREA 6 REP 4	0139-98-54	0.1	ND	1.3	ND
AREA 6 REP 5	0139-98-55	0.1	ND	1.3	ND
AREA 9 REP 1	0139-98-56	0.1	ND	0.5	ND
AREA 9 REP 2	0139-98-57	0.1	ND	0.5	ND
AREA 9 REP 3	0139-98-58	0.1	ND	0.5	ND
AREA 9 REP 4	0139-98-59	0.1	ND	0.5	ND
AREA 9 REP 5	0139-98-60	0.1	ND	0.5	ND
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.1	ND	0.5	ND

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010  
 ANALYSIS: COPPER

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-29/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.5	1.5	2.7	8.4
REFERENCE REP 2	0139-98-2	0.5	1.6	2.7	8.5
REFERENCE REP 3	0139-98-3	0.5	2.4	2.8	13
REFERENCE REP 4	0139-98-4	0.5	2.2	2.6	11
REFERENCE REP 5	0139-98-5	0.5	2.0	2.7	11
AREA 3 REP 1	0139-98-6	0.5	3.4	2.7	18
AREA 3 REP 2	0139-98-7	0.5	4.1	2.6	21
AREA 3 REP 3	0139-98-8	0.5	3.7	2.5	19
AREA 3 REP 4	0139-98-9	0.5	4.2	2.5	21
AREA 3 REP 5	0139-98-10	0.5	3.5	2.5	18
AREA 4 REP 1	0139-98-11	0.5	2.8	2.6	15
AREA 4 REP 2	0139-98-12	0.5	2.8	2.7	15
AREA 4 REP 3	0139-98-13	0.5	2.1	2.7	11
AREA 4 REP 4	0139-98-14	0.5	2.8	2.6	14
AREA 4 REP 5	0139-98-15	0.5	2.6	2.6	14
AREA 5 REP 1	0139-98-16	0.5	2.3	2.7	12
AREA 5 REP 2	0139-98-17	0.5	2.3	2.6	12
AREA 5 REP 3	0139-98-18	0.5	2.8	2.4	14
AREA 5 REP 4	0139-98-19	0.5	2.2	2.6	11
AREA 5 REP 5	0139-98-20	0.5	4.8	2.4	23
AREA 6 REP 1	0139-98-21	0.5	5.4	2.4	26
AREA 6 REP 2	0139-98-22	0.5	4.9	2.4	23
AREA 6 REP 3	0139-98-23	0.5	3.7	2.3	17
AREA 6 REP 4	0139-98-24	0.5	4.0	2.5	20
AREA 6 REP 5	0139-98-25	0.5	6.1	2.7	33
AREA 9 REP 1	0139-98-26	0.5	4.5	2.4	21
AREA 9 REP 2	0139-98-27	0.5	4.5	2.7	25
AREA 9 REP 3	0139-98-28	0.5	5.5	2.5	27
AREA 9 REP 4	0139-98-29	0.5	3.6	2.6	18
AREA 9 REP 5	0139-98-30	0.5	4.3	2.6	22

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010  
 ANALYSIS: COPPER

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-30/98  
 MATRIX: CLAM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.5	11	8.1	180
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.5	15	8.1	250
REFERENCE REP 2	0139-98-32	0.5	49	6.6	640
REFERENCE REP 3	0139-98-33	0.5	16	6.0	200
REFERENCE REP 4	0139-98-34	0.5	21	5.9	250
REFERENCE REP 5	0139-98-35	0.5	21	5.1	220
AREA 3 REP 1	0139-98-36	0.5	16	5.6	180
AREA 3 REP 2	0139-98-37	0.5	51	5.9	600
AREA 3 REP 3	0139-98-38	0.5	34	5.7	380
AREA 3 REP 4	0139-98-39	0.5	41	5.6	460
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.5	45	5.6	510
AREA 3 REP 5	0139-98-40	0.5	33	5.3	350
AREA 4 REP 1	0139-98-41	0.5	27	5.7	320
AREA 4 REP 2	0139-98-42	0.5	42	6.6	550
AREA 4 REP 3	0139-98-43	0.5	9.9	6.0	120
AREA 4 REP 4	0139-98-44	0.5	14	6.2	170
AREA 4 REP 5	0139-98-45	0.5	16	6.5	210
AREA 5 REP 1	0139-98-46	0.5	23	6.8	310
AREA 5 REP 2	0139-98-47	0.5	20	6.0	230
AREA 5 REP 3	0139-98-48	0.5	13	6.2	160
AREA 5 REP 4	0139-98-49	0.5	11	6.8	150
AREA 5 REP 5	0139-98-50	0.5	51	6.5	670
AREA 6 REP 1	0139-98-51	0.5	27	7.2	380
AREA 6 REP 2	0139-98-52	0.5	29	6.2	360
AREA 6 REP 3	0139-98-53	0.5	31	6.8	420
AREA 6 REP 4	0139-98-54	0.5	41	6.4	530
AREA 6 REP 5	0139-98-55	0.5	29	6.3	360
AREA 9 REP 1	0139-98-56	0.5	39	6.6	510
AREA 9 REP 2	0139-98-57	0.5	54	6.7	720
AREA 9 REP 3	0139-98-58	0.5	32	6.8	440
AREA 9 REP 4	0139-98-59	0.5	14	6.5	190
AREA 9 REP 5	0139-98-60	0.5	34	6.2	420
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.5	12	6.2	150

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/23-29/98  
 DATE ANALYZED: 01/27-02/03/98  
 MATRIX: WORM TISSUE

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7421  
 ANALYSIS: LEAD

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	0.16	0.5	0.88
REFERENCE REP 2	0139-98-2	0.1	0.19	0.5	1.04
REFERENCE REP 3	0139-98-3	0.1	ND	0.6	ND
REFERENCE REP 4	0139-98-4	0.1	0.14	0.5	0.73
REFERENCE REP 5	0139-98-5	0.1	ND	0.5	ND
AREA 3 REP 1	0139-98-6	0.1	0.16	0.5	0.87
AREA 3 REP 2	0139-98-7	0.1	0.16	0.5	0.61
AREA 3 REP 3	0139-98-8	0.1	ND	0.5	ND
AREA 3 REP 4	0139-98-9	0.1	ND	0.5	ND
AREA 3 REP 5	0139-98-10	0.1	ND	0.5	ND
AREA 4 REP 1	0139-98-11	0.1	ND	0.5	ND
AREA 4 REP 2	0139-98-12	0.1	0.13	0.5	0.69
AREA 4 REP 3	0139-98-13	0.1	ND	0.5	ND
AREA 4 REP 4	0139-98-14	0.1	ND	0.5	ND
AREA 4 REP 5	0139-98-15	0.1	ND	0.5	ND
AREA 5 REP 1	0139-98-16	0.1	0.19	0.5	1.02
AREA 5 REP 2	0139-98-17	0.1	0.14	0.5	0.73
AREA 5 REP 3	0139-98-18	0.1	ND	0.5	ND
AREA 5 REP 4	0139-98-19	0.1	0.16	0.5	0.83
AREA 5 REP 5	0139-98-20	0.1	0.33	0.5	1.60
AREA 6 REP 1	0139-98-21	0.1	0.21	0.5	1.01
AREA 6 REP 2	0139-98-22	0.1	0.16	0.5	0.74
AREA 6 REP 3	0139-98-23	0.1	0.21	0.5	0.97
AREA 6 REP 4	0139-98-24	0.1	0.12	0.5	0.61
AREA 6 REP 5	0139-98-25	0.1	0.13	0.5	0.70
AREA 9 REP 1	0139-98-26	0.1	0.19	0.5	0.91
AREA 9 REP 2	0139-98-27	0.1	ND	0.5	ND
AREA 9 REP 3	0139-98-28	0.1	0.18	0.5	0.86
AREA 9 REP 4	0139-98-29	0.1	0.15	0.5	0.75
AREA 9 REP 5	0139-98-30	0.1	ND	0.5	ND

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7421, EPA 3050/6010  
 ANALYSIS: LEAD

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/23-29/98  
 DATE ANALYZED: 01/27-02/03/98  
 MATRIX: CLAM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.1	0.28	1.6	4.51
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	0.44	1.6	7.15
REFERENCE REP 2	0139-98-32	0.1	0.45	1.3	5.97
REFERENCE REP 3	0139-98-33	0.1	0.33	1.2	3.88
REFERENCE REP 4	0139-98-34	0.1	0.45	1.2	5.32
REFERENCE REP 5	0139-98-35	0.1	0.43	1.0	4.40
AREA 3 REP 1	0139-98-36	0.1	0.89	1.1	10.0
AREA 3 REP 2	0139-98-37	0.1	1.71	1.2	20.1
AREA 3 REP 3	0139-98-38	0.1	1.03	1.1	11.7
AREA 3 REP 4	0139-98-39	0.1	1.36	1.1	15.3
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.1	1.30	1.1	14.7
AREA 3 REP 5	0139-98-40	0.1	1.03	1.1	10.8
AREA 4 REP 1	0139-98-41	0.1	1.05	1.1	12.1
AREA 4 REP 2	0139-98-42	0.1	0.83	1.3	10.9
AREA 4 REP 3	0139-98-43	0.1	0.66	1.2	7.90
AREA 4 REP 4	0139-98-44	0.1	0.77	1.2	9.48
AREA 4 REP 5	0139-98-45	0.1	0.68	1.3	8.88
AREA 5 REP 1	0139-98-46	0.1	1.57	1.4	21.2
AREA 5 REP 2	0139-98-47	0.1	1.85	1.2	22.1
AREA 5 REP 3	0139-98-48	0.1	1.01	1.2	12.5
AREA 5 REP 4	0139-98-49	0.1	1.90	1.4	25.7
AREA 5 REP 5	0139-98-50	0.1	2.09	1.3	27.2
AREA 6 REP 1	0139-98-51	0.1	0.90	1.5	13.0
AREA 6 REP 2	0139-98-52	0.2	3.52	2.5	43.4
AREA 6 REP 3	0139-98-53	0.1	1.74	1.4	23.6
AREA 6 REP 4	0139-98-54	0.1	1.97	1.3	25.3
AREA 6 REP 5	0139-98-55	0.1	1.21	1.3	15.1
AREA 9 REP 1	0139-98-56	0.1	1.53	1.3	20.2
AREA 9 REP 2	0139-98-57	0.1	1.43	1.3	19.1
AREA 9 REP 3	0139-98-58	0.1	1.61	1.4	22.0
AREA 9 REP 4	0139-98-59	0.2	2.93	2.6	38.1
AREA 9 REP 5	0139-98-60	0.1	1.74	1.2	21.3
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.1	1.09	1.2	13.4

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010  
 ANALYSIS: NICKEL

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-29/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.5	ND	2.7	ND
REFERENCE REP 2	0139-98-2	0.5	ND	2.7	ND
REFERENCE REP 3	0139-98-3	0.5	ND	2.8	ND
REFERENCE REP 4	0139-98-4	0.5	0.57	2.6	2.9
REFERENCE REP 5	0139-98-5	0.5	ND	2.7	ND
AREA 3 REP 1	0139-98-6	0.5	ND	2.7	ND
AREA 3 REP 2	0139-98-7	0.5	ND	2.6	ND
AREA 3 REP 3	0139-98-8	0.5	ND	2.5	ND
AREA 3 REP 4	0139-98-9	0.5	0.83	2.5	4.2
AREA 3 REP 5	0139-98-10	0.5	ND	2.5	ND
AREA 4 REP 1	0139-98-11	0.5	ND	2.6	ND
AREA 4 REP 2	0139-98-12	0.5	ND	2.7	ND
AREA 4 REP 3	0139-98-13	0.5	ND	2.7	ND
AREA 4 REP 4	0139-98-14	0.5	0.51	2.6	2.6
AREA 4 REP 5	0139-98-15	0.5	ND	2.6	ND
AREA 5 REP 1	0139-98-16	0.5	ND	2.7	ND
AREA 5 REP 2	0139-98-17	0.5	ND	2.6	ND
AREA 5 REP 3	0139-98-18	0.5	ND	2.4	ND
AREA 5 REP 4	0139-98-19	0.5	ND	2.6	ND
AREA 5 REP 5	0139-98-20	0.5	1.3	2.4	6.4
AREA 6 REP 1	0139-98-21	0.5	1.1	2.4	5.0
AREA 6 REP 2	0139-98-22	0.5	1.4	2.4	6.5
AREA 6 REP 3	0139-98-23	0.5	ND	2.3	ND
AREA 6 REP 4	0139-98-24	0.5	ND	2.5	ND
AREA 6 REP 5	0139-98-25	0.5	1.5	2.7	8.0
AREA 9 REP 1	0139-98-26	0.5	1.0	2.4	4.9
AREA 9 REP 2	0139-98-27	0.5	1.1	2.7	6.1
AREA 9 REP 3	0139-98-28	0.5	ND	2.5	ND
AREA 9 REP 4	0139-98-29	0.5	ND	2.6	ND
AREA 9 REP 5	0139-98-30	0.5	ND	2.6	ND

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-30/98  
 MATRIX: CLAM TISSUE

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010  
 ANALYSIS: NICKEL

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.5	0.8	8.1	14
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.5	1.2	8.1	19
REFERENCE REP 2	0139-98-32	0.5	1.5	6.6	20
REFERENCE REP 3	0139-98-33	0.5	1.8	6.0	21
REFERENCE REP 4	0139-98-34	0.5	1.3	5.9	15
REFERENCE REP 5	0139-98-35	0.5	1.8	5.1	19
AREA 3 REP 1	0139-98-36	0.5	1.1	5.6	13
AREA 3 REP 2	0139-98-37	0.5	1.9	5.9	22
AREA 3 REP 3	0139-98-38	0.5	1.6	5.7	18
AREA 3 REP 4	0139-98-39	0.5	2.3	5.6	25
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.5	2.4	5.6	27
AREA 3 REP 5	0139-98-40	0.5	1.9	5.3	20
AREA 4 REP 1	0139-98-41	0.5	2.0	5.7	23
AREA 4 REP 2	0139-98-42	0.5	1.6	6.6	21
AREA 4 REP 3	0139-98-43	0.5	1.4	6.0	16
AREA 4 REP 4	0139-98-44	0.5	1.7	6.2	21
AREA 4 REP 5	0139-98-45	0.5	1.7	6.5	22
AREA 5 REP 1	0139-98-46	0.5	1.1	6.8	15
AREA 5 REP 2	0139-98-47	0.5	1.5	6.0	18
AREA 5 REP 3	0139-98-48	0.5	1.4	6.2	17
AREA 5 REP 4	0139-98-49	0.5	1.8	6.8	25
AREA 5 REP 5	0139-98-50	0.5	2.3	6.5	29
AREA 6 REP 1	0139-98-51	0.5	1.1	7.2	16
AREA 6 REP 2	0139-98-52	0.5	2.1	6.2	26
AREA 6 REP 3	0139-98-53	0.5	1.4	6.8	18
AREA 6 REP 4	0139-98-54	0.5	2.1	6.4	27
AREA 6 REP 5	0139-98-55	0.5	1.7	6.3	21
AREA 9 REP 1	0139-98-56	0.5	1.3	6.6	18
AREA 9 REP 2	0139-98-57	0.5	1.2	6.7	16
AREA 9 REP 3	0139-98-58	0.5	1.4	6.8	20
AREA 9 REP 4	0139-98-59	0.5	1.8	6.5	23
AREA 9 REP 5	0139-98-60	0.5	1.5	6.2	18
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.5	1.6	6.2	20

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010  
 ANALYSIS: ZINC

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-29/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.5	25	2.7	140
REFERENCE REP 2	0139-98-2	0.5	21	2.7	110
REFERENCE REP 3	0139-98-3	0.5	31	2.8	170
REFERENCE REP 4	0139-98-4	0.5	35	2.6	180
REFERENCE REP 5	0139-98-5	0.5	32	2.7	170
AREA 3 REP 1	0139-98-6	0.5	35	2.7	190
AREA 3 REP 2	0139-98-7	0.5	36	2.6	190
AREA 3 REP 3	0139-98-8	0.5	37	2.5	180
AREA 3 REP 4	0139-98-9	0.5	37	2.5	190
AREA 3 REP 5	0139-98-10	0.5	40	2.5	200
AREA 4 REP 1	0139-98-11	0.5	34	2.6	180
AREA 4 REP 2	0139-98-12	0.5	33	2.7	180
AREA 4 REP 3	0139-98-13	0.5	36	2.7	190
AREA 4 REP 4	0139-98-14	0.5	39	2.6	200
AREA 4 REP 5	0139-98-15	0.5	35	2.6	180
AREA 5 REP 1	0139-98-16	0.5	39	2.7	210
AREA 5 REP 2	0139-98-17	0.5	39	2.6	200
AREA 5 REP 3	0139-98-18	0.5	38	2.4	180
AREA 5 REP 4	0139-98-19	0.5	37	2.6	190
AREA 5 REP 5	0139-98-20	0.5	87	2.4	420
AREA 6 REP 1	0139-98-21	0.5	85	2.4	410
AREA 6 REP 2	0139-98-22	0.5	78	2.4	370
AREA 6 REP 3	0139-98-23	0.5	67	2.3	310
AREA 6 REP 4	0139-98-24	0.5	65	2.5	320
AREA 6 REP 5	0139-98-25	0.5	64	2.7	350
AREA 9 REP 1	0139-98-26	0.5	70	2.4	330
AREA 9 REP 2	0139-98-27	0.5	69	2.7	380
AREA 9 REP 3	0139-98-28	0.5	67	2.5	330
AREA 9 REP 4	0139-98-29	0.5	65	2.6	330
AREA 9 REP 5	0139-98-30	0.5	62	2.6	320

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-30/98  
 MATRIX: CLAM TISSUE

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010  
 ANALYSIS: ZINC

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.5	14	8.1	230
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.5	15	8.1	240
REFERENCE REP 2	0139-98-32	0.5	22	6.6	290
REFERENCE REP 3	0139-98-33	0.5	23	6.0	270
REFERENCE REP 4	0139-98-34	0.5	19	5.9	220
REFERENCE REP 5	0139-98-35	0.5	34	5.1	350
AREA 3 REP 1	0139-98-36	0.5	26	5.6	300
AREA 3 REP 2	0139-98-37	0.5	50	5.9	590
AREA 3 REP 3	0139-98-38	0.5	34	5.7	390
AREA 3 REP 4	0139-98-39	0.5	40	5.6	450
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.5	36	5.6	400
AREA 3 REP 5	0139-98-40	0.5	37	5.3	390
AREA 4 REP 1	0139-98-41	0.5	29	5.7	330
AREA 4 REP 2	0139-98-42	0.5	27	6.6	350
AREA 4 REP 3	0139-98-43	0.5	33	6.0	390
AREA 4 REP 4	0139-98-44	0.5	31	6.2	380
AREA 4 REP 5	0139-98-45	0.5	24	6.5	320
AREA 5 REP 1	0139-98-46	0.5	31	6.8	410
AREA 5 REP 2	0139-98-47	0.5	37	6.0	440
AREA 5 REP 3	0139-98-48	0.5	23	6.2	280
AREA 5 REP 4	0139-98-49	0.5	24	6.8	330
AREA 5 REP 5	0139-98-50	0.5	40	6.5	520
AREA 6 REP 1	0139-98-51	0.5	23	7.2	340
AREA 6 REP 2	0139-98-52	0.5	46	6.2	570
AREA 6 REP 3	0139-98-53	0.5	38	6.8	510
AREA 6 REP 4	0139-98-54	0.5	34	6.4	440
AREA 6 REP 5	0139-98-55	0.5	30	6.3	370
AREA 9 REP 1	0139-98-56	0.5	41	6.6	540
AREA 9 REP 2	0139-98-57	0.5	34	6.7	450
AREA 9 REP 3	0139-98-58	0.5	31	6.8	420
AREA 9 REP 4	0139-98-59	0.5	34	6.5	440
AREA 9 REP 5	0139-98-60	0.5	27	6.2	340
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.5	26	6.2	320

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7471  
 ANALYSIS: MERCURY

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	ND	0.5	ND
REFERENCE REP 2	0139-98-2	0.1	ND	0.5	ND
REFERENCE REP 3	0139-98-3	0.1	ND	0.6	ND
REFERENCE REP 4	0139-98-4	0.1	ND	0.5	ND
REFERENCE REP 5	0139-98-5	0.1	ND	0.5	ND
AREA 3 REP 1	0139-98-6	0.1	ND	0.5	ND
AREA 3 REP 2	0139-98-7	0.1	ND	0.5	ND
AREA 3 REP 3	0139-98-8	0.1	ND	0.5	ND
AREA 3 REP 4	0139-98-9	0.1	ND	0.5	ND
AREA 3 REP 5	0139-98-10	0.1	ND	0.5	ND
AREA 4 REP 1	0139-98-11	0.1	ND	0.5	ND
AREA 4 REP 2	0139-98-12	0.1	ND	0.5	ND
AREA 4 REP 3	0139-98-13	0.1	ND	0.5	ND
AREA 4 REP 4	0139-98-14	0.1	ND	0.5	ND
AREA 4 REP 5	0139-98-15	0.1	ND	0.5	ND
AREA 5 REP 1	0139-98-16	0.1	ND	0.5	ND
AREA 5 REP 2	0139-98-17	0.1	ND	0.5	ND
AREA 5 REP 3	0139-98-18	0.1	ND	0.5	ND
AREA 5 REP 4	0139-98-19	0.1	ND	0.5	ND
AREA 5 REP 5	0139-98-20	0.1	ND	0.5	ND
AREA 6 REP 1	0139-98-21	0.1	ND	0.5	ND
AREA 6 REP 2	0139-98-22	0.1	ND	0.5	ND
AREA 6 REP 3	0139-98-23	0.1	ND	0.5	ND
AREA 6 REP 4	0139-98-24	0.1	ND	0.5	ND
AREA 6 REP 5	0139-98-25	0.1	ND	0.5	ND
AREA 9 REP 1	0139-98-26	0.1	ND	0.5	ND
AREA 9 REP 2	0139-98-27	0.1	ND	0.5	ND
AREA 9 REP 3	0139-98-28	0.1	ND	0.5	ND
AREA 9 REP 4	0139-98-29	0.1	ND	0.5	ND
AREA 9 REP 5	0139-98-30	0.1	ND	0.5	ND

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/29-30/98  
 MATRIX: CLAM TISSUE

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7471  
 ANALYSIS: MERCURY

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.1	ND	1.6	ND
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	ND	1.6	ND
REFERENCE REP 2	0139-98-32	0.1	ND	1.3	ND
REFERENCE REP 2 (DUP.)	0139-98-32 (DUP.)	0.1	ND	1.3	ND
REFERENCE REP 3	0139-98-33	0.1	ND	1.2	ND
REFERENCE REP 4	0139-98-34	0.1	ND	1.2	ND
REFERENCE REP 5	0139-98-35	0.1	ND	1.0	ND
AREA 3 REP 1	0139-98-36	0.1	ND	1.1	ND
AREA 3 REP 2	0139-98-37	0.1	ND	1.2	ND
AREA 3 REP 3	0139-98-38	0.1	ND	1.1	ND
AREA 3 REP 4	0139-98-39	0.1	ND	1.1	ND
AREA 3 REP 5	0139-98-40	0.1	ND	1.1	ND
AREA 4 REP 1	0139-98-41	0.1	ND	1.2	ND
AREA 4 REP 2	0139-98-42	0.1	ND	1.3	ND
AREA 4 REP 3	0139-98-43	0.1	ND	1.2	ND
AREA 4 REP 4	0139-98-44	0.1	ND	1.2	ND
AREA 4 REP 5	0139-98-45	0.1	ND	1.3	ND
AREA 5 REP 1	0139-98-46	0.1	ND	1.4	ND
AREA 5 REP 2	0139-98-47	0.1	ND	1.2	ND
AREA 5 REP 3	0139-98-48	0.1	ND	1.2	ND
AREA 5 REP 4	0139-98-49	0.1	ND	1.4	ND
AREA 5 REP 5	0139-98-50	0.1	ND	1.3	ND
AREA 6 REP 1	0139-98-51	0.1	ND	1.5	ND
AREA 6 REP 2	0139-98-52	0.1	ND	1.2	ND
AREA 6 REP 3	0139-98-53	0.1	ND	1.4	ND
AREA 6 REP 4	0139-98-54	0.1	ND	1.3	ND
AREA 6 REP 5	0139-98-55	0.1	ND	1.3	ND
AREA 9 REP 1	0139-98-56	0.1	ND	1.3	ND
AREA 9 REP 2	0139-98-57	0.1	ND	1.3	ND
AREA 9 REP 3	0139-98-58	0.1	ND	1.4	ND
AREA 9 REP 4	0139-98-59	0.1	ND	1.3	ND
AREA 9 REP 5	0139-98-60	0.1	ND	1.2	ND
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.1	ND	1.2	ND

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7740  
 ANALYSIS: SELENIUM

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-29/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	ND	0.5	ND
REFERENCE REP 2	0139-98-2	0.1	ND	0.5	ND
REFERENCE REP 3	0139-98-3	1.0 *	ND	5.6 *	ND
REFERENCE REP 4	0139-98-4	0.1	0.24	0.5	1.23
REFERENCE REP 5	0139-98-5	0.1	ND	0.5	ND
AREA 3 REP 1	0139-98-6	0.1	ND	0.5	ND
AREA 3 REP 2	0139-98-7	0.1	0.31	0.5	1.61
AREA 3 REP 3	0139-98-8	0.1	ND	0.5	ND
AREA 3 REP 4	0139-98-9	0.1	0.27	0.5	1.37
AREA 3 REP 5	0139-98-10	0.1	0.65	0.5	3.29
AREA 4 REP 1	0139-98-11	0.1	0.54	0.5	2.78
AREA 4 REP 2	0139-98-12	0.1	0.31	0.5	1.65
AREA 4 REP 3	0139-98-13	0.1	0.23	0.5	1.23
AREA 4 REP 4	0139-98-14	0.1	ND	0.5	ND
AREA 4 REP 5	0139-98-15	0.1	0.38	0.5	1.99
AREA 5 REP 1	0139-98-16	0.1	ND	0.5	ND
AREA 5 REP 2	0139-98-17	0.1	ND	0.5	ND
AREA 5 REP 3	0139-98-18	0.1	0.21	0.5	1.03
AREA 5 REP 4	0139-98-19	0.1	0.26	0.5	1.31
AREA 5 REP 5	0139-98-20	0.1	ND	0.5	ND
AREA 6 REP 1	0139-98-21	0.1	ND	0.5	ND
AREA 6 REP 2	0139-98-22	0.1	ND	0.5	ND
AREA 6 REP 3	0139-98-23	0.1	ND	0.5	ND
AREA 6 REP 4	0139-98-24	0.1	ND	0.5	ND
AREA 6 REP 5	0139-98-25	0.1	ND	0.5	ND
AREA 9 REP 1	0139-98-26	0.1	ND	0.5	ND
AREA 9 REP 2	0139-98-27	0.1	ND	0.5	ND
AREA 9 REP 3	0139-98-28	0.1	ND	0.5	ND
AREA 9 REP 4	0139-98-29	0.1	ND	0.5	ND
AREA 9 REP 5	0139-98-30	0.1	ND	0.5	ND

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: SAMPLE DILUTION NECESSARY TO REDUCE INTERFERENCES FROM NON-TARGET ANALYTES.





## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7060  
 ANALYSIS: ARSENIC

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/29-02/05/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	1.60	0.5	8.77
REFERENCE REP 2	0139-98-2	0.1	1.87	0.5	10.1
REFERENCE REP 3	0139-98-3	0.1	1.97	0.6	11.0
REFERENCE REP 4	0139-98-4	0.1	1.59	0.5	8.15
REFERENCE REP 5	0139-98-5	0.1	1.98	0.5	10.7
AREA 3 REP 1	0139-98-6	0.1	1.36	0.5	7.21
AREA 3 REP 2	0139-98-7	0.1	1.84	0.5	9.60
AREA 3 REP 3	0139-98-8	0.1	1.54	0.5	7.64
AREA 3 REP 4	0139-98-9	0.1	1.50	0.5	7.58
AREA 3 REP 5	0139-98-10	0.1	1.71	0.5	8.69
AREA 4 REP 1	0139-98-11	0.1	1.81	0.5	9.34
AREA 4 REP 2	0139-98-12	0.1	1.77	0.5	9.47
AREA 4 REP 3	0139-98-13	0.1	1.70	0.5	9.05
AREA 4 REP 4	0139-98-14	0.1	1.84	0.5	9.54
AREA 4 REP 5	0139-98-15	0.1	1.93	0.5	10.0
AREA 5 REP 1	0139-98-16	0.1	1.68	0.5	8.98
AREA 5 REP 2	0139-98-17	0.1	1.51	0.5	7.83
AREA 5 REP 3	0139-98-18	0.1	1.74	0.5	8.32
AREA 5 REP 4	0139-98-19	0.1	1.38	0.5	7.02
AREA 5 REP 5	0139-98-20	0.5	3.67	2.4	17.7
AREA 6 REP 1	0139-98-21	0.5	2.46	2.4	11.7
AREA 6 REP 2	0139-98-22	0.5	2.94	2.4	14.0
AREA 6 REP 3	0139-98-23	0.1	1.55	0.5	7.19
AREA 6 REP 4	0139-98-24	0.1	1.63	0.5	8.04
AREA 6 REP 5	0139-98-25	0.5	2.68	2.7	14.5
AREA 9 REP 1	0139-98-26	0.5	2.27	2.4	10.8
AREA 9 REP 2	0139-98-27	0.5	1.93	2.7	10.5
AREA 9 REP 3	0139-98-28	0.5	2.48	2.5	12.3
AREA 9 REP 4	0139-98-29	0.5	2.55	2.6	13.0
AREA 9 REP 5	0139-98-30	0.5	2.35	2.6	12.3

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7060  
 ANALYSIS: ARSENIC

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/29-02/06/98  
 MATRIX: CLAM TISSU

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.1	1.56	1.6	25.2
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	1.70	1.6	27.5
REFERENCE REP 2	0139-98-32	0.5	2.16	6.6	28.5
REFERENCE REP 3	0139-98-33	0.5	2.26	6.0	26.9
REFERENCE REP 4	0139-98-34	0.5	2.38	5.9	28.0
REFERENCE REP 5	0139-98-35	0.5	2.71	5.1	27.6
AREA 3 REP 1	0139-98-36	0.5	2.49	5.6	28.0
AREA 3 REP 2	0139-98-37	0.5	2.73	5.9	32.1
AREA 3 REP 3	0139-98-38	0.5	2.09	5.7	23.7
AREA 3 REP 4	0139-98-39	0.5	1.79	5.6	20.2
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.5	2.77	5.6	31.1
AREA 3 REP 5	0139-98-40	0.5	2.38	5.3	25.1
AREA 4 REP 1	0139-98-41	0.5	3.35	5.7	38.5
AREA 4 REP 2	0139-98-42	0.5	2.20	6.6	29.0
AREA 4 REP 3	0139-98-43	0.5	2.99	6.0	36.1
AREA 4 REP 4	0139-98-44	0.5	3.25	6.2	40.1
AREA 4 REP 5	0139-98-45	0.5	2.36	6.5	30.7
AREA 5 REP 1	0139-98-46	0.5	2.86	6.8	38.7
AREA 5 REP 2	0139-98-47	0.5	3.10	6.0	36.9
AREA 5 REP 3	0139-98-48	0.5	2.76	6.2	34.4
AREA 5 REP 4	0139-98-49	0.5	1.93	6.8	26.1
AREA 5 REP 5	0139-98-50	0.5	4.17	6.5	54.2
AREA 6 REP 1	0139-98-51	0.5	1.59	7.2	23.1
AREA 6 REP 2	0139-98-52	0.5	1.91	6.2	23.6
AREA 6 REP 3	0139-98-53	0.5	2.43	6.8	32.8
AREA 6 REP 4	0139-98-54	0.5	1.89	6.4	24.2
AREA 6 REP 5	0139-98-55	0.5	2.42	6.3	30.2
AREA 9 REP 1	0139-98-56	0.5	2.14	6.6	28.1
AREA 9 REP 2	0139-98-57	0.5	1.60	6.7	21.3
AREA 9 REP 3	0139-98-58	0.5	1.41	6.8	19.3
AREA 9 REP 4	0139-98-59	0.5	1.65	6.5	21.4
AREA 9 REP 5	0139-98-60	0.5	1.34	6.1	16.5
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.5	1.14	6.1	13.9

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7761  
 ANALYSIS: SILVER

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 02/06-09/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	ND	0.5	ND
REFERENCE REP 2	0139-98-2	0.1	ND	0.5	ND
REFERENCE REP 3	0139-98-3	0.1	ND	0.6	ND
REFERENCE REP 4	0139-98-4	0.1	ND	0.5	ND
REFERENCE REP 5	0139-98-5	0.1	ND	0.5	ND
AREA 3 REP 1	0139-98-6	0.1	ND	0.5	ND
AREA 3 REP 2	0139-98-7	0.1	ND	0.5	ND
AREA 3 REP 3	0139-98-8	0.1	ND	0.5	ND
AREA 3 REP 4	0139-98-9	0.1	ND	0.5	ND
AREA 3 REP 5	0139-98-10	0.1	ND	0.5	ND
AREA 4 REP 1	0139-98-11	0.1	ND	0.5	ND
AREA 4 REP 2	0139-98-12	0.1	ND	0.5	ND
AREA 4 REP 3	0139-98-13	0.1	ND	0.5	ND
AREA 4 REP 4	0139-98-14	0.1	ND	0.5	ND
AREA 4 REP 5	0139-98-15	0.1	ND	0.5	ND
AREA 5 REP 1	0139-98-16	0.1	ND	0.5	ND
AREA 5 REP 2	0139-98-17	0.1	ND	0.5	ND
AREA 5 REP 3	0139-98-18	0.1	ND	0.5	ND
AREA 5 REP 4	0139-98-19	0.1	ND	0.5	ND
AREA 5 REP 5	0139-98-20	0.1	ND	0.5	ND
AREA 6 REP 1	0139-98-21	0.1	ND	0.5	ND
AREA 6 REP 2	0139-98-22	0.1	ND	0.5	ND
AREA 6 REP 3	0139-98-23	0.1	ND	0.5	ND
AREA 6 REP 4	0139-98-24	0.1	ND	0.5	ND
AREA 6 REP 5	0139-98-25	0.1	ND	0.5	ND
AREA 9 REP 1	0139-98-26	0.1	ND	0.5	ND
AREA 9 REP 2	0139-98-27	0.1	ND	0.5	ND
AREA 9 REP 3	0139-98-28	0.1	ND	0.5	ND
AREA 9 REP 4	0139-98-29	0.1	ND	0.5	ND
AREA 9 REP 5	0139-98-30	0.1	ND	0.5	ND

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7740  
 ANALYSIS: SELENIUM

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-02/05/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	ND	0.5	ND
REFERENCE REP 2	0139-98-2	0.1	ND	0.5	ND
REFERENCE REP 3	0139-98-3	1.0 *	ND	5.6 *	ND
REFERENCE REP 4	0139-98-4	0.1	0.24	0.5	1.23
REFERENCE REP 5	0139-98-5	0.1	ND	0.5	ND
AREA 3 REP 1	0139-98-6	0.1	ND	0.5	ND
AREA 3 REP 2	0139-98-7	0.1	0.31	0.5	1.61
AREA 3 REP 3	0139-98-8	0.1	ND	0.5	ND
AREA 3 REP 4	0139-98-9	0.1	0.27	0.5	1.37
AREA 3 REP 5	0139-98-10	0.1	0.65	0.5	3.29
AREA 4 REP 1	0139-98-11	0.1	0.54	0.5	2.78
AREA 4 REP 2	0139-98-12	0.1	0.31	0.5	1.65
AREA 4 REP 3	0139-98-13	0.1	0.23	0.5	1.23
AREA 4 REP 4	0139-98-14	0.1	ND	0.5	ND
AREA 4 REP 5	0139-98-15	0.1	0.38	0.5	1.99
AREA 5 REP 1	0139-98-16	0.1	ND	0.5	ND
AREA 5 REP 2	0139-98-17	0.1	ND	0.5	ND
AREA 5 REP 3	0139-98-18	0.1	0.21	0.5	1.03
AREA 5 REP 4	0139-98-19	0.1	0.26	0.5	1.31
AREA 5 REP 5	0139-98-20	0.5 *	ND	2.4	ND
AREA 6 REP 1	0139-98-21	0.5 *	ND	2.4	ND
AREA 6 REP 2	0139-98-22	0.5 *	ND	2.4	ND
AREA 6 REP 3	0139-98-23	0.5 *	ND	2.3	ND
AREA 6 REP 4	0139-98-24	0.5 *	ND	2.5	ND
AREA 6 REP 5	0139-98-25	0.5 *	ND	2.7	ND
AREA 9 REP 1	0139-98-26	0.5 *	ND	2.4	ND
AREA 9 REP 2	0139-98-27	0.5 *	ND	2.7	ND
AREA 9 REP 3	0139-98-28	0.5 *	ND	2.5	ND
AREA 9 REP 4	0139-98-29	0.5 *	ND	2.6	ND
AREA 9 REP 5	0139-98-30	0.5 *	ND	2.6	ND

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: SAMPLE DILUTION NECESSARY TO REDUCE INTERFERENCES FROM NON-TARGET ANALYTES.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7740  
 ANALYSIS: SELENIUM

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-02/05/98  
 MATRIX: CLAM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.1	0.11	1.6	1.74
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	0.24	1.6	3.85
REFERENCE REP 2	0139-98-32	0.5 *	ND	6.6	ND
REFERENCE REP 3	0139-98-33	0.5 *	ND	6.0	ND
REFERENCE REP 4	0139-98-34	0.5 *	ND	5.9	ND
REFERENCE REP 5	0139-98-35	0.5 *	ND	5.1	ND
AREA 3 REP 1	0139-98-36	0.5 *	ND	5.6	ND
AREA 3 REP 2	0139-98-37	0.5 *	ND	5.9	ND
AREA 3 REP 3	0139-98-38	0.5 *	ND	5.7	ND
AREA 3 REP 4	0139-98-39	0.5 *	ND	5.6	ND
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.5 *	ND	5.6	ND
AREA 3 REP 5	0139-98-40	0.5 *	ND	5.3	ND
AREA 4 REP 1	0139-98-41	0.5 *	ND	5.7	ND
AREA 4 REP 2	0139-98-42	0.5 *	ND	6.6	ND
AREA 4 REP 3	0139-98-43	0.5 *	ND	6.0	ND
AREA 4 REP 4	0139-98-44	0.5 *	ND	6.2	ND
AREA 4 REP 5	0139-98-45	0.5 *	ND	6.5	ND
AREA 5 REP 1	0139-98-46	0.5 *	ND	6.8	ND
AREA 5 REP 2	0139-98-47	0.5 *	ND	6.0	ND
AREA 5 REP 3	0139-98-48	0.5 *	ND	6.2	ND
AREA 5 REP 4	0139-98-49	0.5 *	ND	6.8	ND
AREA 5 REP 5	0139-98-50	0.5 *	ND	6.5	ND
AREA 6 REP 1	0139-98-51	0.5 *	ND	7.2	ND
AREA 6 REP 2	0139-98-52	0.5 *	ND	6.2	ND
AREA 6 REP 3	0139-98-53	0.5 *	ND	6.8	ND
AREA 6 REP 4	0139-98-54	0.5 *	ND	6.4	ND
AREA 6 REP 5	0139-98-55	0.5 *	ND	6.3	ND
AREA 9 REP 1	0139-98-56	0.5 *	ND	6.6	ND
AREA 9 REP 2	0139-98-57	0.5 *	ND	6.7	ND
AREA 9 REP 3	0139-98-58	0.5 *	ND	6.8	ND
AREA 9 REP 4	0139-98-59	0.5 *	ND	6.5	ND
AREA 9 REP 5	0139-98-60	0.5 *	ND	6.1	ND
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.5 *	ND	6.1	ND

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: SAMPLE DILUTION NECESSARY TO REDUCE INTERFERENCES FROM NON-TARGET ANALYTES.



# ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 7761  
 ANALYSIS: SILVER

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 02/06-09/98  
 MATRIX: CLAM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.1	ND	1.6	ND
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	ND	1.6	ND
REFERENCE REP 2	0139-98-32	0.1	0.11	1.3	1.41
REFERENCE REP 3	0139-98-33	0.1	ND	1.2	ND
REFERENCE REP 4	0139-98-34	0.1	ND	1.2	ND
REFERENCE REP 5	0139-98-35	0.1	ND	1.0	ND
AREA 3 REP 1	0139-98-36	0.1	ND	1.1	ND
AREA 3 REP 2	0139-98-37	0.1	0.12	1.2	1.44
AREA 3 REP 3	0139-98-38	0.1	0.11	1.1	1.21
AREA 3 REP 4	0139-98-39	0.1	0.11	1.1	1.20
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.1	0.12	1.1	1.39
AREA 3 REP 5	0139-98-40	0.1	ND	1.1	ND
AREA 4 REP 1	0139-98-41	0.1	ND	1.2	ND
AREA 4 REP 2	0139-98-42	0.1	ND	1.3	ND
AREA 4 REP 3	0139-98-43	0.1	ND	1.2	ND
AREA 4 REP 4	0139-98-44	0.1	ND	1.2	ND
AREA 4 REP 5	0139-98-45	0.1	ND	1.3	ND
AREA 5 REP 1	0139-98-46	0.1	ND	1.4	ND
AREA 5 REP 2	0139-98-47	0.1	ND	1.2	ND
AREA 5 REP 3	0139-98-48	0.1	ND	1.2	ND
AREA 5 REP 4	0139-98-49	0.1	ND	1.4	ND
AREA 5 REP 5	0139-98-50	0.1	ND	1.3	ND
AREA 6 REP 1	0139-98-51	0.1	ND	1.5	ND
AREA 6 REP 2	0139-98-52	0.1	ND	1.2	ND
AREA 6 REP 3	0139-98-53	0.1	ND	1.4	ND
AREA 6 REP 4	0139-98-54	0.1	ND	1.3	ND
AREA 6 REP 5	0139-98-55	0.1	ND	1.3	ND
AREA 9 REP 1	0139-98-56	0.1	0.10	1.3	1.37
AREA 9 REP 2	0139-98-57	0.1	ND	1.3	ND
AREA 9 REP 3	0139-98-58	0.1	ND	1.4	ND
AREA 9 REP 4	0139-98-59	0.1	ND	1.3	ND
AREA 9 REP 5	0139-98-60	0.1	ND	1.2	ND
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.1	ND	1.2	ND

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010, EPA 7191  
 ANALYSIS: CHROMIUM

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-02/10/98  
 MATRIX: WORM TISSUE

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-1	0.1	0.16	0.5	0.89
REFERENCE REP 2	0139-98-2	0.1	0.29	0.5	1.55
REFERENCE REP 3	0139-98-3	0.1	0.32	0.6	1.76
REFERENCE REP 4	0139-98-4	0.1	0.26	0.5	1.34
REFERENCE REP 5	0139-98-5	0.1	0.16	0.5	0.87
AREA 3 REP 1	0139-98-6	0.1	0.19	0.5	0.99
AREA 3 REP 2	0139-98-7	0.1	0.21	0.5	1.08
AREA 3 REP 3	0139-98-8	0.1	0.27	0.5	1.32
AREA 3 REP 4	0139-98-9	0.1	0.21	0.5	1.08
AREA 3 REP 5	0139-98-10	0.1	0.20	0.5	1.00
AREA 4 REP 1	0139-98-11	0.1	0.21	0.5	1.06
AREA 4 REP 2	0139-98-12	0.1	0.27	0.5	1.42
AREA 4 REP 3	0139-98-13	0.1	0.17	0.5	0.90
AREA 4 REP 4	0139-98-14	0.1	0.25	0.5	1.28
AREA 4 REP 5	0139-98-15	0.1	0.19	0.5	0.98
AREA 5 REP 1	0139-98-16	0.5	0.51	2.7	2.80
AREA 5 REP 2	0139-98-17	0.1	0.20	0.5	1.02
AREA 5 REP 3	0139-98-18	0.1	0.17	0.5	0.82
AREA 5 REP 4	0139-98-19	0.1	0.22	0.5	1.14
AREA 5 REP 5	0139-98-20	0.5	1.0	2.4	5.0
AREA 6 REP 1	0139-98-21	0.5	0.90	2.4	4.3
AREA 6 REP 2	0139-98-22	0.1	0.19	0.5	0.88
AREA 6 REP 3	0139-98-23	0.1	0.18	0.5	0.84
AREA 6 REP 4	0139-98-24	0.1	0.12	0.5	0.60
AREA 6 REP 5	0139-98-25	0.5	1.3	2.7	6.9
AREA 9 REP 1	0139-98-26	0.1	0.17	0.5	0.79
AREA 9 REP 2	0139-98-27	0.1	0.18	0.5	0.96
AREA 9 REP 3	0139-98-28	0.1	0.14	0.5	0.67
AREA 9 REP 4	0139-98-29	0.1	0.15	0.5	0.75
AREA 9 REP 5	0139-98-30	0.1	0.15	0.5	0.79

RL = REPORTING LIMIT

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE DIGESTED: 01/28-29/98  
 DATE ANALYZED: 01/28-02/10/98  
 MATRIX: CLAM TISSUE

PROJECT NAME/No.: MARINA DEL REY  
 ANALYSIS METHOD: EPA 3050/6010, EPA 7191  
 ANALYSIS: CHROMIUM

SAMPLE ID	PTAS LOG #	WET WEIGHT		DRY WEIGHT	
		R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)	R.L. PPM (MG/KG)	RESULTS PPM (MG/KG)
REFERENCE REP 1	0139-98-31	0.5	0.60	8.1	9.6
REFERENCE REP 1 (DUP.)	0139-98-31 (DUP.)	0.1	0.45	1.6	7.32
REFERENCE REP 2	0139-98-32	0.1	0.27	1.3	3.54
REFERENCE REP 3	0139-98-33	0.1	0.36	1.2	4.30
REFERENCE REP 4	0139-98-34	0.1	0.35	1.2	4.06
REFERENCE REP 5	0139-98-35	0.5	1.1	5.1	11.0
AREA 3 REP 1	0139-98-36	0.1	0.33	1.1	3.66
AREA 3 REP 2	0139-98-37	0.5	0.87	5.9	10.0
AREA 3 REP 3	0139-98-38	0.1	0.30	1.1	3.45
AREA 3 REP 4	0139-98-39	0.1	0.39	1.1	4.36
AREA 3 REP 4 (DUP.)	0139-98-39 (DUP.)	0.1	0.37	1.1	4.16
AREA 3 REP 5	0139-98-40	0.5	0.83	8.3	8.7
AREA 4 REP 1	0139-98-41	0.1	0.70	1.2	4.25
AREA 4 REP 2	0139-98-42	0.1	0.34	1.3	4.42
AREA 4 REP 3	0139-98-43	0.1	0.40	1.2	4.83
AREA 4 REP 4	0139-98-44	0.1	0.30	1.2	3.74
AREA 4 REP 5	0139-98-45	0.1	0.28	1.3	3.69
AREA 5 REP 1	0139-98-46	0.1	0.34	1.4	4.66
AREA 5 REP 2	0139-98-47	0.1	0.38	1.2	4.52
AREA 5 REP 3	0139-98-48	0.1	0.21	1.2	2.62
AREA 5 REP 4	0139-98-49	0.1	0.64	1.4	8.62
AREA 5 REP 5	0139-98-50	0.1	0.61	1.3	7.98
AREA 6 REP 1	0139-98-51	0.1	0.37	1.5	5.42
AREA 6 REP 2	0139-98-52	0.1	0.43	1.2	5.36
AREA 6 REP 3	0139-98-53	0.1	0.43	1.4	5.78
AREA 6 REP 4	0139-98-54	0.1	0.50	1.3	6.40
AREA 6 REP 5	0139-98-55	0.1	0.29	1.3	3.67
AREA 9 REP 1	0139-98-56	0.1	0.41	1.3	5.33
AREA 9 REP 2	0139-98-57	0.1	0.39	1.3	5.13
AREA 9 REP 3	0139-98-58	0.1	0.57	1.4	7.85
AREA 9 REP 4	0139-98-59	0.1	0.50	1.3	6.54
AREA 9 REP 5	0139-98-60	0.1	0.48	1.2	5.89
AREA 9 REP 5 (DUP.)	0139-98-60 (DUP.)	0.1	0.45	1.2	5.50

RL = REPORTING LIMIT

DUP. = DUPLICATE

ND = NOT DETECTED AT LISTED REPORTING LIMITS.

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**QA/QC REPORT**

					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/28-02/10/98						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
CADMIUM	82	118	112	5	75-125	< 20
CADMIUM	85	82	76	8	75-125	< 20
CADMIUM	90	84	80	5	75-125	< 20
COPPER	76	99	95	4	75-125	< 20
COPPER	84	85	85	0	75-125	< 20
COPPER	85	95	93	2	75-125	< 20
LEAD	77	74**	90	20	75-125	< 20
LEAD	115	77	79	3	75-125	< 20
LEAD	110	101	74**	31**	75-125	< 20
NICKEL	73*	88	88	0	75-125	< 20
NICKEL	80	80	81	1	75-125	< 20
NICKEL	80	89	89	0	75-125	< 20
ZINC	73*	93	72	1	75-125	< 20
ZINC	81	84	85	1	75-125	< 20
ZINC	80	92	92	0	75-125	< 20
MERCURY	109	114	110	4	75-125	< 20
MERCURY	108	121	118	3	75-125	< 20
MERCURY	107	114	111	3	75-125	< 20
SELENIUM	99	107	114	6	75-125	< 20
SELENIUM	98	84	70**	18	75-125	< 20
SELENIUM	83	79	80	1	75-125	< 20
ARSENIC	92	36***	44***	22***	75-125	< 20
ARSENIC	90	133***	154***	15	75-125	< 20
ARSENIC	99	74***	65***	13	75-125	< 20
SILVER	90	96	81	17	75-125	< 20
SILVER	94	85	82	4	75-125	< 20
SILVER	87	70**	90	25**	75-125	< 20
CHROMIUM	75	91	91	0	75-125	< 20
CHROMIUM	83	83	84	1	75-125	< 20
CHROMIUM	83	90	90	0	75-125	< 20
CHROMIUM-EPA 7191	115	140***	134***	4	75-125	< 20
CHROMIUM-EPA 7191	116	121***	127***	5	75-125	< 20
CHROMIUM-EPA 7191	95	109	104	5	75-125	< 20

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE

\* NOTE: A DUPLICATE LCS SAMPLE WAS ANALYZED WITH THE SAMPLE BATCH AND THE RESULTING RECOVERY AND RPD MET OR EXCEEDED ACCEPTANCE CRITERIA.

\*\* NOTE: POOR RECOVERY ATTRIBUTABLE TO NONHOMOGENEITY OF SAMPLE SPIKED. A DUPLICATE LCS WAS ANALYZED WITH THE SAMPLE BATCH AND THE RESULTING RECOVERY AND RPD MET OR EXCEEDED ACCEPTANCE CRITERIA.

\*\*\* NOTE: POOR MATRIX SPIKE RECOVERIES ATTRIBUTABLE TO SAMPLE MATRIX EFFECTS. A DUPLICATE LCS WAS ANALYZED WITH THE SAMPLE BATCH AND THE RESULTING RECOVERY AND RPD MET OR EXCEEDED ACCEPTANCE CRITERIA.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/26/98

SAMPLE ID: N/A

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 30 GRAMS

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	20	ND
ACENAPHTHYLENE	20	ND	20	ND
ACENAPHTHENE	20	ND	20	ND
FLUORENE	20	ND	20	ND
PHENANTHRENE	20	ND	20	ND
ANTHRACENE	20	ND	20	ND
FLUORANTHENE	20	ND	20	ND
PYRENE	20	ND	20	ND
BENZO(A)ANTHRACENE	20	ND	20	ND
CHRYSENE	20	ND	20	ND
BENZO(B)FLUORANTHENE	20	ND	20	ND
BENZO(K)FLUORANTHENE	20	ND	20	ND
BENZO(A)PYRENE	20	ND	20	ND
DIBENZO(A,H)ANTHRACENE	20	ND	20	ND
INDENO(1,2,3-CD)PYRENE	20	ND	20	ND
BENZO(GHI)PERYLENE	20	ND	20	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-1

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	110	ND
ACENAPHTHYLENE	20	ND	110	ND
ACENAPHTHENE	20	ND	110	ND
FLUORENE	20	ND	110	ND
PHENANTHRENE	20	ND	110	ND
ANTHRACENE	20	ND	110	ND
FLUORANTHENE	20	ND	110	ND
PYRENE	20	ND	110	ND
BENZO(A)ANTHRACENE	20	ND	110	ND
CHRYSENE	20	ND	110	ND
BENZO(B)FLUORANTHENE	20	ND	110	ND
BENZO(K)FLUORANTHENE	20	ND	110	ND
BENZO(A)PYRENE	20	ND	110	ND
DIBENZO(A,H)ANTHRACENE	20	ND	110	ND
INDENO(1,2,3-CD)PYRENE	20	ND	110	ND
BENZO(GHI)PERYLENE	20	ND	110	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-2

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	108	ND
ACENAPHTHYLENE	20	ND	108	ND
ACENAPHTHENE	20	ND	108	ND
FLUORENE	20	ND	108	ND
PHENANTHRENE	20	ND	108	ND
ANTHRACENE	20	ND	108	ND
FLUORANTHENE	20	ND	108	ND
PYRENE	20	ND	108	ND
BENZO(A)ANTHRACENE	20	ND	108	ND
CHRYSENE	20	ND	108	ND
BENZO(B)FLUORANTHENE	20	ND	108	ND
BENZO(K)FLUORANTHENE	20	ND	108	ND
BENZO(A)PYRENE	20	ND	108	ND
DIBENZO(A,H)ANTHRACENE	20	ND	108	ND
INDENO(1,2,3-CD)PYRENE	20	ND	108	ND
BENZO(GHI)PERYLENE	20	ND	108	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-3

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	112	ND
ACENAPHTHYLENE	20	ND	112	ND
ACENAPHTHENE	20	ND	112	ND
FLUORENE	20	ND	112	ND
PHENANTHRENE	20	ND	112	ND
ANTHRACENE	20	ND	112	ND
FLUORANTHENE	20	ND	112	ND
PYRENE	20	ND	112	ND
BENZO(A)ANTHRACENE	20	ND	112	ND
CHRYSENE	20	ND	112	ND
BENZO(B)FLUORANTHENE	20	ND	112	ND
BENZO(K)FLUORANTHENE	20	ND	112	ND
BENZO(A)PYRENE	20	ND	112	ND
DIBENZO(A,H)ANTHRACENE	20	ND	112	ND
INDENO(1,2,3-CD)PYRENE	20	ND	112	ND
BENZO(GHI)PERYLENE	20	ND	112	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-4

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	103	ND
ACENAPHTHYLENE	20	ND	103	ND
ACENAPHTHENE	20	ND	103	ND
FLUORENE	20	ND	103	ND
PHENANTHRENE	20	ND	103	ND
ANTHRACENE	20	ND	103	ND
FLUORANTHENE	20	ND	103	ND
PYRENE	20	ND	103	ND
BENZO(A)ANTHRACENE	20	ND	103	ND
CHRYSENE	20	ND	103	ND
BENZO(B)FLUORANTHENE	20	ND	103	ND
BENZO(K)FLUORANTHENE	20	ND	103	ND
BENZO(A)PYRENE	20	ND	103	ND
DIBENZO(A,H)ANTHRACENE	20	ND	103	ND
INDENO(1,2,3-CD)PYRENE	20	ND	103	ND
BENZO(GHI)PERYLENE	20	ND	103	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-5

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	108	ND
ACENAPHTHYLENE	20	ND	108	ND
ACENAPHTHENE	20	ND	108	ND
FLUORENE	20	ND	108	ND
PHENANTHRENE	20	ND	108	ND
ANTHRACENE	20	ND	108	ND
FLUORANTHENE	20	ND	108	ND
PYRENE	20	ND	108	ND
BENZO(A)ANTHRACENE	20	ND	108	ND
CHRYSENE	20	ND	108	ND
BENZO(B)FLUORANTHENE	20	ND	108	ND
BENZO(K)FLUORANTHENE	20	ND	108	ND
BENZO(A)PYRENE	20	ND	108	ND
DIBENZO(A,H)ANTHRACENE	20	ND	108	ND
INDENO(1,2,3-CD)PYRENE	20	ND	108	ND
BENZO(GHI)PERYLENE	20	ND	108	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-6

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	106	ND
ACENAPHTHYLENE	20	ND	106	ND
ACENAPHTHENE	20	ND	106	ND
FLUORENE	20	ND	106	ND
PHENANTHRENE	20	ND	106	ND
ANTHRACENE	20	ND	106	ND
FLUORANTHENE	20	ND	106	ND
PYRENE	20	ND	106	ND
BENZO(A)ANTHRACENE	20	ND	106	ND
CHRYSENE	20	ND	106	ND
BENZO(B)FLUORANTHENE	20	ND	106	ND
BENZO(K)FLUORANTHENE	20	ND	106	ND
BENZO(A)PYRENE	20	ND	106	ND
DIBENZO(A,H)ANTHRACENE	20	ND	106	ND
INDENO(1,2,3-CD)PYRENE	20	ND	106	ND
BENZO(GHI)PERYLENE	20	ND	106	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-7

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	104	ND
ACENAPHTHYLENE	20	ND	104	ND
ACENAPHTHENE	20	ND	104	ND
FLUORENE	20	ND	104	ND
PHENANTHRENE	20	ND	104	ND
ANTHRACENE	20	ND	104	ND
FLUORANTHENE	20	ND	104	ND
PYRENE	20	ND	104	ND
BENZO(A)ANTHRACENE	20	ND	104	ND
CHRYSENE	20	ND	104	ND
BENZO(B)FLUORANTHENE	20	ND	104	ND
BENZO(K)FLUORANTHENE	20	ND	104	ND
BENZO(A)PYRENE	20	ND	104	ND
DIBENZO(A,H)ANTHRACENE	20	ND	104	ND
INDENO(1,2,3-CD)PYRENE	20	ND	104	ND
BENZO(GHI)PERYLENE	20	ND	104	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-8

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	99	ND
ACENAPHTHYLENE	20	ND	99	ND
ACENAPHTHENE	20	ND	99	ND
FLUORENE	20	ND	99	ND
PHENANTHRENE	20	ND	99	ND
ANTHRACENE	20	ND	99	ND
FLUORANTHENE	20	ND	99	ND
PYRENE	20	ND	99	ND
BENZO(A)ANTHRACENE	20	ND	99	ND
CHRYSENE	20	ND	99	ND
BENZO(B)FLUORANTHENE	20	ND	99	ND
BENZO(K)FLUORANTHENE	20	ND	99	ND
BENZO(A)PYRENE	20	ND	99	ND
DIBENZO(A,H)ANTHRACENE	20	ND	99	ND
INDENO(1,2,3-CD)PYRENE	20	ND	99	ND
BENZO(GHI)PERYLENE	20	ND	99	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-9

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	101	ND
ACENAPHTHYLENE	20	ND	101	ND
ACENAPHTHENE	20	ND	101	ND
FLUORENE	20	ND	101	ND
PHENANTHRENE	20	ND	101	ND
ANTHRACENE	20	ND	101	ND
FLUORANTHENE	20	ND	101	ND
PYRENE	20	ND	101	ND
BENZO(A)ANTHRACENE	20	ND	101	ND
CHRYSENE	20	ND	101	ND
BENZO(B)FLUORANTHENE	20	ND	101	ND
BENZO(K)FLUORANTHENE	20	ND	101	ND
BENZO(A)PYRENE	20	ND	101	ND
DIBENZO(A,H)ANTHRACENE	20	ND	101	ND
INDENO(1,2,3-CD)PYRENE	20	ND	101	ND
BENZO(GHI)PERYLENE	20	ND	101	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-10

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	102	ND
ACENAPHTHYLENE	20	ND	102	ND
ACENAPHTHENE	20	ND	102	ND
FLUORENE	20	ND	102	ND
PHENANTHRENE	20	ND	102	ND
ANTHRACENE	20	ND	102	ND
FLUORANTHENE	20	ND	102	ND
<b>PYRENE</b>	20	<b>25</b>	<b>102</b>	<b>127</b>
BENZO(A)ANTHRACENE	20	ND	102	ND
CHRYSENE	20	ND	102	ND
BENZO(B)FLUORANTHENE	20	ND	102	ND
BENZO(K)FLUORANTHENE	20	ND	102	ND
BENZO(A)PYRENE	20	ND	102	ND
DIBENZO(A,H)ANTHRACENE	20	ND	102	ND
INDENO(1,2,3-CD)PYRENE	20	ND	102	ND
BENZO(GHI)PERYLENE	20	ND	102	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-11

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	103	ND
ACENAPHTHYLENE	20	ND	103	ND
ACENAPHTHENE	20	ND	103	ND
FLUORENE	20	ND	103	ND
PHENANTHRENE	20	ND	103	ND
ANTHRACENE	20	ND	103	ND
FLUORANTHENE	20	ND	103	ND
PYRENE	20	ND	103	ND
BENZO(A)ANTHRACENE	20	ND	103	ND
CHRYSENE	20	ND	103	ND
BENZO(B)FLUORANTHENE	20	ND	103	ND
BENZO(K)FLUORANTHENE	20	ND	103	ND
BENZO(A)PYRENE	20	ND	103	ND
DIBENZO(A,H)ANTHRACENE	20	ND	103	ND
INDENO(1,2,3-CD)PYRENE	20	ND	103	ND
BENZO(GHI)PERYLENE	20	ND	103	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-12

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	107	ND
ACENAPHTHYLENE	20	ND	107	ND
ACENAPHTHENE	20	ND	107	ND
FLUORENE	20	ND	107	ND
PHENANTHRENE	20	ND	107	ND
ANTHRACENE	20	ND	107	ND
FLUORANTHENE	20	ND	107	ND
<b>PYRENE</b>	<b>20</b>	<b>24</b>	<b>107</b>	<b>128</b>
BENZO(A)ANTHRACENE	20	ND	107	ND
CHRYSENE	20	ND	107	ND
BENZO(B)FLUORANTHENE	20	ND	107	ND
BENZO(K)FLUORANTHENE	20	ND	107	ND
BENZO(A)PYRENE	20	ND	107	ND
DIBENZO(A,H)ANTHRACENE	20	ND	107	ND
INDENO(1,2,3-CD)PYRENE	20	ND	107	ND
BENZO(GHI)PERYLENE	20	ND	107	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-13

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	106	ND
ACENAPHTHYLENE	20	ND	106	ND
ACENAPHTHENE	20	ND	106	ND
FLUORENE	20	ND	106	ND
PHENANTHRENE	20	ND	106	ND
ANTHRACENE	20	ND	106	ND
FLUORANTHENE	20	ND	106	ND
PYRENE	20	ND	106	ND
BENZO(A)ANTHRACENE	20	ND	106	ND
CHRYSENE	20	ND	106	ND
BENZO(B)FLUORANTHENE	20	ND	106	ND
BENZO(K)FLUORANTHENE	20	ND	106	ND
BENZO(A)PYRENE	20	ND	106	ND
DIBENZO(A,H)ANTHRACENE	20	ND	106	ND
INDENO(1,2,3-CD)PYRENE	20	ND	106	ND
BENZO(GHI)PERYLENE	20	ND	106	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-14

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	104	ND
ACENAPHTHYLENE	20	ND	104	ND
ACENAPHTHENE	20	ND	104	ND
FLUORENE	20	ND	104	ND
PHENANTHRENE	20	ND	104	ND
ANTHRACENE	20	ND	104	ND
FLUORANTHENE	20	ND	104	ND
<b>PYRENE</b>	<b>20</b>	<b>28</b>	<b>104</b>	<b>145</b>
BENZO(A)ANTHRACENE	20	ND	104	ND
CHRYSENE	20	ND	104	ND
BENZO(B)FLUORANTHENE	20	ND	104	ND
BENZO(K)FLUORANTHENE	20	ND	104	ND
BENZO(A)PYRENE	20	ND	104	ND
DIBENZO(A,H)ANTHRACENE	20	ND	104	ND
INDENO(1,2,3-CD)PYRENE	20	ND	104	ND
BENZO(GHI)PERYLENE	20	ND	104	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270**  
**POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-15

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	104	ND
ACENAPHTHYLENE	20	ND	104	ND
ACENAPHTHENE	20	ND	104	ND
FLUORENE	20	ND	104	ND
PHENANTHRENE	20	ND	104	ND
ANTHRACENE	20	ND	104	ND
<b>FLUORANTHENE</b>	<b>20</b>	<b>22</b>	<b>104</b>	<b>114</b>
<b>PYRENE</b>	<b>20</b>	<b>25</b>	<b>104</b>	<b>130</b>
BENZO(A)ANTHRACENE	20	ND	104	ND
CHRYSENE	20	ND	104	ND
BENZO(B)FLUORANTHENE	20	ND	104	ND
BENZO(K)FLUORANTHENE	20	ND	104	ND
BENZO(A)PYRENE	20	ND	104	ND
DIBENZO(A,H)ANTHRACENE	20	ND	104	ND
INDENO(1,2,3-CD)PYRENE	20	ND	104	ND
BENZO(GHI)PERYLENE	20	ND	104	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-16

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	107	ND
ACENAPHTHYLENE	20	ND	107	ND
ACENAPHTHENE	20	ND	107	ND
FLUORENE	20	ND	107	ND
PHENANTHRENE	20	ND	107	ND
ANTHRACENE	20	ND	107	ND
FLUORANTHENE	20	ND	107	ND
<b>PYRENE</b>	<b>20</b>	<b>34</b>	<b>107</b>	<b>181</b>
BENZO(A)ANTHRACENE	20	ND	107	ND
CHRYSENE	20	ND	107	ND
BENZO(B)FLUORANTHENE	20	ND	107	ND
BENZO(K)FLUORANTHENE	20	ND	107	ND
BENZO(A)PYRENE	20	ND	107	ND
DIBENZO(A,H)ANTHRACENE	20	ND	107	ND
INDENO(1,2,3-CD)PYRENE	20	ND	107	ND
BENZO(GHI)PERYLENE	20	ND	107	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-17

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	104	ND
ACENAPHTHYLENE	20	ND	104	ND
ACENAPHTHENE	20	ND	104	ND
FLUORENE	20	ND	104	ND
PHENANTHRENE	20	ND	104	ND
ANTHRACENE	20	ND	104	ND
FLUORANTHENE	20	ND	104	ND
<b>PYRENE</b>	<b>20</b>	<b>37</b>	<b>104</b>	<b>191</b>
BENZO(A)ANTHRACENE	20	ND	104	ND
<b>CHRYSENE</b>	<b>20</b>	<b>35</b>	<b>104</b>	<b>181</b>
BENZO(B)FLUORANTHENE	20	ND	104	ND
BENZO(K)FLUORANTHENE	20	ND	104	ND
BENZO(A)PYRENE	20	ND	104	ND
DIBENZO(A,H)ANTHRACENE	20	ND	104	ND
INDENO(1,2,3-CD)PYRENE	20	ND	104	ND
BENZO(GHI)PERYLENE	20	ND	104	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-18

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	96	ND
ACENAPHTHYLENE	20	ND	96	ND
ACENAPHTHENE	20	ND	96	ND
FLUORENE	20	ND	96	ND
PHENANTHRENE	20	ND	96	ND
ANTHRACENE	20	ND	96	ND
FLUORANTHENE	20	27	96	129
PYRENE	20	43	96	206
BENZO(A)ANTHRACENE	20	ND	96	ND
CHRYSENE	20	36	96	172
BENZO(B)FLUORANTHENE	20	ND	96	ND
BENZO(K)FLUORANTHENE	20	ND	96	ND
BENZO(A)PYRENE	20	ND	96	ND
DIBENZO(A,H)ANTHRACENE	20	ND	96	ND
INDENO(1,2,3-CD)PYRENE	20	ND	96	ND
BENZO(GHI)PERYLENE	20	ND	96	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-19

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	102	ND
ACENAPHTHYLENE	20	ND	102	ND
ACENAPHTHENE	20	ND	102	ND
FLUORENE	20	ND	102	ND
PHENANTHRENE	20	ND	102	ND
ANTHRACENE	20	ND	102	ND
FLUORANTHENE	20	ND	102	ND
<b>PYRENE</b>	20	<b>31</b>	<b>102</b>	<b>158</b>
BENZO(A)ANTHRACENE	20	ND	102	ND
CHRYSENE	20	ND	102	ND
BENZO(B)FLUORANTHENE	20	ND	102	ND
BENZO(K)FLUORANTHENE	20	ND	102	ND
BENZO(A)PYRENE	20	ND	102	ND
DIBENZO(A,H)ANTHRACENE	20	ND	102	ND
INDENO(1,2,3-CD)PYRENE	20	ND	102	ND
BENZO(GHI)PERYLENE	20	ND	102	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-20

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	96	ND
ACENAPHTHYLENE	20	ND	96	ND
ACENAPHTHENE	20	ND	96	ND
FLUORENE	20	ND	96	ND
PHENANTHRENE	20	ND	96	ND
ANTHRACENE	20	ND	96	ND
<b>FLUORANTHENE</b>	<b>20</b>	<b>26</b>	<b>96</b>	<b>125</b>
<b>PYRENE</b>	<b>20</b>	<b>55</b>	<b>96</b>	<b>264</b>
BENZO(A)ANTHRACENE	20	ND	96	ND
CHRYSENE	20	ND	96	ND
BENZO(B)FLUORANTHENE	20	ND	96	ND
BENZO(K)FLUORANTHENE	20	ND	96	ND
BENZO(A)PYRENE	20	ND	96	ND
DIBENZO(A,H)ANTHRACENE	20	ND	96	ND
INDENO(1,2,3-CD)PYRENE	20	ND	96	ND
BENZO(GHI)PERYLENE	20	ND	96	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/28/98

SAMPLE ID: N/A

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	20	ND
ACENAPHTHYLENE	20	ND	20	ND
ACENAPHTHENE	20	ND	20	ND
FLUORENE	20	ND	20	ND
PHENANTHRENE	20	ND	20	ND
ANTHRACENE	20	ND	20	ND
FLUORANTHENE	20	ND	20	ND
PYRENE	20	ND	20	ND
BENZO(A)ANTHRACENE	20	ND	20	ND
CHRYSENE	20	ND	20	ND
BENZO(B)FLUORANTHENE	20	ND	20	ND
BENZO(K)FLUORANTHENE	20	ND	20	ND
BENZO(A)PYRENE	20	ND	20	ND
DIBENZO(A,H)ANTHRACENE	20	ND	20	ND
INDENO(1,2,3-CD)PYRENE	20	ND	20	ND
BENZO(GHI)PERYLENE	20	ND	20	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-21

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	95	ND
ACENAPHTHYLENE	20	ND	95	ND
ACENAPHTHENE	20	ND	95	ND
FLUORENE	20	ND	95	ND
PHENANTHRENE	20	ND	95	ND
ANTHRACENE	20	ND	95	ND
FLUORANTHENE	20	ND	95	ND
<b>PYRENE</b>	<b>20</b>	<b>46</b>	<b>95</b>	<b>218</b>
BENZO(A)ANTHRACENE	20	ND	95	ND
CHRYSENE	20	ND	95	ND
BENZO(B)FLUORANTHENE	20	ND	95	ND
BENZO(K)FLUORANTHENE	20	ND	95	ND
BENZO(A)PYRENE	20	ND	95	ND
DIBENZO(A,H)ANTHRACENE	20	ND	95	ND
INDENO(1,2,3-CD)PYRENE	20	ND	95	ND
BENZO(GHI)PERYLENE	20	ND	95	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-22

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	95	ND
ACENAPHTHYLENE	20	ND	95	ND
ACENAPHTHENE	20	ND	95	ND
FLUORENE	20	ND	95	ND
PHENANTHRENE	20	ND	95	ND
ANTHRACENE	20	ND	95	ND
FLUORANTHENE	20	ND	95	ND
<b>PYRENE</b>	20	<b>43</b>	<b>95</b>	<b>203</b>
BENZO(A)ANTHRACENE	20	ND	95	ND
CHRYSENE	20	ND	95	ND
BENZO(B)FLUORANTHENE	20	ND	95	ND
BENZO(K)FLUORANTHENE	20	ND	95	ND
BENZO(A)PYRENE	20	ND	95	ND
DIBENZO(A,H)ANTHRACENE	20	ND	95	ND
INDENO(1,2,3-CD)PYRENE	20	ND	95	ND
BENZO(GHI)PERYLENE	20	ND	95	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-23

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	93	ND
ACENAPHTHYLENE	20	ND	93	ND
ACENAPHTHENE	20	ND	93	ND
FLUORENE	20	ND	93	ND
PHENANTHRENE	20	ND	93	ND
ANTHRACENE	20	ND	93	ND
FLUORANTHENE	20	ND	93	ND
PYRENE	20	29	93	135
BENZO(A)ANTHRACENE	20	ND	93	ND
CHRYSENE	20	ND	93	ND
BENZO(B)FLUORANTHENE	20	ND	93	ND
BENZO(K)FLUORANTHENE	20	ND	93	ND
BENZO(A)PYRENE	20	ND	93	ND
DIBENZO(A,H)ANTHRACENE	20	ND	93	ND
INDENO(1,2,3-CD)PYRENE	20	ND	93	ND
BENZO(GHI)PERYLENE	20	ND	93	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-24

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	99	ND
ACENAPHTHYLENE	20	ND	99	ND
ACENAPHTHENE	20	ND	99	ND
FLUORENE	20	ND	99	ND
PHENANTHRENE	20	ND	99	ND
ANTHRACENE	20	ND	99	ND
FLUORANTHENE	20	ND	99	ND
<b>PYRENE</b>	20	<b>29</b>	99	<b>143</b>
BENZO(A)ANTHRACENE	20	ND	99	ND
CHRYSENE	20	ND	99	ND
BENZO(B)FLUORANTHENE	20	ND	99	ND
BENZO(K)FLUORANTHENE	20	ND	99	ND
BENZO(A)PYRENE	20	ND	99	ND
DIBENZO(A,H)ANTHRACENE	20	ND	99	ND
INDENO(1,2,3-CD)PYRENE	20	ND	99	ND
BENZO(GHI)PERYLENE	20	ND	99	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-25

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	108	ND
ACENAPHTHYLENE	20	ND	108	ND
ACENAPHTHENE	20	ND	108	ND
FLUORENE	20	ND	108	ND
PHENANTHRENE	20	ND	108	ND
ANTHRACENE	20	ND	108	ND
FLUORANTHENE	20	ND	108	ND
<b>PYRENE</b>	<b>20</b>	<b>27</b>	<b>108</b>	<b>146</b>
BENZO(A)ANTHRACENE	20	ND	108	ND
CHRYSENE	20	ND	108	ND
BENZO(B)FLUORANTHENE	20	ND	108	ND
BENZO(K)FLUORANTHENE	20	ND	108	ND
BENZO(A)PYRENE	20	ND	108	ND
DIBENZO(A,H)ANTHRACENE	20	ND	108	ND
INDENO(1,2,3-CD)PYRENE	20	ND	108	ND
BENZO(GHI)PERYLENE	20	ND	108	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-26

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	95	ND
ACENAPHTHYLENE	20	ND	95	ND
ACENAPHTHENE	20	ND	95	ND
FLUORENE	20	ND	95	ND
PHENANTHRENE	20	ND	95	ND
ANTHRACENE	20	ND	95	ND
FLUORANTHENE	20	ND	95	ND
<b>PYRENE</b>	<b>20</b>	<b>30</b>	<b>95</b>	<b>143</b>
BENZO(A)ANTHRACENE	20	ND	95	ND
CHRYSENE	20	ND	95	ND
BENZO(B)FLUORANTHENE	20	ND	95	ND
BENZO(K)FLUORANTHENE	20	ND	95	ND
BENZO(A)PYRENE	20	ND	95	ND
DIBENZO(A,H)ANTHRACENE	20	ND	95	ND
INDENO(1,2,3-CD)PYRENE	20	ND	95	ND
BENZO(GHI)PERYLENE	20	ND	95	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270**  
**POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-27

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	109	ND
ACENAPHTHYLENE	20	ND	109	ND
ACENAPHTHENE	20	ND	109	ND
FLUORENE	20	ND	109	ND
PHENANTHRENE	20	ND	109	ND
ANTHRACENE	20	ND	109	ND
FLUORANTHENE	20	ND	109	ND
<b>PYRENE</b>	<b>20</b>	<b>29</b>	<b>109</b>	<b>158</b>
BENZO(A)ANTHRACENE	20	ND	109	ND
CHRYSENE	20	ND	109	ND
BENZO(B)FLUORANTHENE	20	ND	109	ND
BENZO(K)FLUORANTHENE	20	ND	109	ND
BENZO(A)PYRENE	20	ND	109	ND
DIBENZO(A,H)ANTHRACENE	20	ND	109	ND
INDENO(1,2,3-CD)PYRENE	20	ND	109	ND
BENZO(GHI)PERYLENE	20	ND	109	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270**  
**POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-28

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	100	ND
ACENAPHTHYLENE	20	ND	100	ND
ACENAPHTHENE	20	ND	100	ND
FLUORENE	20	ND	100	ND
PHENANTHRENE	20	ND	100	ND
ANTHRACENE	20	ND	100	ND
FLUORANTHENE	20	ND	100	ND
PYRENE	20	31	100	154
BENZO(A)ANTHRACENE	20	ND	100	ND
CHRYSENE	20	ND	100	ND
BENZO(B)FLUORANTHENE	20	ND	100	ND
BENZO(K)FLUORANTHENE	20	ND	100	ND
BENZO(A)PYRENE	20	ND	100	ND
DIBENZO(A,H)ANTHRACENE	20	ND	100	ND
INDENO(1,2,3-CD)PYRENE	20	ND	100	ND
BENZO(GHI)PERYLENE	20	ND	100	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-29

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	102	ND
ACENAPHTHYLENE	20	ND	102	ND
ACENAPHTHENE	20	ND	102	ND
FLUORENE	20	ND	102	ND
PHENANTHRENE	20	ND	102	ND
ANTHRACENE	20	ND	102	ND
FLUORANTHENE	20	ND	102	ND
<b>PYRENE</b>	<b>20</b>	<b>28</b>	<b>102</b>	<b>143</b>
BENZO(A)ANTHRACENE	20	ND	102	ND
CHRYSENE	20	ND	102	ND
BENZO(B)FLUORANTHENE	20	ND	102	ND
BENZO(K)FLUORANTHENE	20	ND	102	ND
BENZO(A)PYRENE	20	ND	102	ND
DIBENZO(A,H)ANTHRACENE	20	ND	102	ND
INDENO(1,2,3-CD)PYRENE	20	ND	102	ND
BENZO(GHI)PERYLENE	20	ND	102	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-30

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	105	ND
ACENAPHTHYLENE	20	ND	105	ND
ACENAPHTHENE	20	ND	105	ND
FLUORENE	20	ND	105	ND
PHENANTHRENE	20	ND	105	ND
ANTHRACENE	20	ND	105	ND
FLUORANTHENE	20	ND	105	ND
<b>PYRENE</b>	<b>20</b>	<b>37</b>	<b>105</b>	<b>194</b>
BENZO(A)ANTHRACENE	20	ND	105	ND
CHRYSENE	20	ND	105	ND
BENZO(B)FLUORANTHENE	20	ND	105	ND
BENZO(K)FLUORANTHENE	20	ND	105	ND
BENZO(A)PYRENE	20	ND	105	ND
DIBENZO(A,H)ANTHRACENE	20	ND	105	ND
INDENO(1,2,3-CD)PYRENE	20	ND	105	ND
BENZO(GHI)PERYLENE	20	ND	105	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-31

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	323	ND
ACENAPHTHYLENE	20	ND	323	ND
ACENAPHTHENE	20	ND	323	ND
FLUORENE	20	ND	323	ND
PHENANTHRENE	20	ND	323	ND
ANTHRACENE	20	ND	323	ND
FLUORANTHENE	20	ND	323	ND
PYRENE	20	ND	323	ND
BENZO(A)ANTHRACENE	20	ND	323	ND
CHRYSENE	20	ND	323	ND
BENZO(B)FLUORANTHENE	20	ND	323	ND
BENZO(K)FLUORANTHENE	20	ND	323	ND
BENZO(A)PYRENE	20	ND	323	ND
DIBENZO(A,H)ANTHRACENE	20	ND	323	ND
INDENO(1,2,3-CD)PYRENE	20	ND	323	ND
BENZO(GHI)PERYLENE	20	ND	323	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-32

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	263	ND
ACENAPHTHYLENE	20	ND	263	ND
ACENAPHTHENE	20	ND	263	ND
FLUORENE	20	ND	263	ND
PHENANTHRENE	20	ND	263	ND
ANTHRACENE	20	ND	263	ND
FLUORANTHENE	20	ND	263	ND
PYRENE	20	ND	263	ND
BENZO(A)ANTHRACENE	20	ND	263	ND
CHRYSENE	20	ND	263	ND
BENZO(B)FLUORANTHENE	20	ND	263	ND
BENZO(K)FLUORANTHENE	20	ND	263	ND
BENZO(A)PYRENE	20	ND	263	ND
DIBENZO(A,H)ANTHRACENE	20	ND	263	ND
INDENO(1,2,3-CD)PYRENE	20	ND	263	ND
BENZO(GHI)PERYLENE	20	ND	263	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-33

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	238	ND
ACENAPHTHYLENE	20	ND	238	ND
ACENAPHTHENE	20	ND	238	ND
FLUORENE	20	ND	238	ND
PHENANTHRENE	20	ND	238	ND
ANTHRACENE	20	ND	238	ND
FLUORANTHENE	20	ND	238	ND
PYRENE	20	ND	238	ND
BENZO(A)ANTHRACENE	20	ND	238	ND
CHRYSENE	20	ND	238	ND
BENZO(B)FLUORANTHENE	20	ND	238	ND
BENZO(K)FLUORANTHENE	20	ND	238	ND
BENZO(A)PYRENE	20	ND	238	ND
DIBENZO(A,H)ANTHRACENE	20	ND	238	ND
INDENO(1,2,3-CD)PYRENE	20	ND	238	ND
BENZO(GHI)PERYLENE	20	ND	238	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-34

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	235	ND
ACENAPHTHYLENE	20	ND	235	ND
ACENAPHTHENE	20	ND	235	ND
FLUORENE	20	ND	235	ND
PHENANTHRENE	20	ND	235	ND
ANTHRACENE	20	ND	235	ND
FLUORANTHENE	20	ND	235	ND
PYRENE	20	ND	235	ND
BENZO(A)ANTHRACENE	20	ND	235	ND
CHRYSENE	20	ND	235	ND
BENZO(B)FLUORANTHENE	20	ND	235	ND
BENZO(K)FLUORANTHENE	20	ND	235	ND
BENZO(A)PYRENE	20	ND	235	ND
DIBENZO(A,H)ANTHRACENE	20	ND	235	ND
INDENO(1,2,3-CD)PYRENE	20	ND	235	ND
BENZO(GHI)PERYLENE	20	ND	235	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-35

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	204	ND
ACENAPHTHYLENE	20	ND	204	ND
ACENAPHTHENE	20	ND	204	ND
FLUORENE	20	ND	204	ND
PHENANTHRENE	20	ND	204	ND
ANTHRACENE	20	ND	204	ND
FLUORANTHENE	20	ND	204	ND
PYRENE	20	ND	204	ND
BENZO(A)ANTHRACENE	20	ND	204	ND
CHRYSENE	20	ND	204	ND
BENZO(B)FLUORANTHENE	20	ND	204	ND
BENZO(K)FLUORANTHENE	20	ND	204	ND
BENZO(A)PYRENE	20	ND	204	ND
DIBENZO(A,H)ANTHRACENE	20	ND	204	ND
INDENO(1,2,3-CD)PYRENE	20	ND	204	ND
BENZO(GHI)PERYLENE	20	ND	204	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-36

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	225	ND
ACENAPHTHYLENE	20	ND	225	ND
ACENAPHTHENE	20	ND	225	ND
FLUORENE	20	ND	225	ND
PHENANTHRENE	20	ND	225	ND
ANTHRACENE	20	ND	225	ND
FLUORANTHENE	20	ND	225	ND
PYRENE	20	ND	225	ND
BENZO(A)ANTHRACENE	20	ND	225	ND
CHRYSENE	20	ND	225	ND
BENZO(B)FLUORANTHENE	20	ND	225	ND
BENZO(K)FLUORANTHENE	20	ND	225	ND
BENZO(A)PYRENE	20	ND	225	ND
DIBENZO(A,H)ANTHRACENE	20	ND	225	ND
INDENO(1,2,3-CD)PYRENE	20	ND	225	ND
BENZO(GHI)PERYLENE	20	ND	225	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/29/98

SAMPLE ID: N/A

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
NAPHTHALENE	20	ND	20	ND
ACENAPHTHYLENE	20	ND	20	ND
ACENAPHTHENE	20	ND	20	ND
FLUORENE	20	ND	20	ND
PHENANTHRENE	20	ND	20	ND
ANTHRACENE	20	ND	20	ND
FLUORANTHENE	20	ND	20	ND
PYRENE	20	ND	20	ND
BENZO(A)ANTHRACENE	20	ND	20	ND
CHRYSENE	20	ND	20	ND
BENZO(B)FLUORANTHENE	20	ND	20	ND
BENZO(K)FLUORANTHENE	20	ND	20	ND
BENZO(A)PYRENE	20	ND	20	ND
DIBENZO(A,H)ANTHRACENE	20	ND	20	ND
INDENO(1,2,3-CD)PYRENE	20	ND	20	ND
BENZO(GH)PERYLENE	20	ND	20	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-37

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	235	ND
ACENAPHTHYLENE	20	ND	235	ND
ACENAPHTHENE	20	ND	235	ND
FLUORENE	20	ND	235	ND
PHENANTHRENE	20	ND	235	ND
ANTHRACENE	20	ND	235	ND
FLUORANTHENE	20	ND	235	ND
PYRENE	20	ND	235	ND
BENZO(A)ANTHRACENE	20	ND	235	ND
CHRYSENE	20	ND	235	ND
BENZO(B)FLUORANTHENE	20	ND	235	ND
BENZO(K)FLUORANTHENE	20	ND	235	ND
BENZO(A)PYRENE	20	ND	235	ND
DIBENZO(A,H)ANTHRACENE	20	ND	235	ND
INDENO(1,2,3-CD)PYRENE	20	ND	235	ND
BENZO(GHI)PERYLENE	20	ND	235	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-38

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	227	ND
ACENAPHTHYLENE	20	ND	227	ND
ACENAPHTHENE	20	ND	227	ND
FLUORENE	20	ND	227	ND
PHENANTHRENE	20	ND	227	ND
ANTHRACENE	20	ND	227	ND
FLUORANTHENE	20	ND	227	ND
PYRENE	20	ND	227	ND
BENZO(A)ANTHRACENE	20	ND	227	ND
CHRYSENE	20	ND	227	ND
BENZO(B)FLUORANTHENE	20	ND	227	ND
BENZO(K)FLUORANTHENE	20	ND	227	ND
BENZO(A)PYRENE	20	ND	227	ND
DIBENZO(A,H)ANTHRACENE	20	ND	227	ND
INDENO(1,2,3-CD)PYRENE	20	ND	227	ND
BENZO(GHI)PERYLENE	20	ND	227	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-39

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	225	ND
ACENAPHTHYLENE	20	ND	225	ND
ACENAPHTHENE	20	ND	225	ND
FLUORENE	20	ND	225	ND
PHENANTHRENE	20	ND	225	ND
ANTHRACENE	20	ND	225	ND
FLUORANTHENE	20	ND	225	ND
PYRENE	20	ND	225	ND
BENZO(A)ANTHRACENE	20	ND	225	ND
CHRYSENE	20	ND	225	ND
BENZO(B)FLUORANTHENE	20	ND	225	ND
BENZO(K)FLUORANTHENE	20	ND	225	ND
BENZO(A)PYRENE	20	ND	225	ND
DIBENZO(A,H)ANTHRACENE	20	ND	225	ND
INDENO(1,2,3-CD)PYRENE	20	ND	225	ND
BENZO(GHI)PERYLENE	20	ND	225	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-40

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	211	ND
ACENAPHTHYLENE	20	ND	211	ND
ACENAPHTHENE	20	ND	211	ND
FLUORENE	20	ND	211	ND
PHENANTHRENE	20	ND	211	ND
ANTHRACENE	20	ND	211	ND
FLUORANTHENE	20	ND	211	ND
PYRENE	20	ND	211	ND
BENZO(A)ANTHRACENE	20	ND	211	ND
CHRYSENE	20	ND	211	ND
BENZO(B)FLUORANTHENE	20	ND	211	ND
BENZO(K)FLUORANTHENE	20	ND	211	ND
BENZO(A)PYRENE	20	ND	211	ND
DIBENZO(A,H)ANTHRACENE	20	ND	211	ND
INDENO(1,2,3-CD)PYRENE	20	ND	211	ND
BENZO(GHI)PERYLENE	20	ND	211	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-41

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	230	ND
ACENAPHTHYLENE	20	ND	230	ND
ACENAPHTHENE	20	ND	230	ND
FLUORENE	20	ND	230	ND
PHENANTHRENE	20	ND	230	ND
ANTHRACENE	20	ND	230	ND
FLUORANTHENE	20	ND	230	ND
PYRENE	20	ND	230	ND
BENZO(A)ANTHRACENE	20	ND	230	ND
CHRYSENE	20	ND	230	ND
BENZO(B)FLUORANTHENE	20	ND	230	ND
BENZO(K)FLUORANTHENE	20	ND	230	ND
BENZO(A)PYRENE	20	ND	230	ND
DIBENZO(A,H)ANTHRACENE	20	ND	230	ND
INDENO(1,2,3-CD)PYRENE	20	ND	230	ND
BENZO(GHI)PERYLENE	20	ND	230	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-41 (DUPLICATE)

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1 (DUPLICATE)

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	230	ND
ACENAPHTHYLENE	20	ND	230	ND
ACENAPHTHENE	20	ND	230	ND
FLUORENE	20	ND	230	ND
PHENANTHRENE	20	ND	230	ND
ANTHRACENE	20	ND	230	ND
FLUORANTHENE	20	ND	230	ND
PYRENE	20	ND	230	ND
BENZO(A)ANTHRACENE	20	ND	230	ND
CHRYSENE	20	ND	230	ND
BENZO(B)FLUORANTHENE	20	ND	230	ND
BENZO(K)FLUORANTHENE	20	ND	230	ND
BENZO(A)PYRENE	20	ND	230	ND
DIBENZO(A,H)ANTHRACENE	20	ND	230	ND
INDENO(1,2,3-CD)PYRENE	20	ND	230	ND
BENZO(GHI)PERYLENE	20	ND	230	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-42

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 2

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	263	ND
ACENAPHTHYLENE	20	ND	263	ND
ACENAPHTHENE	20	ND	263	ND
FLUORENE	20	ND	263	ND
PHENANTHRENE	20	ND	263	ND
ANTHRACENE	20	ND	263	ND
FLUORANTHENE	20	ND	263	ND
PYRENE	20	ND	263	ND
BENZO(A)ANTHRACENE	20	ND	263	ND
CHRYSENE	20	ND	263	ND
BENZO(B)FLUORANTHENE	20	ND	263	ND
BENZO(K)FLUORANTHENE	20	ND	263	ND
BENZO(A)PYRENE	20	ND	263	ND
DIBENZO(A,H)ANTHRACENE	20	ND	263	ND
INDENO(1,2,3-CD)PYRENE	20	ND	263	ND
BENZO(GHI)PERYLENE	20	ND	263	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-43

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	241	ND
ACENAPHTHYLENE	20	ND	241	ND
ACENAPHTHENE	20	ND	241	ND
FLUORENE	20	ND	241	ND
PHENANTHRENE	20	ND	241	ND
ANTHRACENE	20	ND	241	ND
FLUORANTHENE	20	ND	241	ND
PYRENE	20	ND	241	ND
BENZO(A)ANTHRACENE	20	ND	241	ND
CHRYSENE	20	ND	241	ND
BENZO(B)FLUORANTHENE	20	ND	241	ND
BENZO(K)FLUORANTHENE	20	ND	241	ND
BENZO(A)PYRENE	20	ND	241	ND
DIBENZO(A,H)ANTHRACENE	20	ND	241	ND
INDENO(1,2,3-CD)PYRENE	20	ND	241	ND
BENZO(GHI)PERYLENE	20	ND	241	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-44

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	247	ND
ACENAPHTHYLENE	20	ND	247	ND
ACENAPHTHENE	20	ND	247	ND
FLUORENE	20	ND	247	ND
PHENANTHRENE	20	ND	247	ND
ANTHRACENE	20	ND	247	ND
FLUORANTHENE	20	ND	247	ND
PYRENE	20	ND	247	ND
BENZO(A)ANTHRACENE	20	ND	247	ND
CHRYSENE	20	ND	247	ND
BENZO(B)FLUORANTHENE	20	ND	247	ND
BENZO(K)FLUORANTHENE	20	ND	247	ND
BENZO(A)PYRENE	20	ND	247	ND
DIBENZO(A,H)ANTHRACENE	20	ND	247	ND
INDENO(1,2,3-CD)PYRENE	20	ND	247	ND
BENZO(GHI)PERYLENE	20	ND	247	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-45

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	260	ND
ACENAPHTHYLENE	20	ND	260	ND
ACENAPHTHENE	20	ND	260	ND
FLUORENE	20	ND	260	ND
PHENANTHRENE	20	ND	260	ND
ANTHRACENE	20	ND	260	ND
FLUORANTHENE	20	ND	260	ND
PYRENE	20	ND	260	ND
BENZO(A)ANTHRACENE	20	ND	260	ND
CHRYSENE	20	ND	260	ND
BENZO(B)FLUORANTHENE	20	ND	260	ND
BENZO(K)FLUORANTHENE	20	ND	260	ND
BENZO(A)PYRENE	20	ND	260	ND
DIBENZO(A,H)ANTHRACENE	20	ND	260	ND
INDENO(1,2,3-CD)PYRENE	20	ND	260	ND
BENZO(GHI)PERYLENE	20	ND	260	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-46

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	270	ND
ACENAPHTHYLENE	20	ND	270	ND
ACENAPHTHENE	20	ND	270	ND
FLUORENE	20	ND	270	ND
PHENANTHRENE	20	ND	270	ND
ANTHRACENE	20	ND	270	ND
FLUORANTHENE	20	ND	270	ND
PYRENE	20	ND	270	ND
BENZO(A)ANTHRACENE	20	ND	270	ND
CHRYSENE	20	ND	270	ND
BENZO(B)FLUORANTHENE	20	ND	270	ND
BENZO(K)FLUORANTHENE	20	ND	270	ND
BENZO(A)PYRENE	20	ND	270	ND
DIBENZO(A,H)ANTHRACENE	20	ND	270	ND
INDENO(1,2,3-CD)PYRENE	20	ND	270	ND
BENZO(GHI)PERYLENE	20	ND	270	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-47

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	238	ND
ACENAPHTHYLENE	20	ND	238	ND
ACENAPHTHENE	20	ND	238	ND
FLUORENE	20	ND	238	ND
PHENANTHRENE	20	ND	238	ND
ANTHRACENE	20	ND	238	ND
FLUORANTHENE	20	25	238	298
PYRENE	20	20	238	238
BENZO(A)ANTHRACENE	20	ND	238	ND
CHRYSENE	20	ND	238	ND
BENZO(B)FLUORANTHENE	20	ND	238	ND
BENZO(K)FLUORANTHENE	20	ND	238	ND
BENZO(A)PYRENE	20	ND	238	ND
DIBENZO(A,H)ANTHRACENE	20	ND	238	ND
INDENO(1,2,3-CD)PYRENE	20	ND	238	ND
BENZO(GHI)PERYLENE	20	ND	238	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-48

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	247	ND
ACENAPHTHYLENE	20	ND	247	ND
ACENAPHTHENE	20	ND	247	ND
FLUORENE	20	ND	247	ND
PHENANTHRENE	20	ND	247	ND
ANTHRACENE	20	ND	247	ND
FLUORANTHENE	20	ND	247	ND
PYRENE	20	ND	247	ND
BENZO(A)ANTHRACENE	20	ND	247	ND
CHRYSENE	20	ND	247	ND
BENZO(B)FLUORANTHENE	20	ND	247	ND
BENZO(K)FLUORANTHENE	20	ND	247	ND
BENZO(A)PYRENE	20	ND	247	ND
DIBENZO(A,H)ANTHRACENE	20	ND	247	ND
INDENO(1,2,3-CD)PYRENE	20	ND	247	ND
BENZO(GHI)PERYLENE	20	ND	247	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-48 (DUPLICATE)

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3 (DUPLICATE)

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	247	ND
ACENAPHTHYLENE	20	ND	247	ND
ACENAPHTHENE	20	ND	247	ND
FLUORENE	20	ND	247	ND
PHENANTHRENE	20	ND	247	ND
ANTHRACENE	20	ND	247	ND
FLUORANTHENE	20	ND	247	ND
PYRENE	20	ND	247	ND
BENZO(A)ANTHRACENE	20	ND	247	ND
CHRYSENE	20	ND	247	ND
BENZO(B)FLUORANTHENE	20	ND	247	ND
BENZO(K)FLUORANTHENE	20	ND	247	ND
BENZO(A)PYRENE	20	ND	247	ND
DIBENZO(A,H)ANTHRACENE	20	ND	247	ND
INDENO(1,2,3-CD)PYRENE	20	ND	247	ND
BENZO(GHI)PERYLENE	20	ND	247	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270**  
**POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-49

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
NAPHTHALENE	20	ND	270	ND
ACENAPHTHYLENE	20	ND	270	ND
ACENAPHTHENE	20	ND	270	ND
FLUORENE	20	ND	270	ND
PHENANTHRENE	20	ND	270	ND
ANTHRACENE	20	ND	270	ND
FLUORANTHENE	20	ND	270	ND
PYRENE	20	ND	270	ND
BENZO(A)ANTHRACENE	20	ND	270	ND
CHRYSENE	20	ND	270	ND
BENZO(B)FLUORANTHENE	20	ND	270	ND
BENZO(K)FLUORANTHENE	20	ND	270	ND
BENZO(A)PYRENE	20	ND	270	ND
DIBENZO(A,H)ANTHRACENE	20	ND	270	ND
INDENO(1,2,3-CD)PYRENE	20	ND	270	ND
BENZO(GHI)PERYLENE	20	ND	270	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-50

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	260	ND
ACENAPHTHYLENE	20	ND	260	ND
ACENAPHTHENE	20	ND	260	ND
FLUORENE	20	ND	260	ND
PHENANTHRENE	20	ND	260	ND
ANTHRACENE	20	ND	260	ND
FLUORANTHENE	20	ND	260	ND
PYRENE	20	ND	260	ND
BENZO(A)ANTHRACENE	20	ND	260	ND
CHRYSENE	20	ND	260	ND
BENZO(B)FLUORANTHENE	20	ND	260	ND
BENZO(K)FLUORANTHENE	20	ND	260	ND
BENZO(A)PYRENE	20	ND	260	ND
DIBENZO(A,H)ANTHRACENE	20	ND	260	ND
INDENO(1,2,3-CD)PYRENE	20	ND	260	ND
BENZO(GHI)PERYLENE	20	ND	260	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-51

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	290	ND
ACENAPHTHYLENE	20	ND	290	ND
ACENAPHTHENE	20	ND	290	ND
FLUORENE	20	ND	290	ND
PHENANTHRENE	20	ND	290	ND
ANTHRACENE	20	ND	290	ND
FLUORANTHENE	20	ND	290	ND
PYRENE	20	ND	290	ND
BENZO(A)ANTHRACENE	20	ND	290	ND
CHRYSENE	20	ND	290	ND
BENZO(B)FLUORANTHENE	20	ND	290	ND
BENZO(K)FLUORANTHENE	20	ND	290	ND
BENZO(A)PYRENE	20	ND	290	ND
DIBENZO(A,H)ANTHRACENE	20	ND	290	ND
INDENO(1,2,3-CD)PYRENE	20	ND	290	ND
BENZO(GHI)PERYLENE	20	ND	290	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-51 (DUPLICATE)

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1 (DUPLICATE)

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	290	ND
ACENAPHTHYLENE	20	ND	290	ND
ACENAPHTHENE	20	ND	290	ND
FLUORENE	20	ND	290	ND
PHENANTHRENE	20	ND	290	ND
ANTHRACENE	20	ND	290	ND
FLUORANTHENE	20	ND	290	ND
PYRENE	20	ND	290	ND
BENZO(A)ANTHRACENE	20	ND	290	ND
CHRYSENE	20	ND	290	ND
BENZO(B)FLUORANTHENE	20	ND	290	ND
BENZO(K)FLUORANTHENE	20	ND	290	ND
BENZO(A)PYRENE	20	ND	290	ND
DIBENZO(A,H)ANTHRACENE	20	ND	290	ND
INDENO(1,2,3-CD)PYRENE	20	ND	290	ND
BENZO(GHI)PERYLENE	20	ND	290	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-52

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX:

CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
NAPHTHALENE	20	ND	247	ND
ACENAPHTHYLENE	20	ND	247	ND
ACENAPHTHENE	20	ND	247	ND
FLUORENE	20	ND	247	ND
PHENANTHRENE	20	ND	247	ND
ANTHRACENE	20	ND	247	ND
FLUORANTHENE	20	ND	247	ND
PYRENE	20	ND	247	ND
BENZO(A)ANTHRACENE	20	ND	247	ND
CHRYSENE	20	ND	247	ND
BENZO(B)FLUORANTHENE	20	ND	247	ND
BENZO(K)FLUORANTHENE	20	ND	247	ND
BENZO(A)PYRENE	20	ND	247	ND
DIBENZO(A,H)ANTHRACENE	20	ND	247	ND
INDENO(1,2,3-CD)PYRENE	20	ND	247	ND
BENZO(GHI)PERYLENE	20	ND	247	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270**  
**POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-53

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	270	ND
ACENAPHTHYLENE	20	ND	270	ND
ACENAPHTHENE	20	ND	270	ND
FLUORENE	20	ND	270	ND
PHENANTHRENE	20	ND	270	ND
ANTHRACENE	20	ND	270	ND
FLUORANTHENE	20	ND	270	ND
PYRENE	20	ND	270	ND
BENZO(A)ANTHRACENE	20	ND	270	ND
CHRYSENE	20	ND	270	ND
BENZO(B)FLUORANTHENE	20	ND	270	ND
BENZO(K)FLUORANTHENE	20	ND	270	ND
BENZO(A)PYRENE	20	ND	270	ND
DIBENZO(A,H)ANTHRACENE	20	ND	270	ND
INDENO(1,2,3-CD)PYRENE	20	ND	270	ND
BENZO(GHI)PERYLENE	20	ND	270	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-54

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	256	ND
ACENAPHTHYLENE	20	ND	256	ND
ACENAPHTHENE	20	ND	256	ND
FLUORENE	20	ND	256	ND
PHENANTHRENE	20	ND	256	ND
ANTHRACENE	20	ND	256	ND
FLUORANTHENE	20	ND	256	ND
PYRENE	20	ND	256	ND
BENZO(A)ANTHRACENE	20	ND	256	ND
CHRYSENE	20	ND	256	ND
BENZO(B)FLUORANTHENE	20	ND	256	ND
BENZO(K)FLUORANTHENE	20	ND	256	ND
BENZO(A)PYRENE	20	ND	256	ND
DIBENZO(A,H)ANTHRACENE	20	ND	256	ND
INDENO(1,2,3-CD)PYRENE	20	ND	256	ND
BENZO(GHI)PERYLENE	20	ND	256	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-55

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	250	ND
ACENAPHTHYLENE	20	ND	250	ND
ACENAPHTHENE	20	ND	250	ND
FLUORENE	20	ND	250	ND
PHENANTHRENE	20	ND	250	ND
ANTHRACENE	20	ND	250	ND
FLUORANTHENE	20	ND	250	ND
PYRENE	20	ND	250	ND
BENZO(A)ANTHRACENE	20	ND	250	ND
CHRYSENE	20	ND	250	ND
BENZO(B)FLUORANTHENE	20	ND	250	ND
BENZO(K)FLUORANTHENE	20	ND	250	ND
BENZO(A)PYRENE	20	ND	250	ND
DIBENZO(A,H)ANTHRACENE	20	ND	250	ND
INDENO(1,2,3-CD)PYRENE	20	ND	250	ND
BENZO(GHI)PERYLENE	20	ND	250	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-56

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX:

CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	263	ND
ACENAPHTHYLENE	20	ND	263	ND
ACENAPHTHENE	20	ND	263	ND
FLUORENE	20	ND	263	ND
PHENANTHRENE	20	ND	263	ND
ANTHRACENE	20	ND	263	ND
FLUORANTHENE	20	ND	263	ND
PYRENE	20	ND	263	ND
BENZO(A)ANTHRACENE	20	ND	263	ND
CHRYSENE	20	ND	263	ND
BENZO(B)FLUORANTHENE	20	ND	263	ND
BENZO(K)FLUORANTHENE	20	ND	263	ND
BENZO(A)PYRENE	20	ND	263	ND
DIBENZO(A,H)ANTHRACENE	20	ND	263	ND
INDENO(1,2,3-CD)PYRENE	20	ND	263	ND
BENZO(GHI)PERYLENE	20	ND	263	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-57

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	267	ND
ACENAPHTHYLENE	20	ND	267	ND
ACENAPHTHENE	20	ND	267	ND
FLUORENE	20	ND	267	ND
PHENANTHRENE	20	ND	267	ND
ANTHRACENE	20	ND	267	ND
FLUORANTHENE	20	ND	267	ND
PYRENE	20	ND	267	ND
BENZO(A)ANTHRACENE	20	ND	267	ND
CHRYSENE	20	ND	267	ND
BENZO(B)FLUORANTHENE	20	ND	267	ND
BENZO(K)FLUORANTHENE	20	ND	267	ND
BENZO(A)PYRENE	20	ND	267	ND
DIBENZO(A,H)ANTHRACENE	20	ND	267	ND
INDENO(1,2,3-CD)PYRENE	20	ND	267	ND
BENZO(GHI)PERYLENE	20	ND	267	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-58

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
NAPHTHALENE	20	ND	274	ND
ACENAPHTHYLENE	20	ND	274	ND
ACENAPHTHENE	20	ND	274	ND
FLUORENE	20	ND	274	ND
PHENANTHRENE	20	ND	274	ND
ANTHRACENE	20	ND	274	ND
FLUORANTHENE	20	ND	274	ND
PYRENE	20	ND	274	ND
BENZO(A)ANTHRACENE	20	ND	274	ND
CHRYSENE	20	ND	274	ND
BENZO(B)FLUORANTHENE	20	ND	274	ND
BENZO(K)FLUORANTHENE	20	ND	274	ND
BENZO(A)PYRENE	20	ND	274	ND
DIBENZO(A,H)ANTHRACENE	20	ND	274	ND
INDENO(1,2,3-CD)PYRENE	20	ND	274	ND
BENZO(GHI)PERYLENE	20	ND	274	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-59

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
NAPHTHALENE	20	ND	260	ND
ACENAPHTHYLENE	20	ND	260	ND
ACENAPHTHENE	20	ND	260	ND
FLUORENE	20	ND	260	ND
PHENANTHRENE	20	ND	260	ND
ANTHRACENE	20	ND	260	ND
FLUORANTHENE	20	ND	260	ND
PYRENE	20	ND	260	ND
BENZO(A)ANTHRACENE	20	ND	260	ND
CHRYSENE	20	ND	260	ND
BENZO(B)FLUORANTHENE	20	ND	260	ND
BENZO(K)FLUORANTHENE	20	ND	260	ND
BENZO(A)PYRENE	20	ND	260	ND
DIBENZO(A,H)ANTHRACENE	20	ND	260	ND
INDENO(1,2,3-CD)PYRENE	20	ND	260	ND
BENZO(GHI)PERYLENE	20	ND	260	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-60

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
NAPHTHALENE	20	ND	247	ND
ACENAPHTHYLENE	20	ND	247	ND
ACENAPHTHENE	20	ND	247	ND
FLUORENE	20	ND	247	ND
PHENANTHRENE	20	ND	247	ND
ANTHRACENE	20	ND	247	ND
FLUORANTHENE	20	ND	247	ND
PYRENE	20	ND	247	ND
BENZO(A)ANTHRACENE	20	ND	247	ND
CHRYSENE	20	ND	247	ND
BENZO(B)FLUORANTHENE	20	ND	247	ND
BENZO(K)FLUORANTHENE	20	ND	247	ND
BENZO(A)PYRENE	20	ND	247	ND
DIBENZO(A,H)ANTHRACENE	20	ND	247	ND
INDENO(1,2,3-CD)PYRENE	20	ND	247	ND
BENZO(GHI)PERYLENE	20	ND	247	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## QA/QC REPORT

METHOD: PAHS by EPA 8270-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/28/98						
QA/QC SAMPLE: PTAS 0139-98-50						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
ACENAPHTHENE	110	110	105	5	47-145	<30
ACENAPHTHYLENE	111	110	106	4	33-145	<30
ANTHRACENE	115	113	115	2	27-133	<30
BENZO(A)ANTHRACENE	126	123	125	2	33-143	<30
BENZO(A)PYRENE	124	123	126	2	17-163	<30
BENZO(B)FLUORANTHENE	137	137	135	1	24-159	<30
BENZO(GHI)PERYLENE	138	132	135	2	D-219	<30
BENZO(K)FLUORANTHENE	120	113	113	0	11-162	<30
CHRYSENE	64	61	63	3	17-168	<30
DIBENZO(A,H)ANTHRACENE	75	79	83	5	D-227	<30
FLUORANTHENE	128	123	125	2	26-137	<30
FLUORENE	122	121	120	1	59-121	<30
INDENO(1,2,3-CD)PYRENE	139	143	149	4	D-171	<30
NAPHTHALENE	102	92	81	13	21-133	<30
PHENANTHRENE	120	117	119	2	54-120	<30
PYRENE	123	123	124	1	40-127	<30

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE



## QA/QC REPORT

METHOD: PAHS by EPA 8270-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/29/98						
QA/QC SAMPLE: PTAS 0139-98-43						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
ACENAPHTHENE	108	109	108	1	47-145	<30
ACENAPHTHYLENE	110	113	109	4	33-145	<30
ANTHRACENE	114	111	111	0	27-133	<30
BENZO(A)ANTHRACENE	121	119	122	2	33-143	<30
BENZO(A)PYRENE	120	121	120	1	17-163	<30
BENZO(B)FLUORANTHENE	126	136	112	19	24-159	<30
BENZO(GHI)PERYLENE	128	102	118	15	D-219	<30
BENZO(K)FLUORANTHENE	98	97	101	4	11-162	<30
CHRYSENE	62	60	60	0	17-168	<30
DIBENZO(A,H)ANTHRACENE	96	84	81	4	D-227	<30
FLUORANTHENE	127	122	123	1	26-137	<30
FLUORENE	121	122	122	0	59-121	<30
INDENO(1,2,3-CD)PYRENE	138	117	113	3	D-171	<30
NAPHTHALENE	103	100	96	4	21-133	<30
PHENANTHRENE	114	112	111	1	54-120	<30
PYRENE	94	93	96	3	40-127	<30

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/26/98

SAMPLE ID: N/A

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 30 GRAMS

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE</b>	10	49	10	49
BUTYL BENZYLPHTHALATE	10	ND	10	ND
<b>DI-N-BUTYLPHTHALATE</b>	10	53	10	53
DIETHYLPHTHALATE	10	ND	10	ND
DIMETHYLPHTHALATE	10	ND	10	ND
DI-N-OCTYLPHTHALATE	10	ND	10	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-1

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	102	55	560
BUTYL BENZYLPHTHALATE	10	ND	55	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	88	55	484
DIETHYLPHTHALATE	20	16	55	88
DIMETHYLPHTHALATE	10	ND	55	ND
DI-N-OCTYLPHTHALATE	10	ND	55	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-2

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	85	54	459
BUTYL BENZYLPHTHALATE	10	ND	54	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	70	54	378
DIETHYLPHTHALATE	10	ND	54	ND
DIMETHYLPHTHALATE	10	ND	54	ND
DI-N-OCTYLPHTHALATE	10	ND	54	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-3  
 SAMPLE ID: REFERENCE REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	40	56	223
BUTYL BENZYLPHTHALATE	10	ND	56	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	44	56	446
DIETHYLPHTHALATE	10	10	56	56
DIMETHYLPHTHALATE	10	ND	56	ND
DI-N-OCTYLPHTHALATE	10	ND	56	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-4

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	62	51	318
BUTYL BENZYLPHTHALATE	10	ND	51	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	59	51	303
DIETHYLPHTHALATE	10	ND	51	ND
DIMETHYLPHTHALATE	10	ND	51	ND
DI-N-OCTYLPHTHALATE	10	ND	51	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-5

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	79	54	425
BUTYL BENZYLPHTHALATE	10	ND	54	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	83	54	446
DIETHYLPHTHALATE	10	12	54	65
DIMETHYLPHTHALATE	10	ND	54	ND
DI-N-OCTYLPHTHALATE	10	ND	54	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-6  
 SAMPLE ID: AREA 3 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	57	53	303
BUTYL BENZYLPHTHALATE	10	ND	53	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	47	53	250
DIETHYLPHTHALATE	10	19	53	101
DIMETHYLPHTHALATE	10	ND	53	ND
DI-N-OCTYLPHTHALATE	10	ND	53	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-7

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	69	52	359
BUTYL BENZYLPHTHALATE	10	ND	52	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	52	52	271
<b>DIETHYLPHTHALATE</b>	10	13	52	68
DIMETHYLPHTHALATE	10	ND	52	ND
DI-N-OCTYLPHTHALATE	10	ND	52	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-8  
 SAMPLE ID: AREA 3 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	170	50	841
BUTYL BENZYLPHTHALATE	10	ND	50	ND
DI-N-BUTYLPHTHALATE*	10	43	50	213
DIETHYLPHTHALATE	10	16	50	79
DIMETHYLPHTHALATE	10	ND	50	ND
DI-N-OCTYLPHTHALATE	10	ND	50	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-9

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	112	51	566
BUTYL BENZYLPHTHALATE	10	ND	51	ND
DI-N-BUTYLPHTHALATE*	10	57	51	288
DIETHYLPHTHALATE	10	11	51	56
DIMETHYLPHTHALATE	10	ND	51	ND
DI-N-OCTYLPHTHALATE	10	ND	51	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-10

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	115	51	584
BUTYL BENZYLPHTHALATE	10	ND	51	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	51	51	259
DIETHYLPHTHALATE	10	ND	51	ND
DIMETHYLPHTHALATE	10	ND	51	ND
DI-N-OCTYLPHTHALATE	10	ND	51	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-11

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	108	52	557
BUTYL BENZYLPHTHALATE	10	ND	52	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	106	52	546
DIETHYLPHTHALATE	10	15	52	77
DIMETHYLPHTHALATE	10	ND	52	ND
DI-N-OCTYLPHTHALATE	10	ND	52	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-12

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	82	53	439
BUTYL BENZYLPHTHALATE	10	ND	53	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	63	53	337
DIETHYLPHTHALATE	10	ND	53	ND
DIMETHYLPHTHALATE	10	ND	53	ND
DI-N-OCTYLPHTHALATE	10	ND	53	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-13

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	120	53	638
BUTYL BENZYLPHTHALATE	10	ND	53	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	82	53	436
DIETHYLPHTHALATE	10	12	53	64
DIMETHYLPHTHALATE	10	ND	53	ND
DI-N-OCTYLPHTHALATE	10	ND	53	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-14

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	72	52	373
BUTYL BENZYLPHTHALATE	10	ND	52	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	59	52	306
DIETHYLPHTHALATE	10	16	52	83
DIMETHYLPHTHALATE	10	ND	52	ND
DI-N-OCTYLPHTHALATE	10	ND	52	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-15

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	102	52	528
BUTYL BENZYLPHTHALATE	10	ND	52	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	89	52	461
<b>DIETHYLPHTHALATE</b>	10	21	52	109
DIMETHYLPHTHALATE	10	ND	52	ND
DI-N-OCTYLPHTHALATE	10	ND	52	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-16

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	255	53	1,360
BUTYL BENZYLPHTHALATE	10	ND	53	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	219	53	1,170
DIETHYLPHTHALATE	10	17	53	91
DIMETHYLPHTHALATE	10	ND	53	ND
DI-N-OCTYLPHTHALATE	10	ND	53	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-17  
 SAMPLE ID: AREA 5 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	148	52	767
BUTYL BENZYLPHTHALATE	10	ND	52	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	98	52	508
<b>DIETHYLPHTHALATE</b>	10	16	52	83
DIMETHYLPHTHALATE	10	ND	52	ND
DI-N-OCTYLPHTHALATE	10	ND	52	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-18

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	277	48	1,330
BUTYL BENZYLPHTHALATE	10	ND	48	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	272	48	1,300
<b>DIETHYLPHTHALATE</b>	10	16	48	77
DIMETHYLPHTHALATE	10	ND	48	ND
DI-N-OCTYLPHTHALATE	10	ND	48	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-19  
 SAMPLE ID: AREA 5 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	90	51	459
BUTYL BENZYLPHTHALATE	10	ND	51	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	64	51	327
DIETHYLPHTHALATE	10	14	51	71
DIMETHYLPHTHALATE	10	ND	51	ND
DI-N-OCTYLPHTHALATE	10	ND	51	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-20  
 SAMPLE ID: AREA 5 REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	128	48	615
BUTYL BENZYLPHTHALATE	10	ND	48	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	60	48	288
DIETHYLPHTHALATE	10	12	48	58
DIMETHYLPHTHALATE	10	ND	48	ND
DI-N-OCTYLPHTHALATE	10	ND	48	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/28/98

SAMPLE ID: N/A

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE	10	ND	10	ND
BUTYL BENZYLPHTHALATE	10	ND	10	ND
DI-N-BUTYLPHTHALATE	10	ND	10	ND
DIETHYLPHTHALATE	10	ND	10	ND
DIMETHYLPHTHALATE	10	ND	10	ND
DI-N-OCTYLPHTHALATE	10	ND	10	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-21

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	170	47	806
BUTYL BENZYLPHTHALATE	10	ND	47	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	115	47	545
<b>DIETHYLPHTHALATE</b>	10	13	47	62
DIMETHYLPHTHALATE	10	ND	47	ND
DI-N-OCTYLPHTHALATE	10	ND	47	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-22

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	1,290	47	6,110
BUTYL BENZYLPHTHALATE	10	ND	47	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	113	47	536
DIETHYLPHTHALATE	10	17	47	81
DIMETHYLPHTHALATE	10	ND	47	ND
DI-N-OCTYLPHTHALATE	10.	ND	47	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-23

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	152	47	707
<b>BUTYL BENZYLPHTHALATE</b>	10	23	47	107
<b>DI-N-BUTYLPHTHALATE*</b>	10	127	47	591
<b>DIETHYLPHTHALATE</b>	10	15	47	70
<b>DIMETHYLPHTHALATE</b>	10	ND	47	ND
<b>DI-N-OCTYLPHTHALATE</b>	10	ND	47	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-24  
 SAMPLE ID: AREA 6 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	131	49	645
BUTYL BENZYLPHTHALATE	10	ND	49	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	96	49	473
<b>DIETHYLPHTHALATE</b>	10	18	49	89
DIMETHYLPHTHALATE	10	ND	49	ND
DI-N-OCTYLPHTHALATE	10	ND	49	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-25  
 SAMPLE ID: AREA 6 REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	176	54	951
BUTYL BENZYLPHTHALATE	10	ND	54	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	145	54	784
DIETHYLPHTHALATE	10	23	54	124
DIMETHYLPHTHALATE	10	ND	54	ND
DI-N-OCTYLPHTHALATE	10	ND	54	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-26

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	127	48	605
BUTYL BENZYLPHTHALATE	10	ND	48	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	98	48	467
DIETHYLPHTHALATE	10	18	48	86
DIMETHYLPHTHALATE	10	ND	48	ND
DI-N-OCTYLPHTHALATE	10	ND	48	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-27  
 SAMPLE ID: AREA 9 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	128	55	699
BUTYL BENZYLPHTHALATE	10	ND	55	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	100	55	546
DIETHYLPHTHALATE	10	17	55	93
DIMETHYLPHTHALATE	10	ND	55	ND
DI-N-OCTYLPHTHALATE	10	ND	55	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-28

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	192	50	955
BUTYL BENZYLPHTHALATE	10	ND	50	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	117	50	582
<b>DIETHYLPHTHALATE</b>	10	15	50	75
DIMETHYLPHTHALATE	10	ND	50	ND
DI-N-OCTYLPHTHALATE	10	ND	50	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-29  
 SAMPLE ID: AREA 9 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	107	51	546
BUTYL BENZYLPHTHALATE	10	ND	51	ND
DI-N-BUTYLPHTHALATE*	10	105	51	536
DIETHYLPHTHALATE	10	14	51	71
DIMETHYLPHTHALATE	10	ND	51	ND
DI-N-OCTYLPHTHALATE	10	ND	51	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-30

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	355	52	1,860
BUTYL BENZYLPHTHALATE	10	ND	52	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	313	52	1,640
DIETHYLPHTHALATE	10	31	52	162
DIMETHYLPHTHALATE	10	ND	52	ND
DI-N-OCTYLPHTHALATE	10	ND	52	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-31  
 SAMPLE ID: REFERENCE REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	59	161	952
BUTYL BENZYLPHTHALATE	10	ND	161	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	71	161	1,150
DIETHYLPHTHALATE	10	ND	161	ND
DIMETHYLPHTHALATE	10	ND	161	ND
DI-N-OCTYLPHTHALATE	10	ND	161	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-32

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	82	132	1,080
BUTYL BENZYLPHTHALATE	10	ND	132	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	81	132	1,070
DIETHYLPHTHALATE	10	ND	132	ND
DIMETHYLPHTHALATE	10	ND	132	ND
DI-N-OCTYLPHTHALATE	10	ND	132	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-33

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	71	119	845
BUTYL BENZYLPHTHALATE	10	ND	119	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	78	119	929
<b>DIETHYLPHTHALATE</b>	10	11	119	131
DIMETHYLPHTHALATE	10	ND	119	ND
DI-N-OCTYLPHTHALATE	10	ND	119	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-34

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	60	118	706
BUTYL BENZYLPHTHALATE	10	ND	118	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	69	118	812
DIETHYLPHTHALATE	10	ND	118	ND
DIMETHYLPHTHALATE	10	ND	118	ND
DI-N-OCTYLPHTHALATE	10	ND	118	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-35

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	73	102	745
BUTYL BENZYLPHTHALATE	10	ND	102	ND
DI-N-BUTYLPHTHALATE*	10	85	102	867
DIETHYLPHTHALATE	10	ND	102	ND
DIMETHYLPHTHALATE	10	ND	102	ND
DI-N-OCTYLPHTHALATE	10	ND	102	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A  
 DATE RECEIVED: N/A  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: SOLID  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: METHOD BLANK  
 SAMPLE ID: N/A  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	11	10	11
BUTYL BENZYLPHTHALATE	10	ND	10	ND
DI-N-BUTYLPHTHALATE	10	ND	10	ND
DIETHYLPHTHALATE	10	ND	10	ND
DIMETHYLPHTHALATE	10	ND	10	ND
DI-N-OCTYLPHTHALATE	10	ND	10	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-36  
 SAMPLE ID: AREA 3 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	155	112	1,740
BUTYL BENZYLPHTHALATE	10	ND	112	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	56	112	629
DIETHYLPHTHALATE	10	11	112	124
DIMETHYLPHTHALATE	10	ND	112	ND
DI-N-OCTYLPHTHALATE	10	ND	112	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-37  
 SAMPLE ID: AREA 3 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	91	118	1,070
BUTYL BENZYLPHTHALATE	10	ND	118	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	55	118	647
DIETHYLPHTHALATE	10	ND	118	ND
DIMETHYLPHTHALATE	10	ND	118	ND
DI-N-OCTYLPHTHALATE	10	ND	118	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-38  
 SAMPLE ID: AREA 3 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	111	114	1,260
BUTYL BENZYLPHTHALATE	10	ND	114	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	72	114	818
DIETHYLPHTHALATE	10	ND	114	ND
DIMETHYLPHTHALATE	10	ND	114	ND
DI-N-OCTYLPHTHALATE	10	ND	114	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-39  
 SAMPLE ID: AREA 3 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	235	112	2,640
BUTYL BENZYLPHTHALATE	10	ND	112	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	169	112	1,900
DIETHYLPHTHALATE	10	13	112	146
DIMETHYLPHTHALATE	10	ND	112	ND
DI-N-OCTYLPHTHALATE	10	ND	112	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-40  
 SAMPLE ID: AREA 3 REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	172	105	1,810
BUTYL BENZYLPHTHALATE	10	ND	105	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	160	105	1,680
DIETHYLPHTHALATE	10	19	105	200
DIMETHYLPHTHALATE	10	ND	105	ND
DI-N-OCTYLPHTHALATE	10	ND	105	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-41  
 SAMPLE ID: AREA 4 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	236	115	2,710
<b>BUTYL BENZYLPHTHALATE</b>	10	17	115	195
<b>DI-N-BUTYLPHTHALATE*</b>	10	255	115	2,930
<b>DIETHYLPHTHALATE</b>	10	14	115	161
<b>DIMETHYLPHTHALATE</b>	10	ND	115	ND
<b>DI-N-OCTYLPHTHALATE</b>	10	ND	115	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-41 (DUPLICATE)  
 SAMPLE ID: AREA 4 REP 1 (DUPLICATE)  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	137	115	1,570
BUTYL BENZYLPHTHALATE	10	ND	115	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	126	115	1,450
DIETHYLPHTHALATE	10	14	115	161
DIMETHYLPHTHALATE	10	ND	115	ND
DI-N-OCTYLPHTHALATE	10	ND	115	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-42  
 SAMPLE ID: AREA 4 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	114	132	1,500
BUTYL BENZYLPHTHALATE	10	ND	132	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	125	132	1,640
DIETHYLPHTHALATE	10	15	132	197
DIMETHYLPHTHALATE	10	ND	132	ND
DI-N-OCTYLPHTHALATE	10	ND	132	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-43  
 SAMPLE ID: AREA 4 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	207	120	2,490
BUTYL BENZYLPHTHALATE	10	ND	120	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	86	120	1,040
DIETHYLPHTHALATE	10	13	120	157
DIMETHYLPHTHALATE	10	ND	120	ND
DI-N-OCTYLPHTHALATE	10	ND	120	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-44  
 SAMPLE ID: AREA 4 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	131	123	1,620
BUTYL BENZYLPHTHALATE	10	ND	123	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	120	123	1,480
DIETHYLPHTHALATE	10	16	123	198
DIMETHYLPHTHALATE	10	ND	123	ND
DI-N-OCTYLPHTHALATE	10	ND	123	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-45  
 SAMPLE ID: AREA 4 REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	102	130	1,320
BUTYL BENZYLPHTHALATE	10	ND	130	ND
DI-N-BUTYLPHTHALATE*	10	62	130	805
DIETHYLPHTHALATE	10	ND	130	ND
DIMETHYLPHTHALATE	10	ND	130	ND
DI-N-OCTYLPHTHALATE	10	ND	130	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-46  
 SAMPLE ID: AREA 5 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	89	135	1,200
BUTYL BENZYLPHTHALATE	10	ND	135	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	81	135	1,090
DIETHYLPHTHALATE	10	12	135	162
DIMETHYLPHTHALATE	10	ND	135	ND
DI-N-OCTYLPHTHALATE	10	ND	135	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-47  
 SAMPLE ID: AREA 5 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	143	119	1,700
BUTYL BENZYLPHTHALATE	10	ND	119	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	99	119	1,180
<b>DIETHYLPHTHALATE</b>	10	13	119	155
DIMETHYLPHTHALATE	10	ND	119	ND
DI-N-OCTYLPHTHALATE	10	ND	119	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-48  
 SAMPLE ID: AREA 5 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	80	123	988
BUTYL BENZYLPHTHALATE	10	ND	123	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	42	123	519
DIETHYLPHTHALATE	10	ND	123	ND
DIMETHYLPHTHALATE	10	ND	123	ND
DI-N-OCTYLPHTHALATE	10	ND	123	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-48 (DUPLICATE)  
 SAMPLE ID: AREA 5 REP 3 (DUPLICATE)  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	74	123	914
BUTYL BENZYLPHTHALATE	10	ND	123	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	55	123	679
DIETHYLPHTHALATE	10	12	123	148
DIMETHYLPHTHALATE	10	ND	123	ND
DI-N-OCTYLPHTHALATE	10	ND	123	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-49

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	58	135	784
BUTYL BENZYLPHTHALATE	10	17	135	230
DI-N-BUTYLPHTHALATE*	10	73	135	986
DIETHYLPHTHALATE	10	ND	135	ND
DIMETHYLPHTHALATE	10	ND	135	ND
DI-N-OCTYLPHTHALATE	10	ND	135	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-50  
 SAMPLE ID: AREA 5 REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	84	130	1,090
<b>BUTYL BENZYLPHTHALATE</b>	10	25	130	325
<b>DI-N-BUTYLPHTHALATE*</b>	10	99	130	1,290
<b>DIETHYLPHTHALATE</b>	10	13	130	169
<b>DIMETHYLPHTHALATE</b>	10	ND	130	ND
<b>DI-N-OCTYLPHTHALATE</b>	10	ND	130	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-51  
 SAMPLE ID: AREA 6 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	130	145	1,880
BUTYL BENZYLPHTHALATE	10	ND	145	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	59	145	855
DIETHYLPHTHALATE	10	ND	145	ND
DIMETHYLPHTHALATE	10	ND	145	ND
DI-N-OCTYLPHTHALATE	10	ND	145	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-51 (DUPLICATE)  
 SAMPLE ID: AREA 6 REP 1 (DUPLICATE)  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	150	145	2,170
BUTYL BENZYLPHTHALATE	10	ND	145	ND
DI-N-BUTYLPHTHALATE*	10	106	145	1,540
DIETHYLPHTHALATE	10	11	145	159
DIMETHYLPHTHALATE	10	ND	145	ND
DI-N-OCTYLPHTHALATE	10	ND	145	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-52

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	131	123	1,620
BUTYL BENZYLPHTHALATE	10	ND	123	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	66	123	815
DIETHYLPHTHALATE	10	13	123	160
DIMETHYLPHTHALATE	10	ND	123	ND
DI-N-OCTYLPHTHALATE	10	ND	123	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-53  
 SAMPLE ID: AREA 6 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	153	135	2,070
BUTYL BENZYLPHTHALATE	10	ND	135	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	90	135	1,220
DIETHYLPHTHALATE	10	ND	135	ND
DIMETHYLPHTHALATE	10	ND	135	ND
DI-N-OCTYLPHTHALATE	10	ND	135	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.





**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-54  
 SAMPLE ID: AREA 6 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	163	128	2,090
BUTYL BENZYLPHTHALATE	10	ND	128	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	114	128	1,460
DIETHYLPHTHALATE	10	15	128	192
DIMETHYLPHTHALATE	10	ND	128	ND
DI-N-OCTYLPHTHALATE	10	ND	128	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-55

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	241	125	3,010
BUTYL BENZYLPHTHALATE	10	ND	125	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	170	125	2,120
DIETHYLPHTHALATE	10	15	125	188
DIMETHYLPHTHALATE	10	ND	125	ND
DI-N-OCTYLPHTHALATE	10	ND	125	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-56

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
BIS(2-ETHYLHEXYL)PHTHALATE*	10	144	132	1,890
BUTYL BENZYLPHTHALATE	10	19	132	250
DI-N-BUTYLPHTHALATE*	10	93	132	1,220
DIETHYLPHTHALATE	10	15	132	197
DIMETHYLPHTHALATE	10	ND	132	ND
DI-N-OCTYLPHTHALATE	10	ND	132	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
DATE RECEIVED: 01/21/98  
DATE EXTRACTED: 01/29/98  
DATE ANALYZED: 01/31/98  
MATRIX: CLAM TISSUE  
SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
PTAS LOG #: 0139-98-57  
SAMPLE ID: AREA 9 REP 2  
DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	260	133	3,470
BUTYL BENZYLPHTHALATE	10	ND	133	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	217	133	2,890
DIETHYLPHTHALATE	10	15	133	200
DIMETHYLPHTHALATE	10	ND	133	ND
DI-N-OCTYLPHTHALATE	10	ND	133	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-58

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	129	137	1,770
BUTYL BENZYLPHTHALATE	10	ND	137	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	91	137	1,250
DIETHYLPHTHALATE	10	14	137	192
DIMETHYLPHTHALATE	10	ND	137	ND
DI-N-OCTYLPHTHALATE	10	ND	137	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-59

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	231	130	3,000
BUTYL BENZYLPHTHALATE	10	ND	130	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	220	130	2,860
DIETHYLPHTHALATE	10	37	130	481
DIMETHYLPHTHALATE	10	ND	130	ND
DI-N-OCTYLPHTHALATE	10	ND	130	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHTHALATES**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-60  
 SAMPLE ID: AREA 9 REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
<b>BIS(2-ETHYLHEXYL)PHTHALATE*</b>	10	204	123	2,520
BUTYL BENZYLPHTHALATE	10	ND	123	ND
<b>DI-N-BUTYLPHTHALATE*</b>	10	165	123	2,040
DIETHYLPHTHALATE	10	16	123	198
DIMETHYLPHTHALATE	10	ND	123	ND
DI-N-OCTYLPHTHALATE	10	ND	123	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: THIS ANALYTE WAS FOUND IN THE METHOD BLANK AND IS A SUSPECTED LABORATORY CONTAMINANT.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/26/98

SAMPLE ID: N/A

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 30 GRAMS

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L.		D.L.	
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	20	ND
2-CHLOROPHENOL	25	ND	25	ND
2,4-DICHLOROPHENOL	20	ND	20	ND
2,4-DIMETHYLPHENOL	80	ND	80	ND
2,4-DINITROPHENOL	100	ND	100	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	50	ND
2-NITROPHENOL	20	ND	20	ND
4-NITROPHENOL	40	ND	40	ND
PENTACHLOROPHENOL	40	ND	40	ND
PHENOL	30	ND	30	ND
2,4,6-TRICHLOROPHENOL	30	ND	30	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-1

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	110	ND
2-CHLOROPHENOL	25	ND	137	ND
2,4-DICHLOROPHENOL	20	ND	110	ND
2,4-DIMETHYLPHENOL	80	ND	440	ND
2,4-DINITROPHENOL	100	ND	549	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	275	ND
2-NITROPHENOL	20	ND	110	ND
4-NITROPHENOL	40	ND	220	ND
PENTACHLOROPHENOL	40	ND	220	ND
PHENOL	30	ND	165	ND
2,4,6-TRICHLOROPHENOL	30	ND	165	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-2

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	108	ND
2-CHLOROPHENOL	25	ND	135	ND
2,4-DICHLOROPHENOL	20	ND	108	ND
2,4-DIMETHYLPHENOL	80	ND	432	ND
2,4-DINITROPHENOL	100	ND	541	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	270	ND
2-NITROPHENOL	20	ND	108	ND
4-NITROPHENOL	40	ND	216	ND
PENTACHLOROPHENOL	40	ND	216	ND
PHENOL	30	ND	162	ND
2,4,6-TRICHLOROPHENOL	30	ND	162	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-3

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	112	ND
2-CHLOROPHENOL	25	ND	140	ND
2,4-DICHLOROPHENOL	20	ND	112	ND
2,4-DIMETHYLPHENOL	80	ND	447	ND
2,4-DINITROPHENOL	100	ND	559	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	279	ND
2-NITROPHENOL	20	ND	112	ND
4-NITROPHENOL	40	ND	223	ND
PENTACHLOROPHENOL	40	ND	223	ND
PHENOL	30	ND	168	ND
2,4,6-TRICHLOROPHENOL	30	ND	168	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-4

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	103	ND
2-CHLOROPHENOL	25	ND	128	ND
2,4-DICHLOROPHENOL	20	ND	103	ND
2,4-DIMETHYLPHENOL	80	ND	410	ND
2,4-DINITROPHENOL	100	ND	513	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	256	ND
2-NITROPHENOL	20	ND	103	ND
4-NITROPHENOL	40	ND	205	ND
PENTACHLOROPHENOL	40	ND	205	ND
PHENOL	30	ND	154	ND
2,4,6-TRICHLOROPHENOL	30	ND	154	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-5  
 SAMPLE ID: REFERENCE REP 5  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	108	ND
2-CHLOROPHENOL	25	ND	134	ND
2,4-DICHLOROPHENOL	20	ND	108	ND
2,4-DIMETHYLPHENOL	80	ND	430	ND
2,4-DINITROPHENOL	100	ND	538	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	269	ND
2-NITROPHENOL	20	ND	108	ND
4-NITROPHENOL	40	ND	215	ND
PENTACHLOROPHENOL	40	ND	215	ND
PHENOL	30	ND	161	ND
2,4,6-TRICHLOROPHENOL	30	ND	161	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-6

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	106	ND
2-CHLOROPHENOL	25	ND	133	ND
2,4-DICHLOROPHENOL	20	ND	106	ND
2,4-DIMETHYLPHENOL	80	ND	426	ND
2,4-DINITROPHENOL	100	ND	532	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	266	ND
2-NITROPHENOL	20	ND	106	ND
4-NITROPHENOL	40	ND	213	ND
PENTACHLOROPHENOL	40	ND	213	ND
PHENOL	30	ND	160	ND
2,4,6-TRICHLOROPHENOL	30	ND	160	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-7

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	104	ND
2-CHLOROPHENOL	25	ND	130	ND
2,4-DICHLOROPHENOL	20	ND	104	ND
2,4-DIMETHYLPHENOL	80	ND	417	ND
2,4-DINITROPHENOL	100	ND	521	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	260	ND
2-NITROPHENOL	20	ND	104	ND
4-NITROPHENOL	40	ND	208	ND
PENTACHLOROPHENOL	40	ND	208	ND
PHENOL	30	ND	156	ND
2,4,6-TRICHLOROPHENOL	30	ND	156	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-8

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	99	ND
2-CHLOROPHENOL	25	ND	124	ND
2,4-DICHLOROPHENOL	20	ND	99	ND
2,4-DIMETHYLPHENOL	80	ND	396	ND
2,4-DINITROPHENOL	100	ND	495	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	248	ND
2-NITROPHENOL	20	ND	99	ND
4-NITROPHENOL	40	ND	198	ND
PENTACHLOROPHENOL	40	ND	198	ND
PHENOL	30	ND	149	ND
2,4,6-TRICHLOROPHENOL	30	ND	149	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-9  
 SAMPLE ID: AREA 3 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	101	ND
2-CHLOROPHENOL	25	ND	126	ND
2,4-DICHLOROPHENOL	20	ND	101	ND
2,4-DIMETHYLPHENOL	80	ND	404	ND
2,4-DINITROPHENOL	100	ND	505	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	253	ND
2-NITROPHENOL	20	ND	101	ND
4-NITROPHENOL	40	ND	202	ND
PENTACHLOROPHENOL	40	ND	202	ND
PHENOL	30	ND	152	ND
2,4,6-TRICHLOROPHENOL	30	ND	152	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-10

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	102	ND
2-CHLOROPHENOL	25	ND	127	ND
2,4-DICHLOROPHENOL	20	ND	102	ND
2,4-DIMETHYLPHENOL	80	ND	406	ND
2,4-DINITROPHENOL	100	ND	508	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	254	ND
2-NITROPHENOL	20	ND	102	ND
4-NITROPHENOL	40	ND	203	ND
PENTACHLOROPHENOL	40	ND	203	ND
PHENOL	30	ND	152	ND
2,4,6-TRICHLOROPHENOL	30	ND	152	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-11

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	103	ND
2-CHLOROPHENOL	25	ND	129	ND
2,4-DICHLOROPHENOL	20	ND	103	ND
2,4-DIMETHYLPHENOL	80	ND	412	ND
2,4-DINITROPHENOL	100	ND	515	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	258	ND
2-NITROPHENOL	20	ND	103	ND
4-NITROPHENOL	40	ND	206	ND
PENTACHLOROPHENOL	40	ND	206	ND
PHENOL	30	ND	155	ND
2,4,6-TRICHLOROPHENOL	30	ND	155	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-12

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	107	ND
2-CHLOROPHENOL	25	ND	134	ND
2,4-DICHLOROPHENOL	20	ND	107	ND
2,4-DIMETHYLPHENOL	80	ND	428	ND
2,4-DINITROPHENOL	100	ND	535	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	267	ND
2-NITROPHENOL	20	ND	107	ND
4-NITROPHENOL	40	ND	214	ND
PENTACHLOROPHENOL	40	ND	214	ND
PHENOL	30	ND	160	ND
2,4,6-TRICHLOROPHENOL	30	ND	160	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-13

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	106	ND
2-CHLOROPHENOL	25	ND	133	ND
2,4-DICHLOROPHENOL	20	ND	106	ND
2,4-DIMETHYLPHENOL	80	ND	426	ND
2,4-DINITROPHENOL	100	ND	532	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	266	ND
2-NITROPHENOL	20	ND	106	ND
4-NITROPHENOL	40	ND	213	ND
PENTACHLOROPHENOL	40	ND	213	ND
PHENOL	30	ND	160	ND
2,4,6-TRICHLOROPHENOL	30	ND	160	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-14

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	104	ND
2-CHLOROPHENOL	25	ND	130	ND
2,4-DICHLOROPHENOL	20	ND	104	ND
2,4-DIMETHYLPHENOL	80	ND	415	ND
2,4-DINITROPHENOL	100	ND	518	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	259	ND
2-NITROPHENOL	20	ND	104	ND
4-NITROPHENOL	40	ND	207	ND
PENTACHLOROPHENOL	40	ND	207	ND
PHENOL	30	ND	155	ND
2,4,6-TRICHLOROPHENOL	30	ND	155	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-15

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	104	ND
2-CHLOROPHENOL	25	ND	130	ND
2,4-DICHLOROPHENOL	20	ND	104	ND
2,4-DIMETHYLPHENOL	80	ND	415	ND
2,4-DINITROPHENOL	100	ND	518	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	259	ND
2-NITROPHENOL	20	ND	104	ND
4-NITROPHENOL	40	ND	207	ND
PENTACHLOROPHENOL	40	ND	207	ND
PHENOL	30	ND	155	ND
2,4,6-TRICHLOROPHENOL	30	ND	155	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-16

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	107	ND
2-CHLOROPHENOL	25	ND	134	ND
2,4-DICHLOROPHENOL	20	ND	107	ND
2,4-DIMETHYLPHENOL	80	ND	428	ND
2,4-DINITROPHENOL	100	ND	535	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	267	ND
2-NITROPHENOL	20	ND	107	ND
4-NITROPHENOL	40	ND	214	ND
PENTACHLOROPHENOL	40	ND	214	ND
PHENOL	30	ND	160	ND
2,4,6-TRICHLOROPHENOL	30	ND	160	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-17

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	104	ND
2-CHLOROPHENOL	25	ND	130	ND
2,4-DICHLOROPHENOL	20	ND	104	ND
2,4-DIMETHYLPHENOL	80	ND	415	ND
2,4-DINITROPHENOL	100	ND	518	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	259	ND
2-NITROPHENOL	20	ND	104	ND
4-NITROPHENOL	40	ND	207	ND
PENTACHLOROPHENOL	40	ND	207	ND
PHENOL	30	ND	155	ND
2,4,6-TRICHLOROPHENOL	30	ND	155	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-18

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L.		D.L.	
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	96	ND
2-CHLOROPHENOL	25	ND	120	ND
2,4-DICHLOROPHENOL	20	ND	96	ND
2,4-DIMETHYLPHENOL	80	ND	383	ND
2,4-DINITROPHENOL	100	ND	478	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	239	ND
2-NITROPHENOL	20	ND	96	ND
4-NITROPHENOL	40	ND	191	ND
PENTACHLOROPHENOL	40	ND	191	ND
PHENOL	30	ND	144	ND
2,4,6-TRICHLOROPHENOL	30	ND	144	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-19

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	102	ND
2-CHLOROPHENOL	25	ND	128	ND
2,4-DICHLOROPHENOL	20	ND	102	ND
2,4-DIMETHYLPHENOL	80	ND	408	ND
2,4-DINITROPHENOL	100	ND	510	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	255	ND
2-NITROPHENOL	20	ND	102	ND
4-NITROPHENOL	40	ND	204	ND
PENTACHLOROPHENOL	40	ND	204	ND
PHENOL	30	ND	153	ND
2,4,6-TRICHLOROPHENOL	30	ND	153	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-20

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	96	ND
2-CHLOROPHENOL	25	ND	120	ND
2,4-DICHLOROPHENOL	20	ND	96	ND
2,4-DIMETHYLPHENOL	80	ND	383	ND
2,4-DINITROPHENOL	100	ND	478	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	239	ND
2-NITROPHENOL	20	ND	96	ND
4-NITROPHENOL	40	ND	191	ND
PENTACHLOROPHENOL	40	ND	191	ND
PHENOL	30	ND	144	ND
2,4,6-TRICHLOROPHENOL	30	ND	144	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A  
DATE RECEIVED: N/A  
DATE EXTRACTED: 01/28/98  
DATE ANALYZED: 01/29/98  
MATRIX: SOLID  
SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
PTAS LOG #: METHOD BLANK  
SAMPLE ID: N/A  
DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	20	ND
2-CHLOROPHENOL	25	ND	25	ND
2,4-DICHLOROPHENOL	20	ND	20	ND
2,4-DIMETHYLPHENOL	80	ND	80	ND
2,4-DINITROPHENOL	100	ND	100	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	50	ND
2-NITROPHENOL	20	ND	20	ND
4-NITROPHENOL	40	ND	40	ND
PENTACHLOROPHENOL	40	ND	40	ND
PHENOL	30	ND	30	ND
2,4,6-TRICHLOROPHENOL	30	ND	30	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-21

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	95	ND
2-CHLOROPHENOL	25	ND	118	ND
2,4-DICHLOROPHENOL	20	ND	95	ND
2,4-DIMETHYLPHENOL	80	ND	379	ND
2,4-DINITROPHENOL	100	ND	474	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	237	ND
2-NITROPHENOL	20	ND	95	ND
4-NITROPHENOL	40	ND	190	ND
PENTACHLOROPHENOL	40	ND	190	ND
PHENOL	30	ND	142	ND
2,4,6-TRICHLOROPHENOL	30	ND	142	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

DATE RECEIVED: 01/21/98

PROJECT NAME/No.: MARINA DEL REY

DATE EXTRACTED: 01/29/98

PTAS LOG #: 0139-98-22

DATE ANALYZED: 01/30/98

SAMPLE ID: AREA 6 REP 2

MATRIX: WORM TISSUE

DILUTION FACTOR: 1

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	95	ND
2-CHLOROPHENOL	25	ND	118	ND
2,4-DICHLOROPHENOL	20	ND	95	ND
2,4-DIMETHYLPHENOL	80	ND	379	ND
2,4-DINITROPHENOL	100	ND	474	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	237	ND
2-NITROPHENOL	20	ND	.95	ND
4-NITROPHENOL	40	ND	190	ND
PENTACHLOROPHENOL	40	ND	190	ND
PHENOL	30	ND	142	ND
2,4,6-TRICHLOROPHENOL	30	ND	142	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-23

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	93	ND
2-CHLOROPHENOL	25	ND	116	ND
2,4-DICHLOROPHENOL	20	ND	93	ND
2,4-DIMETHYLPHENOL	80	ND	372	ND
2,4-DINITROPHENOL	100	ND	465	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	233	ND
2-NITROPHENOL	20	ND	93	ND
4-NITROPHENOL	40	ND	186	ND
PENTACHLOROPHENOL	40	ND	186	ND
PHENOL	30	ND	140	ND
2,4,6-TRICHLOROPHENOL	30	ND	140	ND

D.L = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-24  
 SAMPLE ID: AREA 6 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	99	ND
2-CHLOROPHENOL	25	ND	123	ND
2,4-DICHLOROPHENOL	20	ND	99	ND
2,4-DIMETHYLPHENOL	80	ND	394	ND
2,4-DINITROPHENOL	100	ND	493	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	246	ND
2-NITROPHENOL	20	ND	99	ND
4-NITROPHENOL	40	ND	197	ND
PENTACHLOROPHENOL	40	ND	197	ND
PHENOL	30	ND	148	ND
2,4,6-TRICHLOROPHENOL	30	ND	148	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-25

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	108	ND
2-CHLOROPHENOL	25	ND	135	ND
2,4-DICHLOROPHENOL	20	ND	108	ND
2,4-DIMETHYLPHENOL	80	ND	432	ND
2,4-DINITROPHENOL	100	ND	541	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	270	ND
2-NITROPHENOL	20	ND	108	ND
4-NITROPHENOL	40	ND	216	ND
PENTACHLOROPHENOL	40	ND	216	ND
PHENOL	30	ND	162	ND
2,4,6-TRICHLOROPHENOL	30	ND	162	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270**

**PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-26

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	95	ND
2-CHLOROPHENOL	25	ND	119	ND
2,4-DICHLOROPHENOL	20	ND	95	ND
2,4-DIMETHYLPHENOL	80	ND	381	ND
2,4-DINITROPHENOL	100	ND	476	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	238	ND
2-NITROPHENOL	20	ND	95	ND
4-NITROPHENOL	40	ND	190	ND
PENTACHLOROPHENOL	40	ND	190	ND
PHENOL	30	ND	143	ND
2,4,6-TRICHLOROPHENOL	30	ND	143	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-27

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L.		D.L.	
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	109	ND
2-CHLOROPHENOL	25	ND	137	ND
2,4-DICHLOROPHENOL	20	ND	109	ND
2,4-DIMETHYLPHENOL	80	ND	437	ND
2,4-DINITROPHENOL	100	ND	546	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	273	ND
2-NITROPHENOL	20	ND	109	ND
4-NITROPHENOL	40	ND	219	ND
PENTACHLOROPHENOL	40	ND	219	ND
PHENOL	30	ND	164	ND
2,4,6-TRICHLOROPHENOL	30	ND	164	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-28  
 SAMPLE ID: AREA 9 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	100	ND
2-CHLOROPHENOL	25	ND	124	ND
2,4-DICHLOROPHENOL	20	ND	100	ND
2,4-DIMETHYLPHENOL	80	ND	398	ND
2,4-DINITROPHENOL	100	ND	498	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	249	ND
2-NITROPHENOL	20	ND	100	ND
4-NITROPHENOL	40	ND	199	ND
PENTACHLOROPHENOL	40	ND	199	ND
PHENOL	30	ND	149	ND
2,4,6-TRICHLOROPHENOL	30	ND	149	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-29

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	102	ND
2-CHLOROPHENOL	25	ND	128	ND
2,4-DICHLOROPHENOL	20	ND	102	ND
2,4-DIMETHYLPHENOL	80	ND	408	ND
2,4-DINITROPHENOL	100	ND	510	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	255	ND
2-NITROPHENOL	20	ND	102	ND
4-NITROPHENOL	40	ND	204	ND
PENTACHLOROPHENOL	40	ND	204	ND
PHENOL	30	ND	153	ND
2,4,6-TRICHLOROPHENOL	30	ND	153	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-30

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	105	ND
2-CHLOROPHENOL	25	ND	131	ND
2,4-DICHLOROPHENOL	20	ND	105	ND
2,4-DIMETHYLPHENOL	80	ND	419	ND
2,4-DINITROPHENOL	100	ND	524	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	262	ND
2-NITROPHENOL	20	ND	105	ND
4-NITROPHENOL	40	ND	209	ND
PENTACHLOROPHENOL	40	ND	209	ND
PHENOL	30	ND	157	ND
2,4,6-TRICHLOROPHENOL	30	ND	157	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-31

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	323	ND
2-CHLOROPHENOL	25	ND	403	ND
2,4-DICHLOROPHENOL	20	ND	323	ND
2,4-DIMETHYLPHENOL	80	ND	1,290	ND
2,4-DINITROPHENOL	100	ND	1,610	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	806	ND
2-NITROPHENOL	20	ND	323	ND
4-NITROPHENOL	40	ND	645	ND
PENTACHLOROPHENOL	40	ND	645	ND
PHENOL	30	ND	484	ND
2,4,6-TRICHLOROPHENOL	30	ND	484	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-32  
 SAMPLE ID: REFERENCE REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	263	ND
2-CHLOROPHENOL	25	ND	329	ND
2,4-DICHLOROPHENOL	20	ND	263	ND
2,4-DIMETHYLPHENOL	80	ND	1,050	ND
2,4-DINITROPHENOL	100	ND	1,320	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	658	ND
2-NITROPHENOL	20	ND	263	ND
4-NITROPHENOL	40	ND	526	ND
PENTACHLOROPHENOL	40	ND	526	ND
PHENOL	30	ND	395	ND
2,4,6-TRICHLOROPHENOL	30	ND	395	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-33

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	238	ND
2-CHLOROPHENOL	25	ND	298	ND
2,4-DICHLOROPHENOL	20	ND	238	ND
2,4-DIMETHYLPHENOL	80	ND	952	ND
2,4-DINITROPHENOL	100	ND	1,190	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	595	ND
2-NITROPHENOL	20	ND	238	ND
4-NITROPHENOL	40	ND	476	ND
PENTACHLOROPHENOL	40	ND	476	ND
PHENOL	30	ND	357	ND
2,4,6-TRICHLOROPHENOL	30	ND	357	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-34

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	235	ND
2-CHLOROPHENOL	25	ND	294	ND
2,4-DICHLOROPHENOL	20	ND	235	ND
2,4-DIMETHYLPHENOL	80	ND	941	ND
2,4-DINITROPHENOL	100	ND	1,180	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	588	ND
2-NITROPHENOL	20	ND	235	ND
4-NITROPHENOL	40	ND	471	ND
PENTACHLOROPHENOL	40	ND	471	ND
PHENOL	30	ND	353	ND
2,4,6-TRICHLOROPHENOL	30	ND	353	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-35

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	204	ND
2-CHLOROPHENOL	25	ND	255	ND
2,4-DICHLOROPHENOL	20	ND	204	ND
2,4-DIMETHYLPHENOL	80	ND	816	ND
2,4-DINITROPHENOL	100	ND	1,020	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	510	ND
2-NITROPHENOL	20	ND	204	ND
4-NITROPHENOL	40	ND	408	ND
PENTACHLOROPHENOL	40	ND	408	ND
PHENOL	30	ND	306	ND
2,4,6-TRICHLOROPHENOL	30	ND	306	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-36  
 SAMPLE ID: AREA 3 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	225	ND
2-CHLOROPHENOL	25	ND	281	ND
2,4-DICHLOROPHENOL	20	ND	225	ND
2,4-DIMETHYLPHENOL	80	ND	899	ND
2,4-DINITROPHENOL	100	ND	1,120	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	562	ND
2-NITROPHENOL	20	ND	225	ND
4-NITROPHENOL	40	ND	449	ND
PENTACHLOROPHENOL	40	ND	449	ND
PHENOL	30	ND	337	ND
2,4,6-TRICHLOROPHENOL	30	ND	337	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/29/98

SAMPLE ID: N/A

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	20	ND
2-CHLOROPHENOL	25	ND	25	ND
2,4-DICHLOROPHENOL	20	ND	20	ND
2,4-DIMETHYLPHENOL	80	ND	80	ND
2,4-DINITROPHENOL	100	ND	100	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	50	ND
2-NITROPHENOL	20	ND	20	ND
4-NITROPHENOL	40	ND	40	ND
PENTACHLOROPHENOL	40	ND	40	ND
PHENOL	30	ND	30	ND
2,4,6-TRICHLOROPHENOL	30	ND	30	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
DATE RECEIVED: 01/21/98  
DATE EXTRACTED: 01/28/98  
DATE ANALYZED: 01/30/98  
MATRIX: CLAM TISSUE  
SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
PTAS LOG #: 0139-98-37  
SAMPLE ID: AREA 3 REP 2  
DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	235	ND
2-CHLOROPHENOL	25	ND	294	ND
2,4-DICHLOROPHENOL	20	ND	235	ND
2,4-DIMETHYLPHENOL	80	ND	941	ND
2,4-DINITROPHENOL	100	ND	1,180	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	588	ND
2-NITROPHENOL	20	ND	235	ND
4-NITROPHENOL	40	ND	471	ND
PENTACHLOROPHENOL	40	ND	471	ND
PHENOL	30	ND	353	ND
2,4,6-TRICHLOROPHENOL	30	ND	353	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-38  
 SAMPLE ID: AREA 3 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	227	ND
2-CHLOROPHENOL	25	ND	284	ND
2,4-DICHLOROPHENOL	20	ND	227	ND
2,4-DIMETHYLPHENOL	80	ND	909	ND
2,4-DINITROPHENOL	100	ND	1,140	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	568	ND
2-NITROPHENOL	20	ND	227	ND
4-NITROPHENOL	40	ND	455	ND
PENTACHLOROPHENOL	40	ND	455	ND
PHENOL	30	ND	341	ND
2,4,6-TRICHLOROPHENOL	30	ND	341	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 01/30/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY

PTAS LOG #: 0139-98-39

SAMPLE ID: AREA 3 REP 4

DILUTION FACTOR: 1

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	225	ND
2-CHLOROPHENOL	25	ND	281	ND
2,4-DICHLOROPHENOL	20	ND	225	ND
2,4-DIMETHYLPHENOL	80	ND	899	ND
2,4-DINITROPHENOL	100	ND	1,120	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	562	ND
2-NITROPHENOL	20	ND	225	ND
4-NITROPHENOL	40	ND	449	ND
PENTACHLOROPHENOL	40	ND	449	ND
PHENOL	30	ND	337	ND
2,4,6-TRICHLOROPHENOL	30	ND	337	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-40

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	211	ND
2-CHLOROPHENOL	25	ND	263	ND
2,4-DICHLOROPHENOL	20	ND	211	ND
2,4-DIMETHYLPHENOL	80	ND	842	ND
2,4-DINITROPHENOL	100	ND	1,050	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	526	ND
2-NITROPHENOL	20	ND	211	ND
4-NITROPHENOL	40	ND	421	ND
PENTACHLOROPHENOL	40	ND	421	ND
PHENOL	30	ND	316	ND
2,4,6-TRICHLOROPHENOL	30	ND	316	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/28/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-41  
 SAMPLE ID: AREA 4 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	230	ND
2-CHLOROPHENOL	25	ND	287	ND
2,4-DICHLOROPHENOL	20	ND	230	ND
2,4-DIMETHYLPHENOL	80	ND	920	ND
2,4-DINITROPHENOL	100	ND	1,150	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	575	ND
2-NITROPHENOL	20	ND	230	ND
4-NITROPHENOL	40	ND	460	ND
PENTACHLOROPHENOL	40	ND	460	ND
PHENOL	30	ND	345	ND
2,4,6-TRICHLOROPHENOL	30	ND	345	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-41 (DUPLICATE)

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1 (DUPLCIATE)

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	230	ND
2-CHLOROPHENOL	25	ND	287	ND
2,4-DICHLOROPHENOL	20	ND	230	ND
2,4-DIMETHYLPHENOL	80	ND	920	ND
2,4-DINITROPHENOL	100	ND	1,150	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	575	ND
2-NITROPHENOL	20	ND	230	ND
4-NITROPHENOL	40	ND	460	ND
PENTACHLOROPHENOL	40	ND	460	ND
PHENOL	30	ND	345	ND
2,4,6-TRICHLOROPHENOL	30	ND	345	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
DATE RECEIVED: 01/21/98  
DATE EXTRACTED: 01/28/98  
DATE ANALYZED: 02/03/98  
MATRIX: CLAM TISSUE  
SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY

PTAS LOG #: 0139-98-42

SAMPLE ID: AREA 4 REP 2

DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	263	ND
2-CHLOROPHENOL	25	ND	329	ND
2,4-DICHLOROPHENOL	20	ND	263	ND
2,4-DIMETHYLPHENOL	80	ND	1,050	ND
2,4-DINITROPHENOL	100	ND	1,320	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	658	ND
2-NITROPHENOL	20	ND	263	ND
4-NITROPHENOL	40	ND	526	ND
PENTACHLOROPHENOL	40	ND	526	ND
PHENOL	30	ND	395	ND
2,4,6-TRICHLOROPHENOL	30	ND	395	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-43

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	241	ND
2-CHLOROPHENOL	25	ND	301	ND
2,4-DICHLOROPHENOL	20	ND	241	ND
2,4-DIMETHYLPHENOL	80	ND	964	ND
2,4-DINITROPHENOL	100	ND	1,200	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	602	ND
2-NITROPHENOL	20	ND	241	ND
4-NITROPHENOL	40	ND	482	ND
PENTACHLOROPHENOL	40	ND	482	ND
PHENOL	30	ND	361	ND
2,4,6-TRICHLOROPHENOL	30	ND	361	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
DATE RECEIVED: 01/21/98  
DATE EXTRACTED: 01/28/98  
DATE ANALYZED: 02/03/98  
MATRIX: CLAM TISSUE  
SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
PTAS LOG #: 0139-98-44  
SAMPLE ID: AREA 4 REP 4  
DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	247	ND
2-CHLOROPHENOL	25	ND	309	ND
2,4-DICHLOROPHENOL	20	ND	247	ND
2,4-DIMETHYLPHENOL	80	ND	988	ND
2,4-DINITROPHENOL	100	ND	1,240	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	617	ND
2-NITROPHENOL	20	ND	247	ND
4-NITROPHENOL	40	ND	494	ND
PENTACHLOROPHENOL	40	ND	494	ND
PHENOL	30	ND	370	ND
2,4,6-TRICHLOROPHENOL	30	ND	370	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-45

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	260	ND
2-CHLOROPHENOL	25	ND	325	ND
2,4-DICHLOROPHENOL	20	ND	260	ND
2,4-DIMETHYLPHENOL	80	ND	1,040	ND
2,4-DINITROPHENOL	100	ND	1,300	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	649	ND
2-NITROPHENOL	20	ND	260	ND
4-NITROPHENOL	40	ND	519	ND
PENTACHLOROPHENOL	40	ND	519	ND
PHENOL	30	ND	390	ND
2,4,6-TRICHLOROPHENOL	30	ND	390	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-46

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	270	ND
2-CHLOROPHENOL	25	ND	338	ND
2,4-DICHLOROPHENOL	20	ND	270	ND
2,4-DIMETHYLPHENOL	80	ND	1,080	ND
2,4-DINITROPHENOL	100	ND	1,350	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	676	ND
2-NITROPHENOL	20	ND	270	ND
4-NITROPHENOL	40	ND	541	ND
PENTACHLOROPHENOL	40	ND	541	ND
PHENOL	30	ND	405	ND
2,4,6-TRICHLOROPHENOL	30	ND	405	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-47

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	238	ND
2-CHLOROPHENOL	25	ND	298	ND
2,4-DICHLOROPHENOL	20	ND	238	ND
2,4-DIMETHYLPHENOL	80	ND	952	ND
2,4-DINITROPHENOL	100	ND	1,190	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	595	ND
2-NITROPHENOL	20	ND	238	ND
4-NITROPHENOL	40	ND	476	ND
PENTACHLOROPHENOL	40	ND	476	ND
PHENOL	30	ND	357	ND
2,4,6-TRICHLOROPHENOL	30	ND	357	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/26/98  
 DATE ANALYZED: 01/29/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-48  
 SAMPLE ID: AREA 5 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	247	ND
2-CHLOROPHENOL	25	ND	309	ND
2,4-DICHLOROPHENOL	20	ND	247	ND
2,4-DIMETHYLPHENOL	80	ND	988	ND
2,4-DINITROPHENOL	100	ND	1,240	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	617	ND
2-NITROPHENOL	20	ND	247	ND
4-NITROPHENOL	40	ND	494	ND
PENTACHLOROPHENOL	40	ND	494	ND
PHENOL	30	ND	370	ND
2,4,6-TRICHLOROPHENOL	30	ND	370	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-48 (DUPLICATE)

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3 (DUPLICATE)

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	247	ND
2-CHLOROPHENOL	25	ND	309	ND
2,4-DICHLOROPHENOL	20	ND	247	ND
2,4-DIMETHYLPHENOL	80	ND	988	ND
2,4-DINITROPHENOL	100	ND	1,240	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	617	ND
2-NITROPHENOL	20	ND	247	ND
4-NITROPHENOL	40	ND	494	ND
PENTACHLOROPHENOL	40	ND	494	ND
PHENOL	30	ND	370	ND
2,4,6-TRICHLOROPHENOL	30	ND	370	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-49

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	270	ND
2-CHLOROPHENOL	25	ND	338	ND
2,4-DICHLOROPHENOL	20	ND	270	ND
2,4-DIMETHYLPHENOL	80	ND	1,080	ND
2,4-DINITROPHENOL	100	ND	1,350	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	676	ND
2-NITROPHENOL	20	ND	270	ND
4-NITROPHENOL	40	ND	541	ND
PENTACHLOROPHENOL	40	ND	541	ND
PHENOL	30	ND	405	ND
2,4,6-TRICHLOROPHENOL	30	ND	405	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-50

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L.		D.L.	
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	260	ND
2-CHLOROPHENOL	25	ND	325	ND
2,4-DICHLOROPHENOL	20	ND	260	ND
2,4-DIMETHYLPHENOL	80	ND	1,040	ND
2,4-DINITROPHENOL	100	ND	1,300	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	649	ND
2-NITROPHENOL	20	ND	260	ND
4-NITROPHENOL	40	ND	519	ND
PENTACHLOROPHENOL	40	ND	519	ND
PHENOL	30	ND	390	ND
2,4,6-TRICHLOROPHENOL	30	ND	390	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-51  
 SAMPLE ID: AREA 6 REP 1  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	290	ND
2-CHLOROPHENOL	25	ND	362	ND
2,4-DICHLOROPHENOL	20	ND	290	ND
2,4-DIMETHYLPHENOL	80	ND	1,160	ND
2,4-DINITROPHENOL	100	ND	1,450	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	725	ND
2-NITROPHENOL	20	ND	290	ND
4-NITROPHENOL	40	ND	580	ND
PENTACHLOROPHENOL	40	ND	580	ND
PHENOL	30	ND	435	ND
2,4,6-TRICHLOROPHENOL	30	ND	435	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-51 (DUPLICATE)

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1 (DUPLICATE)

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	290	ND
2-CHLOROPHENOL	25	ND	362	ND
2,4-DICHLOROPHENOL	20	ND	290	ND
2,4-DIMETHYLPHENOL	80	ND	1,160	ND
2,4-DINITROPHENOL	100	ND	1,450	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	725	ND
2-NITROPHENOL	20	ND	290	ND
4-NITROPHENOL	40	ND	580	ND
PENTACHLOROPHENOL	40	ND	580	ND
PHENOL	30	ND	435	ND
2,4,6-TRICHLOROPHENOL	30	ND	435	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-52

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	247	ND
2-CHLOROPHENOL	25	ND	309	ND
2,4-DICHLOROPHENOL	20	ND	247	ND
2,4-DIMETHYLPHENOL	80	ND	988	ND
2,4-DINITROPHENOL	100	ND	1,240	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	617	ND
2-NITROPHENOL	20	ND	247	ND
4-NITROPHENOL	40	ND	494	ND
PENTACHLOROPHENOL	40	ND	494	ND
PHENOL	30	ND	370	ND
2,4,6-TRICHLOROPHENOL	30	ND	370	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 01/29/98  
 DATE ANALYZED: 01/31/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-53  
 SAMPLE ID: AREA 6 REP 3  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	270	ND
2-CHLOROPHENOL	25	ND	338	ND
2,4-DICHLOROPHENOL	20	ND	270	ND
2,4-DIMETHYLPHENOL	80	ND	1,080	ND
2,4-DINITROPHENOL	100	ND	1,350	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	676	ND
2-NITROPHENOL	20	ND	270	ND
4-NITROPHENOL	40	ND	541	ND
PENTACHLOROPHENOL	40	ND	541	ND
PHENOL	30	ND	405	ND
2,4,6-TRICHLOROPHENOL	30	ND	405	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

DATE RECEIVED: 01/21/98

PROJECT NAME/No.: MARINA DEL REY

DATE EXTRACTED: 01/29/98

PTAS LOG #: 0139-98-54

DATE ANALYZED: 01/31/98

SAMPLE ID: AREA 6 REP 4

MATRIX: CLAM TISSUE

DILUTION FACTOR: 1

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	256	ND
2-CHLOROPHENOL	25	ND	321	ND
2,4-DICHLOROPHENOL	20	ND	256	ND
2,4-DIMETHYLPHENOL	80	ND	1,030	ND
2,4-DINITROPHENOL	100	ND	1,280	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	641	ND
2-NITROPHENOL	20	ND	256	ND
4-NITROPHENOL	40	ND	513	ND
PENTACHLOROPHENOL	40	ND	513	ND
PHENOL	30	ND	385	ND
2,4,6-TRICHLOROPHENOL	30	ND	385	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-55

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	250	ND
2-CHLOROPHENOL	25	ND	313	ND
2,4-DICHLOROPHENOL	20	ND	250	ND
2,4-DIMETHYLPHENOL	80	ND	1,000	ND
2,4-DINITROPHENOL	100	ND	1,250	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	625	ND
2-NITROPHENOL	20	ND	250	ND
4-NITROPHENOL	40	ND	500	ND
PENTACHLOROPHENOL	40	ND	500	ND
PHENOL	30	ND	375	ND
2,4,6-TRICHLOROPHENOL	30	ND	375	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-56

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L.		D.L.	
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	263	ND
2-CHLOROPHENOL	25	ND	329	ND
2,4-DICHLOROPHENOL	20	ND	263	ND
2,4-DIMETHYLPHENOL	80	ND	1,050	ND
2,4-DINITROPHENOL	100	ND	1,320	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	658	ND
2-NITROPHENOL	20	ND	263	ND
4-NITROPHENOL	40	ND	526	ND
PENTACHLOROPHENOL	40	ND	526	ND
PHENOL	30	ND	395	ND
2,4,6-TRICHLOROPHENOL	30	ND	395	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-57

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	267	ND
2-CHLOROPHENOL	25	ND	333	ND
2,4-DICHLOROPHENOL	20	ND	267	ND
2,4-DIMETHYLPHENOL	80	ND	1,070	ND
2,4-DINITROPHENOL	100	ND	1,330	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	667	ND
2-NITROPHENOL	20	ND	267	ND
4-NITROPHENOL	40	ND	533	ND
PENTACHLOROPHENOL	40	ND	533	ND
PHENOL	30	ND	400	ND
2,4,6-TRICHLOROPHENOL	30	ND	400	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-58

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	274	ND
2-CHLOROPHENOL	25	ND	342	ND
2,4-DICHLOROPHENOL	20	ND	274	ND
2,4-DIMETHYLPHENOL	80	ND	1,100	ND
2,4-DINITROPHENOL	100	ND	1,370	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	685	ND
2-NITROPHENOL	20	ND	274	ND
4-NITROPHENOL	40	ND	548	ND
PENTACHLOROPHENOL	40	ND	548	ND
PHENOL	30	ND	411	ND
2,4,6-TRICHLOROPHENOL	30	ND	411	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-59

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
4-CHLORO-3-METHYLPHENOL	20	ND	260	ND
2-CHLOROPHENOL	25	ND	325	ND
2,4-DICHLOROPHENOL	20	ND	260	ND
2,4-DIMETHYLPHENOL	80	ND	1,040	ND
2,4-DINITROPHENOL	100	ND	1,300	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	649	ND
2-NITROPHENOL	20	ND	260	ND
4-NITROPHENOL	40	ND	519	ND
PENTACHLOROPHENOL	40	ND	519	ND
PHENOL	30	ND	390	ND
2,4,6-TRICHLOROPHENOL	30	ND	390	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8270  
PHENOLS**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
DATE RECEIVED: 01/21/98  
DATE EXTRACTED: 01/29/98  
DATE ANALYZED: 01/31/98  
MATRIX: CLAM TISSUE  
SAMPLE VOL./WT.: 7.5 G

PROJECT NAME/No.: MARINA DEL REY  
PTAS LOG #: 0139-98-60  
SAMPLE ID: AREA 9 REP 5  
DILUTION FACTOR: 1

ANALYTE	WET WEIGHT	RESULTS	DRY WEIGHT	RESULTS
	D.L. PPB (UG/KG)		D.L. PPB (UG/KG)	
4-CHLORO-3-METHYLPHENOL	20	ND	247	ND
2-CHLOROPHENOL	25	ND	309	ND
2,4-DICHLOROPHENOL	20	ND	247	ND
2,4-DIMETHYLPHENOL	80	ND	988	ND
2,4-DINITROPHENOL	100	ND	1,240	ND
4,6-DINITRO-2-METHYLPHENOL	50	ND	617	ND
2-NITROPHENOL	20	ND	247	ND
4-NITROPHENOL	40	ND	494	ND
PENTACHLOROPHENOL	40	ND	494	ND
PHENOL	30	ND	370	ND
2,4,6-TRICHLOROPHENOL	30	ND	370	ND

D.L. = DETECTION LIMIT

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/28/98

SAMPLE ID: N/A

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	2.0	ND
ALPHA-BHC	2.0	ND	2.0	ND
BETA-BHC	2.0	ND	2.0	ND
GAMMA-BHC	2.0	ND	2.0	ND
DELTA-BHC	2.0	ND	2.0	ND
CHLORDANE	20.0	ND	20.0	ND
4,4-DDD	2.0	ND	2.0	ND
4,4-DDE	2.0	ND	2.0	ND
4,4-DDT	2.0	ND	2.0	ND
DIELDRIN	2.0	ND	2.0	ND
ENDOSULFAN I	2.0	ND	2.0	ND
ENDOSULFAN II	2.0	ND	2.0	ND
ENDOSULFAN SULFATE	2.0	ND	2.0	ND
ENDRIN	2.0	ND	2.0	ND
ENDRIN ALDEHYDE	2.0	ND	2.0	ND
HEPTACHLOR	2.0	ND	2.0	ND
HEPTACHLOR EPOXIDE	2.0	ND	2.0	ND
METHOXYCHLOR	20.0	ND	20.0	ND
TOXAPHENE	25.0	ND	25.0	ND
AROCHLOR-1016	10.0	ND	10.0	ND
AROCHLOR-1221	10.0	ND	10.0	ND
AROCHLOR-1232	10.0	ND	10.0	ND
AROCHLOR-1242	10.0	ND	10.0	ND
AROCHLOR-1248	10.0	ND	10.0	ND
AROCHLOR-1254	10.0	ND	10.0	ND
AROCHLOR-1260	10.0	ND	10.0	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-1

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	11.0	ND
ALPHA-BHC	2.0	ND	11.0	ND
BETA-BHC	2.0	ND	11.0	ND
GAMMA-BHC	2.0	ND	11.0	ND
DELTA-BHC	2.0	ND	11.0	ND
CHLORDANE	20.0	ND	110	ND
4,4-DDD	2.0	ND	11.0	ND
4,4-DDE	2.0	ND	11.0	ND
4,4-DDT	2.0	ND	11.0	ND
DIELDRIN	2.0	ND	11.0	ND
ENDOSULFAN I	2.0	ND	11.0	ND
ENDOSULFAN II	2.0	ND	11.0	ND
ENDOSULFAN SULFATE	2.0	ND	11.0	ND
ENDRIN	2.0	ND	11.0	ND
ENDRIN ALDEHYDE	2.0	ND	11.0	ND
HEPTACHLOR	2.0	ND	11.0	ND
HEPTACHLOR EPOXIDE	2.0	ND	11.0	ND
METHOXYCHLOR	20.0	ND	110	ND
TOXAPHENE	25.0	ND	137	ND
AROCHLOR-1016	10.0	ND	55	ND
AROCHLOR-1221	10.0	ND	55	ND
AROCHLOR-1232	10.0	ND	55	ND
AROCHLOR-1242	10.0	ND	55	ND
AROCHLOR-1248	10.0	ND	55	ND
AROCHLOR-1254	10.0	ND	55	ND
AROCHLOR-1260	10.0	ND	55	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-2

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.8	ND
ALPHA-BHC	2.0	ND	10.8	ND
BETA-BHC	2.0	ND	10.8	ND
GAMMA-BHC	2.0	ND	10.8	ND
DELTA-BHC	2.0	ND	10.8	ND
CHLORDANE	20.0	ND	108	ND
4,4-DDD	2.0	ND	10.8	ND
4,4-DDE	2.0	ND	10.8	ND
4,4-DDT	2.0	ND	10.8	ND
DIELDRIN	2.0	ND	10.8	ND
ENDOSULFAN I	2.0	ND	10.8	ND
ENDOSULFAN II	2.0	ND	10.8	ND
ENDOSULFAN SULFATE	2.0	ND	10.8	ND
ENDRIN	2.0	ND	10.8	ND
ENDRIN ALDEHYDE	2.0	ND	10.8	ND
HEPTACHLOR	2.0	ND	10.8	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.8	ND
METHOXYCHLOR	20.0	ND	108	ND
TOXAPHENE	25.0	ND	135	ND
AROCHLOR-1016	10.0	ND	54	ND
AROCHLOR-1221	10.0	ND	54	ND
AROCHLOR-1232	10.0	ND	54	ND
AROCHLOR-1242	10.0	ND	54	ND
AROCHLOR-1248	10.0	ND	54	ND
AROCHLOR-1254	10.0	ND	54	ND
AROCHLOR-1260	10.0	ND	54	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-3

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	11.2	ND
ALPHA-BHC	2.0	ND	11.2	ND
BETA-BHC	2.0	ND	11.2	ND
GAMMA-BHC	2.0	ND	11.2	ND
DELTA-BHC	2.0	ND	11.2	ND
CHLORDANE	20.0	ND	112	ND
4,4-DDD	2.0	ND	11.2	ND
4,4-DDE	2.0	ND	11.2	ND
4,4-DDT	2.0	ND	11.2	ND
DIELDRIN	2.0	ND	11.2	ND
ENDOSULFAN I	2.0	ND	11.2	ND
ENDOSULFAN II	2.0	ND	11.2	ND
ENDOSULFAN SULFATE	2.0	ND	11.2	ND
ENDRIN	2.0	ND	11.2	ND
ENDRIN ALDEHYDE	2.0	ND	11.2	ND
HEPTACHLOR	2.0	ND	11.2	ND
HEPTACHLOR EPOXIDE	2.0	ND	11.2	ND
METHOXYCHLOR	20.0	ND	112	ND
TOXAPHENE	25.0	ND	140	ND
AROCHLOR-1016	10.0	ND	56	ND
AROCHLOR-1221	10.0	ND	56	ND
AROCHLOR-1232	10.0	ND	56	ND
AROCHLOR-1242	10.0	ND	56	ND
AROCHLOR-1248	10.0	ND	56	ND
AROCHLOR-1254	10.0	ND	56	ND
AROCHLOR-1260	10.0	ND	56	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-4

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.3	ND
ALPHA-BHC	2.0	ND	10.3	ND
BETA-BHC	2.0	ND	10.3	ND
GAMMA-BHC	2.0	ND	10.3	ND
DELTA-BHC	2.0	ND	10.3	ND
CHLORDANE	20.0	ND	103	ND
4,4-DDD	2.0	ND	10.3	ND
4,4-DDE	2.0	ND	10.3	ND
4,4-DDT	2.0	ND	10.3	ND
DIELDRIN	2.0	ND	10.3	ND
ENDOSULFAN I	2.0	ND	10.3	ND
ENDOSULFAN II	2.0	ND	10.3	ND
ENDOSULFAN SULFATE	2.0	ND	10.3	ND
ENDRIN	2.0	ND	10.3	ND
ENDRIN ALDEHYDE	2.0	ND	10.3	ND
HEPTACHLOR	2.0	ND	10.3	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.3	ND
METHOXYCHLOR	20.0	ND	103	ND
TOXAPHENE	25.0	ND	128	ND
AROCHLOR-1016	10.0	ND	51	ND
AROCHLOR-1221	10.0	ND	51	ND
AROCHLOR-1232	10.0	ND	51	ND
AROCHLOR-1242	10.0	ND	51	ND
AROCHLOR-1248	10.0	ND	51	ND
AROCHLOR-1254	10.0	ND	51	ND
AROCHLOR-1260	10.0	ND	51	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-5

DATE EXTRACTED: 01/26/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	10.8	ND
ALPHA-BHC	2.0	ND	10.8	ND
BETA-BHC	2.0	ND	10.8	ND
GAMMA-BHC	2.0	ND	10.8	ND
DELTA-BHC	2.0	ND	10.8	ND
CHLORDANE	20.0	ND	108	ND
4,4-DDD	2.0	ND	10.8	ND
4,4-DDE	2.0	ND	10.8	ND
4,4-DDT	2.0	ND	10.8	ND
DIELDRIN	2.0	ND	10.8	ND
ENDOSULFAN I	2.0	ND	10.8	ND
ENDOSULFAN II	2.0	ND	10.8	ND
ENDOSULFAN SULFATE	2.0	ND	10.8	ND
ENDRIN	2.0	ND	10.8	ND
ENDRIN ALDEHYDE	2.0	ND	10.8	ND
HEPTACHLOR	2.0	ND	10.8	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.8	ND
METHOXYCHLOR	20.0	ND	108	ND
TOXAPHENE	25.0	ND	134	ND
AROCHLOR-1016	10.0	ND	54	ND
AROCHLOR-1221	10.0	ND	54	ND
AROCHLOR-1232	10.0	ND	54	ND
AROCHLOR-1242	10.0	ND	54	ND
AROCHLOR-1248	10.0	ND	54	ND
AROCHLOR-1254	10.0	ND	54	ND
AROCHLOR-1260	10.0	ND	54	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-6

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.6	ND
ALPHA-BHC	2.0	ND	10.6	ND
BETA-BHC	2.0	ND	10.6	ND
GAMMA-BHC	2.0	ND	10.6	ND
DELTA-BHC	2.0	ND	10.6	ND
CHLORDANE	20.0	ND	106	ND
4,4-DDD	2.0	ND	10.6	ND
4,4-DDE	2.0	ND	10.6	ND
4,4-DDT	2.0	ND	10.6	ND
DIELDRIN	2.0	ND	10.6	ND
ENDOSULFAN I	2.0	ND	10.6	ND
ENDOSULFAN II	2.0	ND	10.6	ND
ENDOSULFAN SULFATE	2.0	ND	10.6	ND
ENDRIN	2.0	ND	10.6	ND
ENDRIN ALDEHYDE	2.0	ND	10.6	ND
HEPTACHLOR	2.0	ND	10.6	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.6	ND
METHOXYCHLOR	20.0	ND	106	ND
TOXAPHENE	25.0	ND	133	ND
AROCHLOR-1016	10.0	ND	53	ND
AROCHLOR-1221	10.0	ND	53	ND
AROCHLOR-1232	10.0	ND	53	ND
AROCHLOR-1242	10.0	ND	53	ND
AROCHLOR-1248	10.0	ND	53	ND
AROCHLOR-1254	10.0	ND	53	ND
AROCHLOR-1260	10.0	ND	53	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-7

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.4	ND
ALPHA-BHC	2.0	ND	10.4	ND
BETA-BHC	2.0	ND	10.4	ND
GAMMA-BHC	2.0	ND	10.4	ND
DELTA-BHC	2.0	ND	10.4	ND
CHLORDANE	20.0	ND	104	ND
4,4-DDD	2.0	ND	10.4	ND
4,4-DDE	2.0	ND	10.4	ND
4,4-DDT	2.0	ND	10.4	ND
DIELDRIN	2.0	ND	10.4	ND
ENDOSULFAN I	2.0	ND	10.4	ND
ENDOSULFAN II	2.0	ND	10.4	ND
ENDOSULFAN SULFATE	2.0	ND	10.4	ND
ENDRIN	2.0	ND	10.4	ND
ENDRIN ALDEHYDE	2.0	ND	10.4	ND
HEPTACHLOR	2.0	ND	10.4	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.4	ND
METHOXYCHLOR	20.0	ND	104	ND
TOXAPHENE	25.0	ND	130	ND
AROCHLOR-1016	10.0	ND	52	ND
AROCHLOR-1221	10.0	ND	52	ND
AROCHLOR-1232	10.0	ND	52	ND
AROCHLOR-1242	10.0	ND	52	ND
AROCHLOR-1248	10.0	ND	52	ND
AROCHLOR-1254	10.0	ND	52	ND
AROCHLOR-1260	10.0	ND	52	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-8

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.9	ND
ALPHA-BHC	2.0	ND	9.9	ND
BETA-BHC	2.0	ND	9.9	ND
GAMMA-BHC	2.0	ND	9.9	ND
DELTA-BHC	2.0	ND	9.9	ND
CHLORDANE	20.0	ND	99	ND
4,4-DDD	2.0	ND	9.9	ND
4,4-DDE	2.0	ND	9.9	ND
4,4-DDT	2.0	ND	9.9	ND
DIELDRIN	2.0	ND	9.9	ND
ENDOSULFAN I	2.0	ND	9.9	ND
ENDOSULFAN II	2.0	ND	9.9	ND
ENDOSULFAN SULFATE	2.0	ND	9.9	ND
ENDRIN	2.0	ND	9.9	ND
ENDRIN ALDEHYDE	2.0	ND	9.9	ND
HEPTACHLOR	2.0	ND	9.9	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.9	ND
METHOXYCHLOR	20.0	ND	99	ND
TOXAPHENE	25.0	ND	124	ND
AROCHLOR-1016	10.0	ND	50	ND
AROCHLOR-1221	10.0	ND	50	ND
AROCHLOR-1232	10.0	ND	50	ND
AROCHLOR-1242	10.0	ND	50	ND
AROCHLOR-1248	10.0	ND	50	ND
AROCHLOR-1254	10.0	ND	50	ND
AROCHLOR-1260	10.0	ND	50	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-9

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	10.1	ND
ALPHA-BHC	2.0	ND	10.1	ND
BETA-BHC	2.0	ND	10.1	ND
GAMMA-BHC	2.0	ND	10.1	ND
DELTA-BHC	2.0	ND	10.1	ND
CHLORDANE	20.0	ND	101	ND
4,4-DDD	2.0	ND	10.1	ND
4,4-DDE	2.0	ND	10.1	ND
4,4-DDT	2.0	ND	10.1	ND
DIELDRIN	2.0	ND	10.1	ND
ENDOSULFAN I	2.0	ND	10.1	ND
ENDOSULFAN II	2.0	ND	10.1	ND
ENDOSULFAN SULFATE	2.0	ND	10.1	ND
ENDRIN	2.0	ND	10.1	ND
ENDRIN ALDEHYDE	2.0	ND	10.1	ND
HEPTACHLOR	2.0	ND	10.1	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.1	ND
METHOXYCHLOR	20.0	ND	101	ND
TOXAPHENE	25.0	ND	126	ND
AROCHLOR-1016	10.0	ND	51	ND
AROCHLOR-1221	10.0	ND	51	ND
AROCHLOR-1232	10.0	ND	51	ND
AROCHLOR-1242	10.0	ND	51	ND
AROCHLOR-1248	10.0	ND	51	ND
AROCHLOR-1254	10.0	ND	51	ND
AROCHLOR-1260	10.0	ND	51	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-10

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.2	ND
ALPHA-BHC	2.0	ND	10.2	ND
BETA-BHC	2.0	ND	10.2	ND
GAMMA-BHC	2.0	ND	10.2	ND
DELTA-BHC	2.0	ND	10.2	ND
CHLORDANE	20.0	ND	102	ND
4,4-DDD	2.0	ND	10.2	ND
4,4-DDE	2.0	ND	10.2	ND
4,4-DDT	2.0	ND	10.2	ND
DIELDRIN	2.0	ND	10.2	ND
ENDOSULFAN I	2.0	ND	10.2	ND
ENDOSULFAN II	2.0	ND	10.2	ND
ENDOSULFAN SULFATE	2.0	ND	10.2	ND
ENDRIN	2.0	ND	10.2	ND
ENDRIN ALDEHYDE	2.0	ND	10.2	ND
HEPTACHLOR	2.0	ND	10.2	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.2	ND
METHOXYCHLOR	20.0	ND	102	ND
TOXAPHENE	25.0	ND	127	ND
AROCHLOR-1016	10.0	ND	51	ND
AROCHLOR-1221	10.0	ND	51	ND
AROCHLOR-1232	10.0	ND	51	ND
AROCHLOR-1242	10.0	ND	51	ND
AROCHLOR-1248	10.0	ND	51	ND
AROCHLOR-1254	10.0	ND	51	ND
AROCHLOR-1260	10.0	ND	51	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/29/98

SAMPLE ID: N/A

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	2.0	ND
ALPHA-BHC	2.0	ND	2.0	ND
BETA-BHC	2.0	ND	2.0	ND
GAMMA-BHC	2.0	ND	2.0	ND
DELTA-BHC	2.0	ND	2.0	ND
CHLORDANE	20.0	ND	20.0	ND
4,4-DDD	2.0	ND	2.0	ND
4,4-DDE	2.0	ND	2.0	ND
4,4-DDT	2.0	ND	2.0	ND
DIELDRIN	2.0	ND	2.0	ND
ENDOSULFAN I	2.0	ND	2.0	ND
ENDOSULFAN II	2.0	ND	2.0	ND
ENDOSULFAN SULFATE	2.0	ND	2.0	ND
ENDRIN	2.0	ND	2.0	ND
ENDRIN ALDEHYDE	2.0	ND	2.0	ND
HEPTACHLOR	2.0	ND	2.0	ND
HEPTACHLOR EPOXIDE	2.0	ND	2.0	ND
METHOXYCHLOR	20.0	ND	20.0	ND
TOXAPHENE	25.0	ND	25.0	ND
AROCHLOR-1016	10.0	ND	10.0	ND
AROCHLOR-1221	10.0	ND	10.0	ND
AROCHLOR-1232	10.0	ND	10.0	ND
AROCHLOR-1242	10.0	ND	10.0	ND
AROCHLOR-1248	10.0	ND	10.0	ND
AROCHLOR-1254	10.0	ND	10.0	ND
AROCHLOR-1260	10.0	ND	10.0	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 01/26/98

SAMPLE ID: N/A

DATE ANALYZED: 01/28/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	2.0	ND
ALPHA-BHC	2.0	ND	2.0	ND
BETA-BHC	2.0	ND	2.0	ND
GAMMA-BHC	2.0	ND	2.0	ND
DELTA-BHC	2.0	ND	2.0	ND
CHLORDANE	20.0	ND	20.0	ND
4,4-DDD	2.0	ND	2.0	ND
4,4-DDE	2.0	ND	2.0	ND
4,4-DDT	2.0	ND	2.0	ND
DIELDRIN	2.0	ND	2.0	ND
ENDOSULFAN I	2.0	ND	2.0	ND
ENDOSULFAN II	2.0	ND	2.0	ND
ENDOSULFAN SULFATE	2.0	ND	2.0	ND
ENDRIN	2.0	ND	2.0	ND
ENDRIN ALDEHYDE	2.0	ND	2.0	ND
HEPTACHLOR	2.0	ND	2.0	ND
HEPTACHLOR EPOXIDE	2.0	ND	2.0	ND
METHOXYCHLOR	20.0	ND	20.0	ND
TOXAPHENE	25.0	ND	25.0	ND
AROCHLOR-1016	10.0	ND	10.0	ND
AROCHLOR-1221	10.0	ND	10.0	ND
AROCHLOR-1232	10.0	ND	10.0	ND
AROCHLOR-1242	10.0	ND	10.0	ND
AROCHLOR-1248	10.0	ND	10.0	ND
AROCHLOR-1254	10.0	ND	10.0	ND
AROCHLOR-1260	10.0	ND	10.0	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-11

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.3	ND
ALPHA-BHC	2.0	ND	10.3	ND
BETA-BHC	2.0	ND	10.3	ND
GAMMA-BHC	2.0	ND	10.3	ND
DELTA-BHC	2.0	ND	10.3	ND
CHLORDANE	20.0	ND	103	ND
4,4-DDD	2.0	ND	10.3	ND
4,4-DDE	2.0	ND	10.3	ND
4,4-DDT	2.0	ND	10.3	ND
DIELDRIN	2.0	ND	10.3	ND
ENDOSULFAN I	2.0	ND	10.3	ND
ENDOSULFAN II	2.0	ND	10.3	ND
ENDOSULFAN SULFATE	2.0	ND	10.3	ND
ENDRIN	2.0	ND	10.3	ND
ENDRIN ALDEHYDE	2.0	ND	10.3	ND
HEPTACHLOR	2.0	ND	10.3	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.3	ND
METHOXYCHLOR	20.0	ND	103	ND
TOXAPHENE	25.0	ND	129	ND
AROCHLOR-1016	10.0	ND	52	ND
AROCHLOR-1221	10.0	ND	52	ND
AROCHLOR-1232	10.0	ND	52	ND
AROCHLOR-1242	10.0	ND	52	ND
AROCHLOR-1248	10.0	ND	52	ND
AROCHLOR-1254	10.0	ND	52	ND
AROCHLOR-1260	10.0	ND	52	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-12

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 2

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.7	ND
ALPHA-BHC	2.0	ND	10.7	ND
BETA-BHC	2.0	ND	10.7	ND
GAMMA-BHC	2.0	ND	10.7	ND
DELTA-BHC	2.0	ND	10.7	ND
CHLORDANE	20.0	ND	107	ND
4,4-DDD	2.0	ND	10.7	ND
4,4-DDE	2.0	ND	10.7	ND
4,4-DDT	2.0	ND	10.7	ND
DIELDRIN	2.0	ND	10.7	ND
ENDOSULFAN I	2.0	ND	10.7	ND
ENDOSULFAN II	2.0	ND	10.7	ND
ENDOSULFAN SULFATE	2.0	ND	10.7	ND
ENDRIN	2.0	ND	10.7	ND
ENDRIN ALDEHYDE	2.0	ND	10.7	ND
HEPTACHLOR	2.0	ND	10.7	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.7	ND
METHOXYCHLOR	20.0	ND	107	ND
TOXAPHENE	25.0	ND	134	ND
AROCHLOR-1016	10.0	ND	53	ND
AROCHLOR-1221	10.0	ND	53	ND
AROCHLOR-1232	10.0	ND	53	ND
AROCHLOR-1242	10.0	ND	53	ND
AROCHLOR-1248	10.0	ND	53	ND
AROCHLOR-1254	10.0	ND	53	ND
AROCHLOR-1260	10.0	ND	53	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-13

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.6	ND
ALPHA-BHC	2.0	ND	10.6	ND
BETA-BHC	2.0	ND	10.6	ND
GAMMA-BHC	2.0	ND	10.6	ND
DELTA-BHC	2.0	ND	10.6	ND
CHLORDANE	20.0	ND	106	ND
4,4-DDD	2.0	ND	10.6	ND
4,4-DDE	2.0	ND	10.6	ND
4,4-DDT	2.0	ND	10.6	ND
DIELDRIN	2.0	ND	10.6	ND
ENDOSULFAN I	2.0	ND	10.6	ND
ENDOSULFAN II	2.0	ND	10.6	ND
ENDOSULFAN SULFATE	2.0	ND	10.6	ND
ENDRIN	2.0	ND	10.6	ND
ENDRIN ALDEHYDE	2.0	ND	10.6	ND
HEPTACHLOR	2.0	ND	10.6	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.6	ND
METHOXYCHLOR	20.0	ND	106	ND
TOXAPHENE	25.0	ND	133	ND
AROCHLOR-1016	10.0	ND	53	ND
AROCHLOR-1221	10.0	ND	53	ND
AROCHLOR-1232	10.0	ND	53	ND
AROCHLOR-1242	10.0	ND	53	ND
AROCHLOR-1248	10.0	ND	53	ND
AROCHLOR-1254	10.0	ND	53	ND
AROCHLOR-1260	10.0	ND	53	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-14

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 01/30/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.4	ND
ALPHA-BHC	2.0	ND	10.4	ND
BETA-BHC	2.0	ND	10.4	ND
GAMMA-BHC	2.0	ND	10.4	ND
DELTA-BHC	2.0	ND	10.4	ND
CHLORDANE	20.0	ND	104	ND
4,4-DDD	2.0	ND	10.4	ND
4,4-DDE	2.0	ND	10.4	ND
4,4-DDT	2.0	ND	10.4	ND
DIELDRIN	2.0	ND	10.4	ND
ENDOSULFAN I	2.0	ND	10.4	ND
ENDOSULFAN II	2.0	ND	10.4	ND
ENDOSULFAN SULFATE	2.0	ND	10.4	ND
ENDRIN	2.0	ND	10.4	ND
ENDRIN ALDEHYDE	2.0	ND	10.4	ND
HEPTACHLOR	2.0	ND	10.4	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.4	ND
METHOXYCHLOR	20.0	ND	104	ND
TOXAPHENE	25.0	ND	130	ND
AROCHLOR-1016	10.0	ND	52	ND
AROCHLOR-1221	10.0	ND	52	ND
AROCHLOR-1232	10.0	ND	52	ND
AROCHLOR-1242	10.0	ND	52	ND
AROCHLOR-1248	10.0	ND	52	ND
AROCHLOR-1254	10.0	ND	52	ND
AROCHLOR-1260	10.0	ND	52	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-15

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.4	ND
ALPHA-BHC	2.0	ND	10.4	ND
BETA-BHC	2.0	ND	10.4	ND
GAMMA-BHC	2.0	ND	10.4	ND
DELTA-BHC	2.0	ND	10.4	ND
CHLORDANE	20.0	ND	104	ND
4,4-DDD	2.0	ND	10.4	ND
4,4-DDE	2.0	ND	10.4	ND
4,4-DDT	2.0	ND	10.4	ND
DIELDRIN	2.0	ND	10.4	ND
ENDOSULFAN I	2.0	ND	10.4	ND
ENDOSULFAN II	2.0	ND	10.4	ND
ENDOSULFAN SULFATE	2.0	ND	10.4	ND
ENDRIN	2.0	ND	10.4	ND
ENDRIN ALDEHYDE	2.0	ND	10.4	ND
HEPTACHLOR	2.0	ND	10.4	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.4	ND
METHOXYCHLOR	20.0	ND	104	ND
TOXAPHENE	25.0	ND	130	ND
AROCHLOR-1016	10.0	ND	52	ND
AROCHLOR-1221	10.0	ND	52	ND
AROCHLOR-1232	10.0	ND	52	ND
AROCHLOR-1242	10.0	ND	52	ND
AROCHLOR-1248	10.0	ND	52	ND
AROCHLOR-1254	10.0	ND	52	ND
AROCHLOR-1260	10.0	ND	52	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-16

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.7	ND
ALPHA-BHC	2.0	ND	10.7	ND
BETA-BHC	2.0	ND	10.7	ND
GAMMA-BHC	2.0	ND	10.7	ND
DELTA-BHC	2.0	ND	10.7	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>71</b>	<b>107</b>	<b>380</b>
4,4-DDD	2.0	ND	10.7	ND
4,4-DDE	2.0	ND	10.7	ND
4,4-DDT	2.0	ND	10.7	ND
DIELDRIN	2.0	ND	10.7	ND
ENDOSULFAN I	2.0	ND	10.7	ND
ENDOSULFAN II	2.0	ND	10.7	ND
ENDOSULFAN SULFATE	2.0	ND	10.7	ND
ENDRIN	2.0	ND	10.7	ND
ENDRIN ALDEHYDE	2.0	ND	10.7	ND
HEPTACHLOR	2.0	ND	10.7	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.7	ND
METHOXYCHLOR	20.0	ND	107	ND
TOXAPHENE	25.0	ND	134	ND
AROCHLOR-1016	10.0	ND	53	ND
AROCHLOR-1221	10.0	ND	53	ND
AROCHLOR-1232	10.0	ND	53	ND
AROCHLOR-1242	10.0	ND	53	ND
AROCHLOR-1248	10.0	ND	53	ND
AROCHLOR-1254	10.0	ND	53	ND
AROCHLOR-1260	10.0	ND	53	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-17

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	10.4	ND
ALPHA-BHC	2.0	ND	10.4	ND
BETA-BHC	2.0	ND	10.4	ND
GAMMA-BHC	2.0	ND	10.4	ND
DELTA-BHC	2.0	ND	10.4	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>71</b>	<b>104</b>	<b>368</b>
4,4-DDD	2.0	ND	10.4	ND
4,4-DDE	2.0	ND	10.4	ND
4,4-DDT	2.0	ND	10.4	ND
DIELDRIN	2.0	ND	10.4	ND
ENDOSULFAN I	2.0	ND	10.4	ND
ENDOSULFAN II	2.0	ND	10.4	ND
ENDOSULFAN SULFATE	2.0	ND	10.4	ND
ENDRIN	2.0	ND	10.4	ND
ENDRIN ALDEHYDE	2.0	ND	10.4	ND
HEPTACHLOR	2.0	ND	10.4	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.4	ND
METHOXYCHLOR	20.0	ND	104	ND
TOXAPHENE	25.0	ND	130	ND
AROCHLOR-1016	10.0	ND	52	ND
AROCHLOR-1221	10.0	ND	52	ND
AROCHLOR-1232	10.0	ND	52	ND
AROCHLOR-1242	10.0	ND	52	ND
AROCHLOR-1248	10.0	ND	52	ND
AROCHLOR-1254	10.0	ND	52	ND
AROCHLOR-1260	10.0	ND	52	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-18

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.6	ND
ALPHA-BHC	2.0	ND	9.6	ND
BETA-BHC	2.0	ND	9.6	ND
GAMMA-BHC	2.0	ND	9.6	ND
DELTA-BHC	2.0	ND	9.6	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>106</b>	<b>96</b>	<b>507</b>
4,4-DDD	2.0	ND	9.6	ND
4,4-DDE	2.0	ND	9.6	ND
4,4-DDT	2.0	ND	9.6	ND
DIELDRIN	2.0	ND	9.6	ND
ENDOSULFAN I	2.0	ND	9.6	ND
ENDOSULFAN II	2.0	ND	9.6	ND
ENDOSULFAN SULFATE	2.0	ND	9.6	ND
ENDRIN	2.0	ND	9.6	ND
ENDRIN ALDEHYDE	2.0	ND	9.6	ND
HEPTACHLOR	2.0	ND	9.6	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.6	ND
METHOXYCHLOR	20.0	ND	96	ND
TOXAPHENE	25.0	ND	120	ND
AROCHLOR-1016	10.0	ND	48	ND
AROCHLOR-1221	10.0	ND	48	ND
AROCHLOR-1232	10.0	ND	48	ND
AROCHLOR-1242	10.0	ND	48	ND
AROCHLOR-1248	10.0	ND	48	ND
AROCHLOR-1254	10.0	ND	48	ND
AROCHLOR-1260	10.0	ND	48	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-19

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 4

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.2	ND
ALPHA-BHC	2.0	ND	10.2	ND
BETA-BHC	2.0	ND	10.2	ND
GAMMA-BHC	2.0	ND	10.2	ND
DELTA-BHC	2.0	ND	10.2	ND
CHLORDANE	20.0	92	102	469
4,4-DDD	2.0	ND	10.2	ND
4,4-DDE	2.0	ND	10.2	ND
4,4-DDT	2.0	ND	10.2	ND
DELDRIN	2.0	ND	10.2	ND
ENDOSULFAN I	2.0	ND	10.2	ND
ENDOSULFAN II	2.0	ND	10.2	ND
ENDOSULFAN SULFATE	2.0	ND	10.2	ND
ENDRIN	2.0	ND	10.2	ND
ENDRIN ALDEHYDE	2.0	ND	10.2	ND
HEPTACHLOR	2.0	ND	10.2	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.2	ND
METHOXYCHLOR	20.0	ND	102	ND
TOXAPHENE	25.0	ND	128	ND
AROCHLOR-1016	10.0	ND	51	ND
AROCHLOR-1221	10.0	ND	51	ND
AROCHLOR-1232	10.0	ND	51	ND
AROCHLOR-1242	10.0	ND	51	ND
AROCHLOR-1248	10.0	ND	51	ND
AROCHLOR-1254	10.0	ND	51	ND
AROCHLOR-1260	10.0	ND	51	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-20

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.6	ND
ALPHA-BHC	2.0	ND	9.6	ND
BETA-BHC	2.0	ND	9.6	ND
GAMMA-BHC	2.0	ND	9.6	ND
DELTA-BHC	2.0	ND	9.6	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>135</b>	<b>96</b>	<b>649</b>
4,4-DDD	2.0	ND	9.6	ND
4,4-DDE	2.0	ND	9.6	ND
4,4-DDT	2.0	ND	9.6	ND
DIELDRIN	2.0	ND	9.6	ND
ENDOSULFAN I	2.0	ND	9.6	ND
ENDOSULFAN II	2.0	ND	9.6	ND
ENDOSULFAN SULFATE	2.0	ND	9.6	ND
ENDRIN	2.0	ND	9.6	ND
ENDRIN ALDEHYDE	2.0	ND	9.6	ND
HEPTACHLOR	2.0	ND	9.6	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.6	ND
METHOXYCHLOR	20.0	ND	96	ND
TOXAPHENE	25.0	ND	120	ND
AROCHLOR-1016	10.0	ND	48	ND
AROCHLOR-1221	10.0	ND	48	ND
AROCHLOR-1232	10.0	ND	48	ND
AROCHLOR-1242	10.0	ND	48	ND
AROCHLOR-1248	10.0	ND	48	ND
AROCHLOR-1254	10.0	ND	48	ND
AROCHLOR-1260	10.0	ND	48	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-21

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.5	ND
ALPHA-BHC	2.0	ND	9.5	ND
BETA-BHC	2.0	ND	9.5	ND
GAMMA-BHC	2.0	ND	9.5	ND
DELTA-BHC	2.0	ND	9.5	ND
CHLORDANE	20.0	61	95	289
4,4-DDD	2.0	ND	9.5	ND
4,4-DDE	2.0	ND	9.5	ND
4,4-DDT	2.0	ND	9.5	ND
DIELDRIN	2.0	ND	9.5	ND
ENDOSULFAN I	2.0	ND	9.5	ND
ENDOSULFAN II	2.0	ND	9.5	ND
ENDOSULFAN SULFATE	2.0	ND	9.5	ND
ENDRIN	2.0	ND	9.5	ND
ENDRIN ALDEHYDE	2.0	ND	9.5	ND
HEPTACHLOR	2.0	ND	9.5	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.5	ND
METHOXYCHLOR	20.0	ND	95	ND
TOXAPHENE	25.0	ND	118	ND
AROCHLOR-1016	10.0	ND	47	ND
AROCHLOR-1221	10.0	ND	47	ND
AROCHLOR-1232	10.0	ND	47	ND
AROCHLOR-1242	10.0	ND	47	ND
AROCHLOR-1248	10.0	ND	47	ND
AROCHLOR-1254	10.0	ND	47	ND
AROCHLOR-1260	10.0	ND	47	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-22

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.5	ND
ALPHA-BHC	2.0	ND	9.5	ND
BETA-BHC	2.0	ND	9.5	ND
GAMMA-BHC	2.0	ND	9.5	ND
DELTA-BHC	2.0	ND	9.5	ND
CHLORDANE	20.0	60	95	284
4,4-DDD	2.0	ND	9.5	ND
4,4-DDE	2.0	ND	9.5	ND
4,4-DDT	2.0	ND	9.5	ND
DIELDRIN	2.0	ND	9.5	ND
ENDOSULFAN I	2.0	ND	9.5	ND
ENDOSULFAN II	2.0	ND	9.5	ND
ENDOSULFAN SULFATE	2.0	ND	9.5	ND
ENDRIN	2.0	ND	9.5	ND
ENDRIN ALDEHYDE	2.0	ND	9.5	ND
HEPTACHLOR	2.0	ND	9.5	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.5	ND
METHOXYCHLOR	20.0	ND	95	ND
TOXAPHENE	25.0	ND	118	ND
AROCHLOR-1016	10.0	ND	47	ND
AROCHLOR-1221	10.0	ND	47	ND
AROCHLOR-1232	10.0	ND	47	ND
AROCHLOR-1242	10.0	ND	47	ND
AROCHLOR-1248	10.0	ND	47	ND
AROCHLOR-1254	10.0	ND	47	ND
AROCHLOR-1260	10.0	ND	47	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-23

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.3	ND
ALPHA-BHC	2.0	ND	9.3	ND
BETA-BHC	2.0	ND	9.3	ND
GAMMA-BHC	2.0	ND	9.3	ND
DELTA-BHC	2.0	ND	9.3	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>30</b>	<b>93</b>	<b>140</b>
4,4-DDD	2.0	ND	9.3	ND
4,4-DDE	2.0	ND	9.3	ND
4,4-DDT	2.0	ND	9.3	ND
DIELDRIN	2.0	ND	9.3	ND
ENDOSULFAN I	2.0	ND	9.3	ND
ENDOSULFAN II	2.0	ND	9.3	ND
ENDOSULFAN SULFATE	2.0	ND	9.3	ND
ENDRIN	2.0	ND	9.3	ND
ENDRIN ALDEHYDE	2.0	ND	9.3	ND
HEPTACHLOR	2.0	ND	9.3	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.3	ND
METHOXYCHLOR	20.0	ND	93	ND
TOXAPHENE	25.0	ND	116	ND
AROCHLOR-1016	10.0	ND	47	ND
AROCHLOR-1221	10.0	ND	47	ND
AROCHLOR-1232	10.0	ND	47	ND
AROCHLOR-1242	10.0	ND	47	ND
AROCHLOR-1248	10.0	ND	47	ND
AROCHLOR-1254	10.0	ND	47	ND
AROCHLOR-1260	10.0	ND	47	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-24

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 4

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.9	ND
ALPHA-BHC	2.0	ND	9.9	ND
BETA-BHC	2.0	ND	9.9	ND
GAMMA-BHC	2.0	ND	9.9	ND
DELTA-BHC	2.0	ND	9.9	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>78</b>	<b>99</b>	<b>384</b>
4,4-DDD	2.0	ND	9.9	ND
4,4-DDE	2.0	ND	9.9	ND
4,4-DDT	2.0	ND	9.9	ND
DIELDRIN	2.0	ND	9.9	ND
ENDOSULFAN I	2.0	ND	9.9	ND
ENDOSULFAN II	2.0	ND	9.9	ND
ENDOSULFAN SULFATE	2.0	ND	9.9	ND
ENDRIN	2.0	ND	9.9	ND
ENDRIN ALDEHYDE	2.0	ND	9.9	ND
HEPTACHLOR	2.0	ND	9.9	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.9	ND
METHOXYCHLOR	20.0	ND	99	ND
TOXAPHENE	25.0	ND	123	ND
AROCHLOR-1016	10.0	ND	49	ND
AROCHLOR-1221	10.0	ND	49	ND
AROCHLOR-1232	10.0	ND	49	ND
AROCHLOR-1242	10.0	ND	49	ND
AROCHLOR-1248	10.0	ND	49	ND
AROCHLOR-1254	10.0	ND	49	ND
AROCHLOR-1260	10.0	ND	49	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-25

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.8	ND
ALPHA-BHC	2.0	ND	10.8	ND
BETA-BHC	2.0	ND	10.8	ND
GAMMA-BHC	2.0	ND	10.8	ND
DELTA-BHC	2.0	ND	10.8	ND
CHLORDANE	20.0	ND	108	ND
4,4-DDD	2.0	ND	10.8	ND
4,4-DDE	2.0	ND	10.8	ND
4,4-DDT	2.0	ND	10.8	ND
DIELDRIN	2.0	ND	10.8	ND
ENDOSULFAN I	2.0	ND	10.8	ND
ENDOSULFAN II	2.0	ND	10.8	ND
ENDOSULFAN SULFATE	2.0	ND	10.8	ND
ENDRIN	2.0	ND	10.8	ND
ENDRIN ALDEHYDE	2.0	ND	10.8	ND
HEPTACHLOR	2.0	ND	10.8	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.8	ND
METHOXYCHLOR	20.0	ND	108	ND
TOXAPHENE	25.0	ND	135	ND
AROCHLOR-1016	10.0	ND	54	ND
AROCHLOR-1221	10.0	ND	54	ND
AROCHLOR-1232	10.0	ND	54	ND
AROCHLOR-1242	10.0	ND	54	ND
AROCHLOR-1248	10.0	ND	54	ND
AROCHLOR-1254	10.0	ND	54	ND
AROCHLOR-1260	10.0	ND	54	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-26

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	9.5	ND
ALPHA-BHC	2.0	ND	9.5	ND
BETA-BHC	2.0	ND	9.5	ND
GAMMA-BHC	2.0	ND	9.5	ND
DELTA-BHC	2.0	ND	9.5	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>96</b>	<b>95</b>	<b>457</b>
4,4-DDD	2.0	ND	9.5	ND
4,4-DDE	2.0	ND	9.5	ND
4,4-DDT	2.0	ND	9.5	ND
DIELDRIN	2.0	ND	9.5	ND
ENDOSULFAN I	2.0	ND	9.5	ND
ENDOSULFAN II	2.0	ND	9.5	ND
ENDOSULFAN SULFATE	2.0	ND	9.5	ND
ENDRIN	2.0	ND	9.5	ND
ENDRIN ALDEHYDE	2.0	ND	9.5	ND
HEPTACHLOR	2.0	ND	9.5	ND
HEPTACHLOR EPOXIDE	2.0	ND	9.5	ND
METHOXYCHLOR	20.0	ND	95	ND
TOXAPHENE	25.0	ND	119	ND
AROCHLOR-1016	10.0	ND	48	ND
AROCHLOR-1221	10.0	ND	48	ND
AROCHLOR-1232	10.0	ND	48	ND
AROCHLOR-1242	10.0	ND	48	ND
AROCHLOR-1248	10.0	ND	48	ND
AROCHLOR-1254	10.0	ND	48	ND
AROCHLOR-1260	10.0	ND	48	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-27

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	10.9	ND
ALPHA-BHC	2.0	ND	10.9	ND
BETA-BHC	2.0	ND	10.9	ND
GAMMA-BHC	2.0	ND	10.9	ND
DELTA-BHC	2.0	ND	10.9	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>106</b>	<b>109</b>	<b>579</b>
4,4-DDD	2.0	ND	10.9	ND
4,4-DDE	2.0	ND	10.9	ND
4,4-DDT	2.0	ND	10.9	ND
DIELDRIN	2.0	ND	10.9	ND
ENDOSULFAN I	2.0	ND	10.9	ND
ENDOSULFAN II	2.0	ND	10.9	ND
ENDOSULFAN SULFATE	2.0	ND	10.9	ND
ENDRIN	2.0	ND	10.9	ND
ENDRIN ALDEHYDE	2.0	ND	10.9	ND
HEPTACHLOR	2.0	ND	10.9	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.9	ND
METHOXYCHLOR	20.0	ND	109	ND
TOXAPHENE	25.0	ND	137	ND
AROCHLOR-1016	10.0	ND	55	ND
AROCHLOR-1221	10.0	ND	55	ND
AROCHLOR-1232	10.0	ND	55	ND
AROCHLOR-1242	10.0	ND	55	ND
AROCHLOR-1248	10.0	ND	55	ND
AROCHLOR-1254	10.0	ND	55	ND
AROCHLOR-1260	10.0	ND	55	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-28

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.0	ND
ALPHA-BHC	2.0	ND	10.0	ND
BETA-BHC	2.0	ND	10.0	ND
GAMMA-BHC	2.0	ND	10.0	ND
DELTA-BHC	2.0	ND	10.0	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>114</b>	<b>100</b>	<b>567</b>
4,4-DDD	2.0	ND	10.0	ND
4,4-DDE	2.0	ND	10.0	ND
4,4-DDT	2.0	ND	10.0	ND
DIELDRIN	2.0	ND	10.0	ND
ENDOSULFAN I	2.0	ND	10.0	ND
ENDOSULFAN II	2.0	ND	10.0	ND
ENDOSULFAN SULFATE	2.0	ND	10.0	ND
ENDRIN	2.0	ND	10.0	ND
ENDRIN ALDEHYDE	2.0	ND	10.0	ND
HEPTACHLOR	2.0	ND	10.0	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.0	ND
METHOXYCHLOR	20.0	ND	100	ND
TOXAPHENE	25.0	ND	124	ND
AROCHLOR-1016	10.0	ND	50	ND
AROCHLOR-1221	10.0	ND	50	ND
AROCHLOR-1232	10.0	ND	50	ND
AROCHLOR-1242	10.0	ND	50	ND
AROCHLOR-1248	10.0	ND	50	ND
AROCHLOR-1254	10.0	ND	50	ND
AROCHLOR-1260	10.0	ND	50	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-29

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.2	ND
ALPHA-BHC	2.0	ND	10.2	ND
BETA-BHC	2.0	ND	10.2	ND
GAMMA-BHC	2.0	ND	10.2	ND
DELTA-BHC	2.0	ND	10.2	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>39</b>	<b>102</b>	<b>199</b>
4,4-DDD	2.0	ND	10.2	ND
4,4-DDE	2.0	ND	10.2	ND
4,4-DDT	2.0	ND	10.2	ND
DIELDRIN	2.0	ND	10.2	ND
ENDOSULFAN I	2.0	ND	10.2	ND
ENDOSULFAN II	2.0	ND	10.2	ND
ENDOSULFAN SULFATE	2.0	ND	10.2	ND
ENDRIN	2.0	ND	10.2	ND
ENDRIN ALDEHYDE	2.0	ND	10.2	ND
HEPTACHLOR	2.0	ND	10.2	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.2	ND
METHOXYCHLOR	20.0	ND	102	ND
TOXAPHENE	25.0	ND	128	ND
AROCHLOR-1016	10.0	ND	51	ND
AROCHLOR-1221	10.0	ND	51	ND
AROCHLOR-1232	10.0	ND	51	ND
AROCHLOR-1242	10.0	ND	51	ND
AROCHLOR-1248	10.0	ND	51	ND
AROCHLOR-1254	10.0	ND	51	ND
AROCHLOR-1260	10.0	ND	51	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-30

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	10.5	ND
ALPHA-BHC	2.0	ND	10.5	ND
BETA-BHC	2.0	ND	10.5	ND
GAMMA-BHC	2.0	ND	10.5	ND
DELTA-BHC	2.0	ND	10.5	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>118</b>	<b>105</b>	<b>618</b>
4,4-DDD	2.0	ND	10.5	ND
4,4-DDE	2.0	ND	10.5	ND
4,4-DDT	2.0	ND	10.5	ND
DIELDRIN	2.0	ND	10.5	ND
ENDOSULFAN I	2.0	ND	10.5	ND
ENDOSULFAN II	2.0	ND	10.5	ND
ENDOSULFAN SULFATE	2.0	ND	10.5	ND
ENDRIN	2.0	ND	10.5	ND
ENDRIN ALDEHYDE	2.0	ND	10.5	ND
HEPTACHLOR	2.0	ND	10.5	ND
HEPTACHLOR EPOXIDE	2.0	ND	10.5	ND
METHOXYCHLOR	20.0	ND	105	ND
TOXAPHENE	25.0	ND	131	ND
AROCHLOR-1016	10.0	ND	52	ND
AROCHLOR-1221	10.0	ND	52	ND
AROCHLOR-1232	10.0	ND	52	ND
AROCHLOR-1242	10.0	ND	52	ND
AROCHLOR-1248	10.0	ND	52	ND
AROCHLOR-1254	10.0	ND	52	ND
AROCHLOR-1260	10.0	ND	52	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-31

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	32	ND
ALPHA-BHC	2.0	ND	32	ND
BETA-BHC	2.0	ND	32	ND
GAMMA-BHC	2.0	ND	32	ND
DELTA-BHC	2.0	ND	32	ND
CHLORDANE	20.0	ND	323	ND
4,4-DDD	2.0	ND	32	ND
4,4-DDE	2.0	ND	32	ND
4,4-DDT	2.0	ND	32	ND
DIELDRIN	2.0	ND	32	ND
ENDOSULFAN I	2.0	ND	32	ND
ENDOSULFAN II	2.0	ND	32	ND
ENDOSULFAN SULFATE	2.0	ND	32	ND
ENDRIN	2.0	ND	32	ND
ENDRIN ALDEHYDE	2.0	ND	32	ND
HEPTACHLOR	2.0	ND	32	ND
HEPTACHLOR EPOXIDE	2.0	ND	32	ND
METHOXYCHLOR	20.0	ND	323	ND
TOXAPHENE	25.0	ND	403	ND
AROCHLOR-1016	10.0	ND	161	ND
AROCHLOR-1221	10.0	ND	161	ND
AROCHLOR-1232	10.0	ND	161	ND
AROCHLOR-1242	10.0	ND	161	ND
AROCHLOR-1248	10.0	ND	161	ND
AROCHLOR-1254	10.0	ND	161	ND
AROCHLOR-1260	10.0	ND	161	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-32

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
CHLORDANE	20.0	ND	263	ND
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	263	ND
TOXAPHENE	25.0	ND	329	ND
AROCHLOR-1016	10.0	ND	132	ND
AROCHLOR-1221	10.0	ND	132	ND
AROCHLOR-1232	10.0	ND	132	ND
AROCHLOR-1242	10.0	ND	132	ND
AROCHLOR-1248	10.0	ND	132	ND
AROCHLOR-1254	10.0	ND	132	ND
AROCHLOR-1260	10.0	ND	132	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-33

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	24	ND
ALPHA-BHC	2.0	ND	24	ND
BETA-BHC	2.0	ND	24	ND
GAMMA-BHC	2.0	ND	24	ND
DELTA-BHC	2.0	ND	24	ND
CHLORDANE	20.0	ND	238	ND
4,4-DDD	2.0	ND	24	ND
4,4-DDE	2.0	ND	24	ND
4,4-DDT	2.0	ND	24	ND
DIELDRIN	2.0	ND	24	ND
ENDOSULFAN I	2.0	ND	24	ND
ENDOSULFAN II	2.0	ND	24	ND
ENDOSULFAN SULFATE	2.0	ND	24	ND
ENDRIN	2.0	ND	24	ND
ENDRIN ALDEHYDE	2.0	ND	24	ND
HEPTACHLOR	2.0	ND	24	ND
HEPTACHLOR EPOXIDE	2.0	ND	24	ND
METHOXYCHLOR	20.0	ND	238	ND
TOXAPHENE	25.0	ND	298	ND
AROCHLOR-1016	10.0	ND	119	ND
AROCHLOR-1221	10.0	ND	119	ND
AROCHLOR-1232	10.0	ND	119	ND
AROCHLOR-1242	10.0	ND	119	ND
AROCHLOR-1248	10.0	ND	119	ND
AROCHLOR-1254	10.0	ND	119	ND
AROCHLOR-1260	10.0	ND	119	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-34

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	24	ND
ALPHA-BHC	2.0	ND	24	ND
BETA-BHC	2.0	ND	24	ND
GAMMA-BHC	2.0	ND	24	ND
DELTA-BHC	2.0	ND	24	ND
CHLORDANE	20.0	ND	235	ND
4,4-DDD	2.0	ND	24	ND
4,4-DDE	2.0	ND	24	ND
4,4-DDT	2.0	ND	24	ND
DIELDRIN	2.0	ND	24	ND
ENDOSULFAN I	2.0	ND	24	ND
ENDOSULFAN II	2.0	ND	24	ND
ENDOSULFAN SULFATE	2.0	ND	24	ND
ENDRIN	2.0	ND	24	ND
ENDRIN ALDEHYDE	2.0	ND	24	ND
HEPTACHLOR	2.0	ND	24	ND
HEPTACHLOR EPOXIDE	2.0	ND	24	ND
METHOXYCHLOR	20.0	ND	235	ND
TOXAPHENE	25.0	ND	294	ND
AROCHLOR-1016	10.0	ND	118	ND
AROCHLOR-1221	10.0	ND	118	ND
AROCHLOR-1232	10.0	ND	118	ND
AROCHLOR-1242	10.0	ND	118	ND
AROCHLOR-1248	10.0	ND	118	ND
AROCHLOR-1254	10.0	ND	118	ND
AROCHLOR-1260	10.0	ND	118	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-35

DATE EXTRACTED: 01/28/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	20	ND
ALPHA-BHC	2.0	ND	20	ND
BETA-BHC	2.0	ND	20	ND
GAMMA-BHC	2.0	ND	20	ND
DELTA-BHC	2.0	ND	20	ND
CHLORDANE	20.0	ND	204	ND
4,4-DDD	2.0	ND	20	ND
4,4-DDE	2.0	ND	20	ND
4,4-DDT	2.0	ND	20	ND
DIELDRIN	2.0	ND	20	ND
ENDOSULFAN I	2.0	ND	20	ND
ENDOSULFAN II	2.0	ND	20	ND
ENDOSULFAN SULFATE	2.0	ND	20	ND
ENDRIN	2.0	ND	20	ND
ENDRIN ALDEHYDE	2.0	ND	20	ND
HEPTACHLOR	2.0	ND	20	ND
HEPTACHLOR EPOXIDE	2.0	ND	20	ND
METHOXYCHLOR	20.0	ND	204	ND
TOXAPHENE	25.0	ND	255	ND
AROCHLOR-1016	10.0	ND	102	ND
AROCHLOR-1221	10.0	ND	102	ND
AROCHLOR-1232	10.0	ND	102	ND
AROCHLOR-1242	10.0	ND	102	ND
AROCHLOR-1248	10.0	ND	102	ND
AROCHLOR-1254	10.0	ND	102	ND
AROCHLOR-1260	10.0	ND	102	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-36

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	22	ND
ALPHA-BHC	2.0	ND	22	ND
BETA-BHC	2.0	ND	22	ND
GAMMA-BHC	2.0	ND	22	ND
DELTA-BHC	2.0	ND	22	ND
CHLORDANE	20.0	ND	225	ND
4,4-DDD	2.0	ND	22	ND
4,4-DDE	2.0	ND	22	ND
4,4-DDT	2.0	ND	22	ND
DIELDRIN	2.0	ND	22	ND
ENDOSULFAN I	2.0	ND	22	ND
ENDOSULFAN II	2.0	ND	22	ND
ENDOSULFAN SULFATE	2.0	ND	22	ND
ENDRIN	2.0	ND	22	ND
ENDRIN ALDEHYDE	2.0	ND	22	ND
HEPTACHLOR	2.0	ND	22	ND
HEPTACHLOR EPOXIDE	2.0	ND	22	ND
METHOXYCHLOR	20.0	ND	225	ND
TOXAPHENE	25.0	ND	281	ND
AROCHLOR-1016	10.0	ND	112	ND
AROCHLOR-1221	10.0	ND	112	ND
AROCHLOR-1232	10.0	ND	112	ND
AROCHLOR-1242	10.0	ND	112	ND
AROCHLOR-1248	10.0	ND	112	ND
AROCHLOR-1254	10.0	ND	112	ND
AROCHLOR-1260	10.0	ND	112	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-37

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	24	ND
ALPHA-BHC	2.0	ND	24	ND
BETA-BHC	2.0	ND	24	ND
GAMMA-BHC	2.0	ND	24	ND
DELTA-BHC	2.0	ND	24	ND
CHLORDANE	20.0	ND	235	ND
4,4-DDD	2.0	ND	24	ND
4,4-DDE	2.0	ND	24	ND
4,4-DDT	2.0	ND	24	ND
DIELDRIN	2.0	ND	24	ND
ENDOSULFAN I	2.0	ND	24	ND
ENDOSULFAN II	2.0	ND	24	ND
ENDOSULFAN SULFATE	2.0	ND	24	ND
ENDRIN	2.0	ND	24	ND
ENDRIN ALDEHYDE	2.0	ND	24	ND
HEPTACHLOR	2.0	ND	24	ND
HEPTACHLOR EPOXIDE	2.0	ND	24	ND
METHOXYCHLOR	20.0	ND	235	ND
TOXAPHENE	25.0	ND	294	ND
AROCHLOR-1016	10.0	ND	118	ND
AROCHLOR-1221	10.0	ND	118	ND
AROCHLOR-1232	10.0	ND	118	ND
AROCHLOR-1242	10.0	ND	118	ND
AROCHLOR-1248	10.0	ND	118	ND
AROCHLOR-1254	10.0	ND	118	ND
AROCHLOR-1260	10.0	ND	118	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-38

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	23	ND
ALPHA-BHC	2.0	ND	23	ND
BETA-BHC	2.0	ND	23	ND
GAMMA-BHC	2.0	ND	23	ND
DELTA-BHC	2.0	ND	23	ND
CHLORDANE	20.0	ND	227	ND
4,4-DDD	2.0	ND	23	ND
4,4-DDE	2.0	ND	23	ND
4,4-DDT	2.0	ND	23	ND
DIELDRIN	2.0	ND	23	ND
ENDOSULFAN I	2.0	ND	23	ND
ENDOSULFAN II	2.0	ND	23	ND
ENDOSULFAN SULFATE	2.0	ND	23	ND
ENDRIN	2.0	ND	23	ND
ENDRIN ALDEHYDE	2.0	ND	23	ND
HEPTACHLOR	2.0	ND	23	ND
HEPTACHLOR EPOXIDE	2.0	ND	23	ND
METHOXYCHLOR	20.0	ND	227	ND
TOXAPHENE	25.0	ND	284	ND
AROCHLOR-1016	10.0	ND	114	ND
AROCHLOR-1221	10.0	ND	114	ND
AROCHLOR-1232	10.0	ND	114	ND
AROCHLOR-1242	10.0	ND	114	ND
AROCHLOR-1248	10.0	ND	114	ND
AROCHLOR-1254	10.0	ND	114	ND
AROCHLOR-1260	10.0	ND	114	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-39

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	22	ND
ALPHA-BHC	2.0	ND	22	ND
BETA-BHC	2.0	ND	22	ND
GAMMA-BHC	2.0	ND	22	ND
DELTA-BHC	2.0	ND	22	ND
CHLORDANE	20.0	ND	225	ND
4,4-DDD	2.0	ND	22	ND
4,4-DDE	2.0	ND	22	ND
4,4-DDT	2.0	ND	22	ND
DIELDRIN	2.0	ND	22	ND
ENDOSULFAN I	2.0	ND	22	ND
ENDOSULFAN II	2.0	ND	22	ND
ENDOSULFAN SULFATE	2.0	ND	22	ND
ENDRIN	2.0	ND	22	ND
ENDRIN ALDEHYDE	2.0	ND	22	ND
HEPTACHLOR	2.0	ND	22	ND
HEPTACHLOR EPOXIDE	2.0	ND	22	ND
METHOXYCHLOR	20.0	ND	225	ND
TOXAPHENE	25.0	ND	281	ND
AROCHLOR-1016	10.0	ND	112	ND
AROCHLOR-1221	10.0	ND	112	ND
AROCHLOR-1232	10.0	ND	112	ND
AROCHLOR-1242	10.0	ND	112	ND
AROCHLOR-1248	10.0	ND	112	ND
AROCHLOR-1254	10.0	ND	112	ND
AROCHLOR-1260	10.0	ND	112	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-40

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	21	ND
ALPHA-BHC	2.0	ND	21	ND
BETA-BHC	2.0	ND	21	ND
GAMMA-BHC	2.0	ND	21	ND
DELTA-BHC	2.0	ND	21	ND
CHLORDANE	20.0	ND	211	ND
4,4-DDD	2.0	ND	21	ND
4,4-DDE	2.0	ND	21	ND
4,4-DDT	2.0	ND	21	ND
DIELDRIN	2.0	ND	21	ND
ENDOSULFAN I	2.0	ND	21	ND
ENDOSULFAN II	2.0	ND	21	ND
ENDOSULFAN SULFATE	2.0	ND	21	ND
ENDRIN	2.0	ND	21	ND
ENDRIN ALDEHYDE	2.0	ND	21	ND
HEPTACHLOR	2.0	ND	21	ND
HEPTACHLOR EPOXIDE	2.0	ND	21	ND
METHOXYCHLOR	20.0	ND	211	ND
TOXAPHENE	25.0	ND	263	ND
AROCHLOR-1016	10.0	ND	105	ND
AROCHLOR-1221	10.0	ND	105	ND
AROCHLOR-1232	10.0	ND	105	ND
AROCHLOR-1242	10.0	ND	105	ND
AROCHLOR-1248	10.0	ND	105	ND
AROCHLOR-1254	10.0	ND	105	ND
AROCHLOR-1260	10.0	ND	105	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-41

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	23	ND
ALPHA-BHC	2.0	ND	23	ND
BETA-BHC	2.0	ND	23	ND
GAMMA-BHC	2.0	ND	23	ND
DELTA-BHC	2.0	ND	23	ND
CHLORDANE	20.0	ND	230	ND
4,4-DDD	2.0	ND	23	ND
4,4-DDE	2.0	ND	23	ND
4,4-DDT	2.0	ND	23	ND
DIELDRIN	2.0	ND	23	ND
ENDOSULFAN I	2.0	ND	23	ND
ENDOSULFAN II	2.0	ND	23	ND
ENDOSULFAN SULFATE	2.0	ND	23	ND
ENDRIN	2.0	ND	23	ND
ENDRIN ALDEHYDE	2.0	ND	23	ND
HEPTACHLOR	2.0	ND	23	ND
HEPTACHLOR EPOXIDE	2.0	ND	23	ND
METHOXYCHLOR	20.0	ND	230	ND
TOXAPHENE	25.0	ND	287	ND
AROCHLOR-1016	10.0	ND	115	ND
AROCHLOR-1221	10.0	ND	115	ND
AROCHLOR-1232	10.0	ND	115	ND
AROCHLOR-1242	10.0	ND	115	ND
AROCHLOR-1248	10.0	ND	115	ND
AROCHLOR-1254	10.0	ND	115	ND
AROCHLOR-1260	10.0	ND	115	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.	DATE SAMPLED: 01/16/98
PROJECT NAME/No.: MARINA DEL REY	DATE RECEIVED: 01/21/98
PTAS LOG #: 0139-98-41 (DUPLICATE)	DATE EXTRACTED: 01/28/98
SAMPLE ID: AREA 4 REP 1 (DUPLICATE)	DATE ANALYZED: 01/31/98
DILUTION FACTOR: 1	MATRIX: CLAM TISSUE
	SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	23	ND
ALPHA-BHC	2.0	ND	23	ND
BETA-BHC	2.0	ND	23	ND
GAMMA-BHC	2.0	ND	23	ND
DELTA-BHC	2.0	ND	23	ND
CHLORDANE	20.0	ND	230	ND
4,4-DDD	2.0	ND	23	ND
4,4-DDE	2.0	ND	23	ND
4,4-DDT	2.0	ND	23	ND
DIELDRIN	2.0	ND	23	ND
ENDOSULFAN I	2.0	ND	23	ND
ENDOSULFAN II	2.0	ND	23	ND
ENDOSULFAN SULFATE	2.0	ND	23	ND
ENDRIN	2.0	ND	23	ND
ENDRIN ALDEHYDE	2.0	ND	23	ND
HEPTACHLOR	2.0	ND	23	ND
HEPTACHLOR EPOXIDE	2.0	ND	23	ND
METHOXYCHLOR	20.0	ND	230	ND
TOXAPHENE	25.0	ND	287	ND
AROCHLOR-1016	10.0	ND	115	ND
AROCHLOR-1221	10.0	ND	115	ND
AROCHLOR-1232	10.0	ND	115	ND
AROCHLOR-1242	10.0	ND	115	ND
AROCHLOR-1248	10.0	ND	115	ND
AROCHLOR-1254	10.0	ND	115	ND
AROCHLOR-1260	10.0	ND	115	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-42

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 2

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
CHLORDANE	20.0	ND	263	ND
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	263	ND
TOXAPHENE	25.0	ND	329	ND
AROCHLOR-1016	10.0	ND	132	ND
AROCHLOR-1221	10.0	ND	132	ND
AROCHLOR-1232	10.0	ND	132	ND
AROCHLOR-1242	10.0	ND	132	ND
AROCHLOR-1248	10.0	ND	132	ND
AROCHLOR-1254	10.0	ND	132	ND
AROCHLOR-1260	10.0	ND	132	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-43

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	24	ND
ALPHA-BHC	2.0	ND	24	ND
BETA-BHC	2.0	ND	24	ND
GAMMA-BHC	2.0	ND	24	ND
DELTA-BHC	2.0	ND	24	ND
CHLORDANE	20.0	ND	241	ND
4,4-DDD	2.0	ND	24	ND
4,4-DDE	2.0	ND	24	ND
4,4-DDT	2.0	ND	24	ND
DIELDRIN	2.0	ND	24	ND
ENDOSULFAN I	2.0	ND	24	ND
ENDOSULFAN II	2.0	ND	24	ND
ENDOSULFAN SULFATE	2.0	ND	24	ND
ENDRIN	2.0	ND	24	ND
ENDRIN ALDEHYDE	2.0	ND	24	ND
HEPTACHLOR	2.0	ND	24	ND
HEPTACHLOR EPOXIDE	2.0	ND	24	ND
METHOXYCHLOR	20.0	ND	241	ND
TOXAPHENE	25.0	ND	301	ND
AROCHLOR-1016	10.0	ND	120	ND
AROCHLOR-1221	10.0	ND	120	ND
AROCHLOR-1232	10.0	ND	120	ND
AROCHLOR-1242	10.0	ND	120	ND
AROCHLOR-1248	10.0	ND	120	ND
AROCHLOR-1254	10.0	ND	120	ND
AROCHLOR-1260	10.0	ND	120	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-44

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	25	ND
ALPHA-BHC	2.0	ND	25	ND
BETA-BHC	2.0	ND	25	ND
GAMMA-BHC	2.0	ND	25	ND
DELTA-BHC	2.0	ND	25	ND
CHLORDANE	20.0	ND	247	ND
4,4-DDD	2.0	ND	25	ND
4,4-DDE	2.0	ND	25	ND
4,4-DDT	2.0	ND	25	ND
DIELDRIN	2.0	ND	25	ND
ENDOSULFAN I	2.0	ND	25	ND
ENDOSULFAN II	2.0	ND	25	ND
ENDOSULFAN SULFATE	2.0	ND	25	ND
ENDRIN	2.0	ND	25	ND
ENDRIN ALDEHYDE	2.0	ND	25	ND
HEPTACHLOR	2.0	ND	25	ND
HEPTACHLOR EPOXIDE	2.0	ND	25	ND
METHOXYCHLOR	20.0	ND	247	ND
TOXAPHENE	25.0	ND	309	ND
AROCHLOR-1016	10.0	ND	123	ND
AROCHLOR-1221	10.0	ND	123	ND
AROCHLOR-1232	10.0	ND	123	ND
AROCHLOR-1242	10.0	ND	123	ND
AROCHLOR-1248	10.0	ND	123	ND
AROCHLOR-1254	10.0	ND	123	ND
AROCHLOR-1260	10.0	ND	123	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-45

DATE EXTRACTED: 01/28/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 01/31/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
CHLORDANE	20.0	ND	260	ND
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	260	ND
TOXAPHENE	25.0	ND	325	ND
AROCHLOR-1016	10.0	ND	130	ND
AROCHLOR-1221	10.0	ND	130	ND
AROCHLOR-1232	10.0	ND	130	ND
AROCHLOR-1242	10.0	ND	130	ND
AROCHLOR-1248	10.0	ND	130	ND
AROCHLOR-1254	10.0	ND	130	ND
AROCHLOR-1260	10.0	ND	130	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-46

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	27	ND
ALPHA-BHC	2.0	ND	27	ND
BETA-BHC	2.0	ND	27	ND
GAMMA-BHC	2.0	ND	27	ND
DELTA-BHC	2.0	ND	27	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>20</b>	<b>270</b>	<b>270</b>
4,4-DDD	2.0	ND	27	ND
4,4-DDE	2.0	ND	27	ND
4,4-DDT	2.0	ND	27	ND
DIELDRIN	2.0	ND	27	ND
ENDOSULFAN I	2.0	ND	27	ND
ENDOSULFAN II	2.0	ND	27	ND
ENDOSULFAN SULFATE	2.0	ND	27	ND
ENDRIN	2.0	ND	27	ND
ENDRIN ALDEHYDE	2.0	ND	27	ND
HEPTACHLOR	2.0	ND	27	ND
HEPTACHLOR EPOXIDE	2.0	ND	27	ND
METHOXYCHLOR	20.0	ND	270	ND
TOXAPHENE	25.0	ND	338	ND
AROCHLOR-1016	10.0	ND	135	ND
AROCHLOR-1221	10.0	ND	135	ND
AROCHLOR-1232	10.0	ND	135	ND
AROCHLOR-1242	10.0	ND	135	ND
AROCHLOR-1248	10.0	ND	135	ND
AROCHLOR-1254	10.0	ND	135	ND
AROCHLOR-1260	10.0	ND	135	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-47

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	24	ND
ALPHA-BHC	2.0	ND	24	ND
BETA-BHC	2.0	ND	24	ND
GAMMA-BHC	2.0	ND	24	ND
DELTA-BHC	2.0	ND	24	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>44</b>	<b>238</b>	<b>524</b>
4,4-DDD	2.0	ND	24	ND
4,4-DDE	2.0	ND	24	ND
4,4-DDT	2.0	ND	24	ND
DIELDRIN	2.0	ND	24	ND
ENDOSULFAN I	2.0	ND	24	ND
ENDOSULFAN II	2.0	ND	24	ND
ENDOSULFAN SULFATE	2.0	ND	24	ND
ENDRIN	2.0	ND	24	ND
ENDRIN ALDEHYDE	2.0	ND	24	ND
HEPTACHLOR	2.0	ND	24	ND
HEPTACHLOR EPOXIDE	2.0	ND	24	ND
METHOXYCHLOR	20.0	ND	238	ND
TOXAPHENE	25.0	ND	298	ND
AROCHLOR-1016	10.0	ND	119	ND
AROCHLOR-1221	10.0	ND	119	ND
AROCHLOR-1232	10.0	ND	119	ND
AROCHLOR-1242	10.0	ND	119	ND
AROCHLOR-1248	10.0	ND	119	ND
AROCHLOR-1254	10.0	ND	119	ND
AROCHLOR-1260	10.0	ND	119	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-48

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	25	ND
ALPHA-BHC	2.0	ND	25	ND
BETA-BHC	2.0	ND	25	ND
GAMMA-BHC	2.0	ND	25	ND
DELTA-BHC	2.0	ND	25	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>24</b>	<b>247</b>	<b>296</b>
4,4-DDD	2.0	ND	25	ND
4,4-DDE	2.0	ND	25	ND
4,4-DDT	2.0	ND	25	ND
DIELDRIN	2.0	ND	25	ND
ENDOSULFAN I	2.0	ND	25	ND
ENDOSULFAN II	2.0	ND	25	ND
ENDOSULFAN SULFATE	2.0	ND	25	ND
ENDRIN	2.0	ND	25	ND
ENDRIN ALDEHYDE	2.0	ND	25	ND
HEPTACHLOR	2.0	ND	25	ND
HEPTACHLOR EPOXIDE	2.0	ND	25	ND
METHOXYCHLOR	20.0	ND	247	ND
TOXAPHENE	25.0	ND	309	ND
AROCHLOR-1016	10.0	ND	123	ND
AROCHLOR-1221	10.0	ND	123	ND
AROCHLOR-1232	10.0	ND	123	ND
AROCHLOR-1242	10.0	ND	123	ND
AROCHLOR-1248	10.0	ND	123	ND
AROCHLOR-1254	10.0	ND	123	ND
AROCHLOR-1260	10.0	ND	123	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-48 (DUPLICATE)

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 3 (DUPLICATE)

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	25	ND
ALPHA-BHC	2.0	ND	25	ND
BETA-BHC	2.0	ND	25	ND
GAMMA-BHC	2.0	ND	25	ND
DELTA-BHC	2.0	ND	25	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>28</b>	<b>247</b>	<b>346</b>
4,4-DDD	2.0	ND	25	ND
4,4-DDE	2.0	ND	25	ND
4,4-DDT	2.0	ND	25	ND
DIELDRIN	2.0	ND	25	ND
ENDOSULFAN I	2.0	ND	25	ND
ENDOSULFAN II	2.0	ND	25	ND
ENDOSULFAN SULFATE	2.0	ND	25	ND
ENDRIN	2.0	ND	25	ND
ENDRIN ALDEHYDE	2.0	ND	25	ND
HEPTACHLOR	2.0	ND	25	ND
HEPTACHLOR EPOXIDE	2.0	ND	25	ND
METHOXYCHLOR	20.0	ND	247	ND
TOXAPHENE	25.0	ND	309	ND
AROCHLOR-1016	10.0	ND	123	ND
AROCHLOR-1221	10.0	ND	123	ND
AROCHLOR-1232	10.0	ND	123	ND
AROCHLOR-1242	10.0	ND	123	ND
AROCHLOR-1248	10.0	ND	123	ND
AROCHLOR-1254	10.0	ND	123	ND
AROCHLOR-1260	10.0	ND	123	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-49

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	27	ND
ALPHA-BHC	2.0	ND	27	ND
BETA-BHC	2.0	ND	27	ND
GAMMA-BHC	2.0	ND	27	ND
DELTA-BHC	2.0	ND	27	ND
CHLORDANE	20.0	ND	270	ND
4,4-DDD	2.0	ND	27	ND
4,4-DDE	2.0	ND	27	ND
4,4-DDT	2.0	ND	27	ND
DIELDRIN	2.0	ND	27	ND
ENDOSULFAN I	2.0	ND	27	ND
ENDOSULFAN II	2.0	ND	27	ND
ENDOSULFAN SULFATE	2.0	ND	27	ND
ENDRIN	2.0	ND	27	ND
ENDRIN ALDEHYDE	2.0	ND	27	ND
HEPTACHLOR	2.0	ND	27	ND
HEPTACHLOR EPOXIDE	2.0	ND	27	ND
METHOXYCHLOR	20.0	ND	270	ND
TOXAPHENE	25.0	ND	338	ND
AROCHLOR-1016	10.0	ND	135	ND
AROCHLOR-1221	10.0	ND	135	ND
AROCHLOR-1232	10.0	ND	135	ND
AROCHLOR-1242	10.0	ND	135	ND
AROCHLOR-1248	10.0	ND	135	ND
AROCHLOR-1254	10.0	ND	135	ND
AROCHLOR-1260	10.0	ND	135	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-50

DATE EXTRACTED: 01/26/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 01/29/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
<b>CHLORDANE</b>	<b>20.0</b>	<b>23</b>	<b>260</b>	<b>299</b>
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	260	ND
TOXAPHENE	25.0	ND	325	ND
AROCHLOR-1016	10.0	ND	130	ND
AROCHLOR-1221	10.0	ND	130	ND
AROCHLOR-1232	10.0	ND	130	ND
AROCHLOR-1242	10.0	ND	130	ND
AROCHLOR-1248	10.0	ND	130	ND
AROCHLOR-1254	10.0	ND	130	ND
AROCHLOR-1260	10.0	ND	130	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-51

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	29	ND
ALPHA-BHC	2.0	ND	29	ND
BETA-BHC	2.0	ND	29	ND
GAMMA-BHC	2.0	ND	29	ND
DELTA-BHC	2.0	ND	29	ND
CHLORDANE	20.0	ND	290	ND
4,4-DDD	2.0	ND	29	ND
4,4-DDE	2.0	ND	29	ND
4,4-DDT	2.0	ND	29	ND
DIELDRIN	2.0	ND	29	ND
ENDOSULFAN I	2.0	ND	29	ND
ENDOSULFAN II	2.0	ND	29	ND
ENDOSULFAN SULFATE	2.0	ND	29	ND
ENDRIN	2.0	ND	29	ND
ENDRIN ALDEHYDE	2.0	ND	29	ND
HEPTACHLOR	2.0	ND	29	ND
HEPTACHLOR EPOXIDE	2.0	ND	29	ND
METHOXYCHLOR	20.0	ND	290	ND
TOXAPHENE	25.0	ND	362	ND
AROCHLOR-1016	10.0	ND	145	ND
AROCHLOR-1221	10.0	ND	145	ND
AROCHLOR-1232	10.0	ND	145	ND
AROCHLOR-1242	10.0	ND	145	ND
AROCHLOR-1248	10.0	ND	145	ND
AROCHLOR-1254	10.0	ND	145	ND
AROCHLOR-1260	10.0	ND	145	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.	DATE SAMPLED: 01/16/98
PROJECT NAME/No.: MARINA DEL REY	DATE RECEIVED: 01/21/98
PTAS LOG #: 0139-98-51 (DUPLICATE)	DATE EXTRACTED: 01/29/98
SAMPLE ID: AREA 6 REP 1 (DUPLICATE)	DATE ANALYZED: 02/02-03/98
DILUTION FACTOR: 1	MATRIX: CLAM TISSUE
	SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	29	ND
ALPHA-BHC	2.0	ND	29	ND
BETA-BHC	2.0	ND	29	ND
GAMMA-BHC	2.0	ND	29	ND
DELTA-BHC	2.0	ND	29	ND
CHLORDANE	20.0	ND	290	ND
4,4-DDD	2.0	ND	29	ND
4,4-DDE	2.0	ND	29	ND
4,4-DDT	2.0	ND	29	ND
DIELDRIN	2.0	ND	29	ND
ENDOSULFAN I	2.0	ND	29	ND
ENDOSULFAN II	2.0	ND	29	ND
ENDOSULFAN SULFATE	2.0	ND	29	ND
ENDRIN	2.0	ND	29	ND
ENDRIN ALDEHYDE	2.0	ND	29	ND
HEPTACHLOR	2.0	ND	29	ND
HEPTACHLOR EPOXIDE	2.0	ND	29	ND
METHOXYCHLOR	20.0	ND	290	ND
TOXAPHENE	25.0	ND	362	ND
AROCHLOR-1016	10.0	ND	145	ND
AROCHLOR-1221	10.0	ND	145	ND
AROCHLOR-1232	10.0	ND	145	ND
AROCHLOR-1242	10.0	ND	145	ND
AROCHLOR-1248	10.0	ND	145	ND
AROCHLOR-1254	10.0	ND	145	ND
AROCHLOR-1260	10.0	ND	145	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-52

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	25	ND
ALPHA-BHC	2.0	ND	25	ND
BETA-BHC	2.0	ND	25	ND
GAMMA-BHC	2.0	ND	25	ND
DELTA-BHC	2.0	ND	25	ND
CHLORDANE	20.0	ND	247	ND
4,4-DDD	2.0	ND	25	ND
4,4-DDE	2.0	ND	25	ND
4,4-DDT	2.0	ND	25	ND
DIELDRIN	2.0	ND	25	ND
ENDOSULFAN I	2.0	ND	25	ND
ENDOSULFAN II	2.0	ND	25	ND
ENDOSULFAN SULFATE	2.0	ND	25	ND
ENDRIN	2.0	ND	25	ND
ENDRIN ALDEHYDE	2.0	ND	25	ND
HEPTACHLOR	2.0	ND	25	ND
HEPTACHLOR EPOXIDE	2.0	ND	25	ND
METHOXYCHLOR	20.0	ND	247	ND
TOXAPHENE	25.0	ND	309	ND
AROCHLOR-1016	10.0	ND	123	ND
AROCHLOR-1221	10.0	ND	123	ND
AROCHLOR-1232	10.0	ND	123	ND
AROCHLOR-1242	10.0	ND	123	ND
AROCHLOR-1248	10.0	ND	123	ND
AROCHLOR-1254	10.0	ND	123	ND
AROCHLOR-1260	10.0	ND	123	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-53

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	27	ND
ALPHA-BHC	2.0	ND	27	ND
BETA-BHC	2.0	ND	27	ND
GAMMA-BHC	2.0	ND	27	ND
DELTA-BHC	2.0	ND	27	ND
CHLORDANE	20.0	ND	270	ND
4,4-DDD	2.0	ND	27	ND
4,4-DDE	2.0	ND	27	ND
4,4-DDT	2.0	ND	27	ND
DELDRIN	2.0	ND	27	ND
ENDOSULFAN I	2.0	ND	27	ND
ENDOSULFAN II	2.0	ND	27	ND
ENDOSULFAN SULFATE	2.0	ND	27	ND
ENDRIN	2.0	ND	27	ND
ENDRIN ALDEHYDE	2.0	ND	27	ND
HEPTACHLOR	2.0	ND	27	ND
HEPTACHLOR EPOXIDE	2.0	ND	27	ND
METHOXYCHLOR	20.0	ND	270	ND
TOXAPHENE	25.0	ND	338	ND
AROCHLOR-1016	10.0	ND	135	ND
AROCHLOR-1221	10.0	ND	135	ND
AROCHLOR-1232	10.0	ND	135	ND
AROCHLOR-1242	10.0	ND	135	ND
AROCHLOR-1248	10.0	ND	135	ND
AROCHLOR-1254	10.0	ND	135	ND
AROCHLOR-1260	10.0	ND	135	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-54

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 4

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
CHLORDANE	20.0	ND	256	ND
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	256	ND
TOXAPHENE	25.0	ND	321	ND
AROCHLOR-1016	10.0	ND	128	ND
AROCHLOR-1221	10.0	ND	128	ND
AROCHLOR-1232	10.0	ND	128	ND
AROCHLOR-1242	10.0	ND	128	ND
AROCHLOR-1248	10.0	ND	128	ND
AROCHLOR-1254	10.0	ND	128	ND
AROCHLOR-1260	10.0	ND	128	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-55

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	25	ND
ALPHA-BHC	2.0	ND	25	ND
BETA-BHC	2.0	ND	25	ND
GAMMA-BHC	2.0	ND	25	ND
DELTA-BHC	2.0	ND	25	ND
CHLORDANE	20.0	ND	250	ND
4,4-DDD	2.0	ND	25	ND
4,4-DDE	2.0	ND	25	ND
4,4-DDT	2.0	ND	25	ND
DIELDRIN	2.0	ND	25	ND
ENDOSULFAN I	2.0	ND	25	ND
ENDOSULFAN II	2.0	ND	25	ND
ENDOSULFAN SULFATE	2.0	ND	25	ND
ENDRIN	2.0	ND	25	ND
ENDRIN ALDEHYDE	2.0	ND	25	ND
HEPTACHLOR	2.0	ND	25	ND
HEPTACHLOR EPOXIDE	2.0	ND	25	ND
METHOXYCHLOR	20.0	ND	250	ND
TOXAPHENE	25.0	ND	313	ND
AROCHLOR-1016	10.0	ND	125	ND
AROCHLOR-1221	10.0	ND	125	ND
AROCHLOR-1232	10.0	ND	125	ND
AROCHLOR-1242	10.0	ND	125	ND
AROCHLOR-1248	10.0	ND	125	ND
AROCHLOR-1254	10.0	ND	125	ND
AROCHLOR-1260	10.0	ND	125	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-56

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX:

CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
CHLORDANE	20.0	ND	263	ND
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	263	ND
TOXAPHENE	25.0	ND	329	ND
AROCHLOR-1016	10.0	ND	132	ND
AROCHLOR-1221	10.0	ND	132	ND
AROCHLOR-1232	10.0	ND	132	ND
AROCHLOR-1242	10.0	ND	132	ND
AROCHLOR-1248	10.0	ND	132	ND
AROCHLOR-1254	10.0	ND	132	ND
AROCHLOR-1260	10.0	ND	132	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-57

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	27	ND
ALPHA-BHC	2.0	ND	27	ND
BETA-BHC	2.0	ND	27	ND
GAMMA-BHC	2.0	ND	27	ND
DELTA-BHC	2.0	ND	27	ND
CHLORDANE	20.0	ND	267	ND
4,4-DDD	2.0	ND	27	ND
4,4-DDE	2.0	ND	27	ND
4,4-DDT	2.0	ND	27	ND
DIELDRIN	2.0	ND	27	ND
ENDOSULFAN I	2.0	ND	27	ND
ENDOSULFAN II	2.0	ND	27	ND
ENDOSULFAN SULFATE	2.0	ND	27	ND
ENDRIN	2.0	ND	27	ND
ENDRIN ALDEHYDE	2.0	ND	27	ND
HEPTACHLOR	2.0	ND	27	ND
HEPTACHLOR EPOXIDE	2.0	ND	27	ND
METHOXYCHLOR	20.0	ND	267	ND
TOXAPHENE	25.0	ND	333	ND
AROCHLOR-1016	10.0	ND	133	ND
AROCHLOR-1221	10.0	ND	133	ND
AROCHLOR-1232	10.0	ND	133	ND
AROCHLOR-1242	10.0	ND	133	ND
AROCHLOR-1248	10.0	ND	133	ND
AROCHLOR-1254	10.0	ND	133	ND
AROCHLOR-1260	10.0	ND	133	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-58

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	27	ND
ALPHA-BHC	2.0	ND	27	ND
BETA-BHC	2.0	ND	27	ND
GAMMA-BHC	2.0	ND	27	ND
DELTA-BHC	2.0	ND	27	ND
CHLORDANE	20.0	ND	274	ND
4,4-DDD	2.0	ND	27	ND
4,4-DDE	2.0	ND	27	ND
4,4-DDT	2.0	ND	27	ND
DIELDRIN	2.0	ND	27	ND
ENDOSULFAN I	2.0	ND	27	ND
ENDOSULFAN II	2.0	ND	27	ND
ENDOSULFAN SULFATE	2.0	ND	27	ND
ENDRIN	2.0	ND	27	ND
ENDRIN ALDEHYDE	2.0	ND	27	ND
HEPTACHLOR	2.0	ND	27	ND
HEPTACHLOR EPOXIDE	2.0	ND	27	ND
METHOXYCHLOR	20.0	ND	274	ND
TOXAPHENE	25.0	ND	342	ND
AROCHLOR-1016	10.0	ND	137	ND
AROCHLOR-1221	10.0	ND	137	ND
AROCHLOR-1232	10.0	ND	137	ND
AROCHLOR-1242	10.0	ND	137	ND
AROCHLOR-1248	10.0	ND	137	ND
AROCHLOR-1254	10.0	ND	137	ND
AROCHLOR-1260	10.0	ND	137	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-59

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
ALDRIN	2.0	ND	26	ND
ALPHA-BHC	2.0	ND	26	ND
BETA-BHC	2.0	ND	26	ND
GAMMA-BHC	2.0	ND	26	ND
DELTA-BHC	2.0	ND	26	ND
CHLORDANE	20.0	ND	260	ND
4,4-DDD	2.0	ND	26	ND
4,4-DDE	2.0	ND	26	ND
4,4-DDT	2.0	ND	26	ND
DIELDRIN	2.0	ND	26	ND
ENDOSULFAN I	2.0	ND	26	ND
ENDOSULFAN II	2.0	ND	26	ND
ENDOSULFAN SULFATE	2.0	ND	26	ND
ENDRIN	2.0	ND	26	ND
ENDRIN ALDEHYDE	2.0	ND	26	ND
HEPTACHLOR	2.0	ND	26	ND
HEPTACHLOR EPOXIDE	2.0	ND	26	ND
METHOXYCHLOR	20.0	ND	260	ND
TOXAPHENE	25.0	ND	325	ND
AROCHLOR-1016	10.0	ND	130	ND
AROCHLOR-1221	10.0	ND	130	ND
AROCHLOR-1232	10.0	ND	130	ND
AROCHLOR-1242	10.0	ND	130	ND
AROCHLOR-1248	10.0	ND	130	ND
AROCHLOR-1254	10.0	ND	130	ND
AROCHLOR-1260	10.0	ND	130	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080  
ORGANOCHLORINE PESTICIDES AND PCBs**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-60

DATE EXTRACTED: 01/29/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 02/02-03/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 7.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L.	RESULTS	D.L.	RESULTS
	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)	PPB (UG/KG)
ALDRIN	2.0	ND	25	ND
ALPHA-BHC	2.0	ND	25	ND
BETA-BHC	2.0	ND	25	ND
GAMMA-BHC	2.0	ND	25	ND
DELTA-BHC	2.0	ND	25	ND
CHLORDANE	20.0	ND	247	ND
4,4-DDD	2.0	ND	25	ND
4,4-DDE	2.0	ND	25	ND
4,4-DDT	2.0	ND	25	ND
DIELDRIN	2.0	ND	25	ND
ENDOSULFAN I	2.0	ND	25	ND
ENDOSULFAN II	2.0	ND	25	ND
ENDOSULFAN SULFATE	2.0	ND	25	ND
ENDRIN	2.0	ND	25	ND
ENDRIN ALDEHYDE	2.0	ND	25	ND
HEPTACHLOR	2.0	ND	25	ND
HEPTACHLOR EPOXIDE	2.0	ND	25	ND
METHOXYCHLOR	20.0	ND	247	ND
TOXAPHENE	25.0	ND	309	ND
AROCHLOR-1016	10.0	ND	123	ND
AROCHLOR-1221	10.0	ND	123	ND
AROCHLOR-1232	10.0	ND	123	ND
AROCHLOR-1242	10.0	ND	123	ND
AROCHLOR-1248	10.0	ND	123	ND
AROCHLOR-1254	10.0	ND	123	ND
AROCHLOR-1260	10.0	ND	123	ND

DL = DETECTION LIMIT

ND = NON DETECT AT OR ABOVE INDICATED REPORTING LIMIT

REPORTING LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**QA/QC REPORT**

METHOD: PAHS by EPA 8270-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/30/98						
QA/QC SAMPLE: PTAS 0139-98-55						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
ACENAPHTHENE	101	100	103	3	47-145	<30
ACENAPHTHYLENE	103	102	104	2	33-145	<30
ANTHRACENE	103	105	106	1	27-133	<30
BENZO(A)ANTHRACENE	110	114	116	2	33-143	<30
BENZO(A)PYRENE	121	125	128	2	17-163	<30
BENZO(B)FLUORANTHENE	123	136	139	2	24-159	<30
BENZO(GHI)PERYLENE	102	110	114	4	D-219	<30
BENZO(K)FLUORANTHENE	117	119	119	0	11-162	<30
CHRYSENE	56	56	58	4	17-168	<30
DIBENZO(A,H)ANTHRACENE	61	66	70	6	D-227	<30
FLUORANTHENE	115	117	120	3	26-137	<30
FLUORENE	112	115	118	3	59-121	<30
INDENO(1,2,3-CD)PYRENE	101	111	114	3	D-171	<30
NAPHTHALENE	97	87	89	2	21-133	<30
PHENANTHRENE	107	107	110	3	54-120	<30
PYRENE	96	99	106	7	40-127	<30

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE



**QA/QC REPORT**

					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/28-02/02/98						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
CADMIUM	82	118	112	5	75-125	< 20
CADMIUM	85	82	76	8	75-125	< 20
CADMIUM	90	84	80	5	75-125	< 20
COPPER	76	99	95	4	75-125	< 20
COPPER	84	85	85	0	75-125	< 20
COPPER	85	95	93	2	75-125	< 20
LEAD	77	74**	90	20	75-125	< 20
LEAD	115	77	79	3	75-125	< 20
LEAD	110	101	74**	31**	75-125	< 20
NICKEL	73*	88	88	0	75-125	< 20
NICKEL	80	80	81	1	75-125	< 20
NICKEL	80	89	89	0	75-125	< 20
ZINC	73*	93	72	1	75-125	< 20
ZINC	81	84	85	1	75-125	< 20
ZINC	80	92	92	0	75-125	< 20
MERCURY	109	114	110	4	75-125	< 20
MERCURY	108	121	118	3	75-125	< 20
MERCURY	107	114	111	3	75-125	< 20
SELENIUM	99	107	114	6	75-125	< 20

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE

\* NOTE: A DUPLICATE LCS SAMPLE WAS ANALYZED WITH THE SAMPLE BATCH AND THE RESULTING RECOVERY AND RPD MET OR EXCEEDED ACCEPTANCE CRITERIA.

\*\* NOTE: POOR RECOVERY ATTRIBUTABLE TO NONHOMOGENEITY OF SAMPLE SPIKED. A DUPLICATE LCS WAS ANALYZED WITH THE SAMPLE BATCH AND THE RESULTING RECOVERY AND RPD MET OR EXCEEDED ACCEPTANCE CRITERIA.



QA/QC REPORT						
METHOD: EPA 8270-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/30/98						
QA/QC SAMPLE: PTAS 0139-98-55						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
BIS(2-ETHYLHEXYL)PHTHALATE	79	82	88	7	8-158	<30
BUTYL BENZYLPHTHALATE	35	41	51	22	D-152	<30
DI-N-BUTYLPHTHALATE	98	95	107	12	1-118	<30
DI-N-OCTYLPHTHALATE	85	87	91	4	4-146	<30
DIETHYLPHTHALATE	84	86	93	8	D-114	<30
DIMETHYLPHTHALATE	82	84	90	7	D-112	<30

QA/QC REPORT						
METHOD: EPA 8270-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/29/98						
QA/QC SAMPLE: PTAS 0139-98-43						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
BIS(2-ETHYLHEXYL)PHTHALATE	87	81	83	2	8-158	<30
BUTYL BENZYLPHTHALATE	89	89	90	1	D-152	<30
DI-N-BUTYLPHTHALATE	123	112	112	0	1-118	<30
DI-N-OCTYLPHTHALATE	67	74	77	4	4-146	<30
DIETHYLPHTHALATE	99	101	100	1	D-114	<30
DIMETHYLPHTHALATE	95	95	94	1	D-112	<30

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE

D = DETECTION LIMIT



QA/QC REPORT						
METHOD: EPA 8080-TISSUE					ACCEPTABLE LCS, MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/28/98						
QA/QC SAMPLE: PTAS 0139-98-49						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
GAMMA-BHC	117	69	72	4	32-127	<30
HEPTACHLOR	107	84	88	5	34-111	<30
ALDRIN	99	61	63	3	42-122	<30
DIELDRIN	111	87	82	6	36-146	<30
ENDRIN	74	117	129	10	30-147	<30
4,4-DDT	75	57	50	13	25-160	<30

QA/QC REPORT						
METHOD: EPA 8080-TISSUE					ACCEPTABLE LCS, MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/30/98						
QA/QC SAMPLE: PTAS 0139-98-41						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
GAMMA-BHC	70	54	52	4	32-127	<30
HEPTACHLOR	69	57	59	3	34-111	<30
ALDRIN	64	67	70	4	42-122	<30
DIELDRIN	72	58	59	2	36-146	<30
ENDRIN	92	74	74	0	30-147	<30
4,4-DDT	84	43	47	9	25-160	<30

QA/QC REPORT						
METHOD: EPA 8080-TISSUE					ACCEPTABLE LCS, MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 02/02/98						
QA/QC SAMPLE: PTAS 0139-98-52						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
GAMMA-BHC	94	71	93	27	32-127	<30
HEPTACHLOR	90	70	90	25	34-111	<30
ALDRIN	79	58	76	27	42-122	<30
DIELDRIN	99	76	98	25	36-146	<30
ENDRIN	93	73	94	25	30-147	<30
4,4-DDT	86	73	88	19	25-160	<30

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE



**QA/QC REPORT**

METHOD: EPA 8270-PHENOLS-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/29/98						
QA/QC SAMPLE: PTAS 0139-98-43						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
4,6-DINITRO-2-METHYLPHENOL	92	84	93	10	D-181	<30
4-CHLORO-3-METHYLPHENOL	92	95	96	1	22-147	<30
2-CHLOROPHENOL	90	92	89	3	23-134	<30
2,4-DICHLOROPHENOL	88	80	90	0	39-135	<30
2,4-DIMETHYLPHENOL	85	87	85	2	32-119	<30
2,4-DINITROPHENOL	94	107	124	14	D-191	<30
2-NITROPHENOL	85	85	81	5	29-182	<30
4-NITROPHENOL	71	100	100	0	D-132	<30
PENTACHLOROPHENOL	74	99	103	4	14-176	<30
PHENOL	86	87	85	3	5-112	<30
2,4,6-TRICHLOROPHENOL	90	93	92	1	37-144	<30

**QA/QC REPORT**

METHOD: EPA 8270-PHENOLS-TISSUE					ACCEPTABLE LCS,MS/MSD CRITERIA	ACCEPTABLE RPD CRITERIA
DATE ANALYZED: 01/30/98						
QA/QC SAMPLE: PTAS 0139-98-55						
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
4,6-DINITRO-2-METHYLPHENOL	65	70	79	12	D-181	<30
4-CHLORO-3-METHYLPHENOL	88	81	89	9	22-147	<30
2-CHLOROPHENOL	87	73	77	5	23-134	<30
2,4-DICHLOROPHENOL	85	79	84	6	39-135	<30
2,4-DIMETHYLPHENOL	83	75	80	6	32-119	<30
2,4-DINITROPHENOL	42	67	81	19	D-191	<30
2-NITROPHENOL	78	66	71	7	29-182	<30
4-NITROPHENOL	84	102	119	5	D-132	<30
PENTACHLOROPHENOL	76	84	88	5	14-176	<30
PHENOL	81	71	76	7	5-112	<30
2,4,6-TRICHLOROPHENOL	90	84	90	7	37-144	<30

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY  
 LCSD % R = LABORATORY CONTROL SAMPLE DUPLICATE PERCENT RECOVERY  
 MS % R = MATRIX SPIKE PERCENT RECOVERY  
 MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY  
 RPD = RELATIVE PERCENT DIFFERENCE  
 D = DETECTION LIMIT







February 11, 1998

MEC Analytical Systems, Inc.  
Attn: Paul Krause/Lisa Kay  
2433 Impala Drive  
Carlsbad, California 92008

Project Name/No.: Marina del Rey  
Laboratory Log No.: 0139-98 (Addition)  
Date Received: 01/21/98  
Sample Matrix: Sixty tissue samples  
PO No.: None

Please find the following enclosures for the above referenced project identified:

- 1) Analytical Report
- 2) QA/QC Report
- 3) Chain of Custody Form

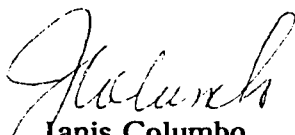
.....*Certificate of Analysis*.....

Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. Date of extraction, date of analysis, detection limits and dilution factor are reported for each compound analyzed.

A minimum of 90% of the data for each analytical method is associated with acceptable quality control criteria. Determinations of completion were made by assessing the following QA/QC functions, as applicable to methodology:

- Surrogate Percent Recovery, Laboratory Control Sample (LCS) percent recoveries for all analyses,
- Matrix Spike Recovery/Matrix Spike Duplicate Recovery (MSR & MSDR) and Relative Percent Difference (RPD from MSR & MSDR).

*I certify that this data report is in compliance both technically and for completeness. Release of the data contained in this hardcopy data report has been authorized by the following signature.*

  
Janis Columbo  
Vice President/Laboratory Director

## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 02/02/98

SAMPLE ID: N/A

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: SEDIMENT

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	1.0	ND
TRIBUTYL TIN	1.0	ND	1.0	ND
DIBUTYL TIN	1.0	ND	1.0	ND
MONOBUTYL TIN	1.0	ND	1.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-15

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1.

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.2	ND
TRIBUTYLTIN	1.0	71.6	5.2	371
DIBUTYLTIN	1.0	2.2	5.2	11.4
MONOBUTYLTIN	1.0	ND	5.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-16

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.3	ND
TRIBUTYL TIN	1.0	60.0	5.3	321
DIBUTYL TIN	1.0	1.8	5.3	9.6
MONOBUTYL TIN	1.0	ND	5.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 02/02/98

SAMPLE ID: N/A

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	1.0	ND
TRIBUTYL TIN	1.0	ND	1.0	ND
DIBUTYL TIN	1.0	ND	1.0	ND
MONOBUTYL TIN	1.0	ND	1.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-17

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 2

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.2	ND
TRIBUTYL TIN	1.0	7.9	5.2	40.9
DIBUTYL TIN	1.0	1.0	5.2	5.2
MONOBUTYL TIN	1.0	ND	5.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-18

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	4.8	ND
TRIBUTYLTIN	1.0	11.1	4.8	53.1
DIBUTYLTIN	1.0	ND	4.8	ND
MONOBUTYLTIN	1.0	ND	4.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-18 (DUPLICATE)

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 3 (DUPLICATE)

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	4.8	ND
TRIBUTYL TIN	1.0	10.9	4.8	52.1
DIBUTYL TIN	1.0	ND	4.8	ND
MONOBUTYL TIN	1.0	ND	4.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-19

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 4

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.1	ND
<b>TRIBUTYL TIN</b>	<b>1.0</b>	<b>16.1</b>	<b>5.1</b>	<b>82.1</b>
DIBUTYL TIN	1.0	ND	5.1	ND
MONOBUTYL TIN	1.0	ND	5.1	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-20

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	4.8	ND
TRIBUTYLTIN	1.0	1.1	4.8	5.3
DIBUTYLTIN	1.0	ND	4.8	ND
MONOBUTYLTIN	1.0	ND	4.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-21

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	4.7	ND
TRIBUTYLTIN	1.0	2.6	4.7	12.3
DIBUTYLTIN	1.0	ND	4.7	ND
MONOBUTYLTIN	1.0	ND	4.7	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-22

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	4.7	ND
TRIBUTYL TIN	1.0	ND	4.7	ND
DIBUTYL TIN	1.0	ND	4.7	ND
MONOBUTYL TIN	1.0	ND	4.7	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-23

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	4.7	ND
TRIBUTYL TIN	1.0	2.1	4.7	9.8
DIBUTYL TIN	1.0	ND	4.7	ND
MONOBUTYL TIN	1.0	ND	4.7	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-24

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 4

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	4.9	ND
TRIBUTYLTIN	1.0	3.8	4.9	18.7
DIBUTYLTIN	1.0	ND	4.9	ND
MONOBUTYLTIN	1.0	ND	4.9	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-25

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.4	ND
TRIBUTYL TIN	1.0	2.0	5.4	10.8
DIBUTYL TIN	1.0	ND	5.4	ND
MONOBUTYL TIN	1.0	ND	5.4	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-26

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	4.8	ND
TRIBUTYLTIN	1.0	2.3	4.8	11.0
DIBUTYLTIN	1.0	ND	4.8	ND
MONOBUTYLTIN	1.0	ND	4.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-27

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 2

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.5	ND
TRIBUTYL TIN	1.0	3.6	5.5	19.7
DIBUTYL TIN	1.0	ND	5.5	ND
MONOBUTYL TIN	1.0	ND	5.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-28

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.0	ND
TRIBUTYLTIN	1.0	ND	5.0	ND
DIBUTYLTIN	1.0	ND	5.0	ND
MONOBUTYLTIN	1.0	ND	5.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-29

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.1	ND
TRIBUTYLTIN	1.0	10.5	5.1	53.6
DIBUTYLTIN	1.0	ND	5.1	ND
MONOBUTYLTIN	1.0	ND	5.1	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-30

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.2	ND
TRIBUTYL TIN	1.0	2.5	5.2	13.1
DIBUTYL TIN	1.0	ND	5.2	ND
MONOBUTYL TIN	1.0	ND	5.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-31

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	16.1	ND
TRIBUTYL TIN	1.0	8.4	16.1	135
DIBUTYL TIN	1.0	ND	16.1	ND
MONOBUTYL TIN	1.0	ND	16.1	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-1

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 1

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.5	ND
TRIBUTYL TIN	1.0	3.2	5.5	17.6
DIBUTYL TIN	1.0	ND	5.5	ND
MONOBUTYL TIN	1.0	ND	5.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-2

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.4	ND
TRIBUTYLTIN	1.0	ND	5.4	ND
DIBUTYLTIN	1.0	ND	5.4	ND
MONOBUTYLTIN	1.0	ND	5.4	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-3

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.6	ND
TRIBUTYLTIN	1.0	1.6	5.6	8.9
DIBUTYLTIN	1.0	ND	5.6	ND
MONOBUTYLTIN	1.0	ND	5.6	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-3 (DUPLICATE)

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 3 (DUPLICATE)

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.6	ND
<b>TRIBUTYLTIN</b>	<b>1.0</b>	<b>1.8</b>	<b>5.6</b>	<b>10.0</b>
DIBUTYLTIN	1.0	ND	5.6	ND
MONOBUTYLTIN	1.0	ND	5.6	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-4

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.1	ND
TRIBUTYLTIN	1.0	1.5	5.1	7.9
DIBUTYLTIN	1.0	ND	5.1	ND
MONOBUTYLTIN	1.0	ND	5.1	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-5

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.4	ND
TRIBUTYLTIN	1.0	1.9	5.4	10.2
DIBUTYLTIN	1.0	ND	5.4	ND
MONOBUTYLTIN	1.0	ND	5.4	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-6

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.3	ND
TRIBUTYLTIN	1.0	1.4	5.3	7.4
DIBUTYLTIN	1.0	ND	5.3	ND
MONOBUTYLTIN	1.0	ND	5.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-7

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	5.2	ND
TRIBUTYL TIN	1.0	1.6	5.2	8.3
DIBUTYL TIN	1.0	ND	5.2	ND
MONOBUTYL TIN	1.0	ND	5.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-8

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.0	ND
TRIBUTYLTIN	1.0	2.7	5.0	13.4
DIBUTYLTIN	1.0	ND	5.0	ND
MONOBUTYLTIN	1.0	ND	5.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-9

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 2\*

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 1.2 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	2.0	ND	10.1	ND
TRIBUTYLTIN	2.0	2.25	10.1	11.4
DIBUTYLTIN	2.0	ND	10.1	ND
MONOBUTYLTIN	2.0	ND	10.1	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: INCREASED DILUTION FACTOR DUE TO LIMITED SAMPLE VOLUME PROVIDED.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-10

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1.5\*

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 1.6 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.5	ND	7.6	ND
TRIBUTYLTIN	1.5	2.0	7.6	10.2
DIBUTYLTIN	1.5	ND	7.6	ND
MONOBUTYLTIN	1.5	ND	7.6	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

\* NOTE: INCREASED DILUTION FACTOR DUE TO LIMITED SAMPLE VOLUME PROVIDED.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-11

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.2	ND
TRIBUTYLTIN	1.0	2.7	5.2	13.9
DIBUTYLTIN	1.0	ND	5.2	ND
MONOBUTYLTIN	1.0	ND	5.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 02/02/98  
 DATE ANALYZED: 02/03/98  
 MATRIX: WORM TISSUE  
 SAMPLE VOL./WT.: 2.5 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-12  
 SAMPLE ID: AREA 4 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.3	ND
TRIBUTYLTIN	1.0	2.3	5.3	12.3
DIBUTYLTIN	1.0	ND	5.3	ND
MONOBUTYLTIN	1.0	ND	5.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-13

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.3	ND
<b>TRIBUTYLTIN</b>	<b>1.0</b>	<b>3.1</b>	<b>5.3</b>	<b>16.5</b>
DIBUTYLTIN	1.0	ND	5.3	ND
MONOBUTYLTIN	1.0	ND	5.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-14

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 02/03/98

DILUTION FACTOR: 1

MATRIX: WORM TISSUE

SAMPLE VOL./WT.: 2.5 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	5.2	ND
TRIBUTYLTIN	1.0	2.2	5.2	11.4
DIBUTYLTIN	1.0	ND	5.2	ND
MONOBUTYLTIN	1.0	ND	5.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-32

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 2

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	13.2	ND
TRIBUTYL TIN	1.0	1.4	13.2	18.4
DIBUTYL TIN	1.0	ND	13.2	ND
MONOBUTYL TIN	1.0	ND	13.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-33

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	11.9	ND
TRIBUTYLTIN	1.0	2.1	11.9	25.0
DIBUTYLTIN	1.0	ND	11.9	ND
MONOBUTYLTIN	1.0	ND	11.9	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-34

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 4

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	11.8	ND
TRIBUTYLTIN	1.0	1.0	11.8	11.8
DIBUTYLTIN	1.0	ND	11.8	ND
MONOBUTYLTIN	1.0	ND	11.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-35

DATE EXTRACTED: 02/02/98

SAMPLE ID: REFERENCE REP 5

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	10.2	ND
TRIBUTYLTIN	1.0	1.6	10.2	16.3
DIBUTYLTIN	1.0	ND	10.2	ND
MONOBUTYLTIN	1.0	ND	10.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-36

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 1

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	11.2	ND
TRIBUTYLTIN	1.0	1.4	11.2	15.7
DIBUTYLTIN	1.0	ND	11.2	ND
MONOBUTYLTIN	1.0	ND	11.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-37

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 2

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	11.8	ND
TRIBUTYLTIN	1.0	1.6	11.8	18.8
DIBUTYLTIN	1.0	ND	11.8	ND
MONOBUTYLTIN	1.0	ND	11.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-38

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	11.4	ND
<b>TRIBUTYL TIN</b>	<b>1.0</b>	<b>2.5</b>	<b>11.4</b>	<b>28.4</b>
DIBUTYL TIN	1.0	ND	11.4	ND
MONOBUTYL TIN	1.0	ND	11.4	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-39

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 4

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	11.2	ND
TRIBUTYL TIN	1.0	1.2	11.2	13.5
DIBUTYL TIN	1.0	ND	11.2	ND
MONOBUTYL TIN	1.0	ND	11.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-40

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 3 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	10.5	ND
TRIBUTYLTIN	1.0	7.9	10.5	83.2
DIBUTYLTIN	1.0	ND	10.5	ND
MONOBUTYLTIN	1.0	ND	10.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-41

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	11.5	ND
TRIBUTYLTIN	1.0	ND	11.5	ND
DIBUTYLTIN	1.0	ND	11.5	ND
MONOBUTYLTIN	1.0	ND	11.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 02/02/98  
 DATE ANALYZED: 02/04/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 5.0 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-42  
 SAMPLE ID: AREA 4 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.2	ND
TRIBUTYLTIN	1.0	ND	13.2	ND
DIBUTYLTIN	1.0	ND	13.2	ND
MONOBUTYLTIN	1.0	ND	13.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-43

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	12.0	ND
TRIBUTYL TIN	1.0	ND	12.0	ND
DIBUTYL TIN	1.0	ND	12.0	ND
MONOBUTYL TIN	1.0	ND	12.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-43 (DUPLICATE)

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 3 (DUPLICATE)

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	12.0	ND
TRIBUTYL TIN	1.0	ND	12.0	ND
DIBUTYL TIN	1.0	ND	12.0	ND
MONOBUTYL TIN	1.0	ND	12.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-44

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 4

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	12.3	ND
TRIBUTYL TIN	1.0	ND	12.3	ND
DIBUTYL TIN	1.0	ND	12.3	ND
MONOBUTYL TIN	1.0	ND	12.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-45

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 4 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	13.0	ND
TRIBUTYL TIN	1.0	ND	13.0	ND
DIBUTYL TIN	1.0	ND	13.0	ND
MONOBUTYL TIN	1.0	ND	13.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-46

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	13.5	ND
TRIBUTYL TIN	1.0	ND	13.5	ND
DIBUTYL TIN	1.0	ND	13.5	ND
MONOBUTYL TIN	1.0	ND	13.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 02/02/98  
 DATE ANALYZED: 02/04/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 5.0 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-47  
 SAMPLE ID: AREA 5 REP 2  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	11.9	ND
TRIBUTYLTIN	1.0	ND	11.9	ND
DIBUTYLTIN	1.0	ND	11.9	ND
MONOBUTYLTIN	1.0	ND	11.9	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-48

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	12.3	ND
TRIBUTYLTIN	1.0	ND	12.3	ND
DIBUTYLTIN	1.0	ND	12.3	ND
MONOBUTYLTIN	1.0	ND	12.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98  
 DATE RECEIVED: 01/21/98  
 DATE EXTRACTED: 02/02/98  
 DATE ANALYZED: 02/04/98  
 MATRIX: CLAM TISSUE  
 SAMPLE VOL./WT.: 5.0 G

PROJECT NAME/No.: MARINA DEL REY  
 PTAS LOG #: 0139-98-49  
 SAMPLE ID: AREA 5 REP 4  
 DILUTION FACTOR: 1

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	13.5	ND
TRIBUTYL TIN	1.0	ND	13.5	ND
DIBUTYL TIN	1.0	ND	13.5	ND
MONOBUTYL TIN	1.0	ND	13.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



# ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-50

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 5 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.0	ND
TRIBUTYLTIN	1.0	ND	13.0	ND
DIBUTYLTIN	1.0	ND	13.0	ND
MONOBUTYLTIN	1.0	ND	13.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: N/A

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: N/A

PTAS LOG #: METHOD BLANK

DATE EXTRACTED: 02/02/98

SAMPLE ID: N/A

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX:

CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	1.0	ND
TRIBUTYL TIN	1.0	ND	1.0	ND
DIBUTYL TIN	1.0	ND	1.0	ND
MONOBUTYL TIN	1.0	ND	1.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-51

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	14.5	ND
TRIBUTYL TIN	1.0	ND	14.5	ND
DIBUTYL TIN	1.0	ND	14.5	ND
MONOBUTYL TIN	1.0	ND	14.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-52

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 2

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	12.3	ND
TRIBUTYLTIN	1.0	ND	12.3	ND
DIBUTYLTIN	1.0	ND	12.3	ND
MONOBUTYLTIN	1.0	ND	12.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-53

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 3

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.5	ND
TRIBUTYLTIN	1.0	ND	13.5	ND
DIBUTYLTIN	1.0	ND	13.5	ND
MONOBUTYLTIN	1.0	ND	13.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-54

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 4

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	12.8	ND
TRIBUTYL TIN	1.0	ND	12.8	ND
DIBUTYL TIN	1.0	ND	12.8	ND
MONOBUTYL TIN	1.0	ND	12.8	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-55

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 6 REP 5

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYL TIN	1.0	ND	12.5	ND
TRIBUTYL TIN	1.0	ND	12.5	ND
DIBUTYL TIN	1.0	ND	12.5	ND
MONOBUTYL TIN	1.0	ND	12.5	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-56

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 1

DATE ANALYZED: 02/04/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.2	ND
TRIBUTYLTIN	1.0	ND	13.2	ND
DIBUTYLTIN	1.0	ND	13.2	ND
MONOBUTYLTIN	1.0	ND	13.2	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

PROJECT NAME/No.: MARINA DEL REY

PTAS LOG #: 0139-98-57

SAMPLE ID: AREA 9 REP 2

DILUTION FACTOR: 1

DATE SAMPLED: 01/16/98

DATE RECEIVED: 01/21/98

DATE EXTRACTED: 02/02/98

DATE ANALYZED: 02/04/98

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.3	ND
TRIBUTYLTIN	1.0	ND	13.3	ND
DIBUTYLTIN	1.0	ND	13.3	ND
MONOBUTYLTIN	1.0	ND	13.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.





**ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD**

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-58

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 3

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.7	ND
TRIBUTYLTIN	1.0	ND	13.7	ND
DIBUTYLTIN	1.0	ND	13.7	ND
MONOBUTYLTIN	1.0	ND	13.7	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-59

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 4

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	13.0	ND
TRIBUTYLTIN	1.0	ND	13.0	ND
DIBUTYLTIN	1.0	ND	13.0	ND
MONOBUTYLTIN	1.0	ND	13.0	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



## ANALYSIS RESULTS - ORGANOTIN SPECIES by GC-FPD

CLIENT: MEC ANALYTICAL SYSTEMS, INC.

DATE SAMPLED: 01/16/98

PROJECT NAME/No.: MARINA DEL REY

DATE RECEIVED: 01/21/98

PTAS LOG #: 0139-98-60

DATE EXTRACTED: 02/02/98

SAMPLE ID: AREA 9 REP 5

DATE ANALYZED: 02/05/98

DILUTION FACTOR: 1

MATRIX: CLAM TISSUE

SAMPLE VOL./WT.: 5.0 G

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
TETRABUTYLTIN	1.0	ND	12.3	ND
TRIBUTYLTIN	1.0	ND	12.3	ND
DIBUTYLTIN	1.0	ND	12.3	ND
MONOBUTYLTIN	1.0	ND	12.3	ND

DL = DETECTION LIMIT

DF = DILUTION FACTOR

ND = NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**QA/QC REPORT**

<b>METHOD: ORGANOTIN SPECIES BY GC-FPD-SEDIMENT</b>					<b>ACCEPTABLE LCS,MS/MSD CRITERIA</b>	<b>ACCEPTABLE RPD CRITERIA</b>
<b>DATE ANALYZED: 02/03/98</b>						
<b>QA/QC SAMPLE: PTAS 0139-98-5</b>						
<b>SPIKED ANALYTE</b>	<b>LCS % R</b>	<b>MS % R</b>	<b>MSD % R</b>	<b>RPD</b>	<b>%</b>	<b>%</b>
TETRABUTYL TIN	100	40*	25**	46**	48-142	< 30
TRIBUTYL TIN	85	39	28**	33**	35-142	< 30
DIBUTYL TIN	102	40	29	32**	D-161	< 30
MONOBUTYL TIN	124*	16	13	21	D-75	< 30*

**QA/QC REPORT**

<b>METHOD: ORGANOTIN SPECIES BY GC-FPD-SEDIMENT</b>					<b>ACCEPTABLE LCS,MS/MSD CRITERIA</b>	<b>ACCEPTABLE RPD CRITERIA</b>
<b>DATE ANALYZED: 02/04/98</b>						
<b>QA/QC SAMPLE: PTAS 0139-98-20</b>						
<b>SPIKED ANALYTE</b>	<b>LCS % R</b>	<b>MS % R</b>	<b>MSD % R</b>	<b>RPD</b>	<b>%</b>	<b>%</b>
TETRABUTYL TIN	107	43**	39**	10	48-142	< 30
TRIBUTYL TIN	88	67	73	10	35-142	< 30
DIBUTYL TIN	98	47	40	16	D-161	< 30
MONOBUTYL TIN	137*	14	18	25	D-75	< 30*

**QA/QC REPORT**

<b>METHOD: ORGANOTIN SPECIES BY GC-FPD-SEDIMENT</b>					<b>ACCEPTABLE LCS,MS/MSD CRITERIA</b>	<b>ACCEPTABLE RPD CRITERIA</b>
<b>DATE ANALYZED: 02/04/98</b>						
<b>QA/QC SAMPLE: PTAS 0139-98-43</b>						
<b>SPIKED ANALYTE</b>	<b>LCS % R</b>	<b>MS % R</b>	<b>MSD % R</b>	<b>RPD</b>	<b>%</b>	<b>%</b>
TETRABUTYL TIN	108	92	71	26	48-142	< 30
TRIBUTYL TIN	92	90	74	20	35-142	< 30
DIBUTYL TIN	99	72	62	15	D-161	< 30
MONOBUTYL TIN	136*	24	17	34**	D-75	< 30*

LCS % R = LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R = MATRIX SPIKE PERCENT RECOVERY

MSD % R = MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD = RELATIVE PERCENT DIFFERENCE

D = DETECTION LIMIT

\* NOTE: RECOVERY FOR THIS ANALYTE IS NOT TYPICAL.

\*\* NOTE: POOR RECOVERY ATTRIBUTABLE TO SAMPLE MATRIX EFFECTS.



**APPENDIX H**

**Chain of Custody Forms**





# SAMPLE RECEIVING INFORMATION SHEET

MEC Analytical Systems, Inc.  
3150 Paradise Drive, Bldg. 36  
Tiburon, CA 94920

Client Name: <span style="font-size: 1.5em;">Marina Del Rey</span>	Requested Analyses: <span style="font-size: 1.5em;">Electricals - Top Smelt re run</span>
Project #:	Analyst Initials: <span style="font-size: 1.2em;">MSB</span> Analysis Date: <span style="font-size: 1.2em;">12/29/77</span>

MEC Sample ID	Client Sample ID	Collection Date	Container Type	Sample Quantity	Temperature (°C)	pH (pH units)	Dissolved Oxygen (% O <sub>2</sub> ) (mg/L)	Safinity (ppt)	Total Ammonia (mg/L)	Total Chlorine (mg/L)
	site 3	12/28/77	Plastic	8L	19.7	7.75	<del>4.7</del> 3.4	32	9.68	—
	4				20.1	7.78	<del>6.3</del> 2.5	32	4.85	—
	5				20.2	7.84	<del>6.1</del> 2.3	32	15.2	—
	6				20.1	7.83	<del>7.3</del> 2.7	32	7.26	—
	Site 9	↓	↓	↓	20.1	7.99	<del>7.4</del> 3.2	32	3.85	—

16.91

Storage Requirements: 4°C/Dark      Room Temperature      (Circle one)

Storage Location: Cold Room      HazMat/Locked Storage      (Circle one)



**SAMPLE RECEIVING INFORMATION SHEET**

MEC Analytical Systems, Inc.  
3150 Paradise Drive, Bldg. 36  
Tiburon, CA 94920

<b>Client Name:</b> Marina del Rey	<b>Requested Analyses:</b> Saltrate
<b>Project #:</b> 0719-009	<b>Analyst Initials:</b> vmsb
	<b>Analysis Date:</b> 12/18/97

MEC Sample ID	Client Sample ID	Collection Date	Container Type	Sample Quantity	Temp- rature (°C)	pH (pH units)	Dissolved Oxygen (mg/L)	Salinity (ppt)	Total Ammonia (mg/L)	Total -Chlorine (mg/L)
	Area 3	12/18/97	Plastic	18L	19.2	7.41	2.7 6.7	31	11.7	0.210
	4				19.0	7.62	2.2 6.3	31	5.67	0.196
	5				19.0	7.76	2.8 6.2	31	16.2	0.156
	6				19.2	7.92	2.5 6.5	31	6.12	0.181
	Area 9	12/18/97	↓	18L	19.0	7.98	2.8 6.1	31	4.78	0.138

Sa fide

Storage Requirements: 4°C/Dark      Frozen      Room Temperature      (Circle one)

Storage Location: Cold Room      Freezer      HazMat/Locked Storage      (Circle one)

FedEx USA Airbill

FedEx Tracking Number

800769587775

0200

Form 1-D No

Recipient's Copy

From 12-17-11

Sender's Phone (562) 431-2084

Company DR DONALD REISH

Address 3092 BLUME DR

Dept/Floor/Suite/Room

City LOS ALAMITOS State CA ZIP 90720

Four Internal Billing Reference Information

To Recipient's Name Mary Ann Irwin Phone (760) 131-2001

Company

Address

City

State CA ZIP

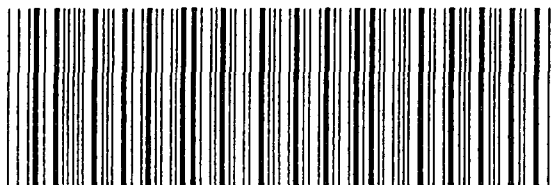
For HOLD at FedEx Location check here

Hold Weekday (Not available with FedEx First Overnight)

Hold Saturday (Not available at all locations. Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here

Extra Charge (Not available at all locations. Available for FedEx Priority Overnight and FedEx 2Day only)



8 0 0 7 6 9 5 8 7 7 7 5

4a Express Package Service Packages under 150 lbs. Delivery commitment may be later in some areas. FedEx Priority Overnight (Next business morning), FedEx Standard Overnight (Next business afternoon), FedEx 2Day\* (Second business day), FedEx Express Saver\* (Third business day)

4b Express Freight Service Packages over 150 lbs. Delivery commitment may be later in some areas. FedEx Overnight Freight (Next business day), FedEx 2Day Freight (Second business day), FedEx Express Saver Freight (Up to 3 business days)

5 Packaging FedEx Letter, FedEx Pak, FedEx Box, FedEx Tube, Other Pkg. (Declared value limit \$500)

6 Special Handling Does this shipment contain dangerous goods? Dry Ice, Cargo Aircraft Only

7 Payment Bill to Sender, Recipient, Third Party, Credit Card, Cash/Check. Obtain Recipient FedEx Account No.



Total Packages, Total Weight, Total Declared Value \$ .00, Total Charges \$ .00. Credit Card Auto.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims

Questions? Call 1-800-Go-FedEx (800)463-3339

287

WCSL 0797 Rev. Date 5/97 Part #150364 ©1994-97 FedEx PRINTED IN U.S.A.

003035920 0

Company Name and Address  
**MEC ANALYTICAL SYSTEMS**  
 6060 CORTE DEL CEDRO  
 CARLSBAD CA 92009

UPS Account Number  
**152-22W**

Shipment Date  
 MAY 12 15 47

UPS Shipping Record No.  
 001 4795012 24 5

Shipping Record

UPS  
 Worldwide  
 Overnight Services

BAR CODE  
 APPLY BAR-CO

1 Company Name and Address  
 MEC ANALYTICAL SYSTEMS  
 6060 CORTE DEL CEDRO  
 CARLSBAD CA 92009

2 Receiver's Name and Address  
 J. Walker  
 University Expt.  
 Halls Ferry Rd  
 Carlsbad  
 CA 92008

3 Service Level  
 Next Day Air / WW Express  
 2nd Day Air / WW Expedited  
 3 Day Select  
 GroundTrac / Standard to Canada  
 Ground (DeliveryTrac)  
 Other

4 Package Information  
 Weight: 99  
 LTR  
 Oversize  
 Dimensional Weight  
 Declared Value  
 C.O.D. Amount

5 Additional Services  
 Delivery Confirmation Signature Required  
 Saturday Delivery  
 Additional Handling Hazardous Material  
 Call Tag  
 Other

6 Affix Tracking Label Below if Applicable.  
 (See Bar Code Labeling Instructions)

Tracking Number: N561 853 011 2 37

Collect Billing / 3rd Party UPS Account No.

Reference Number (Optional)

Other Information

1 Company Name and Address  
 MEC ANALYTICAL SYSTEMS  
 6060 CORTE DEL CEDRO  
 CARLSBAD CA 92009

2 Receiver's Name and Address  
 J. Walker  
 University Expt.  
 Halls Ferry Rd  
 Carlsbad  
 CA 92008

3 Service Level  
 Next Day Air / WW Express  
 2nd Day Air / WW Expedited  
 3 Day Select  
 GroundTrac / Standard to Canada  
 Ground (DeliveryTrac)  
 Other

4 Package Information  
 Weight: 43  
 LTR  
 Oversize  
 Dimensional Weight  
 Declared Value  
 C.O.D. Amount

5 Additional Services  
 Delivery Confirmation Signature Required  
 Saturday Delivery  
 Additional Handling Hazardous Material  
 Call Tag  
 Other

6 Affix Tracking Label Below if Applicable.  
 (See Bar Code Labeling Instructions)

Tracking Number: N561 853 010 3 6

Collect Billing / 3rd Party UPS Account No.

Reference Number (Optional)

Other Information

1 Company Name and Address  
 MEC ANALYTICAL SYSTEMS  
 6060 CORTE DEL CEDRO  
 CARLSBAD CA 92009

2 Receiver's Name and Address  
 J. Walker  
 University Expt.  
 Halls Ferry Rd  
 Carlsbad  
 CA 92008

3 Service Level  
 Next Day Air / WW Express  
 2nd Day Air / WW Expedited  
 3 Day Select  
 GroundTrac / Standard to Canada  
 Ground (DeliveryTrac)  
 Other

4 Package Information  
 Weight: 120  
 LTR  
 Oversize  
 Dimensional Weight  
 Declared Value  
 C.O.D. Amount

5 Additional Services  
 Delivery Confirmation Signature Required  
 Saturday Delivery  
 Additional Handling Hazardous Material  
 Call Tag  
 Other

6 Affix Tracking Label Below if Applicable.  
 (See Bar Code Labeling Instructions)

Tracking Number: N561 853 008 7 4

Collect Billing / 3rd Party UPS Account No.

Reference Number (Optional)

Other Information

UPS  
 Worldwide  
 Overnight Services

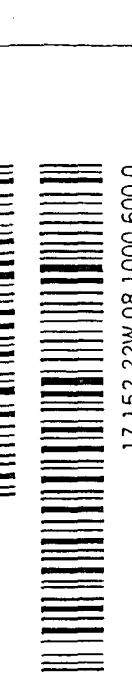
UPS Shipping Record No. 001 4795012 256



Shipping Record

UPS Account Number 152-22W

Company Name and Address  
MEC ANALYTICAL SYSTEMS  
6060 CORTE DEL CEDRO  
CARLSBAD CA 92009



IZ 152 22W 08 1000 600 0

Shipment Date  
MAY 15 1997

Receiver's Name and Address  
J Miller Wares Exp. Station  
Walter Wares Exp. Station  
3909 Halls Ferry Road  
Carlsbad CA 92008

Receiver's Name and Address  
J Miller Wares Exp. Station  
Walter Wares Exp. Station  
3909 Halls Ferry Road  
Carlsbad CA 92008

2	3	4	5	6	7	8
Receiver's Name and Address	Service Level	Package Information	Additional Services	Affix Tracking Label Receipt Below If Applicable.	Collect Billing	Reference Number (Optional)
<p>2</p> <p>Receiver's Name and Address -or- If Same, Mark → Same Address Previous Page</p> <p>J Miller Wares Exp. Station Walter Wares Exp. Station 3909 Halls Ferry Road Carlsbad CA 92008</p> <p>City State Postal/ZIP Code Country Carlsbad CA 92008 USA</p>	<p>3</p> <p>Service Level</p> <p>Next Day Air / WW Express <input checked="" type="checkbox"/></p> <p>2nd Day Air / WW Expedited <input type="checkbox"/></p> <p>3 Day Select <input type="checkbox"/></p> <p>GroundTrac / Standard to Canada <input type="checkbox"/></p> <p>Ground (DeliveryTrac) <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>4</p> <p>Package Information</p> <p>Weight 8.8</p> <p>Dimensional Weight 8.8</p> <p>Declared Value <input type="checkbox"/></p> <p>C.O.D. Amount <input type="checkbox"/></p> <p>LTR <input type="checkbox"/></p> <p>Oversize <input type="checkbox"/></p> <p>Dimensional Weight Declared Value <input type="checkbox"/></p>	<p>5</p> <p>Additional Services</p> <p>Delivery Confirmation <input checked="" type="checkbox"/></p> <p>Signature Required <input type="checkbox"/></p> <p>Saturday Delivery <input type="checkbox"/></p> <p>Additional Handling Hazardous Material <input type="checkbox"/></p> <p>Call Tag <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>6</p> <p>Affix Tracking Label Receipt Below If Applicable.</p> <p>(See Bar Code Labeling Instructions)</p>	<p>7</p> <p>Collect Billing</p> <p>3rd Party <input type="checkbox"/></p> <p>Reference Number (Optional)</p>	<p>8</p> <p>Reference Number (Optional)</p> <p>Other Information</p>
<p>2</p> <p>Receiver's Name and Address -or- If Same, Mark → Same Address Previous Page</p> <p>J Miller Wares Exp. Station Walter Wares Exp. Station 3909 Halls Ferry Road Carlsbad CA 92008</p> <p>City State Postal/ZIP Code Country Carlsbad CA 92008 USA</p>	<p>3</p> <p>Service Level</p> <p>Next Day Air / WW Express <input checked="" type="checkbox"/></p> <p>2nd Day Air / WW Expedited <input type="checkbox"/></p> <p>3 Day Select <input type="checkbox"/></p> <p>GroundTrac / Standard to Canada <input type="checkbox"/></p> <p>Ground (DeliveryTrac) <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>4</p> <p>Package Information</p> <p>Weight 8.8</p> <p>Dimensional Weight 8.8</p> <p>Declared Value <input type="checkbox"/></p> <p>C.O.D. Amount <input type="checkbox"/></p> <p>LTR <input type="checkbox"/></p> <p>Oversize <input type="checkbox"/></p> <p>Dimensional Weight Declared Value <input type="checkbox"/></p>	<p>5</p> <p>Additional Services</p> <p>Delivery Confirmation <input checked="" type="checkbox"/></p> <p>Signature Required <input type="checkbox"/></p> <p>Saturday Delivery <input type="checkbox"/></p> <p>Additional Handling Hazardous Material <input type="checkbox"/></p> <p>Call Tag <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>6</p> <p>Affix Tracking Label Receipt Below If Applicable.</p> <p>(See Bar Code Labeling Instructions)</p>	<p>7</p> <p>Collect Billing</p> <p>3rd Party <input type="checkbox"/></p> <p>Reference Number (Optional)</p>	<p>8</p> <p>Reference Number (Optional)</p> <p>Other Information</p>
<p>2</p> <p>Receiver's Name and Address -or- If Same, Mark → Same Address Previous Page</p> <p>J Miller Wares Exp. Station Walter Wares Exp. Station 3909 Halls Ferry Road Carlsbad CA 92008</p> <p>City State Postal/ZIP Code Country Carlsbad CA 92008 USA</p>	<p>3</p> <p>Service Level</p> <p>Next Day Air / WW Express <input checked="" type="checkbox"/></p> <p>2nd Day Air / WW Expedited <input type="checkbox"/></p> <p>3 Day Select <input type="checkbox"/></p> <p>GroundTrac / Standard to Canada <input type="checkbox"/></p> <p>Ground (DeliveryTrac) <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>4</p> <p>Package Information</p> <p>Weight 8.8</p> <p>Dimensional Weight 8.8</p> <p>Declared Value <input type="checkbox"/></p> <p>C.O.D. Amount <input type="checkbox"/></p> <p>LTR <input type="checkbox"/></p> <p>Oversize <input type="checkbox"/></p> <p>Dimensional Weight Declared Value <input type="checkbox"/></p>	<p>5</p> <p>Additional Services</p> <p>Delivery Confirmation <input checked="" type="checkbox"/></p> <p>Signature Required <input type="checkbox"/></p> <p>Saturday Delivery <input type="checkbox"/></p> <p>Additional Handling Hazardous Material <input type="checkbox"/></p> <p>Call Tag <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>6</p> <p>Affix Tracking Label Receipt Below If Applicable.</p> <p>(See Bar Code Labeling Instructions)</p>	<p>7</p> <p>Collect Billing</p> <p>3rd Party <input type="checkbox"/></p> <p>Reference Number (Optional)</p>	<p>8</p> <p>Reference Number (Optional)</p> <p>Other Information</p>
<p>2</p> <p>Receiver's Name and Address -or- If Same, Mark → Same Address Previous Page</p> <p>J Miller Wares Exp. Station Walter Wares Exp. Station 3909 Halls Ferry Road Carlsbad CA 92008</p> <p>City State Postal/ZIP Code Country Carlsbad CA 92008 USA</p>	<p>3</p> <p>Service Level</p> <p>Next Day Air / WW Express <input checked="" type="checkbox"/></p> <p>2nd Day Air / WW Expedited <input type="checkbox"/></p> <p>3 Day Select <input type="checkbox"/></p> <p>GroundTrac / Standard to Canada <input type="checkbox"/></p> <p>Ground (DeliveryTrac) <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>4</p> <p>Package Information</p> <p>Weight 8.8</p> <p>Dimensional Weight 8.8</p> <p>Declared Value <input type="checkbox"/></p> <p>C.O.D. Amount <input type="checkbox"/></p> <p>LTR <input type="checkbox"/></p> <p>Oversize <input type="checkbox"/></p> <p>Dimensional Weight Declared Value <input type="checkbox"/></p>	<p>5</p> <p>Additional Services</p> <p>Delivery Confirmation <input checked="" type="checkbox"/></p> <p>Signature Required <input type="checkbox"/></p> <p>Saturday Delivery <input type="checkbox"/></p> <p>Additional Handling Hazardous Material <input type="checkbox"/></p> <p>Call Tag <input type="checkbox"/></p> <p>Other <input type="checkbox"/></p>	<p>6</p> <p>Affix Tracking Label Receipt Below If Applicable.</p> <p>(See Bar Code Labeling Instructions)</p>	<p>7</p> <p>Collect Billing</p> <p>3rd Party <input type="checkbox"/></p> <p>Reference Number (Optional)</p>	<p>8</p> <p>Reference Number (Optional)</p> <p>Other Information</p>

Tracking Number: N661 863 007 8

Tracking Number: N661 863 006 9

Tracking Number: N661 863 006 0

Tracking Number: N661 863 012 1

Pickup Time: 10:00

Total Packages: 1

Total Call Tags: 1

No. of Pages: 1

Received for UPS by: [Signature]

UPS Shipping Record No. 001 4795012 256

Company Name and Address: MEC ANALYTICAL SYSTEMS, 6060 CORTE DEL CEDRO, CARLSBAD CA 92009

Shipment Date: MAY 15 1997

UPS Account Number: 152-22W

Shipping Record

Additional Services: Delivery Confirmation, Signature Required

Package Information: Weight 8.8, Dimensional Weight 8.8

Service Level: Next Day Air / WW Express

Receiver's Name and Address: J Miller Wares Exp. Station, Walter Wares Exp. Station, 3909 Halls Ferry Road, Carlsbad CA 92008

Tracking Numbers: N661 863 007 8, N661 863 006 9, N661 863 006 0, N661 863 012 1

Pickup Time: 10:00

Total Packages: 1

Total Call Tags: 1

No. of Pages: 1

Received for UPS by: [Signature]

# FedEx USA Airbill

Tracking Number

2784139153

From (please print)

Date 12/16/91

Sender's FedEx Account Number 1796-8355-2

Sender's Name Alan Monj

Phone (619) 931-9225

Dept./Floor/Suite/Room

Company MEC ANALYTICAL SYSTEMS

Address 6060 CORIE DEL CEDRO

City CARLSBAD

State CA Zip 92009

Your Internal Billing Reference Information (Optional) (First 8 characters will appear on invoice)

ACOE-WDR 0719-009

To (please print)

Recipient's Name Paul Kruse

Phone 415 435-1847

Company MEC Analytical

Dept./Floor/Suite/Room

Address 3150 Paradise Dr Bldg 36

(We Cannot Deliver to P.O. Boxes or P.O. Zip Codes)

City Liburon

State CA Zip 94920

For HOLD at FedEx Location check here

Hold Weekday  Hold Saturday (Not available with FedEx First Overnight or FedEx Standard Overnight)

For Saturday Delivery check here

(Not available with FedEx First Overnight or FedEx Standard Overnight)

Service Conditions, Declared Value, and Limit of Liability - By using this Airbill you agree to the service conditions in our current Service Guide or U.S. Government Service Guide. Both are available on request. SEE BACK OF SENDER'S COPY OF THIS AIRBILL FOR INFORMATION AND ADDITIONAL TERMS. We will not be responsible for any claim in excess of \$100 per package when the result of loss, damage, or delay, non-delivery, misdelivery, or misrouting, unless you declare a higher value, pay an additional charge, and document your actual loss in a timely manner. Your right to recover from us for any loss includes intrinsic value of the package, loss of sales, interest, profit, attorney's fees, costs, and other forms of damage, whether direct, incidental, consequential, or special, and is limited to the greater of \$100 or the declared value but cannot exceed actual documented loss. The maximum declared value for any FedEx Letter and FedEx Pak is \$500. Federal Express may, upon your request, and with some limitations, refund all transportation charges paid. See the FedEx Service Guide for further details.

Questions? Call 1-800-Go-FedEx (1-800-463-3339)

The World On Time

W

Sender's Copy  
194 250 15283247 631M

4a Express Package Service Packages under 150 lbs. Delivery commitment may be later on some days.  
 FedEx Priority Overnight  FedEx Standard Overnight  FedEx 2Day\* (Next business day)

NEM/FedEx First Overnight (Highest rated business morning delivery in select locations) (higher rates apply)

4b Express Freight Service Packages over 150 lbs. Delivery commitment may be later on some days.  
 FedEx Overnight Freight  FedEx 2Day Freight  FedEx Express Saver Freight (Next business day) (Rates for any package)

5 Packaging  FedEx Letter  FedEx Pak  FedEx Box  FedEx Tube  Other (Declared value limit \$500)

6 Special Handling Does this shipment contain dangerous goods?  Yes  No  
 Dry Ice (Dangerous Goods Shipper's Declaration not required)  Yes  No  
CA  Cargo Aircraft Only

7 Payment  Sender (FedEx account or bill to)  Recipient  Third Party  Credit Card  Cash

FedEx Account No. \_\_\_\_\_  
Credit Card No. \_\_\_\_\_  
Total Packages 6 Total Weight 42.0 Total Declared Value \$ 500.00 Total Charges \$ \_\_\_\_\_

8 Release Signature Sign to authorize delivery without the sender's signature. When declaring a value higher than \$100 per shipment, you are an additional charge. See SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY section for further information.

Your signature authorizes Federal Express to deliver this shipment without the sender's signature and agrees to accept and hold harmless Federal Express from any resulting claim.

272

NO. 2005 506  
PART 211796  
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INTERNATIONAL



ANALYTICAL SYSTEMS, INC.

(  Check One)

- 6060 Corte del Cedro • Carlsbad, CA 92009-1514 • (619) 931-9225, FAX 931-9251
- 2433 Impala Drive • Carlsbad, CA 92008 • (619) 931-8081, FAX 931-1580
- 98 Main Street, Suite #428 • Tiburon, CA 94920 • (415) 435-1847, FAX 435-0479

# CHAIN OF CUSTODY

## 02044

PAGE 2 OF 8

DATE 1-11-17

PROJECT NAME/SURVEY/PROJECT NUMBER			ANALYSIS/TEST REQUESTED		
ALIX - M... ..			TC - WIGAS		
PROJECT MANAGER			CONTAINERS		
...			NUMBER & TYPE OF		
COMPANY			PRESERVED HOW/		
MFC Analytical Systems, Inc.			COMMENTS		
ADDRESS			DATE		
6060 Corte del Cedro, Carlsbad, CA 92009			1-11-17		
PHONE/FAX			INITIALS		
760-211-1111			AMH		
SAMPLE I.D.	DATE	TIME	MATRIX	INITIALS	
1	1/11/17		...	AMH	
2	1/11/17		...		
3	1/11/17		...		
4	1/11/17		...		
5	1/11/17		...		
6	1/11/17		...		
7	1/11/17		...		
8	1/11/17		...		
9	1/11/17		...		
10	1/11/17		...		
11	1/11/17		...		
12	1/11/17		...		
13	1/11/17		...		
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15	1/11/17		...		
16	1/11/17		...		
17	1/11/17		...		
18	1/11/17		...		
19	1/11/17		...		
20	1/11/17		...		

**SPECIAL INSTRUCTIONS/COMMENTS:**

Shipping Via: Fedex Airbill No: 274131112

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: _____	Signature: _____
Firm: <u>MFC</u>	Firm: <u>WIGAS</u>	Firm: _____	Firm: _____
Date/Time: <u>1/11/17 10:00</u>	Date/Time: <u>1/11/17 10:00</u>	Date/Time: _____	Date/Time: _____













PAGE 5 of 6

# Pacific Treatment Analytical Services, Inc.

## CHAIN-OF-CUSTODY RECORD

4340 Viewridge Avenue, Suite A

San Diego, CA 92123

Phone (619) 560-7717

Fax (619) 560-7763



### PTAS DATE/TIME STAMP

### PTAS LOG #

Client: <b>MEC</b>		Address:		Phone:		Fax:	
Aftn:		Sampled by:		Billing Address:		Project:	
PO #:		Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) Type*	PTAS ID #
Area 4		Rep 1	1/16/98	1400	Blank	1 G	41
u		Rep 2			Residue		42
u		Rep 3					43
u		Rep 4					44
u		Rep 5					45
Area 5		Rep 1		1410			46
u		Rep 2					47
u		Rep 3					48
u		Rep 4					49
u		Rep 5					50

418.1 (TRPH)	7PH (DHS) Gas Diesel	601/8020 BTXE MTBE	601/8010 (Purgeable Halocarbons)	608/8080 PCBs Pesticides	624/8240/8260 (Volatile Organics)	625/8270 (Semi Volatile Organics)	TTC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals Organics	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS O&G	Pb	Residues	PCBs	PAHs	V.T.S	
							X	X	X	X	X	X	X	X	X	X	X

RELINQUISHED BY		DATE/TIME		RECEIVED BY	
Signature: <i>Lea M. Fay</i>		1/21/98		Signature: <i>[Signature]</i>	
Print: <i>Lea M. Fay</i>		4:30 pm		Print: <i>[Signature]</i>	
Company: <i>MEC</i>				Company: <i>PTAS</i>	

Signature	Print	Company
Signature	Print	Company
Signature	Print	Company
Signature	Print	Company

Disposition: N/C (aqueous) \* PTAS @\$5,00/sample Return

Turnaround Time: 24 hr 48 hr 3 day 4 day Normal

Comments: # see attached d.l.s

PAGE 6 of 6



**Pacific Treatment Analytical Services, Inc.**  
**CHAIN-OF-CUSTODY RECORD**

4340 Viewridge Avenue, Suite A San Diego, CA 92123 Phone (619) 560-7717 Fax (619) 560-7763

PTAS LOG # **0139-98** PTAS DATE/TIME **1/21/98 4:41**

Client: <b>MEC</b>		Address:		City:		State:		Zip:	
Phone:		Fax:		Project:		Requested Analysis:		Received By:	
Sampled by:		Billing Address:		Project:		Requested Analysis:		Received By:	
PO #:		Sample Date:		Sample Time:		Sample Matrix:		Container(s) # Type:	
Client Sample ID		Sample Date		Sample Time		Sample Matrix		Container(s) # Type	
Area 6	Rep 1	1/16/98	12:40	PM	1	G	51		
"	Rep 2						52		
"	Rep 3						53		
"	Rep 4						54		
"	Rep 5						55		
Area 9	Rep 1			1805			56		
"	Rep 2						57		
"	Rep 3						58		
"	Rep 4						59		
"	Rep 5						60		
*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)		Tamper-Proof Seals Intact: Yes No <b>N/A</b>		Correct Containers: Yes No <b>(X) Yes</b>		VOAs w/ZHS: Yes No <b>(X) No</b>		All Samples Properly Preserved: Yes No <b>(X) No</b>	
Disposal: N/C (aqueous) * PTAS (@\$5.00/sample) Return		Turnaround Time: 24 hr 48 hr 3 day 4 day Normal		Comments:		Signature: <b>Lisa M. Kay</b>		DATE/TIME: <b>1/21/98 4:30 pm</b>	
Signature:		Print:		Company:		Signature:		DATE/TIME:	
Print:		Company:		Signature:		Print:		Company:	
Signature:		Print:		Company:		Signature:		DATE/TIME:	
Print:		Company:		Signature:		Print:		Company:	
Signature:		Print:		Company:		Signature:		DATE/TIME:	
Print:		Company:		Signature:		Print:		Company:	

\* PTAS reserves the right to return samples that don't match our waste profile. White - PTAS Canary - Accounting Pink - Client (w/Report) Gold - Client (Retain/Ship Samples) (Rev. 5/97)