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NS MAYPORT
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LETTER REPORT REGARDING TURING BASIN SEDIMENT SAMPLING AND ANALYSIS PLAN NS MAYPORT FL
4/21/1994
ABB

ABB

April 21, 1994 7533-84

Southern Division
Naval Facilities Command
ATTN: Mr. David Driggers
P.O. Box 190010
2155 Eagle Drive
North Charleston, SC 29418

Dear David:

SUBJECT: Letter Report, Mayport Turning Basin Sediment Sampling and Analysis, U.S. Naval Station, Mayport, Florida, Unit Identification Code N60201, Contract No. N62467-89-D-0317, CTO No. 028

INTRODUCTION

This document describes the collection and analysis of two sediment samples collected from the Mayport Turning Basin, located at the Mayport Naval Station (NAVSTA) Mayport, Florida (see Figures 1 and 2 in Attachment A). The sampling event was performed at the request of the Department of the Navy, Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) on behalf of NAVSTA Mayport by ABB Environmental Services Inc. (ABB-ES). The scope of this sampling event was limited to the collection of site-specific data for internal use by the Navy. The analytical results of the sediment sample were not validated and are subject to change. Review of the data, results, conclusions, and recommendations by entities external to the Navy is not anticipated.

The Mayport Turning Basin is a harbor that is dredged routinely (approximately every 2 to 3 years) for berthing of Navy ships. Dredging is necessary to maintain sufficient draft clearance for ship movement and berthing. During the sampling event, active dredging of sediments from the Mayport Turning Basin was ongoing. Dredged sediments were transferred through a slurry pipeline (Figure 2) to solid waste management unit 50 (Solid Waste Management Unit [SWMU] 50) the Western Dredge Spoil Area. The slurry is composed of dredge material and water from Mayport Turning Basin. Solid dredged material (sand, silt, and shell) settle in the SWMU 50 basin. Water is pumped from a sediment stilling basin to Mayport Turning Basin by a return pipeline after the solid materials have settled.

This sampling event was limited in scope and has not characterized all possible sources of contamination at Mayport Turning Basin or the SWMU 50 Dredge Spoil Areas nor has it assessed potential risks. Surface water samples were not collected. Because of the limited scope of the sampling event (two sediment samples), it is possible that some potential target analytes (hazardous waste) were not identified.

ABB Environmental Services, Inc.

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Tallahassee, Florida 32301

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FIELD ACTIVITIES

The sampling event at Mayport Turning Basin was to provide the Navy with sediment samples to assess basin sediments for hazardous constituents. The field activities were conducted on December 2, 1993, and consisted of the collection of two sediment samples at separate locations within the basin (Figure 2). An additional set of collocated sediment samples was collected for an onsite U.S. Environmental Protection Agency (USEPA) observer. Sampling methodology, with exception of self-contained underwater breathing apparatus (SCUBA) diving, and equipment decontamination protocols were in general accordance with those described in the NAVSTA Mayport RFI Workplan, Volumes I and II (ABB-ES, 1991).

Sediment Sample Collection

Two discrete sediment samples were collected by Navy SCUBA divers from the bottom of the Turning Basin under zero visibility conditions. The SCUBA divers were used to collect the sediment samples because high winds and rough water conditions precluded the use of the petit ponar dredge or the sediment core sampler. The sediment samples collected by the SCUBA divers required modification of sampling procedures as described in the following paragraphs.

Sample MPT-BG-SD08 was collected using three precleaned separate sediment sample jars, which had been supplied by the analytical laboratory. Navy divers were directed to invert the three jars and press them into the Mayport Turning Basin floor sediment. The interval sampled consisted of approximately the upper three inches of sediment. Immediately after sample collection, while still submerged, the divers capped the containers that held the sample to be analyzed for the volatile organic compounds (VOCs) in an attempt to maintain zero headspace prior to bring the sample to the surface. The two remaining sample bottles, which were used for semivolatile organic compounds (SVOCs), chlorinated pesticides, herbicides, polychlorinated biphenyls (PCBs), and metals were capped immediately upon return to the surface. All samples were placed in a cooler with ice immediately after labeling. A second Navy diver collected a collocated sediment sample in the same manner for the onsite USEPA observer.

At the suggestion of the USEPA onsite observer, sample MPT-BG-SD09 was collected using a 2.5-liter capacity plastic cooler. The Navy divers descended with the cooler and scraped sediment from approximately 0 to 3 inches from the turning basin floor. Upon return to the surface, the cooler was covered with a Visqueen™ sheet. The sample was then transported to the staging area where the sample for VOC analysis was obtained from the middle portion of the cooler, placed into two precleaned sample bottles, and capped. The remaining sediments were obtained from the central portion of the cooler without touching the side and placed in a precleaned glass mixing bowl, then homogenized using a precleaned stainless-steel spoon. After homogenization, sample MPT-BG-SD09 was placed into precleaned sample bottles supplied by the analytical laboratory. A split sample from the cooler was provided to the onsite USEPA observer.

Laboratory Analyses

Laboratory analysis of the sediment samples followed USEPA document SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1986) and *Toxicity Characteristic Leaching Procedure* (TCLP) (1990). The sediment samples were analyzed for VOCs, SVOCs, chlorinated pesticides, herbicides, PCBs, cyanide and metallic analytes, listed in the Appendix IX Groundwater Monitoring List, 40 CFR 264.

Samples for laboratory analysis were shipped to the laboratory by express-overnight delivery under chain-of-custody protocol. Because of the limited scope of this project, the analytical data were not validated according to the NEESA guidance document 20.2-047B (1988), *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program.*

The analytical results are provided in Attachment C.

Health and Safety

The field sampling activities were performed in Occupational Safety and Health Administration (OSHA) Level D personal protective equipment (PPE). The Level D PPE consisted of steel-toed work boots and disposable gloves. The health and safety requirements for performance of the field work are described in the Health and Safety Plan for the Mayport Resource Conservation and Recovery Act (RCRA) Facility Investigation Workplan for NAVSTA Mayport Volume III (ABB-ES, 1991, revised).

Decontamination

Sampling equipment, the petit ponar dredge and sediment core sampler, was decontaminated according to the equipment decontamination procedures specified in the USEPA-approved RCRA Facility Investigation Workplan for NAVSTA Mayport, Volume II (ABB-ES, 1991). Gloves worn during field sampling activities were replaced between the collection of each sample.

ANALYTICAL RESULTS

Sediment samples MPT-BG-SD08 and MPT-BG-SD09 were collected from the Mayport Turning Basin on December 2, 1993 (Figure 2), and submitted to a NEESA approved laboratory for analysis by TCLP and USEPA SW-846 methods. The following section provides a description of the results of the laboratory analysis of sediment samples MPT-BG-SD08 and MPT-BG-SD09 collected on December 2, 1993. It should be noted that the analytical data have not been validated and are subject to change.

Sediment Sample Results

Tables 1 through 7 in Attachment B summarize the analytical results of the sediment samples MPT-BG-SD08 and MPT-BG-SD09. TCLP analytical results determined from the leachate produced from sediment samples MPT-BG-SD08 and MPT-BG-SD09 suggest that concentrations of target analytes were less than laboratory detection levels and regulatory levels used to characterize materials as hazardous waste (Tables 1 through 4).

Tables 5 through 7 summarize USEPA SW-846 analytical results. Three VOCs (acetone, isobutyl alcohol, and methylene chloride,) were detected in both sediment samples (Table 5). Acetone was detected at 63 and 45 micrograms per kilogram (μg/kg), isobutyl alcohol was detected at 86 and 11 μg/kg, and methylene chloride was detected at 50 and 17 μg/kg in sediment samples MPT-BG-SD08 and MPT-BG-SD09 respectively. 2-Chloroethylvinylether was detected at 14 μg/kg in sediment sample MPT-BG-SD08 (Table 5). Acetone, isobutyl alcohol, and methylene chloride were also detected in laboratory blanks. Acetone and methylene chloride are common laboratory contaminants and isobutyl alcohol is a degradation product of acetone.

Seventeen SVOCs including fourteen polynuclear aromatic hydrocarbons (PAHs), two phthalate esters, and one chlorinated hydrocarbon were detected in various combinations and concentrations in sediment samples MPT-BG-SD08 and MPT-BG-SD09 (Table 6).

Seven PAHs were detected in sediment sample MPT-BG-SD08 at concentrations between the contract required quantitation limit (CRQL) and method detection limit (MDL) and are estimated values. Eleven PAHs were detected in sediment sample MPT-BG-SD09. Four of the eleven PAHs (acenaphthene, anthracene, dibenz(a,h)anthracene, and fluorene) were detected in sediment sample MPT-BG-SD09 below the CRQL and above the MDL. Seven of the 11 PAHs were detected above the CRQL (benzo(a)-anthracene, benzo(a)pyrene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene). The two phthalate esters detected were bis(2-ethylhexyl)phthalate and di-n-butylphthalate, both of which were detected at concentrations below CRQL and MDL. Bis(2-ethylhexyl)phthalate also was detected in a laboratory quality control blank and given a "BJ" qualifier. Phthalate compounds are common laboratory contaminants. The chlorinated hydrocarbon, 1, 4-dichlorobenzene was detected at a concentration between the CRQL and MDL.

Polychlorinated biphenyls (PCBs) were not detected in the two sediment samples. Two pesticides beta-BHC (lindane), and 4,4'-dichlorodiphenyltrichloroethene (4,4'-DDT) were detected at low concentrations (Table 6). Beta-BHC was detected at 5.6 and 15 μg/kg in sediment samples MPT-BG-SD08 and MPT-BG-SD09 respectively. The "P" qualifier assigned to the beta-BHC analytical results indicates that there was a percent difference greater than 25 percent between the two columns used to analyze the sample. The lower of the values is reported by the laboratory. 4,4'-DDT was detected at 6.4 μg/kg in sediment sample MPT-BG-SD09.

The following inorganic target analytes were detected in Mayport Turning Basin sediment samples (Table 7).

- Arsenic was detected in both sediment samples at concentrations of 5.1 and 26.8 milligrams per kilogram (mg/kg).
- Aluminum was detected in both sediment samples at concentrations of 3,120 and 12,500 mg/kg.
- Barium was detected in both sediment samples at concentrations of 19.9 and 157 mg/kg.
- Calcium was detected in both sediment samples at concentrations of 26,900 and 125,000 mg/kg.
- Chromium was detected in both sediment samples at concentrations of 34.3 and 356 mg/kg.
- Cobalt was detected in one sediment sample at a concentration of 1.4 mg/kg.
- Copper was detected in both sediment samples at concentrations of 55.8 and 712 mg/kg.
- Iron was detected in both sediment samples at concentrations of 5,810 and 17,000 mg/kg.
- Lead was detected in both sediment samples at concentrations of 15.3 and 99.1 mg/kg.
- Magnesium was detected in both sediment samples at concentrations of 3,370 and 9,030 mg/kg.
- Manganese was detected in both sediment samples at concentrations of 96.6 and 264 mg/kg.

- Nickel was detected in one sediment sample at a concentration of 17.4 mg/kg.
- Potassium was detected in both sediment samples at concentrations of 821 and 3,620 mg/kg.
- Selenium was detected in one sediment sample at a concentration of 7.6 mg/kg.
- Sodium was detected in both sediment samples at concentrations of 7,890 and 35,100 mg/kg.
- Vanadium was detected in both sediment samples at concentrations of 8.0 and 34.2 mg/kg.
- Zinc was detected in both sediment samples at concentrations of 171 and 995 mg/kg.
- Cyanide was not detected in sediment samples MPT-BG-SD08 or MPT-BG-SD09.

Please feel free to call Frank Lesesne or myself at (904) 656-1293 if you have questions.

Very truly yours,

ABB Environmental Services, Inc.

Margaret E. Layne
Senior Project Manager

Frank K. Lesesne
Quality Assurance Manager

cc: Cheryl Mitchell, NAVSTA Mayport
File

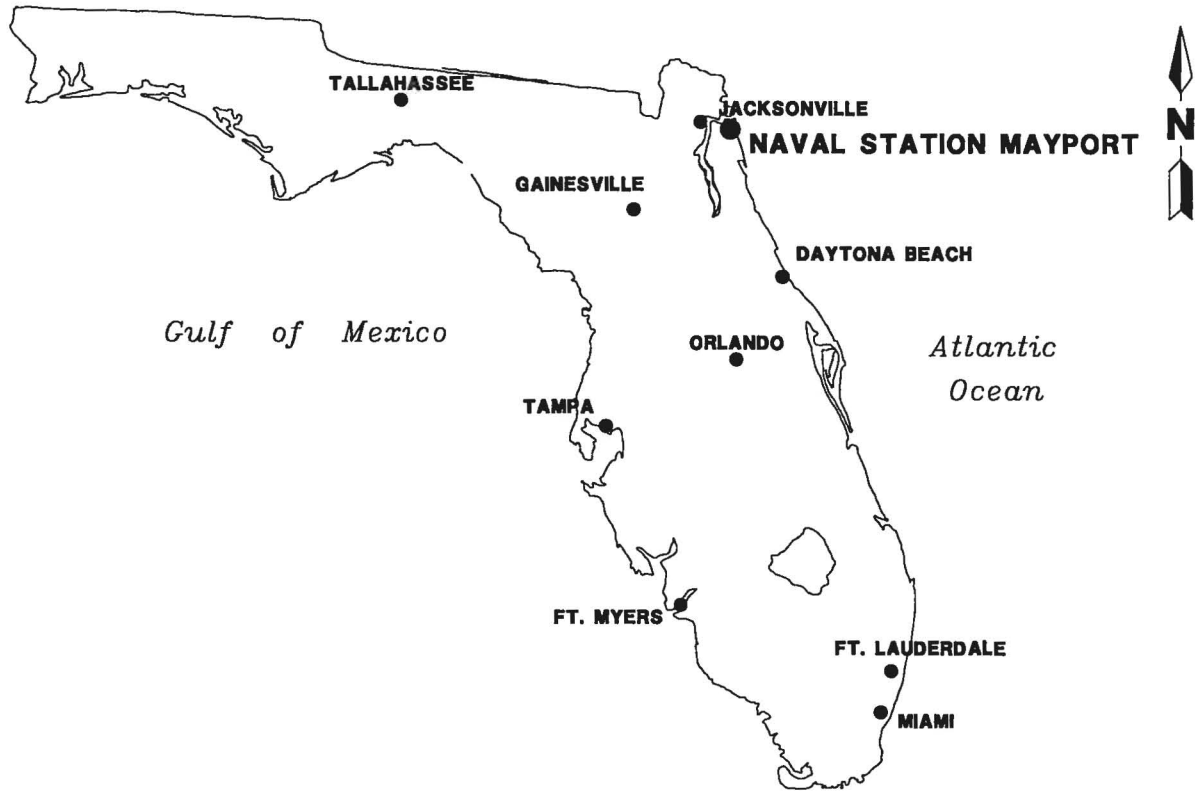
ATTACHMENT A

FIGURES

LIST OF FIGURES

Figure 1 Facility Location Map

Figure 2 Turning Basin Sediment Sampling Locations at NAVSTA Mayport



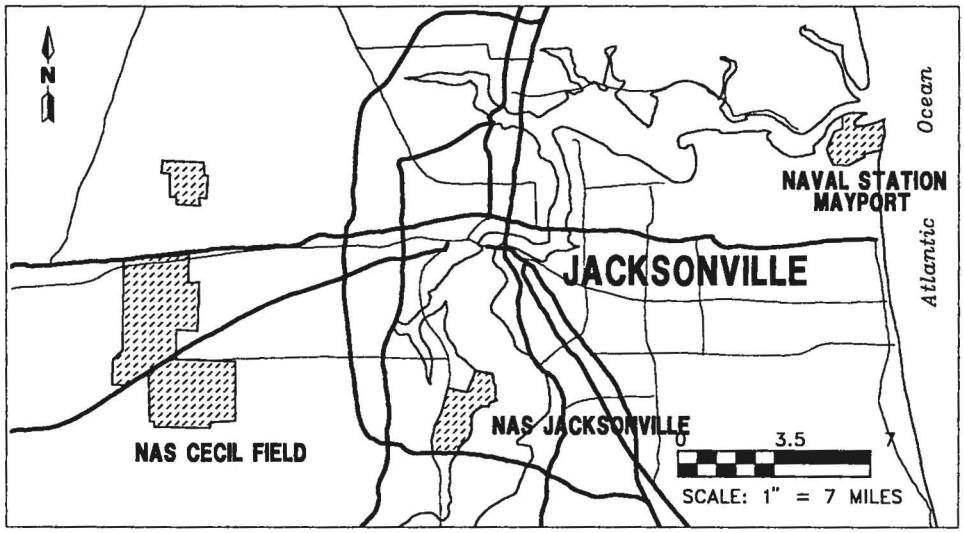


FIGURE 1
FACILITY LOCATION MAP

MAYPORT TURNING BASIN SEDIMENT SAMPLING AND ANALYSIS

U.S. NAVAL STATION MAYPORT
MAYPORT, FLORIDA

MAYLOCAT.DWG\MAH\11-17-93

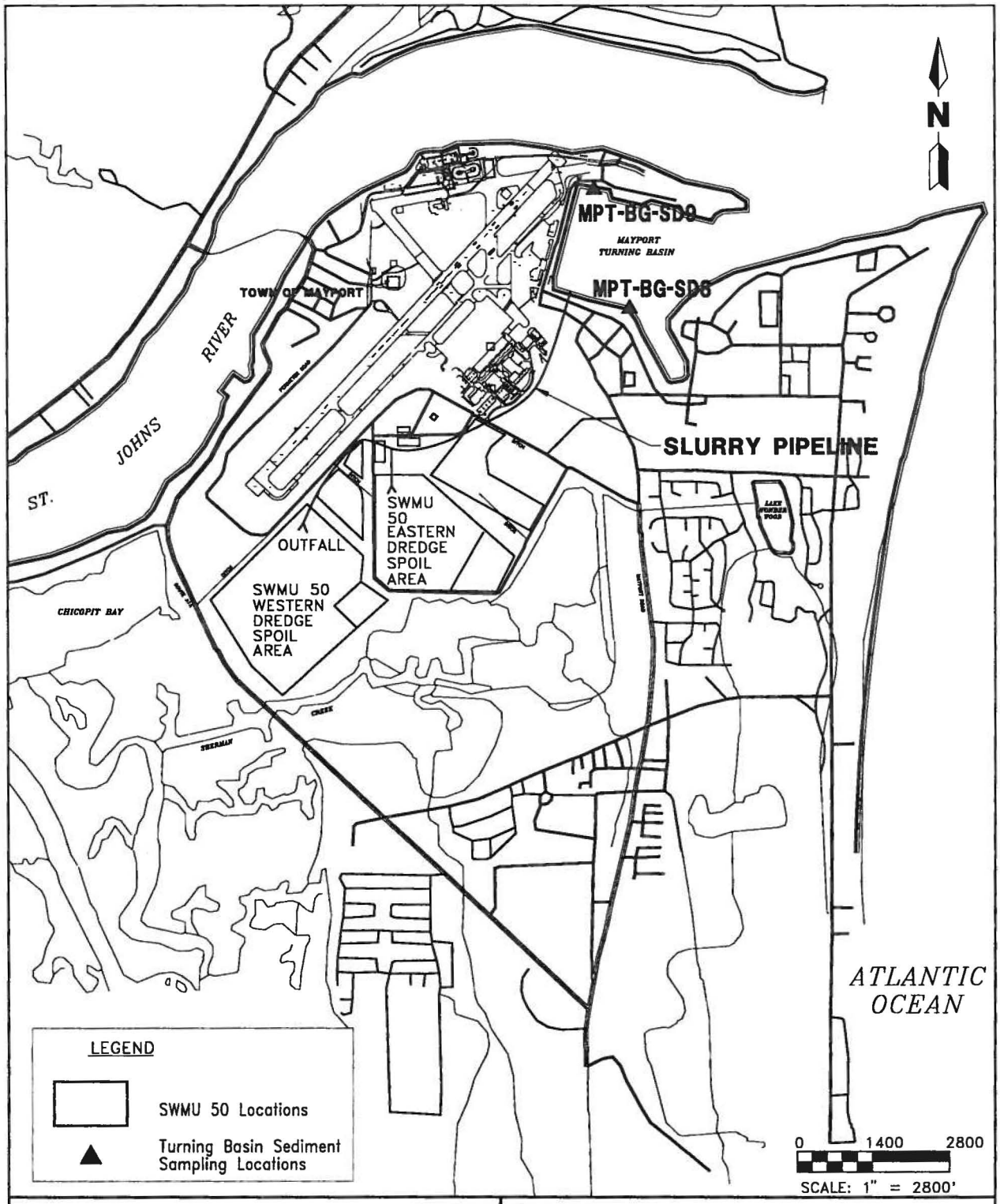


FIGURE 2
TURNING BASIN SEDIMENT SAMPLING LOCATIONS AT NAVSTA MAYPORT

MAYPORT TURNING BASIN SEDIMENT SAMPLING AND ANALYSIS

U.S. NAVAL STATION MAYPORT, FLORIDA

MAYPORT/MAYBACKG.dwg/NWP/4-21-94

ATTACHMENT B

TABLES

Table 1
Volatile Organic Analytes not Detected by TCLP Analysis in Sediment Samples Collected from the Mayport Turning Basin

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Matrix:				Sediment	Sediment
Location/Sample No.:				MPT-BG-SD08	MPT-BG-SD09
Date Sampled:				2-Dec.-93	2-Dec.-93
CAS RN	Common Name	Regulatory Level	Laboratory detection Level	Conc.	Conc.
71-43-2	Benzene	0.05	0.25	< 0.25	< 0.25
78-93-3	2-Butanone	200.0	100.0	< 100.0	<100.0
56-23-5	Carbon Tetrachloride	0.50	0.25	< 0.25	< 0.25
108-90-7	Chlorobenzene	100.0	50.0	< 50.0	< 50.0
67-66-3	Chloroform	6.0	3.0	< 3.0	< 3.0
107-06-2	1,2-Dichloroethane	0.50	0.25	< 0.25	< 0.25
75-35-4	1,1-Dichloroethene	0.70	0.35	< 0.35	< 0.35
127-18-4	Tetrachloroethene	0.70	0.35	< 0.35	< 0.35
79-01-6	Trichloroethene	0.50	0.25	< 0.25	< 0.25
75-01-4	Vinyl Chloride	0.20	0.10	< 0.10	<0.10

Notes: Concentrations are reported in milligrams per liter.
CAS RN = chemical abstract service registry number.
Conc. = concentration.

Table 2
Semivolatile Organic Analytes not Detected by TCLP Analysis in Sediment Samples Collected from the Mayport Turning Basin

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Matrix:				Sediment	Sediment
Location/Sample No.:				MPT-BG-SD08	MPT-BG-SD09
Date Sampled:				2-Dec-93	2-Dec-93
CAS RN	Common Name	Regulatory Level	Laboratory detection Level	Conc.	Conc.
106-46-7	1, 4-Dichlorobenzene	7.5	3.75	< 3.75	< 3.75
121-14-2	2, 4-Dinitrotoluene	0.13	0.065	< 0.065	< 0.065
118-74-1	Hexachlorobenzene	0.13	0.065	< 0.065	< 0.065
87-68-3	Hexachlorobutadiene	0.5	0.25	< 0.25	< 0.25
67-72-1	Hexachloroethane	3.0	1.5	< 1.5	< 1.5
95-48-7	2-Methylphenol	200	100	< 100	< 100
108-39-4	3-Methylphenol	200	100	< 100	<100
106-44-5	4-Methylphenol	200	100	< 100	< 100
98-95-3	Nitrobenzene	2.0	1.0	< 1.0	< 1.0
87-86-5	Pentachlorophenol	100	50	< 50	< 50
110-86-1	Pyridine	5.0	2.5	< 2.5	< 2.5
95-95-4	2, 4, 5-Trichlorophenol	400	200	< 200	< 200
88-06-2	2, 4, 6-Trichlorophenol	2.0	1.0	< 1.0	< 1.0

Notes: Concentrations are reported in milligrams per liter.
CAS RN = chemical abstract service registry number.
Conc. = concentration.

Table 3
Pesticide and Herbicide Analytes not Detected by TCLP Analysis in Sediment Samples Collected from the Mayport Turning Basin

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Matrix:				Sediment	Sediment
Location/Sample No.:				MPT-BG-SD08	MPT-BG-SD09
Date Sampled:				2-Dec.-93	2-Dec.-93
CAS RN	Common Name	Regulatory Level	Laboratory detection Level	Conc.	Conc.
57-74-9	Chlordane	0.03	0.015	< 0.015	< 0.015
72-20-8	Endrin	0.020	0.010	< 0.010	< 0.010
58-89-9	Gamma-BHC (Lindane)	0.40	0.20	< 0.20	< 0.20
76-44-8	Heptachlor	0.0080	0.0040	< 0.0040	< 0.0040
1024-57-3	Heptachlor Epoxide	0.0080	0.0040	< 0.0040	< 0.0040
72-43-5	P, P'Methoxychlor	10.0	5.0	< 5.0	< 5.0
8001-35-2	Toxaphene	0.5	0.25	< 0.25	< 0.25
94-75-7	2, 4-D	10.0	5.0	< 5.0	< 5.0
93-76-5	2, 4, 5-TP (Silvex)	1.0	0.5	< 0.5	< 0.5

Notes: Concentrations are reported in milligrams per liter.
CAS RN = chemical abstract service registry number.
Conc. = concentration.

Table 4
Inorganic Analytes not Detected by TCLP Analysis in Sediment Samples Collected from the Mayport Turning Basin

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Matrix:				Sediment	Sediment
Location/Sample No.:				MPT-BG-SD08	MPT-BG-SD09
Date Sampled:				2-Dec-93	2-Dec-93
CAS RN	Common Name	Regulatory Level	Laboratory detection Level	Conc.	Conc.
7440-38-2	Arsenic	5.0	2.5	< 2.5	< 2.5
7440-39-3	Barium	100	50.0	< 50.0	< 50.0
7440-43-9	Cadmium	1.0	0.5	< 0.5	< 0.5
1333-82-0	Chromium	5.0	2.5	< 2.5	< 2.5
7439-92-1	Lead	5.0	2.5	< 2.5	< 2.5
7439-97-6	Mercury	0.2	0.1	< 0.1	< 0.1
7782-49-2	Selenium	1.0	0.5	< 0.5	< 0.5
7440-22-4	Silver	5.0	2.5	< 2.5	< 2.5

Notes: Concentrations are reported in milligrams per liter.
CAS RN = chemical abstract service registry number.
Conc. = concentration.

Table 5
Volatile Organic Analytes Detected in the Mayport Turning Basin Sediment Samples

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Delivery Group:			11		11	
Sample Matrix:			Sediment		Sediment	
Location/Sample No.:			MPT-BG-SD08		MPT-BG-SD09	
Date Sampled:			2-Dec.-93		2-Dec.-93	
CAS RN	Common Name	Units	Conc.	Qual.	Conc.	Qual.
67-64-1	Acetone	µg/kg	63	BJ	45	BJ
110-75-8	2-Chloroethylvinylether	µg/kg	14	J	--	
78-83-1	Isobutyl Alcohol	µg/kg	86	BJ	11	BJ
75-09-2	Methylene Chloride	µg/kg	50	BJ	17	BJ

Notes: CAS RN = chemical abstract service registry number.
µg/kg = micrograms per kilogram.
Conc. = concentration.
-- = concentration less than the contract Required Quantitation Limit (CRQL).
Qual. = qualifier.
J = estimated concentration.
B = analyte detected in a corresponding blank.

Table 3-6
Semivolatile Organic and Pesticide Analytes Detected in the Mayport Turning Basin Sediment Samples

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Delivery Group:			13/316PS		13/316PS	
Sample Matrix:			Sediment		Sediment	
Location/Sample No.:			MPT-BG-SD08		MPT-BG-SD09	
Date Sampled:			2-Dec.-93		2-Dec.-93	
CAS RN	Common Name	Units	Conc.	Qual.	Conc.	Qual.
83-32-9	Acenaphthene	µg/kg	--		91	J
120-12-7	Anthracene	µg/kg	170	J	440	J
56-55-3	Benzo(a)anthracene	µg/kg	350	J	3,000	
191-24-2	Benzo(g,h,i)perylene	µg/kg	--		1,000	J
205-99-2	Benzo(b)fluoranthene	µg/kg	470	JX	5,400	X
207-08-9	Benzo(k)fluoranthene	µg/kg	470	JX	5,400	X
50-32-8	Benzo(a)pyrene	µg/kg	--		2,100	
218-01-9	Chrysene	µg/kg	370	J	2,900	
53-70-3	Dibenz(a,h)anthracene	µg/kg	--		290	J
206-44-0	Fluoranthene	µg/kg	660	J	7,300	
86-73-7	Fluorene	µg/kg	--		110	J
193-39-5	Indeno(1,2,3-cd)pyrene	µg/kg	--		1,000	
85-01-8	Phenanthrene	µg/kg	--		3,100	
129-00-0	Pyrene	µg/kg	770	J	6,100	
117-81-7	Bis (2-ethylhexyl)phthalate	µg/kg	470	BJ	200	BJ
84-74-2	Di-n-butylphthalate	µg/kg	160	J	160	J
106-46-7	1, 4-Dichlorobenzene	µg/kg	--		110	J
319-85-7	Beta - BHC	µg/kg	5.6	P	15	P
50-29-3	4, 4'-DDT	µg/kg	--		6.4	

Notes: CAS RN = chemical abstract service registry number.
µg/kg = micrograms per kilogram.
Conc. = concentration.
-- = concentration less than the contract Required Quantitation Limit (CRQL).
Qual. = qualifier.
J = estimated concentration.
B = analyte detected in a corresponding blank.
X = indistinguishable coeluting isomers.
P = > 25 percent difference for detected concentrations between two GC columns, lower value reported.

Table 7
Inorganic Analytes Detected in the Mayport Turning Basin Sediment Samples

Technical Memorandum
Mayport Turning Basin Characterization Activities
NAVSTA Mayport, Mayport, Florida

Sample Delivery Group:			937366		937366	
Sample Matrix:			Sediment		Sediment	
Location/Sample No.:			MPT-BG-SD08		MPT-BG-SD09	
Date Sampled:			2-Dec.-93		2-Dec.-93	
CAS RN	Common Name	Units	Conc.	Qual.	Conc.	Qual.
7440-38-2	Arsenic	mg/kg	26.8		5.1	
7429-90-5	Aluminum	mg/kg	12,500		3,120	
7440-39-3	Barium	mg/kg	19.9	J	157	
7440-70-2	Calcium	mg/kg	26,900		125,000	
7440-47-3	Chromium	mg/kg	34.3		356	
7440-48-4	Cobalt	mg/kg	--		1.4	J
7440-50-8	Copper	mg/kg	712		55.8	
7439-89-6	Iron	mg/kg	17,000		5,810	
7493-92-1	Lead	mg/kg	15.3		99.1	
7439-95-4	Magnesium	mg/kg	9,030		3,370	
7439-96-5	Manganese	mg/kg	264		96.6	
7440-02-0	Nickel	mg/kg	17.4	J	--	
7440-09-7	Potassium	mg/kg	3,620		821	J
7782-49-2	Selenium	mg/kg	7.6		--	
7440-23-5	Sodium	mg/kg	35,100		7,890	
7440-62-2	Vanadium	mg/kg	34.2		8	J
7440-66-6	Zinc	mg/kg	171		995	

Notes: CAS RN = chemical abstract service registry number.
μg/kg = micrograms per kilogram.
Conc. = concentration.
-- = concentration less than the contract Required Quantitation Limit (CRQL).
Qual. = qualifier.
J = estimated concentration.

ATTACHMENT C

ANALYTICAL DATA

TCLP AND USEPA SW-846

VOLATILE METHOD TCLP / ZHE
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED :12-2-93
DATE RECEIVED :12-3-93
DATE TCLP/ZHE :12-7-93 (TCLP ROTATION STARTED)
DATE ANALYZED :12-9-93

COMPUCHEM SAMPLE # 590473 MS# 590474
CLIENT I.D. # MPTBGSD08 MSD# 590475
SAMPLE FILE NAME : CN090473C03
DILUTION FACTOR : 5 *

COMPOUND	A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
VINYL CHLORIDE	BRL	BRL	0.050	0.10	0.20
1,1-DICHLOROETHENE	BRL	BRL	0.025	0.35	0.70
2-BUTANONE	BRL	BRL	0.050	100.	200.
CHLOROFORM	BRL	BRL	0.025	3.00	6.00
CARBON TETRACHLORIDE	BRL	BRL	0.025	0.25	0.50
BENZENE	BRL	BRL	0.025	0.25	0.50
1,2-DICHLOROETHANE	BRL	BRL	0.025	0.25	0.50
TRICHLOROETHENE	BRL	BRL	0.025	0.25	0.50
TETRACHLOROETHENE	BRL	BRL	0.025	0.35	0.70
CHLOROBENZENE	BRL	BRL	0.025	50.0	100.

* = Refer to CompuChem's "Plan and Policies".
BRL = Below Reporting Limits

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS = Dilution-Adjusted Reporting Limits
C = Method Detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

VOLATILE METHOD TCLP / ZHE
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED :12-2-93
DATE RECEIVED :12-3-93
DATE TCLP/ZHE :12-7-93 (TCLP ROTATION STARTED)
DATE ANALYZED :12-9-93

COMPUCHEM SAMPLE # 590507 MS# 590474
CLIENT I.D. # MPTBGSD09 MSD# 590475
SAMPLE FILE NAME : CN090507C03
DILUTION FACTOR : 5 *

COMPOUND	A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
VINYL CHLORIDE	BRL	BRL	0.050	0.10	0.20
1,1-DICHLOROETHENE	BRL	BRL	0.025	0.35	0.70
2-BUTANONE	BRL	BRL	0.050	100.	200.
CHLOROFORM	BRL	BRL	0.025	3.00	6.00
CARBON TETRACHLORIDE	BRL	BRL	0.025	0.25	0.50
BENZENE	BRL	BRL	0.025	0.25	0.50
1,2-DICHLOROETHANE	BRL	BRL	0.025	0.25	0.50
TRICHLOROETHENE	BRL	BRL	0.025	0.25	0.50
TETRACHLOROETHENE	BRL	BRL	0.025	0.35	0.70
CHLOROBENZENE	BRL	BRL	0.025	50.0	100.

* = Refer to CompuChem's "Plan and Policies".
BRL = Below Reporting Limits

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS = Dilution-Adjusted Reporting Limits
C = Method Detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

SEMIVOLATILE METHOD TCLP
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED :12/02/93
DATE RECEIVED :12/03/93
TCLP STARTED :12/07/93 (TCLP ROTATION STARTED)
DATE EXTRACTED:12/08/93
DATE ANALYZED :12/09/93

COMPUCHEM SAMPLE # 590477 MS # 590478
CLIENT I.D. # MPTB6SD08 MSD# 590479
FILE NAME : GH090477B02
DILUTION FACTOR : 5 *

COMPOUND		A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
PYRIDINE		BRL	BRL	0.050	2.5	5.0
1,4-DICHLOROBENZENE		BRL	BRL	0.050	3.75	7.5
2-METHYLPHENOL (O-CRESOL)		BRL	BRL	0.050	100.	200.
3-METHYLPHENOL (M-CRESOL)	X	BRL	BRL	0.050	100.	200.
4-METHYLPHENOL (P-CRESOL)	X	BRL	BRL	0.050	100.	200.
HEXACHLOROETHANE		BRL	BRL	0.050	1.5	3.0
NITROBENZENE		BRL	BRL	0.050	1.00	2.0
HEXACHLOROBUTADIENE		BRL	BRL	0.050	0.25	0.5
2,4,6-TRICHLOROPHENOL		BRL	BRL	0.050	1.0	2.0
2,4,5-TRICHLOROPHENOL		BRL	BRL	0.050	200.	400.
2,4-DINITROTOLUENE		BRL	BRL	0.050	0.065	0.13
HEXACHLOROBENZENE		BRL	BRL	0.050	0.065	0.13
PENTACHLOROPHENOL		BRL	BRL	0.250	50.00	100.
TOTAL CRESOLS		BRL	BRL	0.050	100.	200.

* = Refer to CompuChem's "Plan and Policies".
X = Indistinguishable Isomers
BRL = Below Reporting Limits

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS = Dilution-Adjusted Reporting Limits
C = Method detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

SEMIVOLATILE METHOD TCLP
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED :12/02/93
DATE RECEIVED :12/03/93
TCLP STARTED :12/07/93 (TCLP ROTATION STARTED)
DATE EXTRACTED:12/08/93
DATE ANALYZED :12/09/93

COMPUCHEM SAMPLE # 590508 MS # 590478
CLIENT I.D. # MPTBGSD09 MSD# 590479
FILE NAME : GH090508B02
DILUTION FACTOR : 5 *

COMPOUND		A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
PYRIDINE		BRL	BRL	0.050	2.5	5.0
1,4-DICHLOROBENZENE		BRL	BRL	0.050	3.75	7.5
2-METHYLPHENOL (O-CRESOL)		BRL	BRL	0.050	100.	200.
3-METHYLPHENOL (M-CRESOL)	X	BRL	BRL	0.050	100.	200.
4-METHYLPHENOL (P-CRESOL)	X	BRL	BRL	0.050	100.	200.
HEXACHLOROETHANE		BRL	BRL	0.050	1.5	3.0
NITROBENZENE		BRL	BRL	0.050	1.00	2.0
HEXACHLOROBUTADIENE		BRL	BRL	0.050	0.25	0.5
2,4,6-TRICHLOROPHENOL		BRL	BRL	0.050	1.0	2.0
2,4,5-TRICHLOROPHENOL		BRL	BRL	0.050	200.	400.
2,4-DINITROTOLUENE		BRL	BRL	0.050	0.065	0.13
HEXACHLOROBENZENE		BRL	BRL	0.050	0.065	0.13
PENTACHLOROPHENOL		BRL	BRL	0.250	50.00	100.
TOTAL CRESOLS		BRL	BRL	0.050	100.	200.

* = Refer to CompuChem's "Plan and Policies".
X = Indistinguishable Isomers
BRL = Below Reporting Limits

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS = Dilution-Adjusted Reporting Limits
C = Method detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

PESTICIDE METHOD TCLP
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED : 12/02/93
DATE RECEIVED : 12/03/93
DATE LEACHED : 12/07/93 (TCLP ROTATION STARTED)
DATE EXTRACTED: 12/08/93
DATE ANALYZED : 12/09/93

COMPUCHEM SAMPLE # 590485 MS# 589012
CLIENT I. D. # MPTBGSD08 MSD# 589013
DILUTION FACTOR : 5 @

COMPOUND	A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
HEPTACHLOR	BRL	BRL	0.0002	0.0040	0.0080
HEPTACHLOR EPOXIDE	BRL	BRL	0.0002	0.0040	0.0080
TOXAPHENE	BRL	BRL	0.0050	0.2500	0.5000
GAMMA-BHC (LINDANE)	BRL	BRL	0.0002	0.2000	0.4000
CHLORDANE *	BRL	BRL	0.0006	0.0150	0.0300
ENDRIN *	BRL	BRL	0.0003	0.0100	0.0200
P,P'METHOXYCHLOR *	BRL	BRL	0.0015	5.0000	10.000

@ = Refer to CompuChem's "Plan and Policies".
BRL = Below Reporting Limits
* = Not Spiked in Associated MS and MSD

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS = Dilution-Adjected Reporting Limits
C = Method Detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

PESTICIDE METHOD TCLP
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED : 12/02/93
DATE RECEIVED : 12/03/93
DATE LEACHED : 12/07/93 (TCLP ROTATION STARTED)
DATE EXTRACTED: 12/08/93
DATE ANALYZED : 12/09/93

COMPUCHEM SAMPLE # 590510 MS# 589012
CLIENT I. D. # MPTBGSD09 MSD# 589013
DILUTION FACTOR : 5 @

COMPOUND	A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
HEPTACHLOR	BRL	BRL	0.0002	0.0040	0.0080
HEPTACHLOR EPOXIDE	BRL	BRL	0.0002	0.0040	0.0080
TOXAPHENE	BRL	BRL	0.0050	0.2500	0.5000
GAMMA-BHC (LINDANE)	BRL	BRL	0.0002	0.2000	0.4000
CHLORDANE *	BRL	BRL	0.0006	0.0150	0.0300
ENDRIN *	BRL	BRL	0.0003	0.0100	0.0200
P,P'METHOXYCHLOR *	BRL	BRL	0.0015	5.0000	10.000

@ = Refer to CompuChem's "Plan and Policies".
BRL = Below Reporting Limits
* = Not Spiked in Associated MS and MSD

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS = Dilution-Adjected Reporting Limits
C = Method Detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

HERBICIDE METHOD TCLP
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED : 12/02/93
DATE RECEIVED : 12/03/93
DATE LEACHED : 12/07/93 (TCLP ROTATION STARTED)
DATE EXTRACTED: 12/08/93
DATE ANALYZED : 12/13/93

COMPUCHEM SAMPLE # 590486 MS# 589018
CLIENT I.D. #MPTBGSD08 MSD# 589019
DILUTION FACTOR : 5 *

COMPOUND	A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
2,4-D	BRL	BRL	0.020	5.000	10.00
2,4,5-TP (SILVEX)	BRL	BRL	0.005	0.500	1.000

* = Refer to CompuChem's "Plan and Policies".
BRL = Below Reporting Limits

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS=Dilution-Adjusted Reporting Limits
C = Method Detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

HERBICIDE METHOD TCLP
REPORTED (NON-BIAS CORRECTED) RESULTS
VERSION 1.0

DATE SAMPLED : 12/02/93
DATE RECEIVED : 12/03/93
DATE LEACHED : 12/07/93 (TCLP ROTATION STARTED)
DATE EXTRACTED: 12/08/93
DATE ANALYZED : 12/13/93

COMPUCHEM SAMPLE # 590511 MS# 589018
CLIENT I.D. #MPTBGSD09 MSD# 589019
DILUTION FACTOR : 5 *

COMPOUND	A COMP CONC (MG/L)	B COMPU REPORT AMOUNT (MG/L)	C DIL-ADJ REPORT LIMITS (MG/L)	D COMPU REPORT LIMITS (MG/L)	E REG LEVEL (MG/L)
2,4-D	BRL	BRL	0.020	5.000	10.00
2,4,5-TP (SILVEX)	BRL	BRL	0.005	0.500	1.000

* = Refer to CompuChem's "Plan and Policies".
BRL = Below Reporting Limits

A = COMPOUND CONCENTRATION (MG/L) =
A = (Quantitation Amount X Dilution Factor) / 1000
B = COMPUCHEM REPORTING AMOUNT (MG/L) =
B = At or Above One Half of Regulatory Level
C = DIL-ADJ REPORT LIMITS=Dilution-Adjusted Reporting Limits
C = Method Detection Limits X Dilution Factor
D = COMPUCHEM REPORTING LIMITS (MG/L)=One Half of Regulatory Level
E = REG LEVEL = REGULATORY LEVEL (MG/L)

INORGANIC METHOD TCLP
SUMMARY REPORT
SAMPLE ID: MPTBGSD08
CCN: 590481

ELEMENT	DETECTED AMOUNT (Mg/L)	COMPUCHEM REPORT LIMIT (Mg/L)	REGULATORY LEVEL (Mg/L)
ARSENIC	BRL	2.5	5.0
BARIUM	BRL	50.0	100.0
CADMIUM	BRL	0.5	1.0
CHROMIUM	BRL	2.5	5.0
LEAD	BRL	2.5	5.0
SELENIUM	BRL	0.5	1.0
SILVER	BRL	2.5	5.0
MERCURY	BRL	0.1	0.2

BRL = Below Reporting Limits

INORGANIC METHOD TCLP
SUMMARY REPORT
SAMPLE ID: MPTBGSD09
CCN: 590509

ELEMENT	DETECTED AMOUNT (Mg/L)	COMPUCHEM REPORT LIMIT (Mg/L)	REGULATORY LEVEL (Mg/L)
ARSENIC	BRL	2.5	5.0
BARIUM	BRL	50.0	100.0
CADMIUM	BRL	0.5	1.0
CHROMIUM	BRL	2.5	5.0
LEAD	BRL	2.5	5.0
SELENIUM	BRL	0.5	1.0
SILVER	BRL	2.5	5.0
MERCURY	BRL	0.1	0.2

BRL = Below Reporting Limits

INORGANIC METHOD TCLP
SUMMARY REPORT
SAMPLE ID: LEACHATE BLANK
CCN: 590725

ELEMENT	DETECTED AMOUNT (Mg/L)	COMPUCHEM REPORT LIMIT (Mg/L)	REGULATORY LEVEL (Mg/L)
ARSENIC	BRL	2.5	5.0
BARIUM	BRL	50.0	100.0
CADMIUM	BRL	0.5	1.0
CHROMIUM	BRL	2.5	5.0
LEAD	BRL	2.5	5.0
SELENIUM	BRL	0.5	1.0
SILVER	BRL	2.5	5.0
MERCURY	BRL	0.1	0.2

BRL = Below Reporting Limits

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGSD08

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 590487

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH090487C56

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. 77 Date Analyzed: 12/08/93

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	150	U
74-83-9	Bromomethane	87	U
75-01-4	Vinyl Chloride	87	U
75-00-3	Chloroethane	87	U
75-09-2	Methylene Chloride	50	BJ
67-64-1	Acetone	63	BJ
75-15-0	Carbon Disulfide	43	U
75-35-4	1,1-Dichloroethene	87	U
75-34-3	1,1-Dichloroethane	65	U
156-59-2	cis-1,2-Dichloroethene	130	U
156-60-5	Trans-1,2-Dichloroethene	65	U
67-66-3	Chloroform	65	U
107-06-2	1,2-Dichloroethane	43	U
78-93-3	2-Butanone	150	U
71-55-6	1,1,1-Trichloroethane	87	U
56-23-5	Carbon Tetrachloride	65	U
108-05-4	Vinyl Acetate	87	U
75-27-4	Bromodichloromethane	87	U
78-87-5	1,2-Dichloropropane	87	U
10061-01-5	cis-1,3-Dichloropropene	43	U
79-01-6	Trichloroethene	87	U
124-48-1	Dibromochloromethane	65	U
79-00-5	1,1,2-Trichloroethane	65	U
71-43-2	Benzene	65	U
10061-02-6	Trans-1,3-Dichloropropene	65	U
110-75-8	2-Chloroethylvinylether	14	J
75-25-2	Bromoform	65	U
108-10-1	4-Methyl-2-Pentanone	110	U
591-78-6	2-Hexanone	150	U
127-18-4	Tetrachloroethene	65	U
79-34-5	1,1,2,2-Tetrachloroethane	43	U
108-88-3	Toluene	65	U
108-90-7	Chlorobenzene	65	U
100-41-4	Ethylbenzene	65	U
100-42-5	Styrene	43	U
74-88-4	Iodomethane	43	U

75-05-8	Acetonitrile	870	U
107-02-8	Acrolein	1000	U
107-13-1	Acrylonitrile	910	U
107-13-1	Methacrylonitrile	87	U
75-69-4	Trichlorofluoromethane	87	U
78-83-1	Isobutyl Alcohol	86	BJ
123-91-1	1,4-Dioxane	220000	U
107-05-1	3-Chloropropene	65	U
80-62-6	Methyl Methacrylate	220	U
107-12-0	Propionitrile	2600	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluo	43	U
354-58-5	1,1,1-Trichloro-2,2,2-trifluo	65	U
74-95-3	Dibromomethane	87	U
4170-30-3	Crotonaldehyde	2400	U
106-93-4	1,2-Dibromoethane	87	U
630-20-6	1,1,1,2-Tetrachloroethane	87	U
764-41-0	cis-1,4-Dichloro-2-butene	87	U
96-18-4	1,2,3-Trichloropropane	87	U
764-71-0	trans-1,4-Dichloro-2-butene	87	U
96-12-8	1,2-Dibromo-3-chloropropane	220	U
97-63-2	Ethyl methacrylate	110	U
95-47-6	o-Xylene	43	U
	m,p-Xylenes	43	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGSD09

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 11

Matrix: (soil/water) SOIL Lab Sample ID: 590512

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH090512C56

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. 44 Date Analyzed: 12/08/93

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	63	U
74-83-9	Bromomethane	36	U
75-01-4	Vinyl Chloride	36	U
75-00-3	Chloroethane	36	U
75-09-2	Methylene Chloride	17	BJ
67-64-1	Acetone	45	BJ
75-15-0	Carbon Disulfide	18	U
75-35-4	1,1-Dichloroethene	36	U
75-34-3	1,1-Dichloroethane	27	U
156-59-2	cis-1,2-Dichloroethene	54	U
156-60-5	Trans-1,2-Dichloroethene	27	U
67-66-3	Chloroform	27	U
107-06-2	1,2-Dichloroethane	18	U
78-93-3	2-Butanone	63	U
71-55-6	1,1,1-Trichloroethane	36	U
56-23-5	Carbon Tetrachloride	27	U
108-05-4	Vinyl Acetate	36	U
75-27-4	Bromodichloromethane	36	U
78-87-5	1,2-Dichloropropane	36	U
10061-01-5	cis-1,3-Dichloropropene	18	U
79-01-6	Trichloroethene	36	U
124-48-1	Dibromochloromethane	27	U
79-00-5	1,1,2-Trichloroethane	27	U
71-43-2	Benzene	27	U
10061-02-6	Trans-1,3-Dichloropropene	27	U
110-75-8	2-Chloroethylvinylether	27	U
75-25-2	Bromoform	27	U
108-10-1	4-Methyl-2-Pentanone	45	U
591-78-6	2-Hexanone	63	U
127-18-4	Tetrachloroethene	27	U
79-34-5	1,1,2,2-Tetrachloroethane	18	U
108-88-3	Toluene	27	U
108-90-7	Chlorobenzene	27	U
100-41-4	Ethylbenzene	27	U
100-42-5	Styrene	18	U
74-88-4	Iodomethane	18	U

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75-05-8---------Acetonitrile	360	U
107-02-8--------Acrolein	410	U
107-13-1--------Acrylonitrile	380	U
107-13-1--------Methacrylonitrile	36	U
75-69-4---------Trichlorofluoromethane	36	U
78-83-1---------Isobutyl Alcohol	11	BJ
123-91-1--------1,4-Dioxane	91000	U
107-05-1--------3-Chloropropene	27	U
80-62-6---------Methyl Methacrylate	89	U
107-12-0--------Propionitrile	1100	U
76-13-1---------1,1,2-Trichloro-1,2,2-trifluo	18	U
354-58-5--------1,1,1-Trichloro-2,2,2-trifluo	27	U
74-95-3---------Dibromomethane	36	U
4170-30-3-------Crotonaldehyde	980	U
106-93-4--------1,2-Dibromoethane	36	U
630-20-6--------1,1,1,2-Tetrachloroethane	36	U
764-41-0--------cis-1,4-Dichloro-2-butene	36	U
96-18-4---------1,2,3-Trichloropropane	36	U
764-71-0--------trans-1,4-Dichloro-2-butene	36	U
96-12-8---------1,2-Dibromo-3-chloropropane	89	U
97-63-2---------Ethyl methacrylate	45	U
95-47-6---------o-Xylene	18	U
----------m,p-Xylenes	18	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGSD08

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) SOIL Lab Sample ID: 590491

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GJ090491B02

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. 77 dec. ____ Date Extracted: 12/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 12/10/93

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
62-75-9	N-Nitrosodimethylamine	2800	U
110-86-1	Pyridine	2400	U
97-63-2	Ethyl methacrylate	2500	U
123-63-7	Paraldehyde	1500	U
109-06-8	2-Picoline	5200	U
10595-95-6	Nitrosomethylethylamine	2300	U
66-27-3	Methyl methanesulfonate	3000	U
108-95-2	Phenol	2500	U
55-18-5	N-Nitrosodiethylamine	2600	U
62-50-0	Ethyl methanesulfonate	2600	U
62-53-3	Aniline	2400	U
76-01-7	Pentachloroethane	3600	U
111-44-4	bis(2-Chloroethyl)Ether	2500	U
95-57-8	2-Chlorophenol	2700	U
541-73-1	1,3-Dichlorobenzene	2200	U
100-44-7	Benzyl Chloride	2500	U
106-46-7	1,4-Dichlorobenzene	2200	U
100-51-6	Benzyl Alcohol	2400	U
95-50-1	1,2-Dichlorobenzene	2500	U
99-65-0	1,3-Dinitrobenzene	2400	U
56-57-5	4-Nitroquinoline 1-oxide	21000	U
465-73-6	Isodrin	4000	U
95-48-7	2-Methylphenol	2800	U
52-85-7	Famphur	8600	U
108-60-1	bis(2-Chloroisopropyl)Ether	2800	U
108-39-4	3-Methylphenol	5600	U
106-44-5	4-Methylphenol	5600	U
930-55-2	N-Nitrosopyrrolidine	2300	U
59-89-2	N-Nitrosomorpholine	3200	U
98-86-2	Acetophenone	2800	U
621-64-7	N-Nitroso-Di-n-Propylamine	2600	U
636-21-5	o-Toluidine hydrochloride	8600	U
67-72-1	Hexachloroethane	2600	U
98-95-3	Nitrobenzene	2900	U

100-75-4--------N-Nitrosopiperidine	3200	U
78-59-1---------Isophorone	2900	U
88-75-5---------2-Nitrophenol	2700	U
105-67-9--------2,4-Dimethylphenol	2600	U
108-70-3--------1,3,5-Trichlorobenzene	2600	U
98-87-3---------Benzal Chloride	2300	U
65-85-0---------Benzoic Acid	8200	U
111-91-1--------bis(2-Chloroethoxy)Methane	2900	U
120-83-2--------2,4-Dichlorophenol	2400	U
120-82-1--------1,2,4-Trichlorobenzene	2400	U
91-20-3---------Naphthalene	2800	U
106-47-8--------4-Chloroaniline	3000	U
87-65-0---------2,6-Dichlorophenol	5200	U
1888-71-7-------Hexachloropropene	2500	U
87-68-3---------Hexachlorobutadiene	2400	U
87-61-6---------1,2,3-Trichlorobenzene	2600	U
98-07-7---------Benzotrichloride	2700	U
924-16-3--------N-Nitroso-di-n-butylamine	6000	U
59-50-7---------4-Chloro-3-Methylphenol	3200	U
94-59-7---------Safrole	2500	U
126-68-1--------Triethylphosphorothioate	23000	U
91-57-6---------2-Methylnaphthalene	3600	U
90-12-0---------1-Methylnaphthalene	4700	U
95-94-3---------1,2,4,5-Tetrachlorobenzene	5600	U
634-90-2--------1,2,3,5-Tetrachlorobenzene	5600	U
77-47-4---------Hexachlorocyclopentadiene	2800	U
88-06-2---------2,4,6-Trichlorophenol	5600	U
95-95-4---------2,4,5-Trichlorophenol	5600	U
120-58-1--------Isosafrole	5600	U
91-58-7---------2-Chloronaphthalene	4200	U
90-13-1---------1-Chloronaphthalene	5200	U
634-66-2--------1,2,3,4-Tetrachlorobenzene	2800	U
88-74-4---------2-Nitroaniline	4700	U
130-15-4--------1,4-Naphthoquinone	6900	U
131-11-3--------Dimethyl Phthalate	4200	U
208-96-8--------Acenaphthylene	2900	U
606-20-2--------2,6-Dinitrotoluene	3200	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGSD08

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) SOIL Lab Sample ID: 590491

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GJ090491B02

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. 77 dec. ____ Date Extracted: 12/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 12/10/93

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3000	U
83-32-9	Acenaphthene	2800	U
51-28-5	2,4-Dinitrophenol	7300	U
100-02-7	4-Nitrophenol	19000	U
132-64-9	Dibenzofuran	3000	U
121-14-2	2,4-Dinitrotoluene	2800	U
608-93-5	Pentachlorobenzene	2800	U
91-59-8	2-Naphthylamine	3700	U
134-32-7	1-Naphthylamine	6000	U
58-90-2	2,3,4,6-Tetrachlorophenol	6000	U
84-66-2	Diethylphthalate	3100	U
297-97-2	Zinophos	2900	U
7005-72-3	4-Chlorophenyl-phenylether	2600	U
86-73-7	Fluorene	3000	U
100-01-6	4-Nitroaniline	4700	U
99-55-8	5-Nitro-o-toluidine	4300	U
122-66-7	1,2-Diphenylhydrazine	3000	U
534-52-1	4,6-Dinitro-2-Methylphenol	7700	U
86-30-6	N-Nitrosodiphenylamine (1)	6000	U
122-39-4	Diphenylamine	6000	U
99-35-4	1,3,5-Trinitrobenzene	3900	U
62-44-2	Phenacetin	2600	U
101-55-3	4-Bromophenyl-phenylether	3200	U
2303-16-4	Diallate	2800	U
60-51-5	Dimethoate	2800	U
118-74-1	Hexachlorobenzene	3300	U
92-67-1	4-Aminobiphenyl	1800	U
23950-58-5	Pronamide	2800	U
87-86-5	Pentachlorophenol	6000	U
82-68-8	Pentachloronitrobenzene	2800	U
85-01-8	Phenanthrene	2700	U
120-12-7	Anthracene	170	J
84-74-2	Di-n-Butylphthalate	160	J
91-80-5	Methapyrilene	5600	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

50-18-0---------Cyclophosphamide	2700	U
206-44-0--------Fluoranthene	660	J
92-87-5---------Benzidine	6900	U
129-00-0--------Pyrene	770	J
60-11-7---------p-Dimethylaminoazobenzene	2900	U
510-15-6--------Chlorobenzilate	3100	U
119-93-7--------3,3'-Dimethylbenzidine	4200	U
85-68-7---------Butylbenzylphthalate	2900	U
53-96-3---------2-Acetylaminofluorene	3100	U
101-14-4--------Methylene-bis(2-Chloroaniline	1900	U
91-94-1---------3,3'-Dichlorobenzidine	2200	U
106-51-4--------3,3'-Dimethoxybenzidine	4200	U
56-55-3---------Benzo(a)Anthracene	350	J
218-01-9--------Chrysene	370	J
117-81-7--------bis(2-Ethylhexyl)Phthalate	470	BJ
117-84-0--------Di-n-Octyl Phthalate	2100	U
205-99-2--------Benzo(b)Fluoranthene	470	JX
57-97-6---------7,12-Dimethylbenzanthracene	1800	U
207-08-9--------Benzo(k)Fluoranthene	470	JX
50-32-8---------Benzo(a)Pyrene	2800	U
56-49-5---------3-Methylchloranthrene	2600	U
224-42-0--------Dibenzo(a,j)acridine	1800	U
193-39-5--------Indeno(1,2,3-cd)Pyrene	2000	U
53-70-3---------Dibenz(a,h)Anthracene	1900	U
191-24-2--------Benzo(g,h,i)Perylene	2700	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGSD09

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) SOIL Lab Sample ID: 590513

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GH090513A02

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. 44 dec. ____ Date Extracted: 12/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 12/10/93

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
62-75-9	N-Nitrosodimethylamine	1200	U
110-86-1	Pyridine	980	U
97-63-2	Ethyl methacrylate	1000	U
123-63-7	Paraldehyde	640	U
109-06-8	2-Picoline	2100	U
10595-95-6	Nitrosomethylethylamine	960	U
66-27-3	Methyl methanesulfonate	1200	U
108-95-2	Phenol	1000	U
55-18-5	N-Nitrosodiethylamine	1100	U
62-50-0	Ethyl methanesulfonate	1100	U
62-53-3	Aniline	990	U
76-01-7	Pentachloroethane	1500	U
111-44-4	bis(2-Chloroethyl)Ether	1000	U
95-57-8	2-Chlorophenol	1100	U
541-73-1	1,3-Dichlorobenzene	900	U
100-44-7	Benzyl Chloride	1000	U
106-46-7	1,4-Dichlorobenzene	110	J
100-51-6	Benzyl Alcohol	980	U
95-50-1	1,2-Dichlorobenzene	1000	U
99-65-0	1,3-Dinitrobenzene	990	U
56-57-5	4-Nitroquinoline 1-oxide	8500	U
465-73-6	Isodrin	1600	U
95-48-7	2-Methylphenol	1200	U
52-85-7	Famphur	3500	U
108-60-1	bis(2-Chloroisopropyl)Ether	1200	U
108-39-4	3-Methylphenol	2300	U
106-44-5	4-Methylphenol	2300	U
930-55-2	N-Nitrosopyrrolidine	940	U
59-89-2	N-Nitrosomorpholine	1300	U
98-86-2	Acetophenone	1200	U
621-64-7	N-Nitroso-Di-n-Propylamine	1100	U
636-21-5	o-Toluidine hydrochloride	3500	U
67-72-1	Hexachloroethane	1100	U
98-95-3	Nitrobenzene	1200	U

100-75-4--------N-Nitrosopiperidine	1300	U
78-59-1---------Isophorone	1200	U
88-75-5---------2-Nitrophenol	1100	U
105-67-9--------2,4-Dimethylphenol	1100	U
108-70-3--------1,3,5-Trichlorobenzene	1100	U
98-87-3---------Benzal Chloride	940	U
65-85-0---------Benzoic Acid	3400	U
111-91-1--------bis(2-Chloroethoxy)Methane	1200	U
120-83-2--------2,4-Dichlorophenol	980	U
120-82-1--------1,2,4-Trichlorobenzene	980	U
91-20-3---------Naphthalene	1200	U
106-47-8--------4-Chloroaniline	1200	U
87-65-0---------2,6-Dichlorophenol	2100	U
1888-71-7-------Hexachloropropene	1000	U
87-68-3---------Hexachlorobutadiene	990	U
87-61-6---------1,2,3-Trichlorobenzene	1100	U
98-07-7---------Benzotrichloride	1100	U
924-16-3--------N-Nitroso-di-n-butylamine	2500	U
59-50-7---------4-Chloro-3-Methylphenol	1300	U
94-59-7---------Safrole	1000	U
126-68-1--------Triethylphosphorothioate	9400	U
91-57-6---------2-Methylnaphthalene	1500	U
90-12-0---------1-Methylnaphthalene	2000	U
95-94-3---------1,2,4,5-Tetrachlorobenzene	2300	U
634-90-2--------1,2,3,5-Tetrachlorobenzene	2300	U
77-47-4---------Hexachlorocyclopentadiene	1200	U
88-06-2---------2,4,6-Trichlorophenol	2300	U
95-95-4---------2,4,5-Trichlorophenol	2300	U
120-58-1--------Isosafrole	2300	U
91-58-7---------2-Chloronaphthalene	1700	U
90-13-1---------1-Chloronaphthalene	2100	U
634-66-2--------1,2,3,4-Tetrachlorobenzene	1100	U
88-74-4---------2-Nitroaniline	2000	U
130-15-4--------1,4-Naphthoquinone	2800	U
131-11-3--------Dimethyl Phthalate	1700	U
208-96-8--------Acenaphthylene	1200	U
606-20-2--------2,6-Dinitrotoluene	1300	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGSD09

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 13

Matrix: (soil/water) SOIL Lab Sample ID: 590513

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GH090513A02

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. 44 dec. ____ Date Extracted: 12/09/93

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 12/10/93

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	91	J
51-28-5	2,4-Dinitrophenol	3000	U
100-02-7	4-Nitrophenol	8000	U
132-64-9	Dibenzofuran	1200	U
121-14-2	2,4-Dinitrotoluene	1200	U
608-93-5	Pentachlorobenzene	1200	U
91-59-8	2-Naphthylamine	1500	U
134-32-7	1-Naphthylamine	2500	U
58-90-2	2,3,4,6-Tetrachlorophenol	2500	U
84-66-2	Diethylphthalate	1300	U
297-97-2	Zinophos	1200	U
7005-72-3	4-Chlorophenyl-phenylether	1100	U
86-73-7	Fluorene	110	J
100-01-6	4-Nitroaniline	2000	U
99-55-8	5-Nitro-o-toluidine	1800	U
122-66-7	1,2-Diphenylhydrazine	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	3200	U
86-30-6	N-Nitrosodiphenylamine (1)	2500	U
122-39-4	Diphenylamine	2500	U
99-35-4	1,3,5-Trinitrobenzene	1600	U
62-44-2	Phenacetin	1100	U
101-55-3	4-Bromophenyl-phenylether	1300	U
2303-16-4	Diallate	1200	U
60-51-5	Dimethoate	1200	U
118-74-1	Hexachlorobenzene	1400	U
92-67-1	4-Aminobiphenyl	730	U
23950-58-5	Pronamide	1200	U
87-86-5	Pentachlorophenol	2500	U
82-68-8	Pentachloronitrobenzene	1100	U
85-01-8	Phenanthrene	3100	
120-12-7	Anthracene	440	J
84-74-2	Di-n-Butylphthalate	1400	U
91-80-5	Methapyrilene	2300	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

50-18-0---------Cyclophosphamide	1100	U
206-44-0--------Fluoranthene	7300	
92-87-5---------Benzidine	2800	U
129-00-0--------Pyrene	6100	
60-11-7---------p-Dimethylaminoazobenzene	1200	U
510-15-6--------Chlorobenzilate	1300	U
119-93-7--------3,3'-Dimethylbenzidine	1700	U
85-68-7---------Butylbenzylphthalate	1200	U
53-96-3---------2-Acetylaminofluorene	1300	U
101-14-4--------Methylene-bis(2-Chloroaniline	800	U
91-94-1---------3,3'-Dichlorobenzidine	890	U
106-51-4--------3,3'-Dimethoxybenzidine	1700	U
56-55-3---------Benzo(a)Anthracene	3000	
218-01-9--------Chrysene	2900	
117-81-7--------bis(2-Ethylhexyl)Phthalate	200	BJ
117-84-0--------Di-n-Octyl Phthalate	850	U
205-99-2--------Benzo(b)Fluoranthene	5400	X
57-97-6---------7,12-Dimethylbenzanthracene	730	U
207-08-9--------Benzo(k)Fluoranthene	5400	X
50-32-8---------Benzo(a)Pyrene	2100	
56-49-5---------3-Methylchloranthrene	1100	U
224-42-0--------Dibenzo(a,j)acridine	730	U
193-39-5--------Indeno(1,2,3-cd)Pyrene	1000	
53-70-3---------Dibenz(a,h)Anthracene	290	J
191-24-2--------Benzo(g,h,i)Perylene	1000	J

(1) - Cannot be separated from Diphenylamine

1D

ORGANOCHLORINE PESTICIDES AND PCBs ANALYSIS DATA SHEET

SAMPLE NO.

MPTBGSD08

Lab Name: COMPUCHEM,RTP Contract:

Lab Code: COMPU Case No.: 28138 SAS No.: SDG No.: 316PS

Matrix: (soil/water) SOIL Lab Sample ID: 590495

Sample wt/vol: 30.20 (g/ml) G Lab File ID:

% Moisture: 77 decanted: (Y/N) N Date Received: 12/03/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/93

Concentrated Extract Volume: 20000 (uL) Date Analyzed: 12/14/93

Injection Volume: 5.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
58-89-9	gamma-BHC (Lindane)	4.3	U
76-44-8	Heptachlor	4.3	U
309-00-2	Aldrin	4.3	U
959-98-8	Endosulfan I	6.5	U
60-57-1	Dieldrin	6.5	U
33213-65-9	Endosulfan II	15	U
50-29-3	4,4'-DDT	15	U
72-43-5	Methoxychlor	15	U
319-84-6	alpha-BHC	4.3	U
319-85-7	beta-BHC	5.6	P
319-86-8	delta-BHC	4.3	U
1024-57-3	Heptachlor epoxide	4.3	U
72-55-9	4,4'-DDE	15	U
72-20-8	Endrin	11	U
72-54-8	4,4'-DDD	15	U
7421-93-4	Endrin aldehyde	4.3	U
1031-07-8	Endosulfan sulfate	8.6	U
11096-82-5	Aroclor-1260	86	U
12674-11-2	Aroclor-1016	86	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	86	U
53469-21-9	Aroclor-1242	86	U
12672-29-6	Aroclor-1248	86	U
11097-69-1	Aroclor-1254	86	U
8001-35-2	Toxaphene	86	U
57-74-9	Chlordane (Technical)	17	U

1D

ORGANOCHLORINE PESTICIDES AND PCBs ANALYSIS DATA SHEET

SAMPLE NO.

MPTBGSD09

Lab Name: COMPUCHEM,RTP Contract:

Lab Code: COMPU Case No.: 28138 SAS No.: SDG No.: 316PS

Matrix: (soil/water) SOIL Lab Sample ID: 590514

Sample wt/vol: 30.10 (g/ml) G Lab File ID:

% Moisture: 44 decanted: (Y/N) N Date Received: 12/03/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/93

Concentrated Extract Volume: 20000 (uL) Date Analyzed: 12/14/93

Injection Volume: 3.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
959-98-8	Endosulfan I	2.7	U
60-57-1	Dieldrin	2.7	U
33213-65-9	Endosulfan II	6.2	U
50-29-3	4,4'-DDT	6.4	
72-43-5	Methoxychlor	6.2	U
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	15	P
319-86-8	delta-BHC	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
72-55-9	4,4'-DDE	6.2	U
72-20-8	Endrin	4.4	U
72-54-8	4,4'-DDD	6.2	U
7421-93-4	Endrin aldehyde	1.8	U
1031-07-8	Endosulfan sulfate	3.6	U
11096-82-5	Aroclor-1260	36	U
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
8001-35-2	Toxaphene	36	U
57-74-9	Chlordane (Technical)	7.1	U

INORGANIC SDG 938251

U.S. EPA - SW-846

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MPTBGSD08

Lab Name: COMPUCHEM ENV. CORP. Contract: SW-846

Lab Code: COMPU Case No.: 50057 SAS No.: _____ SDG No.: 937366

Matrix (soil/water): SOIL Lab Sample ID: 590499

Level (low/med): LOW Date Received: 12/03/93

% Solids: 22.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12500		*	P
7440-36-0	Antimony	15.4	U	N	P
7440-38-2	Arsenic	26.8		N*	F
7440-39-3	Barium	19.9	B		P
7440-41-7	Beryllium	1.9	U		P
7440-43-9	Cadmium	2.1	U	N	P
7440-70-2	Calcium	26900		*	P
7440-47-3	Chromium	34.3		N*	P
7440-48-4	Cobalt	3.2	U		P
7440-50-8	Copper	712		*	P
7439-89-6	Iron	17000		*	P
7439-92-1	Lead	15.3		N	F
7439-95-4	Magnesium	9030			P
7439-96-5	Manganese	264		EN*	P
7439-97-6	Mercury	.44	U		CV
7440-02-0	Nickel	17.4	B		P
7440-09-7	Potassium	3620			P
7782-49-2	Selenium	7.6		A*	F
7440-22-4	Silver	2.2	U	N	P
7440-23-5	Sodium	35100			P
7440-28-0	Thallium	2.1	U	W	F
7440-62-2	Vanadium	34.2			P
7440-66-6	Zinc	171		EN*	P
	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:
FORM 1.05 - PAGE 1

INORGANIC SDG 938251

U.S. EPA - SW-846

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MPTBGSD09

Lab Name: COMPUCHEM ENV. CORP. Contract: SW-846

Lab Code: COMPU Case No.: 50057 SAS No.: _____ SDG No.: 937366

Matrix (soil/water): SOIL Lab Sample ID: 590515

Level (low/med): LOW Date Received: 12/03/93

% Solids: 55.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3120		*	P
7440-36-0	Antimony	6.2	U	N	P
7440-38-2	Arsenic	5.1		N*	F
7440-39-3	Barium	157			P
7440-41-7	Beryllium	.75	U		P
7440-43-9	Cadmium	.86	U	N	P
7440-70-2	Calcium	125000		*	P
7440-47-3	Chromium	356		N*	P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	55.8		*	P
7439-89-6	Iron	5810		*	P
7439-92-1	Lead	99.1		N	F
7439-95-4	Magnesium	3370			P
7439-96-5	Manganese	96.6		EN*	P
7439-97-6	Mercury	.18	U		CV
7440-02-0	Nickel	6.6	U		P
7440-09-7	Potassium	821	B		P
7782-49-2	Selenium	.65	U	W*	F
7440-22-4	Silver	.90	U	N	P
7440-23-5	Sodium	7890			P
7440-28-0	Thallium	.86	U	W	F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	995		EN*	P
	Cyanide				NR

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:
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U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MPTBGSD08

Lab Name: COMPUCHEM ENV. CORP. Contract: 3/90

Lab Code: COMPU Case No.: 50057 SAS No.: _____ SDG No.: 813819

Matrix (soil/water): SOIL Lab Sample ID: 590503

Level (low/med): LOW Date Received: 12/03/93

% Solids: 22.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	2.2	U	N	AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
FORM 1.05 - PAGE 1

INORGANIC SDG 813819

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MPTBGSD09

ab Name: COMPUCHEM ENV. CORP. Contract: 3/90

ab Code: COMPU Case No.: 50057 SAS No.: _____ SDG No.: 813819

atrix (soil/water): SOIL Lab Sample ID: 590516

evel (low/med): LOW Date Received: 12/03/93

Solids: 55.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	.90	U	N	AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGQS01

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) WATER Lab Sample ID: 590517

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN090517C03

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. ____ Date Analyzed: 12/08/93

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	Trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
110-75-8	2-Chloroethylvinylether	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	5	U
74-88-4	Iodomethane	5	U

75-05-8---------Acetonitrile	60	U
107-02-8--------Acrolein	90	U
107-13-1--------Acrylonitrile	95	U
107-13-1--------Methacrylonitrile	20	U
75-69-4---------Trichlorofluoromethane	10	U
78-83-1---------Isobutyl Alcohol	2800	U
123-91-1--------1,4-Dioxane	3700	U
107-05-1--------3-Chloropropene	15	U
80-62-6---------Methyl Methacrylate	20	U
107-12-0--------Propionitrile	220	U
76-13-1---------1,1,2-Trichloro-1,2,2-trifluo	25	U
354-58-5--------1,1,1-Trichloro-2,2,2-trifluo	15	U
74-95-3---------Dibromomethane	10	U
4170-30-3-------Crotonaldehyde	300	U
106-93-4--------1,2-Dibromoethane	10	U
630-20-6--------1,1,1,2-Tetrachloroethane	10	U
764-41-0--------cis-1,4-Dichloro-2-butene	5	U
96-18-4---------1,2,3-Trichloropropane	10	U
764-71-0--------trans-1,4-Dichloro-2-butene	10	U
96-12-8---------1,2-Dibromo-3-chloropropane	10	U
97-63-2---------Ethyl methacrylate	10	U
95-47-6---------o-Xylene	5	U
----------m,p-Xylenes	5	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MPTBGQS01

Lab Name: COMPUCHEM,RTP Contract: 500576

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 22

Matrix: (soil/water) WATER Lab Sample ID: 590518

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH090518B02

Level: (low/med) LOW Date Received: 12/03/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 12/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 12/08/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	30	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	75	U
100-02-7	4-Nitrophenol	45	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
608-93-5	Pentachlorobenzene	10	U
91-59-8	2-Naphthylamine	20	U
134-32-7	1-Naphthylamine	35	U
58-90-2	2,3,4,6-Tetrachlorophenol	35	U
84-66-2	Diethylphthalate	15	U
297-97-2	Zinophos	15	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	35	U
99-55-8	5-Nitro-o-toluidine	30	U
122-66-7	1,2-Diphenylhydrazine	15	U
534-52-1	4,6-Dinitro-2-Methylphenol	45	U
86-30-6	N-Nitrosodiphenylamine (1)	30	U
122-39-4	Diphenylamine	30	U
99-35-4	1,3,5-Trinitrobenzene	45	U
62-44-2	Phenacetin	20	U
101-55-3	4-Bromophenyl-phenylether	15	U
2303-16-4	Diallate	20	U
60-51-5	Dimethoate	15	U
118-74-1	Hexachlorobenzene	15	U
92-67-1	4-Aminobiphenyl	10	U
23950-58-5	Pronamide	15	U
87-86-5	Pentachlorophenol	55	U
82-68-8	Pentachloronitrobenzene	15	U
85-01-8	Phenanthrene	15	U
120-12-7	Anthracene	15	U
84-74-2	Di-n-Butylphthalate	2	BJ
91-80-5	Methapyrilene	30	U

(1) - Cannot be separated from Diphenylamine

50-18-0---------Cyclophosphamide	20	U
206-44-0--------Fluoranthene	20	U
92-87-5---------Benzidine	25	U
129-00-0--------Pyrene	10	U
140-57-8--------Aramite	20	U
60-11-7---------p-Dimethylaminoazobenzene	10	U
510-15-6--------Chlorobenzilate	10	U
119-93-7--------3,3'-Dimethylbenzidine	100	U
85-68-7---------Butylbenzylphthalate	10	U
53-96-3---------2-Acetylaminofluorene	10	U
101-14-4--------Methylene-bis(2-Chloroaniline	15	U
91-94-1---------3,3'-Dichlorobenzidine	10	U
106-51-4--------3,3'-Dimethoxybenzidine	20	U
56-55-3---------Benzo(a)Anthracene	10	U
218-01-9--------Chrysene	15	U
117-81-7--------bis(2-Ethylhexyl)Phthalate	3	BJ
117-84-0--------Di-n-Octyl Phthalate	20	U
205-99-2--------Benzo(b)Fluoranthene	10	U
57-97-6---------7,12-Dimethylbenzanthracene	10	U
207-08-9--------Benzo(k)Fluoranthene	20	U
50-32-8---------Benzo(a)Pyrene	5	U
56-49-5---------3-Methylchloranthrene	5	U
224-42-0--------Dibenzo(a,j)acridine	10	U
193-39-5--------Indeno(1,2,3-cd)Pyrene	10	U
53-70-3---------Dibenz(a,h)Anthracene	10	U
191-24-2--------Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

COMPOUND LIST
PESTICIDES/PCB'S METHOD 8080

CLIENT SAMPLE ID: MPTBGQS01
LAB SAMPLE ID: 590519

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
1. 4,4'-DDD	BDL	0.10
2. 4,4'-DDE	BDL	0.10
3. 4,4'-DDT	BDL	0.10
4. ALDRIN	BDL	0.03
5. CHLORDANE	BDL	0.12
6. DIELDRIN	BDL	0.03
7. ENDOSULFAN I	BDL	0.05
8. ENDOSULFAN II	BDL	0.10
9. ENDOSULFAN SULFATE	BDL	0.05
10. ENDRIN	BDL	0.05
11. ENDRIN ALDEHYDE	BDL	0.03
12. HEPTACHLOR	BDL	0.03
13. HEPTACHLOR EPOXIDE	BDL	0.03
14. KEPONE	BDL	0.30
15. p,p'-METHOXYCHLOR	BDL	0.30
16. PCB-1016	BDL	0.50
17. PCB-1221	BDL	0.50
18. PCB-1232	BDL	0.50
19. PCB-1242	BDL	0.50
20. PCB-1248	BDL	0.50
21. PCB-1254	BDL	0.50
22. PCB-1260	BDL	0.50
23. TOXAPHENE	BDL	1.00
24. ALPHA-BHC	BDL	0.03
25. BETA-BHC	BDL	0.03
26. DELTA-BHC	BDL	0.03
27. GAMMA-BHC (LINDANE)	BDL	0.03

INORGANIC SDG 938251

U.S. EPA - SW-846

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MPTBGQS01

Lab Name: COMPUCHEM ENV. CORP. Contract: SW-846

Lab Code: COMPU Case No.: 28138 SAS No.: _____ SDG No.: 938251

Matrix (soil/water): WATER Lab Sample ID: 590523

Level (low/med): LOW Date Received: 12/03/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	74.4	B		P
7440-36-0	Antimony	51.1	U		P
7440-38-2	Arsenic	5.2	U		F
7440-39-3	Barium	2.3	U		P
7440-41-7	Beryllium	.40	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	408	B		P
7440-47-3	Chromium	9.2	U		P
7440-48-4	Cobalt	13.6	U		P
7440-50-8	Copper	11.1	U		P
7439-89-6	Iron	10.7	U		P
7439-92-1	Lead	4.9			F
7439-95-4	Magnesium	270	B		P
7439-96-5	Manganese	1.4	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	14.2	U		P
7440-09-7	Potassium	1760	U		P
7782-49-2	Selenium	3.6	U	Q	F
7440-22-4	Silver	5.5	U		P
7440-23-5	Sodium	17900			P
7440-28-0	Thallium	4.8	U	W	F
7440-62-2	Vanadium	6.8	U		P
7440-66-6	Zinc	13.3	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
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PLEASE REFERENCE ENCLOSED NOTICE REGARDING "Q" FLAG IN COLUMN Q

590473 477 481 491 495 499 | 590503 - 507 508 509 510 511 | 590512 513 514 515 516 - 517 | 590518 519 520

CHAIN-OF-CUSTODY RECORD

№ 35434

CompuChem Laboratories, Inc.
3308 Chapel Hill/Nelson Highway
Research Triangle Park, NC 27709

1-800-833-5097

Ship to: 27709 Compuchem Labs 3308 Chapel Hill/Nelson Hwy Research Triangle Park NC	Project Name: Magport	Field Point-of-Contact: None
	Sampler Name: Larry W. Smith	Telephone No: Sampling for project complete? (Y) or N (See Note 1.)
Carrier: Federal Ex Airbill No.: 2013460551	Sampler Signature: Larry W Smith	Project-specific (PS) or Batch (B) QC: PS

Box #1: 1. Surface Water, 2. Ground Water, 3. Leachate, 4. Rinsate, 5. Soil/Sediment/Sludge, 6. Trip Blank, 7. Oil, 8. Waste, 9. Other: _____

Box #2: A. HCl, B. HNO_3, C. $NaHSO_4$, D. $Na_2S_2O_3$, E. Ice Only, O. Other: _____, N. Not Preserved

Box #3: F. Filtered, U. Unfiltered

Box #4: C. CLP 3/90, S. SW-846, W. CWA 600-series, L. Low Conc. CLP, R. Radiological, T. TCLP, O. Other

Box #5: H - High, M - Medium, L - Low

Sample ID (Organics: 9 characters max, inorganics: 6 characters; see Note 2)	Date: Year: 19 93	Time	Box #1 Matrix	Box #2 Preservative	Box #3 Filtered/Unfiltered	Box #4 Method	Box #5 Expect. Conc.	No. of Bottles	Use for Lab QC (MS or DUP)	VOA-GC/MS	SV-GC/MS	Pest/PCB-GC	Herb-GC	VOA-GC	Metals	Mercury	Cyanides	Radiologicals	TOC/TOX	O&G/TPH	Phenols	Other	Remarks/Comments
																							Received 1-VOA Lab part not on COC 8P 12-3-93
MPTBGSDQB	12/2	14:35	5	N	U	ST	L	3		X	X	X	X		X	X	X						3 Bottles
MPTBGSDQ9	12/2	14:55	5	N	U	ST	L	3		X	X	X	X		X	X	X						3 Bottles
MPTBGQS01	12/2	11:40	4	A	U	ST wg	L	3		X													3 Bottles
MPTBGQS01	12/2	11:40	4	N	U	ST wg	L	1			X												1 Bottle
MPTBGQS01	12/2	11:40	4	N	U	S	L	1				X											1 Bottle
MPTBGQS01	12/2	11:40	4	B	U	S	L	1							X								1 Bottles
	/	:																					
	/	:																					
	/	:																					SAMPLES REC'D IN GOOD CONDITION 8P 12-3-93
	/	:																					

Client's Special Instructions: Contact P. Layne or F. Levene @ (904) 656-1293 for additional Information

Lab: Received in Good Condition? Y or N Describe Problems, If Any:

#1 Relinquished By: (Sig.) Larry W Smith	Date: 12/2/93	#2 Relinquished By: (Sig.)	Date:	#3 Relinquished By: (Sig.)	Date:	Sample storage time requested? _____ (in days, see Note 3)
Company Name:	Time:	Company Name:	Time:	Company Name:	Time:	
#1 Received By: (Sig.) Joan Purdie	Date: 12-3-93	#2 Received By: (Sig.)	Date:	#3 Received By: (Sig.)	Date:	DESTROY or RETURN data after five years of archival? (Circle choice; see Note 4)
Company Name: CompuChem	Time: 0830	Company Name:	Time:	Company Name:	Time:	

Note (1): If "N" lab will hold samples to await remainder of project-maximizing batch size and minimizing QC ratio; if "Y" lab will begin processing batches now. Note (2): If CLP inorganics diskette required, ID limited to maximum of six characters.
Note (3): Samples stored 60 days after date report mailed at no extra charge. Note (4): All lab copies of data destroyed after five years unless client requests and pays for return of copies; annual storage fee billed in January of year six.