

WASHINGTON STATE  
DEPARTMENT OF  
E C O L O G Y

**PRIORITY POLLUTANTS IN SEDIMENTS  
FROM EBNEY SLOUGH  
SNOHOMISH RIVER ESTUARY**

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October 1994

Water Body No. WA-07-1011

Publication No. 94-173

*printed on recycled paper*

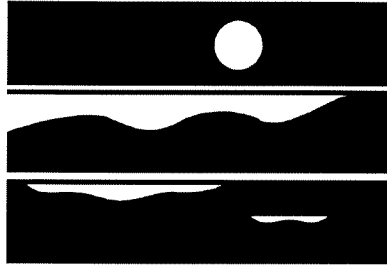


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WASHINGTON STATE  
DEPARTMENT OF  
E C O L O G Y

**Priority Pollutants in Sediments  
From Ebey Slough  
Snohomish River Estuary**

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by  
*James Cabbage*

Environmental Investigations and Laboratory Services Program  
Olympia, Washington 98504-7710

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## **Abstract**

To follow-up earlier studies of the Everett Harbor/Snohomish River Delta area, sediment from 12 sites within the Ebey Slough - Quilceda Creek area were sampled for priority pollutants. The high concentrations of phenolics found in an earlier study in the area were not found in this study. Priority pollutants were not found at high concentrations and many sites had no organic priority pollutants. These study results suggest that no further work is necessary to evaluate potential contaminants in the study area.

# Acknowledgements

Several people and organizations contributed to this project. Rick Huey helped collect samples, reviewed the work, and helped design and requested the study. Teresa Michelsen helped design the study. Stuart Magoon, Karin Feddersen, and Pam Covey all assisted in analysis planning and sample handling. Manchester Environmental Laboratory, ARI Laboratories, and Soil Technology analyzed the samples. Larry Goldstein and Dale Norton reviewed the study plan as well as this report. Kelly Carruth prepared and proofread this report. I thank all these people and organizations.

## Summary and Conclusions

Priority pollutants, when found, were present in low concentrations. No potential "hotspot" of contamination was found in the Ebey Slough area surveyed in this study and no sites were above marine sediment standards. The high concentrations of phenol, benzoic acid and 4-methy-phenol found in an earlier study (PTI & Tetra Tech, 1988) were not found in this study. The quantification limits achieved in this study were adequate to detect concentrations less than 1/5th the concentrations found in the prior study. The only potential indication of contamination in this study is low concentrations of volatile organics at site W-2 and ES-4. Site ES-4 is the site closest to the closed Tulalip landfill.

## Recommendations

- 1) No additional effort should be expended in examining sediments for priority pollutants in the Ebey Slough area with the one exception below.
- 2) The one site with relatively low but detectable levels of acetone and trichloroethene (ES-4) should be resampled if time and resources allow.

# Introduction

Contamination of sediments in Everett Harbor and Snohomish River Delta area were investigated and summarized in 1988 (PTI & Tetra Tech, 1988). In that study, the mouth of Ebey Slough, at the north end of the Snohomish River Delta, was identified as a problem area on the basis of one sample that contained high concentrations of benzoic acid (760 ppb dry weight), 4-methylphenol (1,400 ppb) and phenol (1,200 ppb). Possible sources of these contaminants include the Marysville wastewater treatment plant which discharges into Ebey Slough, and the closed Tulalip Landfill which is adjacent to a saltmarsh that borders the slough. Other studies are investigating sediment quality upriver from the Tulalip landfill. No studies have been conducted to follow-up this earlier investigation in the lower Ebey Slough/Quilceda Creek area.

Data from the entire Everett Harbor/Snohomish River Delta area are being reviewed by Department of Ecology to determine areas that may need sediment cleanup and this study is one part of that effort. This study was conducted to achieve the following objectives:

- Analyze sediments for priority pollutant contaminants at several sites in the Ebey Slough area, including the Quilceda Creek area.
- Provide data to guide priorities for overall cleanup of Everett Harbor and Snohomish River Delta area.

## Methods

Study area and sampling sites are shown in Figure 1. The sampling density is equivalent to earlier studies in the Everett Harbor area. Sediment samples were taken in Quilceda Creek in order to differentiate sources of contamination between Ebey Slough, including the landfill, and the overall concentrations of contaminants in the Snohomish River Delta area. Samples were collected on September 20 and 21, 1993. Most of these sites are intertidal and were sampled on a high tide. Locations and depths of samples are listed in Table 1.

Sediment samples from these 12 sites were collected and analyzed for metals, volatile organic compounds, semivolatile organic compounds, chlorinated pesticides and PCBs, pentachlorophenol, total organic carbon, and grain size. Table 2 lists the analyses and laboratories conducting the analyses.

All samples were collected from a 20-foot skiff equipped with a davit and a modified 0.1m<sup>2</sup> Van Veen grab sampler. Only the top 2 cm were taken for analysis. All samples were homogenized in stainless steel beakers or stainless steel buckets, and subsamples poured into



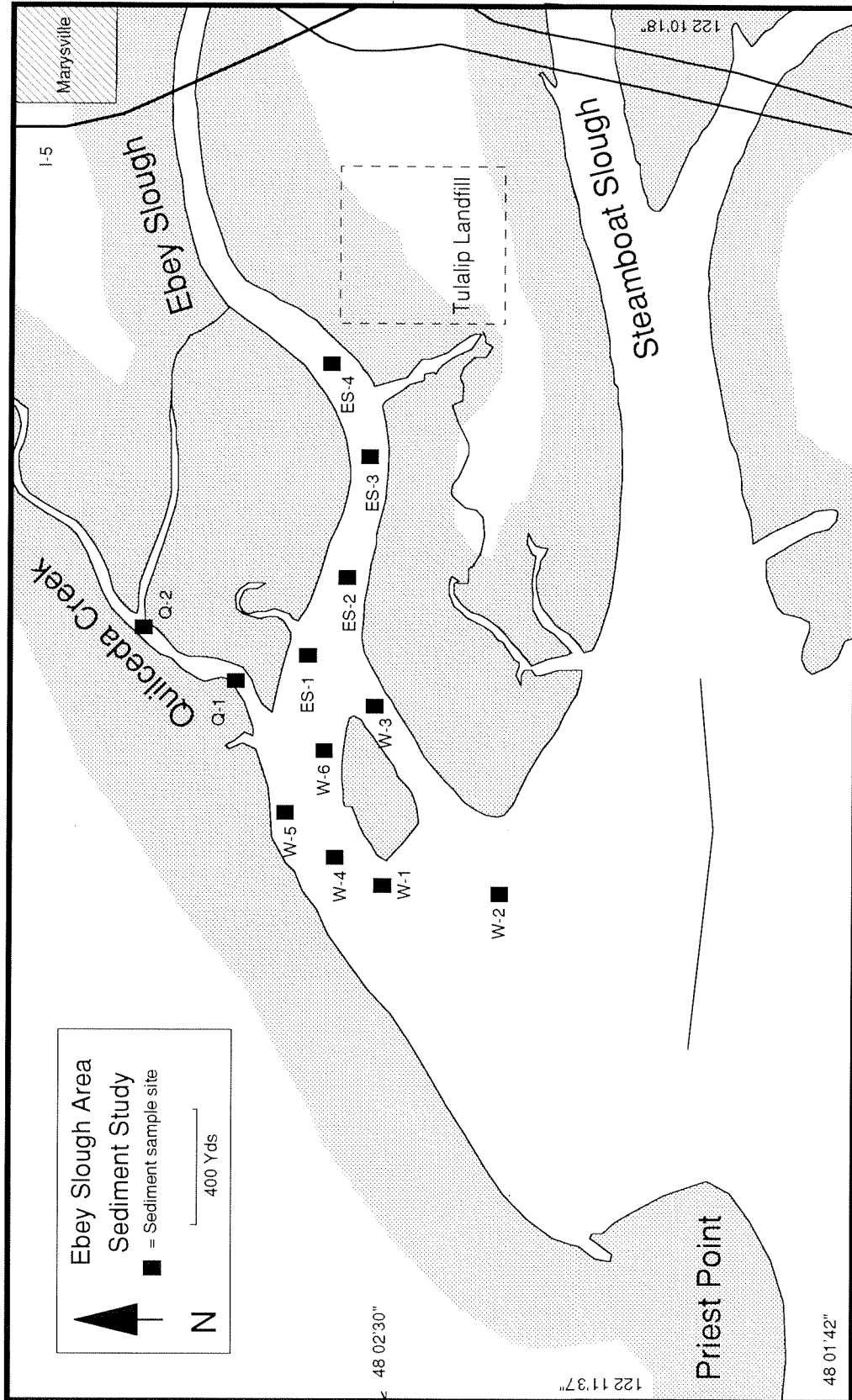


Figure 1. Sites of samples collected on 9/20/93 and 9/21/93.

Table 1. Locations of sample sites.

Site	Lab Number	Sample Date	Time	Depth (ft)		Latitude		Longitude	
				Measured	Re MLLW*	Degrees	Minutes	Degrees	Minutes
W-1	398105	9/20/93	1314	4	1.4	48	2.542	122	12.773
W-2	398106	9/20/93	1550	3.5	2.3	48	2.279	122	12.909
W-3	398107	9/20/93	1155	3	3.6	48	2.532	122	12.399
W-4	398108	9/20/93	1335	12	-6.7	48	2.609	122	12.777
W-5	398109	9/20/93	1420	3.5	1.8	48	2.637	122	12.730
W-6	398110	9/20/93	1400	3.5	2.0	48	2.603	122	12.562
Q-1	398111	9/20/93	1530	3.5	2.0	48	2.777	122	12.314
Q-2	398112	9/20/93	1500	4.5	0.8	48	2.928	122	12.209
ES-1	398113	9/20/93	1645	10	-3.0	48	2.514	122	12.217
ES-2	398114	9/21/93	1110	18	-7.8	48	2.543	122	11.999
ES-3	398115	9/21/93	1205	14	-4.5	48	2.529	122	11.860
ES-4	398116	9/21/93	1245	15	-6.3	48	2.540	122	11.565

\* Sample height in reference to Mean Lower Low Water (0 tide)

Table 2. Analytical methods.

Analysis	Method	Reference	Laboratory
Total organic carbon	Persulfate-UV	EPA 1986a (PSEP Protocols)	ARI
Grain size	Seives and pipettes	EPA 1986a (PSEP Protocols)	Soil Technology
% Moisture	Dry @ 105 degrees C	APHA 1985	Soil Technology
Arsenic	Atomic Absorption	EPA 1986b	Manchester
Cadmium	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Chromium	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Copper	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Mercury	Cold Vapor Atomic Absorption	EPA 1986b	Manchester
Lead	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Nickel	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Silver	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Zinc	Inductively Coupled Argon Plasma	EPA 1986b	Manchester
Semivolatiles	GC/MS Method 8270	EPA 1986b	ARI
Pest/PCB	GC/EC Method 8080	EPA 1986b	ARI
VOAs	GC/MS Method 8240	EPA 1986b	ARI

priority pollutant clean jars. All stainless steel beakers and implements were precleaned with detergent, 10% nitric acid, deionized water, and pesticide analysis grade acetone. The Van Veen sampler was rinsed with on-site water between samples. VOAs were taken into VOA bottles directly from the grab samples. Vessel positions were determined with GPS (Global Positioning System) and triangulation from landmarks.

All sampling and analysis work was conducted using Puget Sound Estuary Program protocols (EPA, 1986a). One matrix spike and one matrix spike duplicate were run to assess accuracy and precision. One blind field replicate (single sample homogenized and split in the field) was submitted to also assess precision. To assure good detection limits on PCBs, the PCBs/Pesticide samples were split, and if the PCB detection limit was comparably high, the PCBs analysis was run again with an acid clean-up to remove some interference.

Quality assurance reviews from the laboratory are shown in Appendix 1. The data are useable as qualified.

## Results and Discussion

Table 3 shows concentrations of chemicals found above detection limits as well as all values for grain size and total organic carbon. The concentrations shown are compared with the Washington State sediment management standards (WAC 173-204) below which no adverse effects on biological resources are predicted. Original laboratory reports with concentrations found and detection limits for all analyses are shown in Appendix 2.

Volatile organics were found at three sites, W-2, ES-2 and ES-4. Methylene chloride and trichloroethene were found above quantification limits at one site. Acetone was found above quantification limits at two sites. Acetone and methylene chloride are used in analytical laboratories and sometimes represent contaminants in the analysis rather than contaminants found at the sample site. However, neither of these chemicals were found in method blanks, the analyses designed to detect systemic laboratory contamination. Acetone was used to clean field sampling equipment and could be the source of these results. Methylene chloride was not part of the field cleaning. Trichloroethene was not used in the field or in the laboratory for any part of the analysis or decontamination, and the findings here reflect concentrations in the environment. No sediment standards have been issued for volatile organics.

Semivolatile organics were found at only one site above quantification limits. We found polycyclic aromatic hydrocarbons (PAH) above quantification limits at site ES-1. PAH is a product of incomplete combustion. No other priority pollutant semivolatile organics were found. A few tentatively identified compounds were found and these are listed in the Appendix along with the detection limits. The most prevalent tentatively identified compound is thiobios methane, or methyl sulfide. It is discharged into the air by kraft pulp mills (Goyer, 1990) and may be discharged in process water as well. It is metabolized by bacteria. No chlorinated pesticides or PCBs were found above detection limits at any site. No semivolatile organic for which there is a standard was found above sediment standards.

Metals were found at low concentrations at all sites. Table 3 compares metals concentrations in sediments to marine sediment standards. No metals approach the levels of the standards. There are no standards for nickel, but these concentrations are comparatively low. The samples were primarily sand (43%-100% sand). As smaller grain size tends to have more surface area on which metals can sorb, some studies have found an inverse correlation of metals concentrations with grain size; the samples with greater percent clay have the comparatively higher concentration of metals. There is no current accepted method to correct or standardize metals concentrations for differing grain size. The grain size distribution that predominates with sand suggests no areas of deposition except for perhaps W-2 and ES-4.

Table 3. Concentrations of organics found above detection limits, all metals and conventionals.

	Site	W-1	W-2	W-3	W-4	W-5	W-6	Q-1	Q-2	ES-1	ES-2	ES-3	ES-4	ES-4*	Marine	
	Lab Number	398105	398106	398107	398108	398109	398110	398111	398112	398113	398114	398115	398116	398117	Standards**	
<b>Volatile Organics (<math>\mu\text{g}/\text{kg}</math> dry weight)</b>																
Methylene chloride	--	--	8.9	--	--	--	--	--	--	--	--	--	--	--	--	
Acetone	--	--	9.1 J	--	--	--	--	--	--	--	--	--	29.0	20.0	--	
Trichloroethene	--	--	--	--	--	--	--	--	--	--	1.1 J	--	1.6 J	2.4	--	
<b>Semivolatile Organics (mg/kg organic carbon)</b>																
Fluoranthene	--	--	--	--	--	--	--	--	--	56	--	--	--	--	160	
Pyrene	--	--	--	--	--	--	--	--	--	35	--	--	--	--	1000	
Chrysene	--	--	--	--	--	--	--	--	--	19 J	--	--	--	--	110	
<b>Metals (mg/kg dry weight)</b>																
Arsenic	15 P	22 P	21 P	14 P	17 P	17 P	20 P	29 P	30 P	19 P	12 P	17 P	26 P	23 P	57	
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	5.1	
Chromium	30	35	32	20	21	21	31	33	28	29	17	27	37	38	260	
Copper	26	33	39	12	11	11	25	9.1	12	22	8.9	19	34	35	390	
Mercury	0.028 U	0.058 J	0.041 J	0.026 U	0.025 U	0.025 U	0.036 J	0.026 U	0.026 U	0.039 J	0.074 J	0.063 J	0.034 U	0.034 U	0.410	
Lead	4.8 P	7.3 P	5.1 P	3.3 P	3.0 P	3.0 P	4.7 P	6.0 P	6.0 P	8.3 P	89	4.6 P	6.5 P	8.9 P	450	
Nickel	31	34	31	22	23	23	31	30	39	30	17	28	37	37	--	
Silver	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	6.1	
Zinc	56	65	58	41	42	42	55	48	70	54	33	52	67	69	410	
<b>Conventionals (percent)</b>																
TOC (Total organic carbon)	1.1%	0.89%	1.1%	0.14%	0.21%	0.21%	1.7%	0.28%	0.25%	0.52%	0.15%	0.50%	1.5%	1.5%		
%Solids	71%	60%	64%	77%	80%	80%	69%	78%	77%	74%	77%	75%	58%	59%		
%Sand (>62.5 $\mu\text{m}$ )	84%	43%	63%	100%	98%	98%	88%	100%	99%	85%	99%	91%	55%	56%		
%Silt (<62.5 $\mu\text{m}$ >3.5 $\mu\text{m}$ )	12%	46%	30%	0%	1%	1%	8%	0%	0%	10%	0%	5%	36%	33%		
%Clay (<3.5 $\mu\text{m}$ )	4%	11%	7%	0%	1%	1%	4%	0%	1%	5%	1%	4%	9%	11%		

\* reanalysis of field split of one grab

\*\* Marine sediment quality standards. Chapter 173-204 WAC April 1991.

U=No chemical found at detection limit shown.

J=Value is an estimate.

P=Value is an estimate due to low signal to noise ratio.

The phenolic compounds found in the prior study (PTI & Tetra Tech, 1988) were not found above detection limits in this study. The grain size for three sites in this earlier study were, like the current study, predominantly sand (74-90%). Total organic carbon concentrations in the prior study were low (0.5-1.4%) and similar to the current study. Because these sediment measures from the past study are roughly equivalent to this study, differences in concentrations of phenolics were probably not related to grain size or TOC.

## References

- APHA, 1985. Standard methods for the examination of water and wastewater, 16th edition. American Public Health Association, Washington D.C.
- EPA, 1986a. Puget Sound Estuary Program: Recommended protocols for measuring selected environmental variables in Puget Sound, Final Report. U.S. Environmental Protection Agency Region 10, Office of Puget Sound.
- EPA, 1986b. Test methods for evaluating solid waste. EPA Environmental monitoring and support laboratory, Cincinnati, OH, U.S. Environmental Protection Agency.
- Goyer, N., 1990. Evaluation of occupational exposure to sulfur compounds in paper pulp kraft mills. American Industrial Hygiene Association Journal, Jul. 51(7), P 390-4.
- PTI & Tetra Tech, 1988. Everett Harbor Action Program: Analysis of Toxic Problem Areas. Final report to US EPA Region X - Office of Puget Sound, Seattle, WA.



# **Appendix 1**

## *QUALITY ASSURANCE NARRATIVES*

State of Washington Department of Ecology  
Manchester Environmental Laboratory  
7411 Beach Dr. East Port Orchard WA. 98366

Data Review  
November 19, 1993

Project: **Ebey Slough**  
Samples: 398105-398117  
Laboratory: Analytical Resources, Inc. F065  
By: Karin Feddersen KF

### Case Summary

These samples were received at the Manchester Environmental Laboratory on September 22, 1993, and transported to Analytical Resources, Inc. on September 24, 1993 for VOA, BNA, TOC, and Pesticide/PCB analysis.

These analyses were reviewed for qualitative and quantitative accuracy, validity, and usefulness.

There is no need to assimilate the "dilution factor" or "sample wt/vol" into the final values reported; these calculations have already been figured into the reported values.

### DATA QUALIFIER DEFINITIONS

- U - The analyte was not detected at or above the reported result.
- UJ - The analyte was not detected at or above the reported estimated result.
- J - The associated numerical result is an estimated quantity.
- NJ or JN - The analyte was tentatively identified. The associated numerical result is an estimate.

## Volatiles

### **Holding Times:**

These samples were analyzed within the SW-846 recommended holding time.

### **Method Blank:**

No target analytes were detected in either method blank.

### **GC/MS Tuning and Calibration:**

Calibration against Bromofluorobenzene (BFB) is acceptable for the initial calibration, continuing calibration and all associated sample analyses.

### **Initial Calibration:**

The initial calibration met the minimum response criteria for the average relative responses. The % Relative Standard Deviations were within the maximum of 30%.

### **Continuing Calibration:**

The average relative response factors for all target analytes were above the minimums, and the percent deviations between the initial and continuing calibration standards were within the maximum of 25%.

### **Matrix Spikes (MS/MSD):**

Matrix spike recovery and precision data are reasonable, acceptable, and within QC limits.

### **Surrogates:**

All surrogate recoveries for these samples, matrix spikes, and the associated method blanks are reasonable, acceptable, and within QC limits.

### **Sample results:**

This data is acceptable for use as amended.

## **Semivolatile analyses BNA**

### **Holding Times:**

These samples were extracted and analyzed within the SW-846 recommended holding times.

### **Method Blanks:**

No target analytes were detected in the method blank.

### **GC/MS Tuning and Calibration:**

Calibration against Decafluorotriphenylphosphine (DFTPP) is acceptable for the initial calibration, continuing calibration, and all associated sample analyses.

### **Initial Calibration:**

The initial calibration met the minimum response criteria for the average relative response. The % Relative Standard Deviations were within the maximum of 30% with several exceptions which did not affect the results.

### **Continuing Calibration:**

The average relative response factors for all target analytes were above the minimums. The percent difference between the initial and continuing calibration standards were within the maximum of 25%, with two notable exceptions on October 8, 1993, 4-Nitrophenol and 2,2-Oxybis(1-Chloropropane), and one notable exception on October 11, 1993, 2,2-Oxybis(1-Chloropropane). These analytes were not detected in any of the samples. Results for these analytes in the corresponding samples have been qualified with a "UJ".

### **Matrix Spikes (MS/MSD):**

Matrix spike recovery and precision data are reasonable, acceptable, and within advisory QC limits.

### **Surrogates:**

All surrogate recoveries for these samples, the matrix spikes, and the associated method blanks are reasonable, acceptable, and within QC limits.

### **Sample Data:**

This data is acceptable for use as amended.

## Pesticides/PCB's

### **Holding Times:**

These samples were extracted and analyzed within the SW-846 recommended holding times. Sample 398109 was re-extracted sixteen days after the holding time. Pesticides are very stable compounds, and this sample was stored in the proper container at the proper temperature, therefore, analysis beyond the recommended holding time should not have a significant effect upon the results. The extract was reanalyzed within the recommended holding time of forty days from the date of extraction.

### **Method Blank:**

No target analytes were detected in the method blank.

### **Initial Calibration:**

The initial calibration % Relative Standard Deviations were within the maximum of 20% with two exceptions, which did not affect the results.

### **Continuing Calibration:**

The percent difference between the initial and continuing calibration standards were within the maximum of 25% with several exceptions, which did not affect the results.

### **Matrix Spikes (MS/MSD):**

Matrix spike recovery and precision data are reasonable, acceptable, and within advisory QC limits.

### **Surrogates:**

All surrogate recoveries for these samples and the associated method blank are reasonable, acceptable, and within QC limits with one exception. Surrogate recoveries for sample 398109 were low. This sample was reextracted and reanalyzed with acceptable results.

### **Sample Data:**

This data is acceptable for use without the need for additional qualification.

## **Total Organic Carbon**

### **Holding Times:**

These samples were analyzed within the P.S.E.P. recommended holding time.

### **Procedural Blank:**

The procedural blanks associated with these samples have demonstrated that the process is free from contamination.

### **Duplicate:**

The duplicate analysis is in acceptable agreement with the original analysis.

### **Sample Data:**

The results for samples 398108 and 398114 fell below the lowest standard analyzed (2000 ppm), and were therefore qualified with a "J". This data is acceptable for use as amended.



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive East • Port Orchard, Washington 98366-8204 • (206) 871-8860 • SCAN 871-8860

October 1, 1993

TO: Jim Cabbage

FROM: Bill Kammin, Environmental\_Lab\_Director

A handwritten signature in black ink, appearing to read "BK", written over the name "Bill Kammin".

SUBJECT: Metals Quality Assurance memo for the Ebey Slough Project

**SAMPLE INFORMATION**

These samples from the Ebey Slough project were received by the Manchester Laboratory on 9/23/93 in good condition.

**HOLDING TIMES**

All analyses were performed within the USEPA Contract Laboratory Program (CLP) holding times for metals analysis (28 days for mercury, 180 days for all other metals).

**INSTRUMENT CALIBRATION**

Instrument calibration was performed before each analytical run and checked by initial calibration verification standards and blanks. Continuing calibration standards and blanks were analyzed at a frequency of 10% during the run and again at the end of the analytical run. All initial and continuing calibration verification standards were within the relevant USEPA (CLP) control limits. AA calibration gave a correlation coefficient ( $r$ ) of 0.995 or greater, also meeting CLP calibration requirements.

**PROCEDURAL BLANKS**

The procedural blanks associated with these samples showed no analytically significant levels of analytes.

**SPIKED SAMPLE ANALYSES**

Spike and duplicate spike sample analyses were performed on this data set. All spike recoveries were within the CLP acceptance limits of +/- 25%, with the following exceptions: silver and mercury. There is an apparent chloride interference in the sample chosen for silver spiking. For mercury, the sample chosen for spike and spike



duplicate showed 33% RSD. Mercury and silver data are both qualified with J, denoting estimated values.

#### **PRECISION DATA**

The results of the spike and duplicate spike samples were used to evaluate precision on this sample set. The Relative Percent Difference (RPD) for all analytes was within the 20% CLP acceptance window for duplicate analysis, with the following exception: mercury.

#### **LABORATORY CONTROL SAMPLE (LCS) ANALYSES**

LCS analyses were within the windows established for each parameter, with the following exception: silver. A spreadsheet detailing LCS recoveries is supplied with this data report.

#### **SUMMARY**

The data generated by the analysis of these samples can be used noting the data qualifications discussed in this memo.

Please note date received and date mailed.

Please call Bill Kammin at SCAN 206-871-8801 to further discuss this project.

WRK:wrk



## **Appendix 2**

*ORGANICS DETECTION LIMITS  
AND  
TENTATIVELY IDENTIFIED COMPOUNDS*





**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Sample: 398106

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

ANALYTICAL RESOURCES INCORPORATED  
Analytical Chemists & Consultants

333 Ninth Ave North  
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GC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

GC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Lab ID: F065 B  
Matrix: Soils/Sediments

Lab ID: F065 B  
Matrix: Soil/Sediment

Instrument: FINN 5  
Date Analyzed: 09/30/93

Amount Analyzed: 2.70 gm (Dry Weight)  
Percent Moisture: 46.2%

Data Release Authorized:

Data Release Authorized:

CAS Number	Compound Name	µg/Kg
74-87-3	Chloroethane	3.7 U
74-83-9	Bromomethane	3.7 U
75-01-4	Vinyl Chloride	3.7 U
75-00-3	Chloroethane	3.7 U
75-09-2	Methylene Chloride	8.9
67-64-1	Acetone	9.1 J
75-15-0	Carbon Disulfide	1.9 U
75-35-4	1,1-Dichloroethane	1.9 U
75-34-3	1,1-Dichloroethane	1.9 U
156-60-5	trans-1,2-Dichloroethane	1.9 U
156-59-2	Cis-1,2-Dichloroethane	1.9 U
67-66-3	Chloroform	1.9 U
107-06-2	1,2-Dichloroethane	1.9 U
78-93-3	2-Butanone	9.3 U
71-55-6	1,1,1-Trichloroethane	1.9 U
56-23-5	Carbon Tetrachloride	1.9 U
108-05-4	Vinyl Acetate	1.9 U
75-27-4	Bromodichloromethane	1.9 U
78-87-5	1,2-Dichloropropane	1.9 U

Surrogate Recoveries	Recovery
c8-Toluene	11.4%
Bromofluorobenzene	88.0%
g4-1,2-Dichloroethane	88.6%

CAS Number	Compound Name	µg/Kg
10061-01-5	cis-1,3-Dichloropropene	1.9 U
79-01-6	Trichloroethene	1.9 U
124-48-1	Dibromochloromethane	1.9 U
79-00-5	1,1,2-Trichloroethane	1.9 U
71-43-2	Benzene	1.9 U
10061-02-5	trans-1,3-Dichloropropene	1.9 U
110-75-8	2-Chloroethylvinylether	1.9 U
75-25-2	Bromoform	1.9 U
108-10-1	4-Methyl-2-Pentanone	9.3 U
591-78-6	2-Hexanone	9.3 U
127-18-4	Tetrachloroethene	1.9 U
79-34-5	1,1,2,2-Tetrachloroethane	1.9 U
108-88-3	Toluene	1.9 U
108-90-7	Chlorobenzene	1.9 U
100-41-4	Ethylbenzene	1.9 U
100-42-5	Styrene	1.9 U
1330-20-7	Total Xylenes	3.7 U
75-69-4	Trichlorofluoromethane	3.7 U
76-13-1	1,1,2-Trichlorotrifluoroethane	3.7 U

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
75-18-3	Methane, Thiobis- (bp m/e 62)	VOA	334	56 J <sup>1</sup>
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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398107

Lab ID: F065 C  
Matrix: Soil/Sediment  
QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/kg)	KF
1	75-18-3 Methane, Thiobis: (bp m/e 62)	VOA	331	14 JN	14 JN
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**ORGANIC ANALYSIS DATA SHEET**  
**Volatiles by Purge & Trap GC/MS**

Sample: 398107

Lab ID: F065 C  
Matrix: Soils/Sediments  
QC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Data Release Authorized:   
Report: 10/04/93-MAC.Gat

CAS Number	Compound Name	ug/kg	CAS Number	Compound Name	ug/kg
74-87-3	Chloromethane	3.4 U	10061-01-5	Cis-1,3-Dichloropropene	1.7 U
74-83-9	Bromomethane	3.4 U	79-01-6	Trichloroethene	1.7 U
75-01-4	Vinyl Chloride	3.4 U	124-48-1	Dibromochloromethane	1.7 U
75-00-3	Chloroethane	3.4 U	79-00-5	1,1,2-Trichloroethane	1.7 U
75-09-2	Methylene Chloride	3.4 U	71-43-2	Benzene	1.7 U
67-64-1	Acetone	8.5 U	10061-02-6	trans-1,3-Dichloropropene	1.7 U
75-15-0	Carbon Disulfide	1.7 U	110-75-8	2-Chloroethylvinylether	1.7 U
75-35-4	1,1-Dichloroethene	1.7 U	75-25-2	Bromoform	1.7 U
75-34-3	1,1-Dichloroethane	1.7 U	108-10-1	4-Methyl-2-Pentanone	8.5 U
156-60-5	trans-1,2-Dichloroethene	1.7 U	591-78-6	2-Hexanone	8.5 U
156-59-2	Cis-1,2-Dichloroethene	1.7 U	127-18-4	Tetrachloroethene	1.7 U
67-66-3	Chloroform	1.7 U	79-34-5	1,1,2,2-Tetrachloroethane	1.7 U
107-06-2	1,2-Dichloroethane	1.7 U	108-88-3	Toluene	1.7 U
78-93-3	2-Butanone	8.5 U	108-90-7	Chlorobenzene	1.7 U
71-55-6	1,1,1-Trichloroethane	1.7 U	100-41-4	Ethylbenzene	1.7 U
56-23-5	Carbon Tetrachloride	1.7 U	100-42-5	Styrene	3.4 U
108-05-4	Vinyl Acetate	1.7 U	1330-20-7	Total Xylenes	3.4 U
75-27-4	Bromodichloromethane	1.7 U	75-69-4	Trichlorofluoromethane	3.4 U
78-87-5	1,2-Dichloropropane	1.7 U	76-13-1	1,1,2-Trichlorotrifluoroethane	3.4 U

Surrogate Recoveries	ug/kg
d8-Toluene	108%
Bromofluorobenzene	86.3%
d4-1,2-Dichloroethane	91.8%



**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398108

Lab ID: F065 D  
Matrix: Soil/Sediments  
QC Report: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Data Release Authorized:

Report: 10/05/93-MAC-Gat



**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Sample: 398108

QC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Lab ID: F065 D  
Matrix: Soils/Sediments  
Instrument: FINN 5  
Date Analyzed: 10/01/93  
Amount Analyzed: 4.34 gm (Dry Weight)  
Percent Moisture: 23.4%

Data Release Authorized:

Report: 10/04/93-MAC-Gat

CAS Number	Compound Name	µg/Kg
74-87-3	Chloromethane	2.3 U
74-83-9	Bromomethane	2.3 U
75-01-4	Vinyl Chloride	2.3 U
75-00-3	Chloroethane	2.3 U
75-09-2	Methylene Chloride	2.3 U
67-64-1	Acetone	5.8 U
75-15-0	Carbon Disulfide	1.2 U
75-35-4	1,1-Dichloroethane	1.2 U
75-34-3	1,1-Dichloroethene	1.2 U
56-60-5	Trans-1,2-Dichloroethane	1.2 U
156-59-2	Cis-1,2-Dichloroethene	1.2 U
67-66-3	Chloroform	1.2 U
107-06-2	1,2-Dichloroethane	1.2 U
78-93-3	2-Butanone	5.8 U
71-55-6	1,1,1-Trichloroethane	1.2 U
56-23-5	Carbon Tetrachloride	1.2 U
108-05-4	Vinyl Acetate	1.2 U
75-27-4	Bromodichloromethane	1.2 U
78-87-5	1,2-Dichloropropane	1.2 U
10061-01-5	1,3-Dichloropropene	1.2 U
79-01-6	Trichloroethene	1.2 U
124-48-1	Dibromochloromethane	1.2 U
79-00-5	1,1,2-Trichloroethane	1.2 U
71-43-2	Benzene	1.2 U
10061-02-6	trans-1,3-Dichloropropene	1.2 U
110-75-8	2-Chloroethylvinylether	1.2 U
75-25-2	Bromoform	1.2 U
108-10-1	4-Methyl-2-Pentanone	5.8 U
591-78-6	2-Hexanone	5.8 U
127-18-4	Tetrachloroethene	1.2 U
79-34-5	1,1,2,2-Tetrachloroethane	1.2 U
108-88-3	Toluene	1.2 U
108-90-7	Chlorobenzene	1.2 U
100-41-4	Ethylbenzene	1.2 U
100-42-5	Styrene	1.2 U
1330-20-7	Total Xylenes	2.3 U
75-69-4	Trichlorofluoromethane	2.3 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.3 U

Surrogate Recoveries	%
d8-Toluene	102%
Bromofluorobenzene	94.5%
d4-1,2-Dichloroethane	111%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
1	NO UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
**Volatiles by Purge & Trap GC/MS**



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Sample: 398109

GC Report No: F065 - WDOE  
 Project: Ebey Slough

VTSR: 09/24/93

Lab ID: F065 E  
 Matrix: Soils/Sediments

Data Release Authorized: *[Signature]*  
 Report: 10/04/93 MAC Gat

Instrument: FINN 5  
 Date Analyzed: 10/01/93

Amount Analyzed: 4.09 gm (Dry Weight)  
 Percent Moisture: 21.3%

CAS Number	Compound Name	µg/Kg	CAS Number	Compound Name	µg/Kg
74-87-3	Chloroethane	2.4 U	10061-01-5	cis-1,3-Dichloropropene	1.2 U
74-83-9	Bromomethane	2.4 U	79-01-6	Trichloroethene	1.2 U
75-01-4	Vinyl Chloride	2.4 U	124-48-1	Dibromochloromethane	1.2 U
75-00-3	Chloroethane	2.4 U	79-00-5	1,1,2-Trichloroethane	1.2 U
75-09-2	Methylene Chloride	2.4 U	71-43-2	Benzene	1.2 U
67-64-1	Acetone	6.1 U	10061-02-6	trans-1,3-Dichloropropene	1.2 U
75-15-0	Carbon Disulfide	1.2 U	110-75-6	2-Chloroethyvinylether	1.2 U
75-35-4	1,1-Dichloroethene	1.2 U	75-25-2	Bromoform	1.2 U
75-34-3	1,1-Dichloroethane	1.2 U	108-10-1	4-Methyl-2-Pentanone	6.1 U
156-60-5	trans-1,2-Dichloroethene	1.2 U	991-78-6	2-Hexanone	6.1 U
156-59-2	Cis-1,2-Dichloroethene	1.2 U	127-18-4	Tetrachloroethene	1.2 U
67-66-3	Chloroform	1.2 U	79-34-5	1,1,2,2-Tetrachloroethane	1.2 U
107-06-2	1,2-Dichloroethane	1.2 U	108-88-3	Toluene	1.2 U
78-93-3	2-Butanone	6.1 U	108-90-7	Chlorobenzene	1.2 U
71-55-6	1,1,1-Trichloroethane	1.2 U	100-41-4	Ethylbenzene	1.2 U
56-23-5	Carbon Tetrachloride	1.2 U	100-42-5	Styrene	2.4 U
108-05-4	Vinyl Acetate	1.2 U	1330-20-7	Total Xylenes	2.4 U
75-27-4	Bromochloromethane	1.2 U	75-69-4	Trichlorofluoromethane	2.4 U
78-87-5	1,2-Dichloropropane	1.2 U	76-13-1	1,1,2-Trichlorotrifluoroethane	2.4 U

Surrogate Recoveries	Recovery %
d8-Toluene	101%
Bromofluorobenzene	96.9%
d4-1,2-Dichloroethane	112%



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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398109

Lab ID: F065 E  
 Matrix: Soil/Sediments

GC Report: F065 - WDOE  
 Project: Ebey Slough

VTSR: 09/24/93

Data Release Authorized: *[Signature]*  
 Report: 10/05/93-MAC-Gat

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA	-	-
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**ORGANICS ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398111

Lab ID: F065 G  
Matrix: Soil/Sediments

Data Release Authorized:   
Report: 10/05/93-MAC-Gat

GC Report: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93



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Sample: 398111

GC Report No: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

Amount Analyzed: 3.70 gm (Dry Weight)  
Percent Moisture: 26.7%

**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F065 G  
Matrix: Soils/Sediments

Data Release Authorized:   
Report: 10/04/93-MAC-Gat

Instrument: FINN 5  
Date Analyzed: 10/01/93

CAS Number	Compound Name	ug/Kg	CAS Number	Compound Name	ug/Kg
74-87-3	Chloromethane	2.7 U	10061-01-5	cis-1,3-Dichloropropene	1.4 U
74-83-9	Bromomethane	2.7 U	79-01-6	Trichloroethene	1.4 U
75-01-4	Vinyl Chloride	2.7 U	124-48-1	Dibromochloromethane	1.4 U
75-00-3	Chloroethane	2.7 U	79-00-5	1,1,2-Trichloroethane	1.4 U
75-09-2	Methylene Chloride	2.7 U	71-43-2	Benzene	1.4 U
67-64-1	Acetone	6.8 U	10061-02-6	trans-1,3-Dichloropropene	1.4 U
75-15-0	Carbon Disulfide	1.4 U	110-75-8	2-Chloroethylvinylether	1.4 U
75-35-4	1,1-Dichloroethene	1.4 U	75-25-2	Bromotoluene	1.4 U
75-34-3	1,1-Dichloroethane	1.4 U	108-10-1	2-Methyl-2-Pentanol	6.8 U
156-60-5	trans-1,2-Dichloroethene	1.4 U	591-78-6	2-Hexanone	6.8 U
156-59-2	Cis-1,2-Dichloroethene	1.4 U	127-18-4	Tetrachloroethene	1.4 U
67-66-3	Chloroform	1.4 U	79-34-5	1,1,2,2-Tetrachloroethane	1.4 U
107-06-2	1,2-Dichloroethane	1.4 U	108-88-3	Toluene	1.4 U
78-93-3	2-Butanone	6.8 U	108-90-7	Chlorobenzene	1.4 U
71-55-6	1,1,1-Trichloroethane	1.4 U	100-41-4	Ethylbenzene	1.4 U
56-23-5	Carbon Tetrachloride	1.4 U	100-42-5	Styrene	2.7 U
108-05-4	Vinyl Acetate	1.4 U	1330-20-7	Total Xylenes	2.7 U
75-27-4	Bromoacetyl bromide	1.4 U	75-69-4	Trichlorofluoromethane	2.7 U
78-37-5	1,2-Dichloropropane	1.4 U	76-13-1	1,1,2-Trichlorotrifluoroethane	2.7 U

Surrogate Recoveries	Recovery %
o8-Toluene	103%
Bromofluorobenzene	98.7%
d4-1,2-Dichloroethane	111%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Sample No: 398112

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GC Report No: F065 - WDOE  
Project: Ebey Slough

Lab ID: F065 H  
Matrix: Soils/Sediments

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

VTSR: 09/24/93

Amount Analyzed: 3.70 gm (Dry Weight)  
Percent Moisture: 25.9%

Instrument: FINN 5  
Date Analyzed: 10/01/93

CAS Number	Compound Name	µg/Kg
24-87-3	Chloroethane	2.7 U
74-83-9	Bromomethane	2.7 U
75-01-4	Vinyl Chloride	2.7 U
5-00-3	Chloroethane	2.7 U
75-09-2	Methylene Chloride	2.7 U
67-64-1	Acetone	6.8 U
75-15-0	Carbon Disulfide	1.4 U
75-35-4	1,1-Dichloroethene	1.4 U
75-34-3	1,1-Dichloroethane	1.4 U
156-60-5	Trans-1,2-Dichloroethene	1.4 U
156-59-2	Cis-1,2-Dichloroethene	1.4 U
67-66-3	Chloroform	1.4 U
107-06-2	1,2-Dichloroethane	1.4 U
78-93-3	2-Butanone	6.8 U
71-55-6	1,1,1-Trichloroethane	1.4 U
56-23-5	Carbon Tetrachloride	1.4 U
108-05-4	Vinyl Acetate	1.4 U
75-27-4	Bromochloromethane	1.4 U
78-87-5	1,2-Dichloropropane	1.4 U
10061-01-5	cis-1,3-Dichloropropene	1.4 U
79-01-6	Trichloroethene	1.4 U
124-48-1	Dibromochloromethane	1.4 U
79-00-5	1,1,2-Trichloroethane	1.4 U
71-43-2	Benzene	1.4 U
10061-02-6	trans-1,3-Dichloropropene	1.4 U
110-75-8	2-Chloroethylvinylether	1.4 U
75-25-2	Bromoform	1.4 U
108-10-1	4-Methyl-2-Pentanone	6.8 U
591-78-6	2-Hexanone	6.8 U
127-18-4	Tetrachloroethene	1.4 U
79-34-5	1,1,2,2-Tetrachloroethane	1.4 U
108-88-3	Toluene	1.4 U
108-90-7	Chlorobenzene	1.4 U
100-41-4	Ethylbenzene	1.4 U
100-42-5	Styrene	1.4 U
1330-20-7	Total Xylenes	2.7 U
75-69-4	Trichlorofluoromethane	2.7 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.7 U

**Surrogate Recoveries**

d8-Toluene	100%
Bromofluorobenzene	102%
d4-1,2-Dichloroethane	117%

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398112

Lab ID: F065 H  
Matrix: Soil/Sediments

GC Report: F065 - WDOE  
Project: Ebey Slough

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

VTSR: 09/24/93

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F0651  
Matrix: Soils/Sediments

Data Release Authorized:   
Report: 10/04/93 MAC.Gat

Instrument: FINN 5  
Date Analyzed: 10/01/93

Amount Analyzed: 3.32 gm (Dry Weight)  
Percent Moisture: 35.9%

Sample: 398113

QC Report No: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93



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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398113

Lab ID: F0651  
Matrix: Soil/Sediments

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

QC Report: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

CAS Number	Compound Name	ug/Kg
74-87-3	Chloroethane	3.0 U
74-83-9	Bromomethane	3.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	Methylene Chloride	3.0 U
67-64-1	Acetone	7.5 U
75-15-0	Carbon Disulfide	1.5 U
75-35-4	1,1-Dichloroethane	1.5 U
75-34-3	1,1-Dichloroethane	1.5 U
156-60-5	Trans-1,2-Dichloroethane	1.5 U
156-59-2	Cis-1,2-Dichloroethane	1.5 U
67-66-3	Chloroform	1.5 U
107-06-2	1,2-Dichloroethane	1.5 U
78-93-3	2-Butanone	7.5 U
71-55-6	1,1,1-Trichloroethane	1.5 U
56-23-5	Carbon Tetrachloride	1.5 U
108-05-4	Vinyl Acetate	1.5 U
75-27-4	Bromochloromethane	1.5 U
78-87-5	1,2-Dichloropropane	1.5 U

Surrogate Recoveries	ug/Kg
o8-Toluene	107%
Bromofluorobenzene	90.7%
o4-1,2-Dichloroethane	115%

CAS Number	Compound Name	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	1.5 U
79-01-6	Trichloroethene	1.5 U
124-48-1	Dibromochloromethane	1.5 U
79-00-5	1,1,2-Trichloroethane	1.5 U
71-43-2	Benzene	1.5 U
10061-02-6	trans-1,3-Dichloropropene	1.5 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	1.5 U
108-10-1	4-Methyl-2-Pentanone	7.5 U
591-78-6	2-Hexanone	1.5 U
127-18-4	Tetrachloroethene	1.5 U
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U
108-88-3	Toluene	1.5 U
108-90-7	Chlorobenzene	1.5 U
100-41-4	Ethylbenzene	1.5 U
100-42-5	Styrene	1.5 U
1330-20-7	Total Xylenes	3.0 U
75-69-4	Trichlorofluoromethane	3.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	3.0 U

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA	-	-
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F065 J  
Matrix: Soils/Sediments

QC Report No: F065 - WDOE  
Project: Ebey Slough

Sample: 398114

Data Release Authorized:  
Report: 10/04/93 MAC Gat

VTSR: 09/24/93

Instrument: FINN 5  
Date Analyzed: 10/01/93

Amount Analyzed: 3.80 gm (Dry Weight)  
Percent Moisture: 26.3%

CAS Number	Compound Name	µg/Kg
74-87-3	Chloromethane	2.6 U
74-83-9	Bromomethane	2.6 U
75-01-4	Vinyl Chloride	2.6 U
75-00-3	Chloroethane	2.6 U
75-09-2	Methylene Chloride	2.6 U
67-64-1	Acetone	6.6 U
75-15-0	Carbon Disulfide	1.3 U
75-35-4	1,1-Dichloroethane	1.3 U
75-34-3	1,1-Dichloroethane	1.3 U
156-60-5	Trans-1,2-Dichloroethene	1.3 U
156-59-2	Cis-1,2-Dichloroethane	1.3 U
67-66-3	Chloroform	1.3 U
107-06-2	1,2-Dichloroethane	1.3 U
78-93-3	2-Butanone	6.6 U
71-55-6	1,1-Trichloroethane	1.3 U
56-23-5	Carbon Tetrachloride	1.3 U
108-05-4	Vinyl Acetate	1.3 U
75-27-4	Bromodichloromethane	1.3 U
78-87-5	1,2-Dichloropropane	1.3 U

**Surrogate Recoveries**

98-Toluene	98.7%
Bromofluorobenzene	95.0%
54-1,2-Dichloroethane	115%

CAS Number	Compound Name	µg/Kg
10061-01-5	Cis-1,3-Dichloropropene	1.3 U
79-01-6	Trichloroethene	1.3 U
124-48-1	Dibromochloromethane	1.3 U
79-00-5	1,1,2-Trichloroethane	1.3 U
71-43-2	Benzene	1.3 U
10061-02-6	trans-1,3-Dichloropropene	1.3 U
110-75-8	2-Chloroethylvinylether	1.3 U
75-25-2	Bromofarm	1.3 U
108-10-1	4-Methyl-2-Pentanone	6.6 U
591-78-6	2-Hexanone	6.6 U
127-18-4	<b>Tetrachloroethene</b>	<b>1.1 J</b>
79-34-5	1,1,2,2-Tetrachloroethane	1.3 U
108-88-3	Toluene	1.3 U
108-90-7	Chlorobenzene	1.3 U
100-41-4	Ethylbenzene	1.3 U
100-42-5	Styrene	1.3 U
1330-20-7	Total Xylenes	2.6 U
75-69-4	Trichlorofluoromethane	2.6 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.6 U

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398114

Lab ID: F065 J  
Matrix: Soil/Sediments

QC Report: F065 - WDOE  
Project: Ebey Slough

Data Release Authorized:  
Report: 10/05/93-MAC:Gat

VTSR: 09/24/93

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F065 K  
Matrix: Soils/Sediments


Sample: 398115

QC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

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Data Release Authorized:   
Report: 10/04/93 MAC.Gat

Instrument: FINN 5  
Date Analyzed: 10/01/93

Amount Analyzed: 3.28 gm (Dry Weight)  
Percent Moisture: 34.9%

CAS Number	Compound Name	µg/Kg
74-87-3	Chloromethane	3.1 U
74-83-9	Bromomethane	3.1 U
75-01-4	Vinyl Chloride	3.1 U
5-00-3	Chloroethane	3.1 U
75-09-2	Methylene Chloride	3.1 U
67-64-1	Acetone	7.6 U
75-15-0	Carbon Disulfide	1.5 U
75-35-4	1,1-Dichloroethane	1.5 U
75-34-3	1,1-Dichloroethane	1.5 U
156-60-5	trans-1,2-Dichloroethene	1.5 U
156-59-2	Cis-1,2-Dichloroethene	1.5 U
67-66-3	Chloroform	1.5 U
107-06-2	1,2-Dichloroethane	1.5 U
78-03-3	2-Butanone	7.6 U
71-55-6	1,1,1-Trichloroethane	1.5 U
56-23-5	Carbon Tetrachloride	1.5 U
106-05-4	Vinyl Acetate	1.5 U
75-27-4	Bromodichloromethane	1.5 U
78-87-5	1,2-Dichloropropane	1.5 U

Surrogate Recoveries	Recovery %
o8-Toluene	104%
Bromofluorobenzene	94.2%
o4-1,2-Dichloroethane	116%

CAS Number	Compound Name	µg/Kg
10061-01-5	cis-1,3-Dichloropropene	1.5 U
79-01-6	Trichloroethene	1.5 U
124-48-1	Dibromochloromethane	1.5 U
79-00-5	1,1,2-Trichloroethane	1.5 U
71-43-2	Benzene	1.5 U
10061-02-6	trans-1,3-Dichloropropene	1.5 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	1.5 U
108-10-1	4-Methyl-2-Pentanone	7.6 U
591-78-6	2-Hexanone	7.6 U
127-18-4	Tetrachloroethene	1.5 U
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U
108-88-3	Toluene	1.5 U
108-90-7	Chlorobenzene	1.5 U
100-41-4	Ethylbenzene	1.5 U
100-42-5	Styrene	1.5 U
1330-20-7	Total Xylenes	3.1 U
75-69-4	Trichlorofluoroethane	3.1 U
76-13-1	1,1,2-Trichlorotrifluoroethane	3.1 U




**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398115

Lab ID: F065 K  
Matrix: Soil/Sediments

QC Report: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F065 L  
Matrix: Soils/Sediments

Data Release Authorized:  
Report: 10/01/93 MAC Gat

Instrument: FINN 5  
Date Analyzed: 10/01/93

Amount Analyzed: 2.54 gm (Dry Weight)  
Percent Moisture: 49.3%

Sample: 398116

QC Report No: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93



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Lab ID: F065 L  
Matrix: Soil/Sediments

Data Release Authorized:  
Report: 10/05/93-MAC.Gat

QC Report: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

CAS Number	Compound Name	µg/Kg	CAS Number	Compound Name	µg/Kg
74-87-3	Chloromethane	3.9 U	10061-01-5	Cis-1,3-Dichloropropene	2.0 U
74-83-9	Bromomethane	3.9 U	79-071-6	Trichloroethene	2.0 U
75-01-4	Vinyl Chloride	3.9 U	124-48-1	Dibromochloromethane	2.0 U
5-00-3	Chloroethane	3.9 U	79-00-5	1,1,2-Trichloroethane	2.0 U
5-09-2	Methylene Chloride	3.9 U	71-43-2	Benzene	2.0 U
67-64-1	<b>Acetone</b>	<b>29</b>	10061-02-6	Trans-1,3-Dichloropropene	2.0 U
75-15-0	Carbon Disulfide	2.0 U	110-75-8	2-Chloroethylvinylether	2.0 U
75-35-4	1,1-Dichloroethene	2.0 U	75-25-2	Bromoform	2.0 U
75-34-3	1,1-Dichloroethane	2.0 U	108-10-1	4-Methyl-2-Pentanone	9.8 U
156-60-5	Trans-1,2-Dichloroethene	2.0 U	591-78-6	2-Hexanone	9.8 U
156-59-2	Cis-1,2-Dichloroethene	2.0 U	<b>127-18-4</b>	<b>Tetrahydrofuran</b>	<b>1.6 J</b>
67-66-3	Chloroform	2.0 U	79-34-5	1,1,2,2-Tetrachloroethane	2.0 U
107-06-2	1,2-Dichloroethane	2.0 U	108-88-3	Toluene	2.0 U
78-93-3	2-Butanone	9.8 U	108-90-7	Chlorobenzene	2.0 U
71-55-6	1,1,1-Trichloroethane	2.0 U	100-41-4	Ethylbenzene	2.0 U
56-23-5	Carbon Tetrachloride	2.0 U	100-42-5	Styrene	3.9 U
108-05-4	Vinyl Acetate	2.0 U	1330-20-7	Total Xylenes	3.9 U
5-27-4	Bromochloromethane	2.0 U	75-09-4	Trichlorofluoromethane	3.9 U
78-87-5	1,2-Dichloropropane	2.0 U	76-13-1	1,1,2-Trichlorotrifluoroethane	3.9 U

**Surrogate Recoveries**

d8-Toluene	108%
Bromofluorobenzene	84.7%
d4-1,2-Dichloroethane	113%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
1	No UNKNOWN pks > 10% IS peak height	VDA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F065 M  
Matrix: Soils/Sediments

GC Report No: F065 - WDOE  
Project: Ebey Slough

Sample: 398117

Data Release Authorized:   
Report: 10/04/93 MAC Gat

VTSR: 09/24/93

Instrument: FINN 5  
Date Analyzed: 10/01/93

Amount Analyzed: 2.94 gm (Dry Weight)  
Percent Moisture: 42.0%

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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398117

Lab ID: F065 M  
Matrix: Soil/Sediments

GC Report: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Data Release Authorized:   
Report: 10/05/93-MAC Gat

CAS Number	Compound Name	ug/Kg	CAS Number	Compound Name	ug/Kg
74-87-3	Chloromethane	3.4 U	10061-01-5	Cis-1,3-Dichloropropene	1.7 U
74-83-9	Bromomethane	3.4 U	79-01-6	Trichloroethene	1.7 U
75-01-4	Vinyl Chloride	3.4 U	124-48-1	Dibromochloromethane	1.7 U
75-00-3	Chloroethane	3.4 U	79-00-5	1,1,2-Trichloroethane	1.7 U
75-09-2	Methylene Chloride	3.4 U	71-43-2	Benzene	1.7 U
67-64-1	Acetone	20	10061-02-6	trans-1,3-Dichloropropene	1.7 U
75-15-0	Carbon Disulfide	1.7 U	110-75-8	2-Chloroethylvinylether	1.7 U
75-35-4	1,1-Dichloroethene	1.7 U	75-25-2	Bromoform	1.7 U
75-34-3	1,1-Dichloroethane	1.7 U	108-10-1	4-Methyl-2-Pentanone	8.5 U
156-60-5	trans-1,2-Dichloroethene	1.7 U	591-78-6	2-Hexanone	8.5 U
156-59-2	Cis-1,2-Dichloroethene	1.7 U	127-18-4	Tetrachloroethene	2.4
67-66-3	Chloroform	1.7 U	79-34-5	1,1,2,2-Tetrachloroethane	1.7 U
107-06-2	1,2-Dichloroethane	1.7 U	108-88-3	Toluene	1.7 U
78-93-3	2-Butanone	8.5 U	108-90-7	Chlorobenzene	1.7 U
71-55-6	1,1,1-Trichloroethane	1.7 U	100-41-4	Ethylbenzene	1.7 U
56-23-5	Carbon Tetrachloride	1.7 U	100-42-5	Styrene	1.7 U
108-05-4	Vinyl Acetate	1.7 U	1330-20-7	Total Xylenes	3.4 U
5-27-4	Bromochloromethane	1.7 U	5-69-4	Trichlorofluoromethane	3.4 U
78-87-5	1,2-Dichloropropane	1.7 U	76-13-1	1,1,2-Trichlorotrifluoroethane	3.4 U

**Surrogate Recoveries**

o8-Toluene	106%
Bromofluorobenzene	92.9%
d4-1,2-Dichloroethane	114%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F5MB1001  
Matrix: Soils/Sediments  
Data Release Authorized:   
Report: 10/05/93-MAC.Gat

Sample: Method Blank#2

QC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: NA

Instrument: FINN 5  
Date Analyzed: 10/01/93  
Amount Analyzed: 5.00 gm (Dry Weight Equivalent)  
Percent Moisture: NA

CAS Number	Compound Name	µg/Kg
74-87-3	Chloromethane	2.0U
74-83-9	Bromomethane	2.0U
5-01-4	Vinyl Chloride	2.0U
5-00-3	Chloroethane	2.0U
5-09-2	Methylene Chloride	2.0U
67-64-1	Acetone	5.0U
5-15-0	Carbon Disulfide	1.0U
75-35-4	1,1-Dichloroethene	1.0U
75-34-3	1,1-Dichloroethane	1.0U
156-60-5	Trans-1,2-Dichloroethene	1.0U
156-59-2	Cis-1,2-Dichloroethene	1.0U
57-59-3	Chloroform	1.0U
107-06-2	1,2-Dichloroethane	1.0U
74-23-3	2-Butanone	5.0U
71-55-6	1,1,1-Trichloroethane	1.0U
50-23-5	Carbon Tetrachloride	1.0U
108-05-4	Vinyl Acetate	1.0U
5-27-4	Bromochloromethane	1.0U
79-87-5	1,2-Dichloropropane	1.0U

**Surrogate Recoveries**

98-Toluene	101%
Bromofluorobenzene	96.9%
d4-1,2-Dichloroethane	108%



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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: Method Blank#2

Lab ID: F5MB1001  
Matrix: Soil/Sediments

QC Report: F065 - WDOE  
Project: Ebey Slough  
VTSR: NA

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
Volatiles by Purge & Trap GC/MS

Lab ID: F5MB0930  
Matrix: Soils/Sediments

Data Release Authorized:   
Report: 10/04/93-MAC.Gat

QC Report No. F665 - WDOE  
Project: Ebey Slough

VTSR: NA

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Sample No: Method Blank

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: Method Blank

Lab ID: F5MB0930  
Matrix: Soil/Sediments

Data Release Authorized:   
Report: 10/05/93-MAC.Gat

QC Report: F065 - WDOE  
Project: Ebey Slough  
VTSR: NA

Amount Analyzed: 5.00 gm (Dry Weight Equivalent)  
Percent Moisture: NA

CAS Number	Compound Name	ug/Kg	CAS Number	Compound Name	ug/Kg
74-87-3	Chloromethane	2.0 U	10061-01-5	cis-1,3-Dichloropropene	1.0 U
4-83-9	Bromomethane	2.0 U	79-01-6	Trichloroethene	1.0 U
5-01-4	Vinyl Chloride	2.0 U	124-48-1	Chloromethane	1.0 U
5-00-3	Chloroethane	2.0 U	79-00-5	1,1,2-Trichloroethane	1.0 U
5-09-2	Methylene Chloride	2.0 U	71-43-2	Benzene	1.0 U
67-64-1	Acetone	5.0 U	10061-02-6	trans-1,3-Dichloropropene	1.0 U
5-15-0	Carbon Disulfide	1.0 U	110-75-8	2-Chloroethylvinylether	1.0 U
5-35-4	1,1-Dichloroethane	1.0 U	75-25-2	Ethanol	1.0 U
75-34-3	1,1-Dichloroethene	1.0 U	108-10-1	4-Methyl-2-Pentanone	5.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U	591-78-6	2-Hexanone	5.0 U
67-66-3	Chloroform	1.0 U	127-18-4	Tetrachloroethene	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U	79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
78-93-3	2-Butanone	5.0 U	108-88-3	Toluene	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U	108-90-7	Chlorobenzene	1.0 U
108-05-4	Carbon Tetrachloride	1.0 U	100-41-4	Ethylbenzene	1.0 U
5-27-4	Bromoacetylchloride	1.0 U	100-42-5	Styrene	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U	1330-20-7	Total Xylenes	2.0 U
			75-69-4	Trichlorofluoromethane	2.0 U
			76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U

Surrogate Recoveries	100%
o8-Toluene	100%
Bromofluorobenzene	92.8%
o4-1,2-Dichloroethane	103%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/kg)
1	No UNKNOWN pks > 10% IS peak height	VOA		
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**ORGANICS ANALYSIS DATA SHEET**  
**Volatiles by Purge & Trap GC/MS**

Lab ID: F065 GMSD  
 Matrix: Soils/Sediments  
 Data Release Authorized:   
 Report: 10/04/93 MAC/Gat

Sample: 398111  
 Matrix Spike Dup.  
 QC Report No: F065 - WDOE  
 Project: Ebey Slough  
 VTSR: 09/24/93

Instrument: FINN 5  
 Date Analyzed: 10/01/93  
 Amount Analyzed: 3.73 gm (Dry Weight)  
 Percent Moisture: 26.7%

CAS Number	Chloromethane	Bromomethane	Vinyl Chloride	Chloroethane	Methylene Chloride	Acetone	Carbon Disulfide	1,1-Dichloroethane	1,1-Dichloroethane	Trans-1,2-Dichloroethane	Cis-1,2-Dichloroethane	Chloroform	1,2-Dichloroethane	2-Butanone	1,1,1-Trichloroethane	Carbon Tetrachloride	Vinyl Acetate	Bromodichloromethane	1,2-Dichloropropane
74-87-3	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	6.7 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	6.7 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
74-83-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-01-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-00-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-09-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67-64-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-15-0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-35-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-34-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
156-60-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
156-59-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67-66-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107-06-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78-93-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71-55-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56-23-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108-05-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-27-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78-87-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Surrogate Recoveries**

d8-Toluene	103%
Bromofluorobenzene	99.4%
d4-1,2-Dichloroethane	113%



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**ORGANICS ANALYSIS DATA SHEET**  
**Volatiles by Purge & Trap GC/MS**

Lab ID: F065 GMS  
 Matrix: Soils/Sediments  
 Data Release Authorized:   
 Report: 10/04/93 MAC/Gat

Sample: 398111  
 Matrix Spike  
 QC Report No: F065 - WDOE  
 Project: Ebey Slough  
 VTSR: 09/24/93

Instrument: FINN 5  
 Date Analyzed: 10/01/93  
 Amount Analyzed: 3.80 gm (Dry Weight)  
 Percent Moisture: 26.7%

CAS Number	Chloromethane	Bromomethane	Vinyl Chloride	Chloroethane	Methylene Chloride	Acetone	Carbon Disulfide	1,1-Dichloroethane	1,1-Dichloroethane	Trans-1,2-Dichloroethane	Cis-1,2-Dichloroethane	Chloroform	1,2-Dichloroethane	2-Butanone	1,1,1-Trichloroethane	Carbon Tetrachloride	Vinyl Acetate	Bromodichloromethane	1,2-Dichloropropane
74-87-3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	6.6 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	6.6 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
74-83-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-01-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-00-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-09-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67-64-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-15-0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-35-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-34-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
156-60-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
156-59-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67-66-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107-06-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78-93-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71-55-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56-23-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108-05-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-27-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78-87-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Surrogate Recoveries**

d8-Toluene	100%
Bromofluorobenzene	96.8%
d4-1,2-Dichloroethane	113%







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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 A  
Matrix: Soil/Sediment

Date Analyzed: 10/04/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Date Extracted: 10/04/93  
Final Extract Volume: 2.0 ml  
Percent Moisture: 31.0%  
pH: 7.3  
Dilution: 1:1

Sample No: 398105

QC Report No: F065 - WDOE  
Project: Ebey Slough

Lab ID: F065 A  
Matrix: Soil/Sediment

Sample Wt: 25.2 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 31.0%  
pH: 7.3  
Dilution: 1:1

Sample No: 398105

QC Report No: F065 - WDOE  
Project: Ebey Slough

Lab ID: F065 A  
Matrix: Soil/Sediment

Sample Wt: 25.2 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 31.0%  
pH: 7.3  
Dilution: 1:1

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398105

QC Report No: F065 - WDOE  
Project No: Ebey Slough

Lab ID: F065 A  
Matrix: Soil/Sediment

Date Release Authorized: 10/21/93 MAC:GAT

Report: 10/21/93 MAC:GAT

QC Report No: F065 - WDOE  
Project No: Ebey Slough

Lab ID: F065 A  
Matrix: Soil/Sediment

Date Release Authorized: 10/21/93 MAC:GAT

CAS Number	Compound Name	Estimated Concentration (µg/Kg)
108-95-2	Phenol	160 U
111-44-4	bis(2-Chloroethyl)Ether	160 U
95-57-8	2-Chlorophenol	160 U
541-73-1	1,3-Dichlorobenzene	160 U
106-46-7	1,4-Dichlorobenzene	160 U
100-51-6	Benzyl Alcohol	400 U
95-50-1	1,2-Dichlorobenzene	160 U
95-48-7	2-Methylphenol	160 U
108-60-1	2,2-Oxybis(1-Chloropropane)	160 U
106-44-5	4-Methylphenol	160 U
62-164-7	N-Nitroso-Di-n-Propylamine	160 U
67-72-1	Hexachloroethane	160 U
98-95-3	Nitrobenzene	160 U
78-59-1	Isophorone	160 U
88-75-5	2-Nitrophenol	400 U
105-67-9	2,4-Dimethylphenol	160 U
65-85-0	Benzoic Acid	800 U
111-91-1	bis(2-Chloroethoxy)Methane	160 U
120-83-2	2,4-Dichlorophenol	240 U
120-82-1	1,2,4-Trichlorobenzene	160 U
91-20-3	Naphthalene	160 U
106-47-8	4-Chloroaniline	240 U
87-58-3	Hexachlorobutadiene	160 U
59-50-7	4-Chloro-3-Methylphenol	160 U
91-57-6	2-Methylnaphthalene	160 U
77-47-4	Hexachlorocyclopentadiene	400 U
88-06-2	2,4,6-Trichlorophenol	400 U
95-95-4	2,4,5-Trichlorophenol	400 U
91-58-7	2-Chloronaphthalene	160 U
86-24-4	2-Nitroaniline	400 U
131-11-3	Dimethyl Phthalate	160 U
208-99-8	Acenaphthylene	160 U
99-09-2	3-Nitroaniline	400 U

**Base/neutral surrogate recoveries**

45-Nitrobenzene	75.2%
2-Fluorobiphenyl	71.0%
d1,d-p-Terphenyl	58.2%
d4:1,2-Dichlorobenzene	63.2%

CAS Number	Compound Name	µg/Kg
83-32-9	Acenaphthene	160 U
51-28-5	2,4-Dinitrophenol	800 U
100-02-7	4-Nitrophenol	800 U
132-64-9	Dibenzofuran	160 U
806-20-2	2,8-Dinitrotoluene	400 U
121-14-2	2,4-Dinitrotoluene	400 U
84-65-2	Dibenzophthalate	400 U
7005-72-3	4-Chlorophenylphenylether	160 U
86-73-7	Fluorene	160 U
100-01-6	4-Nitroaniline	400 U
534-52-1	4,6-Dinitro-2-Methylphenol	800 U
86-30-6	N-Nitrosodiphenylamine(1)	160 U
101-55-3	4-Bromodiphenylphenylether	160 U
118-74-1	Hexachlorobenzene	160 U
87-86-5	Pentachlorophenol	400 U
85-01-8	Phenanthrene	160 U
86-74-8	Catbazole	160 U
120-12-7	Anthracene	160 U
84-74-2	Dih-Burylphthalate	160 U
206-44-0	Fluoranthene	160 U
129-00-0	Pyrene	160 U
85-68-7	Burylbisylphthalate	160 U
91-94-1	3,3'-Dichlorobenzidine	400 U
56-55-3	Benzo(a)Anthracene	160 U
117-81-7	bis(2-Ethylhexyl)Phthalate	160 U
218-01-9	Chrysene	160 U
117-84-0	Dih-Octyl Phthalate	160 U
205-99-2	Benzo(b)Fluoranthene	160 U
207-08-9	Benzo(k)Fluoranthene	160 U
50-32-8	Benzo(a)Pyrene	160 U
193-39-5	Indeno(1,2,3-cd)Pyrene	160 U
63-70-3	Dibenz(a,h)Anthracene	160 U
191-24-2	Benzo(ghi)Perylene	160 U

**Acid surrogate recoveries**

d5-Phenol	72.0%
2-Fluorophenol	73.5%
2,4,6-Tribromophenol	65.4%
d4:2-Chlorophenol	72.5%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	<del>79-24-6 Ethane-1,1,2,2-Tetrachloro-4,4-dimethyl-3,3-dibromide</del>	<del>ABN</del>	<del>1214</del>	<del>330 J M</del>
2	Tetradecanoic Acid (bp m/e 73)	-	1267	210 J
3	Unknown (bp m/e 57)	-	1348	1,200 J M
4	Unknown Hydrocarbon (bp m/e 55)	-	1361	970 J M
5	Hexadecanoic Acid (bp m/e 73)	-	1415	230 J
6	Unknown (bp m/e 79)	-	1481	520 J M
7	Unknown Hydrocarbon (bp m/e 55)	-	1588	170 J
8	Unknown Hydrocarbon (bp m/e 79)	-	1690	340 J
9	Unknown Hydrocarbon (bp m/e 57)	-	1797	220 J
10	Unknown Hydrocarbon (bp m/e 83)	-	1801	180 J
11	Unknown Hydrocarbon (bp m/e 69)	-	1868	310 J
12	Unknown Hydrocarbon (bp m/e 57)	-	1896	220 J
13	Unknown Hydrocarbon (bp m/e 57)	-	1967	280 J
14	Unknown Hydrocarbon (bp m/e 57)	-	2028	510 J
15	Cholest-5-En-3-Oil(3.BETA.)-(bp m/e 43)	-	2134	490 J
16	Sterol isomer (bp m/e 43)	-	2145	240 J
17	Unknown (bp m/e 69)	-	2177	390 J M
18	Unknown Hydrocarbon (bp m/e 95)	-	2201	230 J M
19	Sterol isomer (bp m/e 69)	-	2223	180 J
20	Unknown (bp m/e 124)	-		
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 B  
Matrix: Soil/Sediment

Date Release Authorized: 10/21/93 MAC:GAT

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Sample No: 398106

QC Report No: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

Sample Wt: 22.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 38.0%  
pH: 7.0  
Dilution: 1:1

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398106

Lab ID: F065 B  
Matrix: Soil/Sediment

QC Report No: F065 - WDOE  
Project No: Ebey Slough

Date Release Authorized: 10/21/93 MAC:GAT

VTSR: 09/24/93

CAS Number	Compound Name	μg/Kg
108-95-2	Phenol	180 U
111-44-4	bis(2-Chloroethyl)Ether	180 U
98-57-8	2-Chlorophenol	180 U
541-73-1	1,3-Dichlorobenzene	180 U
106-46-7	1,4-Dichlorobenzene	180 U
100-51-6	Benzyl Alcohol	450 U
95-50-1	1,2-Dichlorobenzene	180 U
95-48-7	2-Methylphenol	180 U
108-60-1	2,2-Oxybis(1-Chloropropane)	180 U
108-44-5	4-Methylphenol	180 U
627-64-7	N-Nitroso-Di-n-Propylamine	180 U
67-72-1	Hexachlorocyclohexane	180 U
98-95-3	Nitrobenzene	180 U
78-59-1	Isophorone	180 U
98-75-5	2-Nitrophenol	450 U
105-67-9	2,4-Dimethylphenol	180 U
65-85-0	Benzoic Acid	800 U
111-91-1	bis(2-Chloroethoxy)Methane	180 U
120-83-2	2,4-Dichlorophenol	270 U
120-82-1	1,2,4-Trichlorophenol	180 U
91-20-3	Naphthalene	180 U
106-47-8	4-Chloroaniline	270 U
87-68-3	Hexachlorobutadiene	180 U
59-50-7	4-Chloro-3-Methylphenol	180 U
91-57-6	2-Methylnaphthalene	180 U
77-47-4	Hexachlorocyclopentadiene	450 U
88-06-2	2,4,6-Trichlorophenol	450 U
95-95-4	2,4,5-Trichlorophenol	450 U
91-58-7	2-Chloronaphthalene	180 U
88-74-4	2-Nitroaniline	450 U
131-11-3	Dimethyl Phthalate	180 U
208-96-8	Acenaphthylene	180 U
99-09-2	3-Nitroaniline	450 U

Base/neutral surrogate recoveries	%
65-Nitrobenzene	73.9%
2-Fluorobiphenyl	69.3%
614-p-Terphenyl	58.1%
64-1,2-Dichlorobenzene	62.2%

CAS Number	Compound Name	μg/Kg
83-32-9	Acenaphthene	180 U
51-28-5	2,4-Dinitrophenol	890 U
100-02-7	4-Nitrophenol	890 U
132-64-9	Dibenzofuran	180 U
606-20-2	2,6-Dihydroquinoline	450 U
121-14-2	2,4-Dihydroquinoline	450 U
84-66-2	Diethylphthalate	450 U
7065-72-3	4-Chlorophenyl-phenylether	180 U
86-73-7	Fluorene	180 U
100-01-6	4-Nitroaniline	450 U
534-62-1	4,6-Dihydro-2-Methylphenol	890 U
86-30-6	N-Nitrosodiphenylamine(1)	180 U
101-55-3	4-Bromophenyl-phenylether	180 U
118-74-1	Hexachlorobenzene	180 U
87-86-5	Pentachlorophenol	450 U
85-01-8	Phenanthrene	180 U
86-74-8	Carbazole	180 U
120-12-7	Anthracene	180 U
84-74-2	Di-n-Butylphthalate	180 U
206-44-0	Fluoranthene	180 U
129-00-0	Pyrene	180 U
85-68-7	Bis(benzyl)phthalate	180 U
91-94-1	3,3-Dichlorobenzidine	450 U
56-55-3	Benz(a)Anthracene	180 U
117-81-7	bis(2-Ethylhexyl)Phthalate	180 U
218-01-9	Chrysene	180 U
117-84-0	Di-n-Octyl Phthalate	180 U
205-99-2	Benz(b)Fluoranthene	180 U
207-08-9	Benz(a)Fluoranthene	180 U
50-32-8	Benzofluoranthene	180 U
193-39-5	Benzofluoranthene	180 U
53-70-3	Dibenz(a,h)Anthracene	180 U
191-24-2	Benzofluoranthene	180 U

Acid surrogate recoveries	%
d5-Phenol	71.3%
2-Fluorophenol	73.4%
2,4,6-Tribromophenol	66.6%
d4-2-Chlorophenol	70.4%

(1) Cannot be separated from diphenylamine

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (μg/Kg)
544-63-8	Tetradecanoic Acid (bp m/e 73)	ABN	1213	250 JN
-	C10H18 isomer (bp m/e 68)	-	1269	300 JN
-	Unknown Hydrocarbon (bp m/e 55)	-	1347	1,300 JN
57-10-3	Hexadecanoic Acid (bp m/e 73)	-	1359	770 JN
-	Unknown Hydrocarbon (bp m/e 95)	-	1452	350 JN
-	Unknown Hydrocarbon (bp m/e 69)	-	1476	250 J
-	Unknown Hydrocarbon (bp m/e 55)	-	1480	280 J
-	Unknown Hydrocarbon (bp m/e 57)	-	1689	520 J
-	Unknown Hydrocarbon (bp m/e 43)	-	1795	400 J
-	Unknown Hydrocarbon (bp m/e 57)	-	1868	470 J
-	Unknown Hydrocarbon (bp m/e 57)	-	1895	360 J
-	Unknown Hydrocarbon (bp m/e 57)	-	1966	350 J
-	Unknown (bp m/e 57)	-	1997	250 J
-	Unknown (bp m/e 55)	-	2014	290 J
57-88-5	Cholest-5-En-3-Oil(3, BEIA)- (bp m/e 43)	-	2027	410 JN
-	Sterol isomer (bp m/e 43)	-	2134	530 JN
-	Unknown (bp m/e 206)	-	2143	560 J
-	Unknown (bp m/e 95)	-	2176	500 J
-	Unknown (bp m/e 55)	-	2200	320 J
-	Unknown (bp m/e 124)	-	2224	260 J



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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS  
Sample ID: F065 C  
Matrix: Soil/Sediment

Date Analyzed: 10/04/93  
Date Extracted: 10/08/93  
Instrument: FINN 2  
GPC Clean-up: Yes

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Sample No: 398107  
Lab ID: F065 C  
Matrix: Soil/Sediment  
Data Release Authorized: 10/21/93 MAC:GAT

Report: 10/21/93 MAC:GAT

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
108-95-2	Phenol			180 U
111-44-4	bis(2-Chloroethyl)Ether			180 U
95-57-8	2-Chlorophenol			180 U
51-73-1	1,3-Dichlorobenzene			180 U
106-46-7	1,4-Dichlorobenzene			180 U
100-51-6	Benzyl Alcohol			440 U
95-50-1	1,2-Dichlorobenzene			180 U
95-48-7	2-Methylphenol			180 U
108-60-1	2,2-Oxybis(1-Chloropropane)			180 U
621-64-7	4-Methylphenol			180 U
67-72-1	Hexachloroethane			180 U
98-95-3	Nitrobenzene			180 U
78-59-1	Isophorone			180 U
88-75-5	2-Nitrophenol			440 U
105-67-9	2,4-Dimethylphenol			180 U
65-85-0	Benzoic Acid			880 U
1171-91-1	bis(2-Chloroethoxy)Methane			180 U
120-83-2	2,4-Dichlorophenol			260 U
120-82-1	1,2,4-Trichlorobenzene			180 U
91-20-3	Naphthalene			180 U
108-47-8	4-Chloroaniline			260 U
97-68-3	Hexachlorobutadiene			180 U
59-50-7	4-Chloro-3-Methylphenol			180 U
91-57-6	2-Methylnaphthalene			180 U
77-47-4	Hexachlorocyclopentadiene			440 U
88-06-2	2,4,6-Trichlorophenol			440 U
95-95-4	2,4,5-Trichlorophenol			180 U
91-59-7	2-Chloronaphthalene			440 U
88-74-4	2-Nitroaniline			180 U
1311-11-3	Dimethyl Phthalate			180 U
208-96-8	Acenaphthylene			180 U
99-09-2	3-Nitroaniline			440 U

**Base/neutral surrogate recoveries**

d5-Nitrobenzene	47.8%
2-Fluorobiphenyl	49.8%
d14-p-Terphenyl	46.4%
d4-1,2-Dichlorobenzene	39.3%

**Acid surrogate recoveries**

d5-Phenol	48.3%
2-Fluorobiphenol	48.8%
2,4,6-Trichlorophenol	56.5%
d4-2-Chlorophenol	46.1%



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**ORGANICS ANALYSIS DATA SHEET**  
Tentatively Identified Compounds  
Sample No: 398107  
Lab ID: F065 C  
Matrix: Soil/Sediment

Date Analyzed: 10/04/93  
Date Extracted: 10/08/93  
Instrument: FINN 2  
GPC Clean-up: Yes

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Sample No: 398107  
Lab ID: F065 C  
Matrix: Soil/Sediment  
Data Release Authorized: 10/21/93 MAC:GAT

Report: 10/21/93 MAC:GAT

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/kg)
83-32-9	Acenaphthene			180 U
51-28-5	2,4-Dinitrophenol			880 U
100-02-7	4-Nitrophenol			880 U
132-64-9	Dibenzofuran			180 U
605-20-2	2,6-Dihydroxynaphthalene			440 U
121-14-2	2,4-Dinitrotoluene			440 U
84-66-2	Diethylphthalate			440 U
7005-72-3	4-Chlorophenylether			180 U
86-73-7	Fluorene			180 U
100-01-6	4-Nitroaniline			440 U
534-52-1	4,6-Dinitro-2-Methylphenol			880 U
86-30-6	N-Nitrosodiphenylamine(I)			180 U
101-55-3	4-Bromodiphenylether			180 U
118-74-1	Hexachlorobenzene			180 U
87-86-5	Pentachlorophenol			440 U
85-01-8	Phenanthrene			180 U
86-74-8	Carbazole			180 U
120-12-7	Anthracene			180 U
84-74-2	Di-n-Butylphthalate			180 U
206-44-0	Fluoranthene			180 U
129-00-0	Pyrene			180 U
85-68-7	BUTYLBENZYLPHthalate			180 U
91-94-1	3,3-Dichlorobenzidine			440 U
56-55-3	Benz(a)Anthracene			180 U
117-81-7	bis(2-Ethylhexyl)Phthalate			180 U
218-01-9	Chrysene			180 U
117-84-0	Di-n-Clsty Phthalate			180 U
205-99-2	Benz(b)Fluoranthene			180 U
207-08-9	Benz(k)Fluoranthene			180 U
50-32-8	Benz(a)Pyrene			180 U
193-39-5	Inden(1,2,3-cd)Pyrene			180 U
53-70-3	Dibenzo(a,h)Anthracene			180 U
191-24-2	Benz(g,h,i)Perylene			180 U

(1) Cannot be separated from diphenylamine



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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 D  
Matrix: Soil/Sediment

Date Release Authorized: 10/21/93  
Report: 10/21/93 MAC:GAT

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Sample No: 398108

GC Report No: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

Sample Wt: 28.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 20.9%  
pH: 7.1  
Dilution: 1:1



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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398108

Lab ID: F065 D  
Matrix: Soil/Sediment

Data Release Authorized: 10/21/93  
Report: 10/21/93 MAC:GAT

GC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

10/21/93 MAC:GAT

CAS Number	Compound Name	Estimated Concentration (ug/Kg)
108-95-2	Phenol	140 U
111-44-4	bis(2-Chloroethyl)Ether	140 U
95-57-8	2-Chlorophenol	140 U
5417-73-1	1,3-Dichlorobenzene	140 U
108-46-7	1,4-Dichlorobenzene	140 U
100-51-6	Benzyl Alcohol	350 U
95-50-1	1,2-Dichlorobenzene	140 U
95-48-7	2-Methylphenol	140 U
108-60-1	2,2-Oxybis(1-Chloropropane)	140 U
69164-7	4-Methylphenol	140 U
107-72-1	N-Nitroso-Di-n-Propylamine	140 U
98-95-3	Hexachloroethane	140 U
78-59-1	Isophorone	140 U
88-75-5	2-Nitrophenol	350 U
105-67-9	2,4-Dimethylphenol	140 U
65-85-0	Benzoic Acid	700 U
111-91-1	bis(2-Chloroethoxy)Methane	140 U
120-83-2	2,4-Dichlorophenol	210 U
120-82-1	1,2,4-Trichlorobenzene	140 U
91-20-3	Naphthalene	140 U
106-47-8	4-Chloroaniline	210 U
87-58-3	Hexachlorobutadiene	140 U
59-50-7	4-Chloro-3-Methylphenol	140 U
91-57-6	2-Methylnaphthalene	140 U
77-47-4	Hexachlorocyclopentadiene	350 U
88-06-2	2,4,6-Trichlorophenol	350 U
95-95-4	2,4,5-Trichlorophenol	140 U
91-58-7	2-Chloronaphthalene	140 U
88-74-4	2-Nitroaniline	350 U
131-11-3	Dimethyl Phthalate	140 U
208-96-8	Acenaphthylene	140 U
69-09-2	3-Nitroaniline	350 U

Base/neutral surrogate recoveries	Percent
d5-Nitrobenzene	73.8%
2-Fluorobiphenyl	73.4%
d1,4-p-Terphenyl	65.6%
d4,1,2-Dichlorobenzene	64.9%

CAS Number	Compound Name	Estimated Concentration (ug/Kg)
83-32-9	Acenaphthene	140 U
51-28-5	2,4-Dinitrophenol	700 U
100-02-7	4-Nitrophenol	700 U
132-64-9	Dibenzofuran	140 U
606-20-2	2,6-Dinitrotoluene	350 U
121-14-2	2,4-Dinitrotoluene	350 U
84-66-2	Diethylphthalate	350 U
7005-72-3	4-Chlorophenylphenylether	140 U
86-73-7	Fluorene	140 U
100-01-6	4-Nitroaniline	350 U
534-52-1	4,6-Dinitro-2-Methylphenol	700 U
86-30-6	N-Nitrosodiphenylamine(1)	140 U
101-55-3	4-Bromodiphenylmethylether	140 U
118-74-1	Hexachlorobenzene	140 U
87-86-5	Pentachlorophenol	350 U
85-01-8	Phenanthrene	140 U
86-74-8	Carbazole	140 U
120-12-7	Anthracene	140 U
84-74-2	Di-n-Butylphthalate	140 U
206-44-0	Fluoranthene	140 U
129-00-0	Pyrene	140 U
85-68-7	Butylbenzylphthalate	140 U
91-94-1	3,3-Dichlorobenzidine	350 U
56-55-3	Benzo(a)Anthracene	140 U
117-81-7	bis(2-Ethylhexyl)Phthalate	140 U
218-01-9	Chrysene	140 U
117-84-0	Di-n-Octyl Phthalate	140 U
205-99-2	Benzo(b)Fluoranthene	140 U
207-08-9	Benzo(k)Fluoranthene	140 U
90-32-8	Benzo(a)Pyrene	140 U
193-39-5	Indeno(1,2,3-cd)Pyrene	140 U
53-70-3	Dibenz(a,h)Anthracene	140 U
191-24-2	Benzo(ghi)Perylene	140 U

Acid surrogate recoveries	Percent
d5-Phenol	71.2%
2-Fluorophenol	74.1%
2,4,6-Tribromophenol	70.6%
d4,2-Chlorophenol	72.6%

(1) Cannot be separated from dibenzylamine



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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS  
Sample ID: F065 E  
Matrix: Soil/Sediment

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS  
Sample ID: F065 E  
Matrix: Soil/Sediment

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398109

Lab ID: F065 E  
Matrix: Soil/Sediment

QC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 30.1 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 21.2%  
pH: 7.3  
Dilution: 1:1

Date Analyzed: 10/04/93  
Date Analyzed: 10/09/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Data Release Authorized:   
Report: 10/21/93 MAC.GAT

Data Release Authorized:   
Report: 10/21/93 MAC.GAT

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

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QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/Kg)	KF
1	1,2,4-Trichlorobenzene	100	977	140 JW	KF
2	Unknown Hydrocarbon (bp. m/e 55)		1345		KF
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

CAS Number	Compound Name	µg/Kg
83-32-9	Acenaphthene	130 U
51-28-5	2,4-Dinitrophenol	670 U
100-02-7	4-Nitrophenol	670 U
132-64-9	Dibenzofuran	130 U
606-20-2	2,6-Dinitrotoluene	330 U
121-14-2	2,4-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	130 U
86-73-7	Fluorene	130 U
100-01-6	4-Nitroaniline	330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670 U
86-30-6	N-Nitrosodiphenylamine(1)	130 U
101-55-3	4-Bromophenyl-phenylether	130 U
118-74-1	Hexachlorobenzene	130 U
87-86-5	Pentachlorophenol	330 U
85-01-8	Phenanthrene	130 U
86-74-8	Carbazole	130 U
120-12-7	Anthracene	130 U
84-74-2	Din-Butylphthalate	130 U
206-44-0	Fluoranthene	130 U
129-00-0	Pyrene	130 U
85-68-7	Butybenzophthalate	130 U
91-94-1	3,3-Dichlorobenzidine	130 U
56-55-3	Benz(a)Anthracene	130 U
117-81-7	bis(2-Ethylhexyl)Phthalate	130 U
218-01-9	Chrysene	130 U
117-84-0	Din-Octyl Phthalate	130 U
205-99-2	Benz(b)Fluoranthene	130 U
207-08-9	Benz(k)Fluoranthene	130 U
50-32-8	Benz(a)Pyrene	130 U
193-39-5	Indeno(1,2,3-cd)Pyrene	130 U
53-70-3	Dibenz(a,h)Anthracene	130 U
191-24-2	Benz(ghi)Perylene	130 U
(1) Cannot be separated from aphenylamine		

**Acid surrogate recoveries**

d5-Phenol	70.9%
2-Fluorophenol	71.2%
2,4,6-Trimorphenol	73.2%
d4-2-Chlorophenol	72.1%

**Base/neutral surrogate recoveries**

d5-Nitrobenzene	74.8%
2-Fluorobiphenyl	72.1%
d14-p-Terphenyl	68.7%
d4-1,2-Dichlorobenzene	62.9%





**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398110

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Lab ID: F065 F  
Matrix: Soil/Sediment

Data Release Authorized:   
Report: 10/21/93 MAC:GAT



**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by GC/MS**

Sample ID: F065 F  
Matrix: Soil/Sediment

Data Release Authorized:   
Report: 10/21/93 MAC:GAT

Sample No: 398110  
QC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93  
Sample Wt: 21.9 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 37.3%  
pH: 7.2  
Dilution: 1:1

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Instrument: FINN 2  
GPC Clean-up: Yes

CAS Number	Compound Name	μg/Kg
83-32-9	Acenaphthene	180 U
51-28-5	2,4-Dinitrophenol	910 U
100-02-7	4-Nitrophenol	910 U
132-64-9	Dibenzofuran	180 U
606-20-2	2,6-Dinitrotoluene	460 U
121-14-2	2,4-Dinitrotoluene	460 U
84-66-2	Diethylphthalate	460 U
7005-72-3	4-Chlorophenyl-phenylether	180 U
86-73-7	Fluorene	180 U
100-01-6	4-Nitroaniline	460 U
534-52-1	4,5-Dinitro-2-Methylphenol	910 U
86-30-6	N-Nitrosodiphenylamine(1)	180 U
101-55-3	4-Bromophenyl-phenylether	180 U
118-74-1	Hexachlorobenzene	180 U
87-86-5	Pentachlorophenol	460 U
85-01-8	Phenanthrene	180 U
86-74-8	Carbazole	180 U
120-12-7	Anthracene	180 U
84-74-2	Di-n-Butylphthalate	180 U
206-44-0	Fluoranthene	180 U
129-00-0	Pyrene	180 U
85-68-7	Butylnonylphthalate	180 U
91-94-1	3,3-Dichlorobenzidine	460 U
56-55-3	Benzo(a)Anthracene	180 U
117-81-7	Is(2-Ethylhexyl)Phthalate	180 U
218-01-9	Chrysene	180 U
117-84-0	Di-n-Octyl Phthalate	180 U
205-99-2	Benzo(b)Fluoranthene	180 U
207-08-9	Benzo(k)Fluoranthene	180 U
50-32-8	Benzo(a)Pyrene	180 U
193-39-5	Indeno(1,2,3-cd)Pyrene	180 U
53-70-3	Dibenzo(a,h)Anthracene	180 U
191-24-2	Benzo(g,h)Perylene	180 U

(1) Cannot be associated from diphenylamine

Acid surrogate recoveries	%
d5-Phenol	54.7%
2-Fluorophenol	55.6%
2,4,6-Tribromophenol	58.8%
2,4-Dichlorophenol	52.7%

CAS Number	Compound Name	μg/Kg
108-95-2	Phenol	180 J
111-44-4	bis(2-Chloroethyl)Ether	180 U
95-57-8	2-Chlorophenol	180 U
541-73-1	1,3-Dichlorobenzene	180 U
106-46-7	1,4-Dichlorobenzene	180 U
100-51-6	Benzyl Alcohol	460 U
95-50-1	1,2-Dichlorobenzene	180 U
95-48-7	2-Methylphenol	180 U
108-60-1	2,2'-Oxybis(1-Chloroethane)	180 U
106-44-5	4-Methylphenol	180 U
621-64-7	N-Nitroso-Di-n-Propylamine	180 U
67-72-1	Hexachloroethane	180 U
98-95-3	Nitrobenzene	180 U
78-59-1	Isophorone	180 U
88-75-5	2-Nitrophenol	460 U
106-67-9	2,4-Dimethylphenol	180 U
65-85-0	Benzoic Acid	910 U
111-91-1	bis(2-Chloroethoxy)Methane	180 U
120-83-2	2,4-Dichlorophenol	270 U
120-82-1	1,2,4-Trichlorobenzene	180 U
91-20-3	Naphthalene	180 U
106-47-8	4-Chloroaniline	270 U
87-26-3	Hexachlorobutadiene	180 U
59-50-7	4-Chloro-3-Methylphenol	180 U
91-57-6	2-Methylnaphthalene	180 U
77-47-4	Hexachlorocyclopentadiene	460 U
88-06-2	2,4,6-Trichlorophenol	460 U
95-95-4	2,4,5-Trichlorophenol	460 U
91-58-7	2-Chloronaphthalene	180 U
88-74-4	2-Nitroaniline	460 U
131-11-3	Dimethyl Phthalate	180 U
208-96-8	Acenaphthylene	180 U
99-09-2	3-Nitroaniline	460 U

Base/neutral surrogate recoveries	%
d5-Nitrobenzene	54.3%
2-Fluorobiphenyl	54.9%
d14-p-Terphenyl	51.1%
d41-1,2-Dichlorobenzene	44.0%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (μg/Kg)
544-63-8	Tetradecanoic Acid (bp m/e 73)	ABN	1213	690 JN
-	Unknown (bp m/e 68)	-	1268	390 J
2091-29-4	9-Hexadecenoic Acid (bp m/e 55)	-	1348	2,000 JN
57-10-3	Hexadecanoic Acid (bp m/e 43)	-	1360	1,800 JN
-	Unknown (bp m/e 79)	-	1414	570 J
-	Unknown (bp m/e 71)	-	1463	200 J
-	Unknown Hydrocarbon (bp m/e 55)	-	1480	790 J M
-	Unknown (bp m/e 43)	-	1491	210 J
-	Unknown (bp m/e 79)	-	1567	290 J
-	Unknown Hydrocarbon (bp m/e 41)	-	1598	250 J M
-	Unknown Hydrocarbon (bp m/e 57)	-	1667	400 J
-	Trimethyl Decane isomer (bp m/e 57)	-	1794	320 J
-	Unknown Hydrocarbon (bp m/e 57)	-	1895	230 J
57-88-5	Cholest-5-En-3-Ol(3 BETA)- (bp m/e 43)	-	2026	550 JN
-	Sterol isomer (bp m/e 43)	-	2133	700 J M
-	Unknown (bp m/e 205)	-	2143	540 J
-	Unknown (bp m/e 177)	-	2150	210 J
-	Unknown Hydrocarbon (bp m/e 95)	-	2176	780 J M
-	Unknown (bp m/e 95)	-	2198	520 J
-	Unknown (bp m/e 124)	-	2223	200 J



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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 G  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Data Release Authorized: *[Signature]*  
Report: 10/21/93 MAC.GAT

Sample No: 398111  
Sample Wt: 27.6 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 22.4%  
pH: 7.2  
Dilution: 1:1

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Instrument: FINN 2  
GPC Clean-up: Yes

QC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Sample No: 398111  
Lab ID: F065 G  
Matrix: Soil/Sediment  
Report: 10/21/93 MAC.GAT

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

CAS Number	Compound Name	ug/Kg
108-95-2	Phenol	140 U
1171-44-4	bis(2-Chloroethyl)Ether	140 U
95-57-8	2-Chlorophenol	140 U
541-73-1	1,3-Dichlorobenzene	140 U
106-46-7	1,4-Dichlorobenzene	140 U
100-51-6	Benzyl Alcohol	360 U
95-50-1	1,2-Dichlorobenzene	140 U
95-48-7	2-Methylphenol	140 U
108-00-1	2,2-Oxybis(1-Chloropropane)	140 U <sup>K</sup>
106-44-5	4-Methylphenol	140 U
621-64-7	N-Nitroso-Di-n-Propylamine	140 U
67-72-1	Hexachloroethane	140 U
98-95-3	Nitrobenzene	140 U
78-59-1	Isophorone	140 U
98-75-5	2-Nitrophenol	360 U
105-67-9	2,4-Dimethylphenol	140 U
65-85-0	Benzoic Acid	720 U
111-91-1	bis(2-Chloroethoxy)Methane	140 U
120-83-2	2,4-Dichlorophenol	220 U
120-82-1	1,2,4-Trichlorobenzene	140 U
91-20-3	Naphthalene	140 U
106-47-8	4-Chloroaniline	220 U
87-68-3	Hexachlorobutadiene	140 U
58-50-7	4-Chloro-3-Methylphenol	140 U
91-57-6	2-Methylnaphthalene	140 U
77-47-4	Hexachlorocyclopentadiene	360 U
88-06-2	2,4,6-Trichlorophenol	360 U
95-95-4	2,4,5-Trichlorophenol	140 U
91-58-7	2-Chloronaphthalene	140 U
86-74-4	2-Nitroaniline	360 U
131-11-3	Dimethyl Phthalate	140 U
208-98-8	Acenaphthylene	140 U
99-09-2	3-Nitroaniline	360 U
<b>Base/neutral surrogate recoveries</b>		
d5-Nitrobenzene		69.4%
2-Fluorophenyl		64.9%
d14-p-Terphenyl		70.2%
d4-1,2-Dichlorobenzene		57.1%

CAS Number	Compound Name	ug/Kg
83-32-9	Acenaphthene	140 U
51-28-5	2,4-Dinitrophenol	720 U
100-02-7	4-Nitrophenol	720 U
132-64-9	Dibenzofuran	140 U
604-20-2	2,6-Dinitrotoluene	360 U
121-14-2	2,4-Dinitrotoluene	360 U
84-66-2	Diethylphthalate	360 U
7005-72-3	4-Chlorophenyl-phenylether	140 U
86-73-7	Fluorene	140 U
100-01-6	4-Nitroaniline	360 U
534-52-1	4,6-Dinitro-2-Methylphenol	720 U
86-30-6	N-Nitrosodiphenylamine(1)	140 U
101-55-3	4-Bromophenyl-phenylether	140 U
118-74-1	Hexachlorobenzene	140 U
87-86-5	Pentachlorophenol	360 U
85-01-8	Phenanthrene	140 U
86-74-8	Carbazole	140 U
120-12-7	Anthracene	140 U
84-74-2	Di-n-Butylphthalate	140 U
206-44-0	Fluoranthene	140 U
129-00-0	Pyrene	140 U
95-68-7	Butylbenzophthalate	140 U
91-94-1	3,3-Dichlorobenzidine	360 U
56-55-3	Benzo(a)Anthracene	140 U
117-81-7	bis(2-Ethylhexyl)Phthalate	140 U
218-01-9	Chrysene	140 U
117-84-0	Di-n-Octyl Phthalate	140 U
205-99-2	Benzo(b)Fluoranthene	140 U
207-08-9	Benzo(k)Fluoranthene	140 U
50-32-8	Benzo(c)Pyrene	140 U
193-39-5	Inden(1,2,3-cd)Pyrene	140 U
53-70-3	Dibenzo(a,h)Anthracene	140 U
191-24-2	Benzo(g,h,i)Perylene	140 U
<b>Acid surrogate recoveries</b>		
d5-Phthalol		65.3%
2-Fluorophenol		66.6%
2,4,6-Trinitrophenol		67.7%
d4-2-Chlorophenol		65.6%

(1) Cannot be separated from acenaphthene

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/Kg)
70-34-5	Ethane-1,1,2,2-tetrachloro- (bp m/e 83)	140 U	1345	190 JN
-	Unknown Hydrocarbon (bp m/e 55)	-	1358	230 JN
57-10-3	Hexadecanoic Acid (bp m/e 60)	-	1996	300 J
-	Unknown (bp m/e 43)	-	2016	3,100 J
-	Unknown (bp m/e 95)	-		
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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

**Sample No: 398112**  
Lab ID: F065 H  
Matrix: Soil/Sediment

**QC Report No: F065 - WDOE**  
Project No: Ebey Slough  
VTSR: 09/24/93

**Sample No: 398112**  
Lab ID: F065 H  
Matrix: Soil/Sediment

**QC Report No: F065 - WDOE**  
Project No: Ebey Slough  
VTSR: 09/24/93

**QC Report No: F065 - WDOE**  
Project No: Ebey Slough  
VTSR: 09/24/93

**Sample No: 398112**

**Sample Wt: 25.6 g (Dry Wt.)**

**Date Analyzed: 10/04/93**

**Data Release Authorized: 10/14/93 MAC:GAT**

**Final Extract Volume: 2.0 ml**  
**Percent Moisture: 21.4%**  
**pH: 6.8**  
**Dilution: 1:1**

**Date Analyzed: 10/04/93**  
**Instrument: FINN 2**  
**GPC Clean-up: Yes**

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/Kg)
1	No UNKNOWN plus > 10% IS peak height	ABN	-	-
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CAS Number	Compound Name	ug/Kg
83-32-9	Acenaphthene	160 U
51-28-5	2,4-Dinitrophenol	780 U
100-02-7	4-Nitrophenol	780 U
132-64-9	Dibenzofuran	160 U
606-20-2	2,6-Dinitrotoluene	390 U
121-14-2	2,4-Dinitrotoluene	390 U
84-66-2	Diethylphthalate	390 U
7005-72-3	4-Chlorophenyl-phenylether	160 U
86-73-7	Fluorene	160 U
100-01-6	4-Nitroaniline	390 U
334-52-1	4,6-Dinitro-2-Methylphenol	780 U
86-30-6	N-Nitrosodiphenylamine(1)	160 U
101-56-3	4-Bromochlorophenylether	160 U
118-74-1	Hexachlorobenzene	160 U
87-86-5	Pentachlorophenol	390 U
86-74-8	Carbazole	160 U
120-12-7	Anthracene	160 U
84-74-2	Dim-Buthylphthalate	160 U
206-44-0	Fluoranthene	160 U
129-00-0	Pyrene	160 U
85-88-7	Buthylbenzophthalate	160 U
91-94-1	3,3-Dichlorobenzidine	390 U
56-85-3	benzo(a)Anthracene	160 U
117-81-7	bis(2-Ethylhexyl)Phthalate	160 U
117-84-0	Dim-Octyl Phthalate	160 U
205-99-2	Benzo(b)Fluoranthene	160 U
207-08-9	Benzo(k)Fluoranthene	160 U
50-32-8	Benzo(a)Pyrene	160 U
193-39-5	Indenx[1,2,3-cd]Pyrene	160 U
53-70-3	Dibenz(a,h)Anthracene	160 U
191-24-2	Benzo(ghi)Perylene	160 U

CAS Number	Compound Name	ug/Kg
108-95-2	Phenol	160 U
111-44-4	bis(2-Chloroethyl)Ether	160 U
95-57-8	2-Chlorophenol	160 U
541-73-1	1,3-Dichlorobenzene	160 U
106-46-7	1,4-Dichlorobenzene	160 U
100-51-6	Benzyl Alcohol	390 U
95-50-1	1,2-Dichlorobenzene	160 U
95-48-7	2-Methylphenol	160 U
108-90-1	2,2-Oxybis(1-Chloropropane)	160 U
106-44-5	4-Methylphenol	160 U
621-64-7	N-Nitroso-Dim-Propylamine	160 U
67-72-1	Hexachlorocyclohexane	160 U
98-95-3	Nitrobenzene	160 U
78-99-1	Isophorone	160 U
88-75-5	2-Nitrophenol	390 U
105-67-9	2,4-Dimethylphenol	160 U
65-85-0	Benzoic Acid	780 U
111-91-1	bis(2-Chloroethoxy)Methane	160 U
120-83-2	2,4-Dichlorophenol	230 U
120-82-1	1,2,4-Trichlorobenzene	160 U
91-20-3	Naphthalene	160 U
106-47-8	4-Chloroaniline	230 U
87-68-3	Hexachlorobutadiene	160 U
59-50-7	4-Chloro-3-Methylphenol	160 U
91-57-6	2-Methylnaphthalene	160 U
77-47-4	Hexachlorocyclopentadiene	390 U
88-06-2	2,4,6-Trichlorophenol	390 U
95-95-4	2,4,6-Trichlorobenzene	390 U
91-58-7	2-Chloronaphthalene	160 U
88-74-4	2-Nitroaniline	390 U
131-11-3	Dimethyl Phthalate	160 U
208-96-9	Acenaphthylene	160 U
90-09-2	3-Nitroaniline	390 U

Form 1, Part B - SV

**Acid surrogate recoveries**

g5-Phenol	64.7%
2-Fluorobiphenyl	66.7%
2,4,6-Trichlorophenol	67.4%
g4-2-Chlorophenol	65.9%

**Base/neutral surrogate recoveries**

g5-Nitrobenzene	67.6%
2-Fluorobiphenyl	65.4%
3,4,4-triphenyl	60.9%
g4-1,2-Dichlorobenzene	60.0%



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Sample No: 398113

QC Report No: F065 - WDOE  
Project: Ebey Slough

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**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398113

Lab ID: F0651  
Matrix: Soil/Sediment

QC Report No: F065 - WDOE  
Project No: Ebey Slough

Data Release Authorized: Report: 10/21/93 MAC:GAT  
VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Sample Wt: 27.5 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 28.3%

pH: 6.9  
Dilution: 1:1

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS  
Sample ID: F0651  
Matrix: Soil/Sediment

Data Release Authorized: Report: 10/21/93 MAC:GAT

CAS Number	Compound Name	µg/Kg
108-95-2	Phenol	150 U
111-44-4	bis(2-Chloroethyl)Ether	150 U
95-57-8	2-Chlorophenol	150 U
541-73-1	1,3-Dichlorobenzene	150 U
106-46-7	1,4-Dichlorobenzene	150 U
100-51-6	Benzyl Alcohol	360 U
95-50-1	1,2-Dichlorobenzene	150 U
95-48-7	2-Methylphenol	150 U
108-60-1	2,2-Oxybis(1-Chloropropane)	150 U
106-44-5	4-Methylphenol	150 U
621-64-7	N-Nitroso-Di-n-Propylamine	150 U
87-72-1	Hexachloroethane	150 U
98-95-3	Nitrobenzene	150 U
78-59-1	Isophorone	150 U
88-75-5	2-Nitrophenol	360 U
105-67-9	2,4-Dimethylphenol	150 U
65-85-0	Benzoic Acid	730 U
111-91-1	bis(2-Chloroethoxy)Methane	150 U
120-83-2	2,4-Dichlorophenol	220 U
120-82-1	1,2,4-Trichlorobenzene	150 U
91-20-3	Naphthalene	150 U
106-47-8	4-Chloroaniline	220 U
37-69-3	Hexachlorobutadiene	150 U
99-50-7	4-Chloro-3-Methylphenol	150 U
91-57-6	2-Methylnaphthalene	150 U
77-47-4	Hexachlorocyclopentadiene	360 U
88-06-2	2,4,6-Trichlorophenol	360 U
95-95-4	2,4,5-Trichlorophenol	150 U
91-58-7	2-Chloronaphthalene	150 U
88-74-4	2-Nitroaniline	360 U
131-11-3	Dimethyl Phthalate	150 U
208-96-8	Acenaphthylene	150 U
99-09-2	3-Nitroaniline	360 U

Base/neutral surrogate recoveries	
d5-Nitrobenzene	67.9%
2-Fluorobiphenyl	62.9%
d1,4-p-Terphenyl	60.0%
d4,1,2-Dichlorobenzene	58.0%

CAS Number	Compound Name	µg/Kg
83-32-9	Acenaphthene	150 U
51-28-5	2,4-Dinitrophenol	730 U
100-02-7	4-Nitrophenol	730 U
132-64-9	Dibenzofuran	150 U
606-20-2	2,6-Dinitrotoluene	360 U
121-14-2	2,4-Dinitrotoluene	360 U
84-68-2	Diethylphthalate	360 U
7005-72-3	4-Chlorophenyl-phenylether	150 U
86-73-7	Fluorene	150 U
100-01-6	4-Nitroaniline	360 U
534-52-1	4,6-Dinitro-2-Methylphenol	730 U
86-74-8	Carbazole	150 U
86-30-6	N-Nitrosodiphenylamine(1)	150 U
101-55-3	4-Bromophenyl-phenylether	150 U
118-74-1	Hexachlorobenzene	150 U
87-86-5	Pentachlorophenol	360 U
85-01-8	Phenanthrene	150 U
86-74-8	Carbazole	150 U
120-12-7	Anthracene	150 U
84-74-2	Di-n-Butylphthalate	150 U
206-44-0	Fluoranthene	290
129-00-0	Pyrene	180
91-94-1	3,3-Dichlorobenzidine	360 U
56-55-3	Benzo(a)Anthracene	150 U
117-81-7	bis(2-Ethylhexyl)phthalate	150 U
218-01-9	Chrysene	98 U
117-84-0	Di-n-Octyl Phthalate	150 U
205-99-2	Benzo(b)Fluoranthene	150 U
207-08-9	Benzo(k)Fluoranthene	150 U
90-32-8	Benzo(a)Pyrene	150 U
193-39-5	Indeno(1,2,3-cd)Pyrene	150 U
53-70-3	Dibenzo(a,h)Anthracene	150 U
191-24-2	Benzo(ghi)Perylene	150 U

Acid surrogate recoveries	
d5-Phenol	65.4%
2-Fluorophenol	67.7%
2,4,6-Tribromophenol	65.6%
d4,2-Chlorophenol	67.1%

(1) Cannot be separated from aphenylamine

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	-	-	1266	130 J
2	-	-	1346	750 JM
3	57-10-3	-	1358	560 JN
4	-	-	1479	230 JN
5	-	-	1795	120 JM
6	-	-	1867	210 JM
7	-	-	2001	150 J
8	-	-	2027	330 JM
9	-	-	2133	210 J
10	-	-	-	-
11	-	-	-	-
12	-	-	-	-
13	-	-	-	-
14	-	-	-	-
15	-	-	-	-
16	-	-	-	-
17	-	-	-	-
18	-	-	-	-
19	-	-	-	-
20	-	-	-	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-



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**ORGANICS ANALYSIS DATA SHEET**  
**Semivolatiles by GC/MS**

Sample ID: F065 J  
Matrix: Soil/Sediment

Date Analyzed: 10/04/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Date Extracted: 10/11/93  
Final Extract Volume: 2.0 ml  
Percent Moisture: 16.5%

pH: 7.0  
Dilution: 1:1

Sample No: 398114

GC Report No: F065 - WDOE  
Project: Ebey Slough

Sample Wt: 29.3 g (Dry Wt.)  
VTSR: 09/24/93

Lab ID: F065 J  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398114

Lab ID: F065 J  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Data Release Authorized:   
Report: 10/14/93 MAC:GAT

CAS Number	Compound Name	µg/Kg
108-95-2	Phenol	140 U
111-44-4	Bis(2-Chloroethyl)Ether	140 U
95-57-8	2-Chlorophenol	140 U
541-73-1	1,3-Dichlorobenzene	140 U
106-46-7	1,4-Dichlorobenzene	140 U
100-51-6	Benzyl Alcohol	340 U
95-95-1	1,2-Dichlorobenzene	140 U
95-48-7	2-Methylphenol	140 U
108-60-1	2,2-Oxybis(1-Chloropropane)	140 U
106-44-5	4-Methylphenol	140 U
621-64-7	N-Nitroso-Di-n-Propylamine	140 U
87-72-1	Hexachloroethane	140 U
98-95-3	Nitrobenzene	140 U
78-59-1	Isophorane	140 U
88-75-5	2-Nitrophenol	340 U
105-67-9	2,4-Dimethylphenol	140 U
65-95-0	Benzoic Acid	680 U
111-91-1	Bis(2-Chloroethoxy)Methane	140 U
120-83-2	2,4-Dichlorophenol	210 U
120-82-1	1,2,4-Trichlorobenzene	140 U
91-20-3	Naphthalene	140 U
106-47-8	4-Chloroaniline	210 U
87-58-3	Hexachlorobutadiene	140 U
59-50-7	4-Chloro-3-Methylphenol	140 U
91-57-6	2-Methylnaphthalene	140 U
77-47-4	Hexachlorocyclopentadiene	340 U
88-06-2	2,4,6-Trichlorophenol	340 U
95-95-4	2,4,5-Trichlorophenol	340 U
91-58-7	2-Chloronaphthalene	140 U
88-74-4	2-Nitroaniline	340 U
131-11-3	Dimethyl Phthalate	140 U
208-96-8	Acenaphthylene	140 U
99-09-2	3-Nitroaniline	340 U

**Base/neutral surrogate recoveries**

d5-Nitrobenzene	76.9%
2-Fluorobiphenyl	68.5%
d14-c-Terphenyl	60.8%
d4-1,2-Dichlorobenzene	60.4%

CAS Number	Compound Name	µg/Kg
83-32-9	Acenaphthene	140 U
51-28-5	2,4-Dinitrophenol	680 U
100-02-7	4-Nitrophenol	680 U
132-64-9	Dibenzofuran	140 U
606-20-2	2,6-Dinitrotoluene	340 U
121-14-2	2,4-Dinitrotoluene	340 U
84-66-2	Diethylphthalate	340 U
7005-72-3	4-Chlorophenylphenylether	140 U
86-73-7	Fluorene	140 U
100-01-6	4-Nitroaniline	340 U
534-52-1	4,6-Dinitro-2-Methylphenol	680 U
86-30-6	N-Nitrosodiphenylamine(1)	140 U
101-55-3	4-Bromophenylphenylether	140 U
118-74-1	Hexachlorobenzene	140 U
87-86-5	Pentachlorobenzene	340 U
85-01-8	Phenanthrene	140 U
86-74-8	Carbazole	140 U
120-12-7	Anthracene	140 U
84-74-2	Di-n-Butylphthalate	140 U
205-44-0	Fluoranthene	140 U
129-00-0	Pyrene	140 U
85-68-7	Butylbenzylphthalate	140 U
91-94-1	3,3-Dichlorobenzidine	340 U
56-55-3	Benzo(a)Anthracene	140 U
117-81-7	Bis(2-Ethylhexyl)Phthalate	140 U
218-01-9	Chrysene	140 U
117-84-0	Di-n-Octyl Phthalate	140 U
205-99-2	Benzo(b)Fluoranthene	140 U
207-08-9	Benzo(k)Fluoranthene	140 U
50-32-8	Benzo(a)Pyrene	140 U
193-39-5	Indeno(1,2,3-cd)Pyrene	140 U
53-70-3	DiBenzo(a,h)Anthracene	140 U
191-24-2	Benzo(ghi)Perylene	140 U

**Acid surrogate recoveries**

d5-Phenol	67.6%
2-Fluorophenol	72.9%
2,4,6-Tribromophenol	73.1%
d4-2-Chlorophenol	66.6%

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	No UNKNOWN pks > 10% IS peak height	ABN		
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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 K  
Matrix: Soil/Sediment

Data Release Authorized:   
Report: 10/21/93 MAC.GAT

Date Extracted: 10/04/93  
Date Analyzed: 10/11/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Sample Wt: 27.6 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 27.2%  
pH: 7.1  
Dilution: 1:1

VTSR: 09/24/93

Sample No: 398115

QC Report No: F065 - WDOE  
Project: Ebey Slough

QC Report No: F065 - WDOE  
Project No: Ebey Slough

Data Release Authorized:   
Report: 10/21/93 MAC.GAT

VTSR: 09/24/93

Sample No: 398115

Lab ID: F065 K  
Matrix: Soil/Sediment

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

CAS Number	Compound Name	µg/Kg	MF
108-95-2	Phenol	140 U	
111-44-4	Bis(2-Chloroethyl)Ether	140 U	
95-57-8	2-Chlorobenzal	140 U	
541-73-1	1,3-Dichlorobenzene	140 U	
108-46-7	1,4-Dichlorobenzene	140 U	
100-51-6	Benzyl Alcohol	360 U	
95-50-1	1,2-Dichlorobenzene	140 U	
95-48-7	2-Methylphenol	140 U	
108-60-1	2,2-Oxybis(1-Chloropropane)	140 U	
106-44-5	4-Methylphenol	140 U	
621-64-7	N-Nitroso-Dim-Propylamine	140 U	
67-72-1	Hexachloroethane	140 U	
98-95-3	Nitrobenzene	140 U	
78-59-1	Isobutane	140 U	
88-75-5	2-Nitrophenol	360 U	
105-67-9	2,4-Dimethylphenol	140 U	
65-85-0	Benzoic Acid	720 U	
111-91-1	Bis(2-Chloroethyl)Methane	140 U	
120-83-2	2,4-Dichlorophenol	220 U	
120-92-1	1,2,4-Trichlorobenzene	140 U	
91-20-3	Naphthalene	140 U	
106-47-8	4-Chloroaniline	220 U	
87-68-3	Hexachlorobutadiene	140 U	
91-57-6	4-Chloro-3-Methylphenol	140 U	
77-47-4	Hexachlorocyclopentadiene	360 U	
88-06-2	2,4,6-Trichlorophenol	360 U	
95-95-4	2,4,5-Trichlorophenol	140 U	
91-58-7	2-Chloronaphthalene	360 U	
88-74-4	2-Nitroaniline	140 U	
131-11-3	Dimethyl Phthalate	140 U	
208-96-8	Acenaphthylene	140 U	
99-09-2	3-Nitroaniline	360 U	

Base/neutral surrogate recoveries	
d5-Nitrobenzene	65.5%
2-Fluorobiphenyl	61.7%
d1,4-p-Terphenyl	58.4%
d4-1,2-Dichlorobenzene	52.7%

CAS Number	Compound Name	µg/Kg	MF
83-32-9	Acenaphthene	140 U	
51-28-5	2,4-Dinitrophenol	720 U	
100-02-7	4-Nitrophenol	720 U	
132-64-9	Dibenzofuran	140 U	
605-20-2	2,6-Dinitrotoluene	360 U	
121-14-2	2,4-Dinitrotoluene	360 U	
84-56-2	Diethylphthalate	360 U	
7005-72-3	4-Chlorophenyl-phenylether	140 U	
86-73-7	Fluorene	140 U	
100-01-6	4-Nitroaniline	360 U	
334-52-1	4,6-Dinitro-2-Methylphenol	720 U	
86-30-6	N-Nitrosodiphenylamine(1)	140 U	
101-55-3	4-Bromophenyl-phenylether	140 U	
118-74-1	Hexachlorobenzene	140 U	
87-86-5	Pentachlorophenol	360 U	
85-01-8	Phenanthrene	140 U	
86-74-8	Carbazole	140 U	
120-12-7	Anthracene	140 U	
84-74-2	Di-n-Butylphthalate	140 U	
266-44-0	Fluoranthene	140 U	
129-00-0	Pyrene	140 U	
85-68-7	Buylbenzylphthalate	140 U	
91-94-1	3,3-Dichlorobenzidine	360 U	
56-55-3	Benzo(a)Anthracene	140 U	
117-81-7	Bis(2-Ethylhexyl)Phthalate	140 U	
218-01-9	Chrysene	140 U	
117-84-0	Di-n-Octyl Phthalate	140 U	
205-99-2	Benzo(b)Fluoranthene	140 U	
207-08-9	Benzo(k)Fluoranthene	140 U	
50-32-8	Benzo(a)Pyrene	140 U	
193-39-5	Indena(1,2,3-cd)Pyrene	140 U	
53-70-3	Dibenz(a,h)Anthracene	140 U	
191-24-2	Benzo(ghi)Perylene	140 U	

Acid surrogate recoveries	
d5-Phenol	61.2%
2-Fluorophenol	65.2%
2,4,6-Tribromophenol	70.5%
d4-2-Chlorophenol	60.4%

(1) Cannot be separated from diphenylamine

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)	MF
1	Unknown Hydrocarbon (bp m/e 55)	ABN	1347	330 J/N	KF
2	Hexadecanoic Acid (bp m/e 43)	-	1360	230 J/N	
3	Unknown (bp m/e 69)	-	1459	120 J	
4	Unknown (bp m/e 202)	-	1610	290 J	KF
5	Unknown Hydrocarbon (bp m/e 57)	-	1709	200 J/N	KF
6	Unknown (bp m/e 199)	-	1772	220 J	
7	Unknown Hydrocarbon (bp m/e 57)	-	1796	160 J/M	KF
8	Unknown (bp m/e 69)	-	1868	210 J	
9	Unknown (bp m/e 57)	-	1966	210 J	
10	Unknown (bp m/e 43)	-	2043	230 J	
11	Unknown (bp m/e 205)	-	2144	170 J	
12	Unknown (bp m/e 177)	-	2152	160 J	
13	Unknown (bp m/e 95)	-	2176	150 J	
14	Unknown (bp m/e 124)	-	2223	170 J	
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**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 L  
Matrix: Soil/Sediment

Date Analyzed: 10/04/93  
Instrument: FINN 2  
GPC Clean-up: Yes

Date Extracted: 10/04/93  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 21.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 21.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 21.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

**ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 21.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 21.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Sample Wt: 21.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 40.2%

pH: 7.1  
Dilution: 1:1

Sample No: 398116  
Lab ID: F065 L  
Matrix: Soil/Sediment

GC Report No: F065 - WDOE  
Project No: Ebey Slough

VTSR: 09/24/93

Data Release Authorized:   
Report: 10/21/93 MAC:GAT

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	Cyclotetrasiloxane, Octamethyl- (bp m/e 281)	ABN	490	810 JN
2	Cyclopentasiloxane, Decamethyl- (bp m/e 73)	-	668	560 JN
3	Unknown Hydrocarbon (bp m/e 55)	-	1349	980 JN
4	Unknown Hydrocarbon (bp m/e 57)	-	1690	760 JN
5	Unknown Hydrocarbon (bp m/e 57)	-	1797	1,000 JN
6	Unknown Hydrocarbon (bp m/e 57)	-	1871	980 JN
7	Unknown Hydrocarbon (bp m/e 57)	-	1897	700 JN
8	Unknown (bp m/e 43)	-	1920	540 JN
9	Unknown Hydrocarbon (bp m/e 57)	-	1968	940 JN
10	Unknown (bp m/e 43)	-	2004	930 JN
11	Unknown (bp m/e 41)	-	2019	3,000 J
12	Unknown Hydrocarbon (bp m/e 57)	-	2062	670 JN
13	D-Friedolein-14-En-3-One (bp m/e 69)	-	2137	530 JN
14	Unknown (bp m/e 205)	-	2146	1,600 J
15	Unknown (bp m/e 177)	-	2154	570 J
16	Unknown (bp m/e 231)	-	2169	610 J
17	Unknown (bp m/e 218)	-	2179	1,600 J
18	Unknown (bp m/e 69)	-	2204	530 J
19	Unknown (bp m/e 43)	-	2213	580 J
20	Unknown (bp m/e 124)	-	2226	570 J
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CAS Number	Compound Name	µg/Kg
83-32-9	Acenaphthene	190 U
51-28-5	2,4-Dinitrophenol	930 U
100-02-7	4-Nitrophenol	930 U
132-64-9	Dibenzofuran	190 U
506-20-2	2,6-Dinitrotoluene	470 U
121-14-2	2,4-Dinitrotoluene	470 U
84-66-2	Dibutylphthalate	470 U
7068-72-3	4-Chlorophenylphenylether	190 U
86-73-7	Fluorene	190 U
100-01-6	4-Nitroaniline	470 U
534-92-1	4,6-Dinitro-2-Methylphenol	930 U
86-30-6	N-Nitrosodiphenylamine(1)	190 U
101-55-3	4-Bromophenylphenylether	190 U
118-74-1	Hexachlorobenzene	190 U
87-86-5	Pentachlorobenzene	470 U
85-01-8	Phenanthrene	190 U
86-74-8	Carbazole	190 U
120-12-7	Anthracene	190 U
84-74-2	Di-n-Butylphthalate	190 U
206-44-0	Fluoranthene	190 U
129-00-0	Pyrene	190 U
85-68-7	Butybenzophthalate	190 U
91-94-1	3,3'-Dichlorobenzidine	470 U
56-55-3	Benz(a)Anthracene	190 U
117-81-7	bis(2-Ethylhexyl)Phthalate	190 U
218-01-9	Chrysene	190 U
117-84-0	Di-n-Octyl Phthalate	190 U
205-99-2	Benz(b)Fluoranthene	190 U
207-08-9	Benz(k)Fluoranthene	190 U
90-32-8	Benz(a)Pyrene	190 U
193-39-5	Indeno(1,2,3-cd)Pyrene	190 U
53-70-3	Dibenz(a,h)Anthracene	190 U
191-24-2	Benz(ghi)Perylene	190 U

(1) Cannot be separated from dibenzofuran

Acid surrogate recoveries	µg/Kg
d5-Phenol	67.6%
2-Fluorophenol	74.8%
2,4,6-Trifluorophenol	75.3%
d4-2-Chlorophenol	66.3%

CAS Number	Compound Name	µg/Kg
108-95-2	Phenol	190 U
111-44-4	Bis(2-Chloroethyl)Ether	190 U
95-57-8	2-Chlorophenol	190 U
541-73-1	1,3-Dichlorobenzene	190 U
106-46-7	1,4-Dichlorobenzene	190 U
100-51-6	Benzyl Alcohol	470 U
95-50-1	1,2-Dichlorobenzene	190 U
95-48-7	2-Methylphenol	190 U
108-60-1	2,2-Oxybis(1-Chloropropane)	190 U
108-44-5	4-Methylphenol	190 U
621-64-7	N-Nitroso-Di-n-Propylamine	190 U
98-95-3	Hexachloroethane	190 U
78-59-1	Nitrobenzene	190 U
88-75-5	Isobutane	190 U
105-67-9	2-Nitrophenol	470 U
65-95-0	Benzoic Acid	930 U
111-91-1	bis(2-Chloroethoxy)Methane	190 U
120-83-2	2,4-Dichlorophenol	280 U
120-82-1	1,2,4-Trichlorobenzene	190 U
91-20-3	Naphthalene	190 U
106-47-8	4-Chloroaniline	280 U
87-66-3	Hexachlorocyclopentadiene	190 U
59-50-7	4-Chloro-3-Methylphenol	190 U
91-57-6	2-Methylnaphthalene	190 U
77-47-4	Hexachlorocyclopentadiene	470 U
88-06-2	2,4,6-Trichlorophenol	470 U
95-95-4	2,4,5-Trichlorophenol	470 U
91-58-7	2-Chloronaphthalene	190 U
88-74-4	2-Nitroaniline	470 U
131-11-3	Dimethyl Phthalate	190 U
208-96-8	Acenaphthylene	190 U
99-09-2	3-Nitroaniline	470 U

Base/neutral surrogate recoveries	µg/Kg
d5-Nitrobenzene	71.8%
2-Fluorobiphenyl	66.0%
d1,4-o-Terphenyl	53.3%
d4-1,2-Dichlorobenzene	59.5%



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**ORGANICS ANALYSIS DATA SHEET - Tentatively Identified Compounds**

Sample No: 398117

Lab ID: F065 M  
Matrix: Soil/Sediment

Data Release Authorized:  
Report: 10/14/93 MAC.GAT

GC Report No: F065 - WDOE  
Project No: Ebey Slough  
VTSR: 09/24/93

Sample No: 398117

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GC Report No: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Sample Wt: 22.4 g (Dry Wt.)  
Final Extract Volume: 2.0 ml  
Percent Moisture: 39.4%  
pH: 7.1  
Dilution: 1:1

**ORGANICS ANALYSIS DATA SHEET**  
Semivolatiles by GC/MS

Sample ID: F065 M  
Matrix: Soil/Sediment

Data Release Authorized:  
Report: 10/21/93 MAC.GAT

Date Extracted: 10/04/93  
Date Analyzed: 10/11/93  
Instrument: FINN 2  
GPC Clean-up: Yes

CAS Number	Compound Name	ug/Kg
108-95-2	Phenol	180 U
111-44-4	bis(2-Chloroethyl)Ether	180 U
95-57-8	2-Chlorophenol	180 U
541-73-1	1,3-Dichlorobenzene	180 U
106-48-7	1,4-Dichlorobenzene	180 U
100-51-6	Benzyl Alcohol	450 U
95-50-1	1,2-Dichlorobenzene	180 U
95-48-7	2-Methylphenol	180 U
108-60-1	2,2-Oxybis(1-Chloropropane)	180 U
108-44-5	4-Methylphenol	180 U
621-64-7	N-Nitroso-Di-n-Propylamine	180 U
67-72-1	Hexachloroethane	180 U
98-95-3	Nitrobenzene	180 U
78-59-1	Isophorone	180 U
88-75-5	2-Nitrophenol	450 U
105-67-9	2,4-Dimethylphenol	180 U
68-85-0	Benzoic Acid	890 U
111-91-1	bis(2-Chloroethoxy)Methane	180 U
120-83-2	2,4-Dichlorophenol	270 U
120-82-1	1,2-Trichlorobenzene	180 U
91-20-3	Naphthalene	180 U
106-47-8	4-Chloroaniline	270 U
87-68-3	Hexachlorobutadiene	180 U
59-50-7	4-Chloro-3-Methylphenol	180 U
91-57-6	2-Methylnaphthalene	180 U
71-47-4	Hexachlorocyclopentadiene	450 U
88-06-2	2,4,6-Trichlorophenol	450 U
95-95-4	2,4,5-Trichlorophenol	450 U
91-58-7	2-Chloronaphthalene	180 U
88-74-4	2-Nitroaniline	450 U
131-11-3	DimethylPhthalate	180 U
208-96-8	Acenaphthylene	180 U
99-09-2	3-Nitroaniline	450 U

Base/neutral surrogate recoveries	ug/Kg
d5-Nitrobenzene	63.7%
2-Fluorobiphenyl	63.8%
d14-p-Terphenyl	55.3%
d4-1,2-Dichlorobenzene	52.2%

CAS Number	Compound Name	ug/Kg
83-32-9	Acenaphthene	180 U
51-28-5	2,4-Dinitrophenol	990 U
100-02-7	4-Nitrophenol	990 U
132-64-9	Dibenzofuran	180 U
605-20-2	2,6-Dinitrotoluene	450 U
121-14-2	2,4-Dinitrotoluene	450 U
84-66-2	Diethylphthalate	450 U
7005-72-3	4-Chlorophenyl-phenylether	180 U
86-73-7	Fluorene	180 U
100-01-6	4-Nitroaniline	450 U
534-52-1	4,6-Dinitro-2-Methylphenol	990 U
86-30-6	N-Nitrosodiphenylamine(1)	180 U
101-55-3	4-Biomaphenyl-phenylether	180 U
118-74-1	Hexachlorobenzene	180 U
87-86-5	Pentachlorophenol	450 U
85-01-8	Phenanthrene	180 U
86-74-8	Carbazole	180 U
120-12-7	Anthracene	180 U
86-74-2	Di-n-Butylphthalate	180 U
206-44-0	Fluoranthene	180 U
129-00-0	Pyrene	180 U
85-69-7	Buylbenzylphthalate	180 U
91-94-1	3,3-Dichlorobenzidine	450 U
56-55-3	BenzotriAnthracene	180 U
117-81-7	bis(2-Ethylhexyl)Phthalate	180 U
218-01-9	Chrysene	180 U
117-84-0	Di-n-Octyl Phthalate	180 U
205-99-2	BenzotriFluoranthene	180 U
207-08-9	BenzotriFluoranthene	180 U
50-32-8	BenzotriPyrene	180 U
193-39-5	Indeno(1,2,3-cd)Pyrene	180 U
53-70-3	Dibenz(a,h)Anthracene	180 U
191-24-2	Benzotri(ghi)Perylene	180 U

Acid surrogate recoveries	ug/Kg
d5-Phenol	60.3%
2-Fluorophenol	61.0%
2,4,6-Trifluorophenol	76.4%
d4-2-Chlorophenol	60.4%

(1) Cannot be separated from diphenylamine

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/Kg)
1	Unknown (bp m/e 57)	ABN	1267	260 J
2	Unknown Hydrocarbon (bp m/e 55)	*	1348	660 J M
3	Unknown (bp m/e 73)	*	1360	410 J
4	Unknown (bp m/e 95)	*	1656	380 J
5	Unknown Hydrocarbon (bp m/e 57)	*	1689	560 J M
6	Unknown (bp m/e 43)	*	1704	260 J
7	Unknown Hydrocarbon (bp m/e 57)	*	1796	670 J M
8	Unknown (bp m/e 43)	*	1817	280 J
9	Unknown (bp m/e 57)	*	1868	590 J
10	Unknown Hydrocarbon (bp m/e 57)	*	1895	460 J M
11	Unknown (bp m/e 57)	*	1918	310 J
12	Unknown Hydrocarbon (bp m/e 57)	*	1966	560 J M
13	Unknown (bp m/e 43)	*	2003	380 J
14	Unknown (bp m/e 43)	*	2013	670 J
15	Unknown Hydrocarbon (bp m/e 57)	*	2059	380 J M
16	Unknown (bp m/e 55)	*	2134	380 J
17	Unknown (bp m/e 218)	*	2146	1,600 J
18	Unknown (bp m/e 95)	*	2176	1,000 J
19	Unknown (bp m/e 43)	*	2212	350 J
20	Unknown (bp m/e 124)	*	2222	350 J
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**SOIL SEMIVOLATILE SURROGATE RECOVERY**

Client: WDOE  
Project: Ebey Slough  
Date Release Authorized: 10/15/93  
Report: MAC.GAT

ARI Job No: F065  
Method Blank 10/04  
398106  
398107  
398108  
398109  
398110  
398111  
398112  
Spike Blank  
398114  
398115  
398116  
398117 matrix spike  
398117 matrix spike dup

Client Sample ID	S1 (NBZ)	S2 (FBP)	S3 (TPH)	S4 (DCB)	S5 (PHL)	S6 (ZFP)	S7 (TBP)	S8 (CCP)	LOT
Method Blank 10/04	70.2	66.3	54.1	58.4	64.6	73.7	57.5	64.0	0
398106	75.2	71.0	58.2	63.2	72.0	73.5	65.4	72.5	0
398107	73.9	69.3	56.1	62.2	71.3	73.4	66.6	70.4	0
398108	47.8	49.8	46.4	39.3	48.3	48.8	56.5	46.1	0
398109	71.8	73.4	65.6	64.9	71.2	74.1	70.6	72.6	0
398110	71.8	72.1	68.7	62.9	70.9	71.2	73.2	72.1	0
398111	54.3	54.9	51.1	44.0	54.7	55.9	58.8	52.7	0
398112	69.4	64.9	70.2	57.1	65.3	66.6	67.7	65.6	0
Spike Blank	67.9	65.4	60.9	60.0	64.7	66.7	67.4	65.9	0
398114	60.5	62.9	60.0	58.0	65.4	67.7	65.6	67.1	0
398115	76.9	68.5	50.1	39.5	57.8	58.8	57.3	57.8	0
398116	65.5	61.7	58.4	52.7	61.2	65.2	70.5	60.4	0
398117	71.8	66.0	53.3	59.5	67.6	74.8	75.3	66.3	0
398117 matrix spike	67.5	66.1	59.3	53.3	65.7	63.8	76.3	62.2	0
398117 matrix spike dup	60.9	63.7	57.7	47.7	63.0	63.2	81.1	57.7	0

QC LIMITS:  
(23-120)  
(30-115)  
(18-137)  
(20-130)\*\*  
(24-113)  
(25-121)  
(19-122)  
(20-130)\*\*

S1 (NBZ)=Nitrobenzene-d5  
S2 (FBP)=2-Fluorobenzophenyl  
S3 (TPH)=Terephthylid14  
S4 (DCB)=1,2-Dichlorobenzene-d4  
S5 (PHL)=Phenol-d5  
S6 (ZFP)=2-Fluorophenol  
S7 (TBP)=2,4,6-Tribromophenyl  
S8 (CCP)=2-Chlorophenol-d4



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**SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY**

Client: WDOE  
Project: Ebey Slough  
Date Release Authorized: 10/04/93  
Report: MAC.GAT 10/22/93

ARI Sample ID: F065 M  
Client Sample ID: 398117  
Instrument ID: FINN 2  
Date Analyzed: 10/11/93

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONC (ug/Kg)	MS CONC (ug/Kg)	MS REC	QC LIMITS REC
Phenol	3,280	0	1,920	58.5%	26-90
2-Chlorophenol	3,280	0	1,970	60.1%	25-102
1,4-Dichlorobenzene	2,190	0	1,250	57.1%	28-104
N-Nitroso-Di-n-Propylamine	2,190	0	1,250	57.1%	41-126
1,2,4-Trichlorobenzene	2,190	0	1,310	59.8%	38-107
4-Chloro-3-Methylphenol	3,280	0	2,210	67.4%	26-103
Acenaphthene	2,190	0	1,480	67.6%	31-137
4-Nitrophenol	3,280	0	2,520	76.8%	11-114
2,4-Dinitrotoluene	2,190	0	1,540	70.3%	28-89
Pentachlorophenol	3,280	0	1,830	55.8%	17-109
Pyrene	2,190	0	1,520	69.4%	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONC (ug/Kg)	MSD REC	QC LIMITS	
				RPD	REC
Phenol	3,710	2,060	55.5%	53	26-90
2-Chlorophenol	3,710	2,070	55.8%	7.4	50
1,4-Dichlorobenzene	2,480	1,280	51.6%	10	27
N-Nitroso-Di-n-Propylamine	2,480	1,310	52.8%	7.8	38
1,2,4-Trichlorobenzene	2,480	1,350	54.4%	9.5	23
4-Chloro-3-Methylphenol	3,710	2,570	69.3%	2.8	33
Acenaphthene	2,480	1,640	66.1%	2.2	19
4-Nitrophenol	3,710	3,040	81.9%	6.4	50
2,4-Dinitrotoluene	2,480	1,770	71.4%	1.6	47
Pentachlorophenol	3,710	1,820	49.1%	13	47
Pyrene	2,480	1,740	70.2%	1.1	36

RPD: 0 out of 11 outside limits  
Spike Recovery: 0 out of 22 outside limits  
\* Asterisked values outside QC Limits

Comments:





**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB BY GC/ECD**

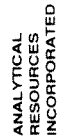


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**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB BY GC/ECD**



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Lab Sample ID: F065A  
Matrix: Soils/Sediments  
Data Release Authorized: *Catherine M. Lawrence*  
Report: 10/22/93 MAC:sk

QC Report No.: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 25.2 (Dry Wt.)  
Final Ext. Volume: 20 mL

GC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc./Dil Factor: 1:1

Lab Sample ID: F065B  
Matrix: Soils/Sediments  
Data Release Authorized: *Catherine M. Lawrence*  
Report: 10/18/93 MAC:sk

QC Report No.: F065 - WDOE  
Project: Ebey Slough  
VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 22.4 (Dry Wt.)  
Final Ext. Volume: 20 mL

GC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc./Dil Factor: 1:1

CAS Number	µg/kg
319-84-6	5.0 U
319-85-7	5.0 U
319-86-8	5.0 U
58-89-9	5.0 U
76-44-8	5.0 U
309-00-2	5.0 U
1024-57-3	5.0 U
959-98-8	5.0 U
60-57-1	10 U
72-55-9	10 U
72-20-8	10 U
33212-65-9	10 U
72-54-8	10 U
1031-07-8	10 U
50-29-3	10 U
72-43-5	50 U
53494-70-5	10 U
7421-36-3	10 U
5103-74-2	5.0 U
5103-71-9	5.0 U
8001-35-2	500 U
12672-29-6	100 U
11097-69-1	100 U
11096-82-5	100 U
11104-28-2	200 U
11141-16-5	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	84.7% 46-131
Tetrachlorometylene (TCMX)	94.7% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value. Indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analysis is typically less than 50%.

CAS Number	µg/kg
319-84-6	5.0 U
319-85-7	5.0 U
319-86-8	5.0 U
58-89-9	5.0 U
76-44-8	5.0 U
309-00-2	5.0 U
1024-57-3	5.0 U
959-98-8	5.0 U
60-57-1	10 U
72-55-9	10 U
72-20-8	10 U
33212-65-9	10 U
72-54-8	10 U
1031-07-8	10 U
50-29-3	10 U
72-43-5	50 U
53494-70-5	10 U
7421-36-3	10 U
5103-74-2	5.0 U
5103-71-9	5.0 U
8001-35-2	500 U
12672-29-6	100 U
11097-69-1	100 U
11096-82-5	100 U
11104-28-2	200 U
11141-16-5	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	81.6% 46-131
Tetrachlorometylene (TCMX)	89.5% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value. Indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analysis is typically less than 50%.



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**ORGANICS ANALYSIS DATA SHEET  
PESTICIDE/PCB by GC/ECD**

Sample No: 398107

QC Report No.: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

Lab Sample ID: F065C  
Matrix: Soils/Sediments

*Catherine M. Newman*

Data Release Authorized: *Catherine M. Newman*  
MAC-3K

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 22.8 (Dry Wt.)  
Final Ext. Volume: 20 mL

GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
	Aracior-1242/1016	100 U
12672-29-6	Aracior-1248	100 U
11097-69-1	Aracior-1254	100 U
11096-82-5	Aracior-1260	100 U
11104-28-2	Aracior-1221	200 U
11141-16-5	Aracior-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	66.4%
Tetrachloromethoxyethylene (TCMX)	71.5%
	46-131
	54-138

**Data Qualifiers**

- J If the result is a value greater than or equal to the detection limit, report the value
- X Indicates an estimated value when that value is less than the calculated detection limit
- S Indicates a value above the linear range of the detector. Dilution required
- D Indicates no value reported due to saturation of the detector
- U Indicates the surrogate was diluted out
- NA Indicates compound was analyzed for, but not detected at the given detection limit
- \*
- Indicates compound not analyzed

If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.

FORM I-PEST

MB,08/93



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**ORGANICS ANALYSIS DATA SHEET  
PESTICIDE/PCB by GC/ECD**

Sample No: 398108

QC Report No.: F065 - WDOE  
Project: Ebey Slough

VTSR: 09/24/93

Lab Sample ID: F065D  
Matrix: Soils/Sediments

*Catherine M. Newman*

Data Release Authorized: *Catherine M. Newman*  
MAC-3K

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 28.4 (Dry Wt.)  
Final Ext. Volume: 20 mL

GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
	Aracior-1242/1016	100 U
12672-29-6	Aracior-1248	100 U
11097-69-1	Aracior-1254	100 U
11096-82-5	Aracior-1260	100 U
11104-28-2	Aracior-1221	200 U
11141-16-5	Aracior-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	89.6%
Tetrachloromethoxyethylene (TCMX)	96.0%
	46-131
	54-138

**Data Qualifiers**

- J If the result is a value greater than or equal to the detection limit, report the value
- X Indicates an estimated value when that value is less than the calculated detection limit
- S Indicates a value above the linear range of the detector. Dilution required
- D Indicates no value reported due to saturation of the detector
- U Indicates the surrogate was diluted out
- NA Indicates compound was analyzed for, but not detected at the given detection limit
- \*
- Indicates compound not analyzed

If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.

FORM I-PEST

MB,08/93



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**ORGANICS ANALYSIS DATA SHEET  
PESTICIDE/PCB BY GC/ECD**

Lab Sample ID: F065E  
Matrix: Soils/Sediments  
Data Release Authorized: *Edward M. Norman*  
Report: 10/18/93 MAC:sk  
VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 30.1 (Dry Wt.)  
Final Ext. Volume: 20 mL

GC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

Sample No: 398109  
Reanalysis  
GC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Edward M. Norman*  
Report: 10/25/93 MAC:sk  
VTSR: 09/24/93

Date Extracted: 10/18/93  
Date Analyzed: 10/20/93  
Sample Amount: 30.6 (Dry Wt.)  
Final Ext. Volume: 20 mL

GPC Cleanup: No  
Florisil Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1



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**ORGANICS ANALYSIS DATA SHEET  
PESTICIDE/PCB BY GC/ECD**

Lab Sample ID: F065E2  
Matrix: Soils/Sediments  
Data Release Authorized: *Edward M. Norman*  
Report: 10/25/93 MAC:sk  
VTSR: 09/24/93

Date Extracted: 10/18/93  
Date Analyzed: 10/20/93  
Sample Amount: 30.6 (Dry Wt.)  
Final Ext. Volume: 20 mL

GPC Cleanup: No  
Florisil Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg
319-84-6	5.0 U
319-85-7	5.0 U
319-86-8	5.0 U
58-89-9	5.0 U
76-44-8	5.0 U
309-00-2	5.0 U
1024-57-3	5.0 U
959-98-8	5.0 U
60-57-1	10 U
72-55-9	10 U
72-20-8	10 U
33212-65-9	10 U
72-54-8	10 U
1031-07-8	10 U
50-29-3	10 U
72-43-5	50 U
53494-70-5	10 U
7421-36-3	10 U
5103-74-2	5.0 U
5103-71-9	5.0 U
8001-35-2	500 U
100 U	100 U
12672-29-6	100 U
11097-69-1	100 U
11096-82-5	100 U
11104-28-2	200 U
11141-16-5	100 U

Pesticide Surrogate Recovery	GC Limits
Decachlorobiphenyl (DCBP)	33.8%
Tetrachlorometylene (TCMX)	37.4%
	46-131
	54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value  
indicates an estimated value when that value is less than the calculated detection limit.  
X indicates a value above the linear range of the detector. Dilution required.  
S indicates no value reported due to saturation of the detector.  
D indicates the surrogate was diluted out.  
U indicates the surrogate was analyzed for, but not detected at the given detection limit.  
NA indicates compound was analyzed for, but not detected at the given detection limit.  
If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery.  
of this analysis is typically less than 50%.

CAS Number	µg/kg
319-84-6	3.3 U
319-85-7	3.3 U
319-86-8	3.3 U
58-89-9	3.3 U
76-44-8	3.3 U
309-00-2	3.3 U
1024-57-3	3.3 U
959-98-8	3.3 U
60-57-1	6.6 U
72-55-9	6.6 U
72-20-8	6.6 U
33212-65-9	6.6 U
72-54-8	6.6 U
1031-07-8	6.6 U
50-29-3	6.6 U
72-43-5	33 U
53494-70-5	6.6 U
7421-36-3	6.6 U
5103-74-2	3.3 U
5103-71-9	3.3 U
8001-35-2	330 U
100 U	66 U
12672-29-6	66 U
11097-69-1	66 U
11096-82-5	66 U
11104-28-2	140 U
11141-16-5	66 U

Pesticide Surrogate Recovery	GC Limits
Decachlorobiphenyl (DCBP)	75.3%
Tetrachlorometylene (TCMX)	90.4%
	46-131
	54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value  
indicates an estimated value when that value is less than the calculated detection limit.  
X indicates a value above the linear range of the detector. Dilution required.  
S indicates no value reported due to saturation of the detector.  
D indicates the surrogate was diluted out.  
U indicates compound was analyzed for, but not detected at the given detection limit.  
NA indicates compound was analyzed for, but not detected at the given detection limit.  
If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery.  
of this analysis is typically less than 50%.



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**ORGANICS ANALYSIS DATA SHEET**  
PESTICIDE/PCB BY GC/ECD

Lab Sample ID: F065F  
Matrix: Soils/Sediments  
QC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Cathleen M. Newman*  
Report: 10/18/93 MAC:sk VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 21.9 (Dry Wt.)  
Final Ext. Volume: 20 mL  
GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc./Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
-	Aroclor-1242/1016	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	100 U
11096-82-5	Aroclor-1260	100 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	71.9% 46-131
Tetrachlorometylene (TCMX)	81.2% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value.  
J Indicates an estimated value when that value is less than the calculated detection limit.  
X Indicates a value above the linear range of the detector. Dilution required.  
S Indicates no value reported due to saturation of the detector.  
D Indicates the surrogate was diluted out.  
U Indicates compound was analyzed for, but not detected at the given detection limit.  
NA Indicates compound not analyzed.  
\* If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



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**ORGANICS ANALYSIS DATA SHEET**  
PESTICIDE/PCB BY GC/ECD

Lab Sample ID: F065G  
Matrix: Soils/Sediments  
QC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Cathleen M. Newman*  
Report: 10/18/93 MAC:sk VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 27.6 (Dry Wt.)  
Final Ext. Volume: 20 mL  
GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc./Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
-	Aroclor-1242/1016	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	100 U
11096-82-5	Aroclor-1260	100 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	93.8% 46-131
Tetrachlorometylene (TCMX)	105% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value.  
J Indicates an estimated value when that value is less than the calculated detection limit.  
X Indicates a value above the linear range of the detector. Dilution required.  
S Indicates no value reported due to saturation of the detector.  
D Indicates the surrogate was diluted out.  
U Indicates compound was analyzed for, but not detected at the given detection limit.  
NA Indicates compound not analyzed.  
\* If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



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**ORGANICS ANALYSIS DATA SHEET  
PESTICIDE/PCB BY GC/ECD**

Sample No: 398112

Lab Sample ID: F065H  
Matrix: Soils/Sediments  
QC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *William M. Nelson*  
Report: 10/18/93 MAC:sk VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Sample Amount: 25.6 (Dry Wt.)  
Final Ext. Volume: 20 mL  
Conc/Dil Factor: 1:1  
GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg
319-84-6	5.0 U
319-85-7	5.0 U
319-86-8	5.0 U
58-89-9	5.0 U
76-44-8	5.0 U
309-00-2	5.0 U
1024-57-3	5.0 U
959-98-8	5.0 U
60-57-1	10 U
72-55-9	10 U
72-20-8	10 U
33212-65-9	10 U
72-54-8	10 U
1031-07-8	10 U
90-29-3	10 U
72-43-5	50 U
53494-70-5	10 U
7421-36-3	10 U
5103-74-2	5.0 U
5103-71-9	5.0 U
8001-35-2	500 U
12672-29-6	100 U
11097-69-1	100 U
11096-82-5	100 U
11104-28-2	200 U
11141-16-5	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	83.9%
Tetrachlorometylene (TCMX)	93.6%
	46-131
	54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analysis is typically less than 50%.



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**ORGANICS ANALYSIS DATA SHEET  
PESTICIDE/PCB BY GC/ECD**

Sample No: 398113

Lab Sample ID: F065I  
Matrix: Soils/Sediments  
QC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *William M. Nelson*  
Report: 10/18/93 MAC:sk VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Sample Amount: 27.5 (Dry Wt.)  
Final Ext. Volume: 20 mL  
Conc/Dil Factor: 1:1  
GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg
319-84-6	5.0 U
319-85-7	5.0 U
319-86-8	5.0 U
58-89-9	5.0 U
76-44-8	5.0 U
309-00-2	5.0 U
1024-57-3	5.0 U
959-98-8	5.0 U
60-57-1	10 U
72-55-9	10 U
72-20-8	10 U
33212-65-9	10 U
72-54-8	10 U
1031-07-8	10 U
90-29-3	10 U
72-43-5	50 U
53494-70-5	10 U
7421-36-3	10 U
5103-74-2	5.0 U
5103-71-9	5.0 U
8001-35-2	500 U
12672-29-6	100 U
11097-69-1	100 U
11096-82-5	100 U
11104-28-2	200 U
11141-16-5	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	86.1%
Tetrachlorometylene (TCMX)	91.7%
	46-131
	54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analysis is typically less than 50%.





**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB by GC/ECD**

Sample No: 398114

Lab Sample ID: F065J  
Matrix: Sells/Sediments  
GC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Cathy M. Nelson*  
MAC sk

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Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Sample Amount: 29.3 (Dry Wt.)  
Final Ext. Volume: 20 mL  
VTSR: 09/24/93

GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
-	Aroclor-1242/1016	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	100 U
11096-82-5	Aroclor-1260	100 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	95.3% 46-131
Tetrachlorometylene (TCMX)	104% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value. Indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB by GC/ECD**

Sample No: 398115

Lab Sample ID: F065K  
Matrix: Sells/Sediments  
GC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Cathy M. Nelson*  
MAC sk

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(206) 821-7523 (FAX)

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Sample Amount: 27.6 (Dry Wt.)  
Final Ext. Volume: 20 mL  
VTSR: 09/24/93

GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc/Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
-	Aroclor-1242/1016	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	100 U
11096-82-5	Aroclor-1260	100 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	91.3% 46-131
Tetrachlorometylene (TCMX)	103% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value. Indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB BY GC/ECD**

Lab Sample ID: F065L  
Matrix: Soils/Sediments  
QC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Cathy M. Newman*  
Report: 10/18/93 MAC:sk VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Sample Amount: 21.4 (Dry Wt.)  
Final Ext. Volume: 20 mL  
Conc/Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
-	Aroclor-1242/1016	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	100 U
11096-82-5	Aroclor-1260	100 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	89.4% 46-131
Tetrachlorometylene (TCMX)	100% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value. Indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. NA Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB BY GC/ECD**

Lab Sample ID: F065M  
Matrix: Soils/Sediments  
QC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Cathy M. Newman*  
Report: 10/18/93 MAC:sk VTSR: 09/24/93

Date Extracted: 10/04/93  
Date Analyzed: 10/09/93  
Sample Amount: 22.4 (Dry Wt.)  
Final Ext. Volume: 20 mL  
Conc/Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
-	Aroclor-1242/1016	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	100 U
11096-82-5	Aroclor-1260	100 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	92.3% 46-131
Tetrachlorometylene (TCMX)	100% 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value. Indicates an estimated value when that value is less than the calculated detection limit. Indicates a value above the linear range of the detector. Dilution required. Indicates no value reported due to saturation of the detector. Indicates the surrogate was diluted out. Indicates compound was analyzed for, but not detected at the given detection limit. NA Indicates compound not analyzed. If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB by GC/ECD**

Sample No: **Method Blank**

Lab Sample ID: F065MB  
Matrix: Soils/Sediments  
GC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Catherine M. Newman*  
Report: 10/22/93 MAC:sk VTSR: NA

Date Extracted: 10/04/93  
Date Analyzed: 10/08/93  
Sample Amount: 20.2 (Dry Wt. Equiv.)  
Final Ext. Volume: 20 mL  
GPC Cleanup: Yes  
Alumina Cleanup: Yes  
Sulfur Cleanup: No  
Conc./Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	5.0 U
319-85-7	Beta-BHC	5.0 U
319-86-8	Delta-BHC	5.0 U
58-89-9	Gamma-BHC (Lindane)	5.0 U
76-44-8	Heptachlor	5.0 U
309-00-2	Aldrin	5.0 U
1024-57-3	Heptachlor Epoxide	5.0 U
959-98-8	Endosulfan I	5.0 U
60-57-1	Dieldrin	10 U
72-55-9	4,4'-DDE	10 U
72-20-8	Endrin	10 U
33212-65-9	Endosulfan II	10 U
72-54-8	4,4'-DDD	10 U
1031-07-8	Endosulfan Sulfate	10 U
50-29-3	4,4'-DDT	10 U
72-43-5	Methoxychlor	50 U
53494-70-5	Endrin Ketone	10 U
7421-36-3	Endrin Aldehyde *	10 U
5103-74-2	Gamma-Chlordane	5.0 U
5103-71-9	Alpha-Chlordane	5.0 U
8001-35-2	Toxaphene	500 U
	Aracloer-1242/1016	100 U
12672-29-6	Aracloer-1248	100 U
11097-69-1	Aracloer-1254	100 U
11096-82-5	Aracloer-1260	100 U
11104-28-2	Aracloer-1221	200 U
11141-16-5	Aracloer-1232	100 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	79.6% - 46-131
Tetrachloromethoxyethylene (TCMX)	83.9% - 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value.  
J Indicates an estimated value when that value is less than the calculated detection limit.  
X Indicates a value above the linear range of the detector. Dilution required.  
S Indicates no value reported due to saturation of the detector.  
D Indicates the surrogate was diluted out.  
U Indicates compound was analyzed for, but not detected at the given detection limit.  
NA Indicates compound not analyzed.  
\* If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 5%.



**ORGANICS ANALYSIS DATA SHEET**  
**PESTICIDE/PCB by GC/ECD**

Sample No: **Method Blank**

Lab Sample ID: F065MB2  
Matrix: Soils/Sediments  
GC Report No.: F065 - WDOE  
Project: Ebey Slough  
Data Release Authorized: *Catherine M. Newman*  
Report: 10/25/93 MAC:sk VTSR: NA

Date Extracted: 10/18/93  
Date Analyzed: 10/20/93  
Sample Amount: 30.6 (Dry Wt. Equiv.)  
Final Ext. Volume: 20 mL  
GPC Cleanup: No  
Florisil Cleanup: No  
Sulfur Cleanup: No  
Conc./Dil Factor: 1:1

CAS Number	µg/kg	
319-84-6	Alpha-BHC	3.3 U
319-85-7	Beta-BHC	3.3 U
319-86-8	Delta-BHC	3.3 U
58-89-9	Gamma-BHC (Lindane)	3.3 U
76-44-8	Heptachlor	3.3 U
309-00-2	Aldrin	3.3 U
1024-57-3	Heptachlor Epoxide	3.3 U
959-98-8	Endosulfan I	3.3 U
60-57-1	Dieldrin	6.6 U
72-55-9	4,4'-DDE	6.6 U
72-20-8	Endrin	6.6 U
33212-65-9	Endosulfan II	6.6 U
72-54-8	4,4'-DDD	6.6 U
1031-07-8	Endosulfan Sulfate	6.6 U
50-29-3	4,4'-DDT	6.6 U
72-43-5	Methoxychlor	33 U
53494-70-5	Endrin Ketone	6.6 U
7421-36-3	Endrin Aldehyde *	6.6 U
5103-74-2	Gamma-Chlordane	3.3 U
5103-71-9	Alpha-Chlordane	3.3 U
8001-35-2	Toxaphene	330 U
	Aracloer-1242/1016	66 U
12672-29-6	Aracloer-1248	66 U
11097-69-1	Aracloer-1254	66 U
11096-82-5	Aracloer-1260	66 U
11104-28-2	Aracloer-1221	140 U
11141-16-5	Aracloer-1232	66 U

Pesticide Surrogate Recovery	QC Limits
Decachlorobiphenyl (DCBP)	78.6% - 46-131
Tetrachloromethoxyethylene (TCMX)	92.8% - 54-138

**Data Qualifiers**  
If the result is a value greater than or equal to the detection limit, report the value.  
J Indicates an estimated value when that value is less than the calculated detection limit.  
X Indicates a value above the linear range of the detector. Dilution required.  
S Indicates no value reported due to saturation of the detector.  
D Indicates the surrogate was diluted out.  
U Indicates compound was analyzed for, but not detected at the given detection limit.  
NA Indicates compound not analyzed.  
\* If Alumina cleanup was performed, Endrin Aldehyde values are qualified as recovery of this analyte is typically less than 50%.



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**SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY**

ARI ID: F065M  
Sample No: 398117  
QC Report: WDOE  
Project: Ebey Slough

Data Release Authorized: *Cathy M. Pearson*

Report: 10/18/93 sk

COMPOUND	SPIKE ADDED (µg/kg)	SAMPLE CONC (µg/kg)	MS CONC (µg/kg)	MS REC	QC LIMITS	
					RPD	%REC
Lindane	43.7	0	43.5	99.5%	46-127	
Heptachlor	43.7	0	42.1	96.3%	35-130	
Aldrin	43.7	0	41.8	95.7%	34-132	
Dieldrin	87.3	0	82.3	94.3%	31-134	
Endrin	87.3	0	100	115%	42-139	
4,4'-DDT	87.3	0	94.8	109%	23-134	

COMPOUND	SPIKE ADDED (µg/kg)	MSD CONC (µg/kg)	MSD REC	RPD	QC LIMITS	
					RPD	%REC
Lindane	49.5	50.9	103%	3.5	50	46-127
Heptachlor	49.5	50.6	102%	5.7	31	35-130
Aldrin	49.5	47.8	96.6%	0.9	43	34-132
Dieldrin	99.0	89.0	89.9%	4.8	38	31-134
Endrin	99.0	114	115%	0.0	45	42-139
4,4'-DDT	99.0	103	104%	4.7	50	23-134

RPD: 0 out of 6 outside limits  
Spike Recovery: 0 out of 12 outside limits  
Asterisked values outside QC Limits

**Comments:** QC Limits taken from CLP 04MD1.6 (June 1991)  
Values taken from DB608 column due to a rise in response on DB5.



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**4C PESTICIDE METHOD BLANK SUMMARY**

ARI Job No: F065

Client: WDOE  
Project: Ebey Slough

Lab Sample ID: F065mb

Matrix: Soils/Sediments  
Level: Low

Extraction: Sonic  
Date Extracted: 10/04/93

Date Analyzed (1): 10/08/93  
Time Analyzed (1): 11:26  
Instrument ID (1): ECD-1  
GC Column ID (1): DB-5 0.53 mm

Date Analyzed (2): 10/08/93  
Time Analyzed (2): 11:26  
Instrument ID (2): ECD-1  
GC Column ID (2): DB-608 0.53 mm

Report: MAC.sk/mb 10/20/93

**THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS,MSD:**

Client	Sample ID	Lab Sample ID	Lab File ID	Date Analyzed
Spike Blank	10/04	F065sb	10/04	10/08/93
	398105	F065A	100728	10/08/93
	398106	F065B	100727	10/08/93
	398107	F065C	100729	10/08/93
	398108	F065D	100734	10/08/93
	398109	F065E	100735	10/08/93
	398110	F065F	100736	10/08/93
	398111	F065G	100737	10/08/93
	398112	F065H	100738	10/09/93
	398113	F065I	100739	10/09/93
	398114	F065J	100740	10/09/93
	398115	F065K	100741	10/09/93
	398116	F065L	100742	10/09/93
	398117	F065M	100743	10/09/93
	398117 MS	F065Mms	100744	10/09/93
	398117 MSD	F065Mmsd	100748	10/09/93

Comments: