EPA Region 5 Records Ctr.
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INSPECTION REPORT
FOR
HANNAH MARINE CORP
LEMONT, IL
IL-D069496248
R05-8303-01F
March 5, 1986

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ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

MEMORANDUM

DATE: March 5, 1986
TO: File
FROM: Paul Hess PAH
SUBJECT: Illinois/R05-8393-01F/IL-0277
Lemont/Hannah Marine Corp.
IL D069496248

The Region V, Office of Superfund, has tasked FIT to perform a Site Inspection and Hazard Ranking System (HRS) assessment of the above-referenced facility. This site was originally identified to USEPA when the Illinois Environmental Protection Agency (IEPA) submitted a Preliminary Assessment form in March of 1984.

The Hannah Marine facility is a river barge cleaning and repair yard with docks on the south side of the Chicago Sanitary and Ship Canal. This thirty-four (34) year old facility is located in an unincorporated area about three (3) miles east of Lemont, Illinois. The property is owned by the Metropolitan Sanitary District of Greater Chicago (MSD) and leased to the current operator.

The vessels that Hannah Marine cleans have a minimum product capacity of 330,000 gallons and some hold 500,000 gallons. These vessels must be cleaned between product shipments to prevent cross contamination of chemicals. The storage compartments of these vessels are first vacuumed to remove the remaining chemical product from the bottom of the vessel. The compartments are then steam-cleaned sometimes with a detergent to remove any chemical residue on the walls and floor. The

recycled paper

amount of liquid and/or sludge waste generated from this cleaning operation for a single barge varies from nine (9) to fifteen (15) thousand gallons. During the years 1951 through 1958, all of the chemical residue and wash water was discharged to the waters of the canal. This practice was stopped at the insistence of MSD. Then two (2) unlined waste water retention lagoons were placed into operation in late 1958. The practice of discharging the wash water waste to these retention lagoons continued until 1978 when MSD demanded that they be closed and filled. At this point, MSD constructed two (2) shallow groundwater sampling sumps, one on the east side of the site near the abandoned lagoons and the other one on the west side. These sumps were constructed with a twenty (20) foot long by four (4) foot diameter galvanized conduct pipe placed upright in a gravel bed, (see site photos).

Currently, the vacuumed bottoms are stored separately from the wash water waste. These chemical bottoms are stored in an above ground tank farm near the main building. The wash water waste is now stored in much larger above ground tank in an area near the abandoned lagoons. This second tank farm has two (2) tanks, one 426,000 gallon capacity and one 108,000 gallon capacity. The contents of these tanks are shipped to Chem Clean Company in East Chicago, Indiana two to three times a year.

During the interview portion of the site inspection, Mr. Votava, the plant manager, stated that they produce about one-million gallons of wash water waste each year. Mr. Votava clarified his statement by saying they clean between ninety (90) and one hundred twenty (120) barges each year, and each barge produces about nine (9) to fifteen (15) thousand gallons of wash water. Therefore, FIT concludes that twenty-seven (27) million gallons of waste was discharged at this site during the years 1951 through 1978. Also, he gave FIT a list of his most frequent customers. This list is attached to the Site Inspection Report, form 2070-13, "part 9 - Generator/Transporter information.

FIT conducted a sampling program during the on-site inspection that included three (3) groundwater points, three (3) surface water points, and the wash water waste. The wash water sample was collected to establish the site's waste characteristics. The three (3) groundwater samples were collected from the on-site, ninety (90) foot deep production well and from the two (2) on-site MSD sumps. The three (3) sediment samples were collected from the ship canal at various points along the working dock, (see sample location map attached).

The waste water sample results confirmed the presence of nineteen (19) organic priority pollutants at very high concentrations (see Sample Result Table I attached). Styrene was found at 136,000 micrograms per liter (ug/l). Therefore, the facility's waste stream is a hazardous waste. Fourteen of those compounds found in the wash water were found in the production well and groundwater sumps in smaller concentrations. Also, six (6) organic priority pollutants were found in the two down-gradient sediment sample in significantly higher concentration than in the up-gradient surface water sample. Therefore, it is concluded that both the surface and groundwater have been contaminated from the discharge of on-site hazardous waste.

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D069496248

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
HANNAH MARINE CORP.	RT. 83 & 107TH ST.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
LEMONT (UNINCORPORATE)	IL.	60439	COOK & DU PAGE	043	4

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
41°42'10.0"	087°56'50.0"	☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
5 18 85 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1951 / ____ (BEGINNING YEAR / ENDING YEAR) ____ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR E&E, Inc. (FIT) (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR ____ (Name of firm) ☐ G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
PAUL HESS	TEAM LEADER	E&E, INC.	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
ARLENE PRATE	SAMPLER	"	( ) "
DAVE CURNOCK	SAFETY	"	( ) "
LUIS MORALES	EQUIPMENT	"	( ) "
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
GEORGE VOTAVA	PLANT MGR.	HANNAH MARINE - LEMONT PLANT	(312) 242-3210
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	9:10 AM	CLEAR, SUNNY, DRY (78°F)

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
DON JOSIF	REGION V, OFFICE OF SUPERFUND	(312) 886-0393

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
PAUL HESS	FIT	E&E, INC.	663-9415	2 3 86 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D069496248

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☒ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 113,400
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☒ H. IGNITABLE
- ☒ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	37,800	TONS	BARGE CLEANING WASTE
SOL	SOLVENTS	37,800	"	" " "
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	37,800	"	" " " "
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	1,1,1-TRICHLOROETHANE	71-55-6	ON-SITE WASTE	444	ug/l
SOL	TRICHLOROETHENE	79-01-6	" "	27	"
OLW	BENZENE	71-43-2	" "	1,220	"
SOL	4-METHYL-1-2 PENTANONE	108-10-1	" "	459	"
OLW	TOLUENE	108-88-3	" "	5,210	"
SOL	ETHYLBENZENE	100-41-4	" "	119	"
OCC	STYRENE	100-42-5	"	136,000	"
OLW	PHENOL	108-95-2	" "	670	"
SOL	BENZYL ALCOHOL	100-51-6	" "	46	"
OLW	2-METHYL PHENOL	95-48-7	" "	206	"
OLW	4-METHYL PHENOL	106-44-5	" "	396	"
OLW	NAPTHALENE	91-20-3	" "	127	"
SOL	PYRENE	129-00-0	" "	2,880	"
OLW	XYLENE		" "	258	"
OLW	2-METHYLNAPTHALENE	91-57-6	" "	103	"
OLW	PHENANTHRENE	85-01-8	" "	25	"

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	N/A		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT SAMPLE RESULTS AND ON-SITE INTERVIEW

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D006949624 8

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☒ OBSERVED (DATE: 5-8-85) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 19,878 — 04 NARRATIVE DESCRIPTION

THIRTY FOUR (34) ORGANIC PRIORITY POLLUTANTS WERE FOUND IN THE ON-SITE GROUND WATER THAT WERE ALSO FOUND IN ON-SITE WASTE WATER RETAINED FOR DISPOSAL.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☒ OBSERVED (DATE: 5-8-85) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100 — 04 NARRATIVE DESCRIPTION

FACILITY DISCHARGED WASTE WATER FROM CLEANING CHEMICAL BARGES DIRECTLY TO THE SHIP CANAL FROM 1951 THROUGH 1958.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE) ☐ POTENTIAL ☒ ALLEGED
03 AREA POTENTIALLY AFFECTED: 15 (Acres) — 04 NARRATIVE DESCRIPTION

TWO (2) LARGE LAGOONS (UNLINED) WERE USED FOR RETENTION OF CLEANING WASTE FROM 1958 THROUGH 1979

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 19,878 — 04 NARRATIVE DESCRIPTION

RESIDENTIAL WELLS, INDUSTRIAL WELLS, AND COMMUNITY WELLS WITHIN 3-MILE RADIUS ARE LOCATED WITHIN AQUIFER OF CONCERN. THESE WELLS HAVE NOT BEEN ANALYZED.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D069496248

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS	NONE			
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☒ A. SURFACE IMPOUNDMENT	CLOSED	
☒ B. PILES	UNK	
☐ C. DRUMS, ABOVE GROUND		
☒ D. TANK, ABOVE GROUND	554,000	GALS.
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☒ H. OTHER NONE (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE: 97 (Acres)

07 COMMENTS LAGOONS THAT CONTAINED WASTE WERE FILLED WITH SOIL IN 1979. EXCESS MATERIAL LEFT IN CHEMICAL BARGE IS NOW REMOVED TO SMALLER STORAGE TANKS BEFORE THE BARGE IS CLEANED. FACILITY CLEANS 90 TO 120 BARGES PER YEAR AND USES 9,000 TO 15,000 GALS OF WATER TO CLEAN EACH BARGE (STEAM CLEAN).

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC. THE LAGOONS WERE UNLINED AND FILLED IN 1979. THERE ARE TO AREAS OF TANKS - ONE GROUP TO STORE EXCESS CHEMICALS AND THE OTHER FOR WASH WATER. THE DIKING AROUND TO WASTE WATER TANKS IS POOR AND THERE IS NONE AROUND CHEMICAL TANKS.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

ON-SITE INTERVIEW

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE: IL | 02 SITE NUMBER: D069496248

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☒	B. ☒
NON-COMMUNITY	C. ☐	D. ☒

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☒	B. ☐	C. ☐
D. ☒	E. ☐	F. ☐

03 DISTANCE TO SITE

A. 1½ (mi)
B. <2000 (mi) FT.

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING
☒ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 19,878

03 DISTANCE TO NEAREST DRINKING WATER WELL <2,000 (mi) FT.

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
12 (ft)	SOUTHWEST	12 (ft)	UNK (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

PRIVATE, INDUSTRIAL, AND COUNTY WELLS RANGE FROM 70 TO 350 FT. IN DEPTH. ALL ARE USED FOR DRINKING WATER. A FEW VILLAGES ARE DRAWING WATER FROM CHICAGO AND THEIR ARE OUTSIDE THE 3-MILE RADIUS.

10 RECHARGE AREA
☒ YES ☐ NO
COMMENTS PERCOLATION OF PERCIPITATION TO BEDROCK

11 DISCHARGE AREA
☒ YES ☐ NO
COMMENTS SHALLOW GROUND WATER DISCHARGE TO THE DES PLAINES RIVER

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE
☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES
☐ C. COMMERCIAL, INDUSTRIAL
☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
CHICAGO SANITARY AND SHIP CANAL	☒	ZERO FT. (mi)
CALUMET SAG CANNEL	☒	ZERO FT. (mi)
DES PLAINES RIVER	☐	<2000 FT. (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 725 NO. OF PERSONS	B. 7,800 NO. OF PERSONS	C. 22,500 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: <2,000 FT. (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 2,600

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 150 FT. (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

THE POPULATION NORTH OF SITE IS A DENSE URBAN CENTER (CHICAGO SUBURBAN AREA) - THERE IS VERY LITTLE POPULATION EAST OF THE SITE (FOREST PRESERVES) - THE POPULATION SOUTH IS RURAL AND URBAN IN NATURE — THE POPULATION WEST OF SITE IS WORKERS AT ARGONNE NATIONAL LABS.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	069496248

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

WASTE LAGOONS WERE UNLINED

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

NONE

III. TOTAL POPULATION POTENTIALLY AFFECTED: 19,878

IV. COMMENTS

CURRENT WASTE IS STORED IN TWO ABOVE GROUND STEEL TANKS, ONE - 426,000 GAL. AND ONE - 108,000 GAL. WASTE IS TRUCKED TO CHEM-CLEAN CO. IN EAST CHICAGO, INDIANA.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA AND USEPA FILES

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D069496248

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☒ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
<5 (ft)	<5 (ft)	UNK

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
5 (in)	2 (in)	<8 %	NORTHWEST	<3 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10

N/A ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. N/A (mi)

OTHER: B. ONE (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

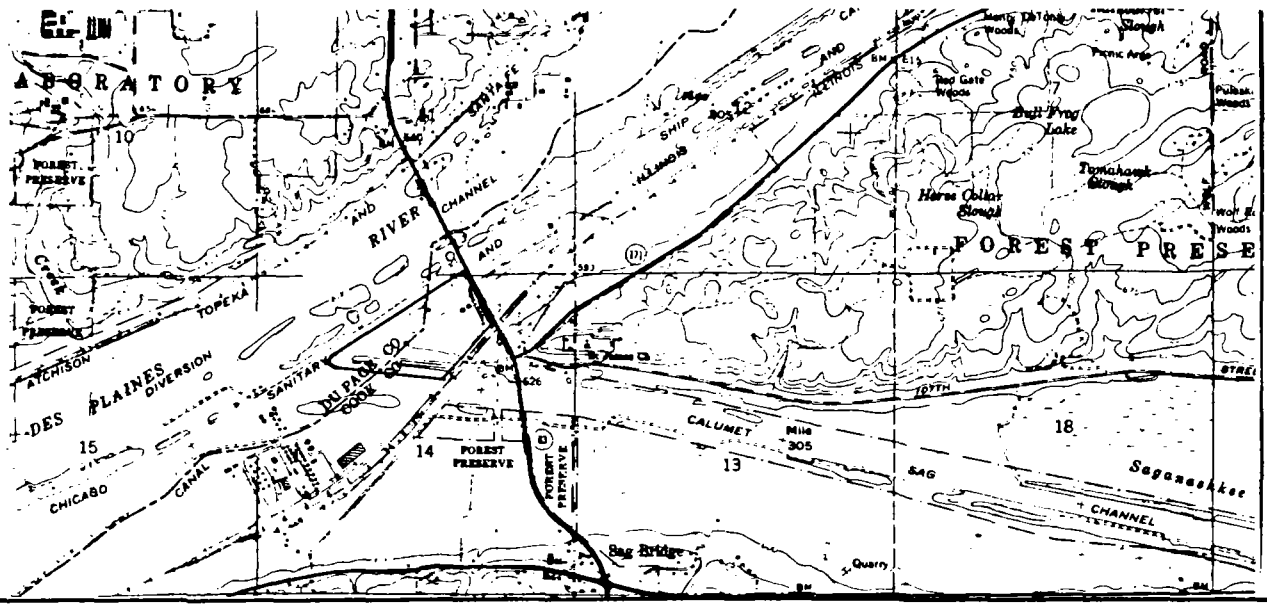
ENDANGERED SPECIES: N/A

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. <2,000 FT. (mi)	B. <1/2 (mi)	C. NONE (mi)	D. >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA AND USEPA FILES

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D069496248

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	PEI ASS. INC. AND ROCKY MT. ANALYTICAL	RETURNED
SURFACE WATER	3	" " " AND " " "	"
WASTE	1	" " " AND " " "	"
AIR			
RUNOFF			
SPILL	N/A		
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	NONE

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF USEPA, REG V, OFFICE OF SUPERFUND (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS USEPA, REG. V, OFFICE OF SUPERFUND

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

NONE

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA AND USEPA FILES

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL.	D069496248

II. CURRENT OWNER(S) / **PARENT COMPANY** (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
HANNAH MARINE CORP.		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
361 FRONTAGE RD. (SUITE 101)			

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
BURR RIDGE	IL.	60521			

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first) / **IV. REALTY OWNER(S)** (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NONE		METRO. SANITARY DIST. OF GREATER CHICAGO	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
		100 ERIE ST.	

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
			CHICAGO	IL.	

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

ON-SITE INTERVIEW

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL.	D069496248

II. CURRENT OPERATOR (Provide if different from owner)		OPERATOR'S PARENT COMPANY (If applicable)	
01 NAME: HANNAH MARINE CORP.	02 D+B NUMBER:	10 NAME: HANNAH MARINE CORP.	11 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): RT. 83 & 107TH ST.	04 SIC CODE:	12 STREET ADDRESS (P.O. Box, RFD #, etc.): 361 FRONTAGE RD.	13 SIC CODE:
05 CITY: LEMONT; 06 STATE: IL.	07 ZIP CODE: 60439	14 CITY: BURR RIDGE; 15 STATE: IL.	16 ZIP CODE: 60521
08 YEARS OF OPERATION: 34 YEARS	09 NAME OF OWNER: SAME AS ABOVE		

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)		PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)	
01 NAME: N/A	02 D+B NUMBER:	10 NAME: N/A	11 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:	12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:	14 CITY:	15 STATE: / 16 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:		
01 NAME: N/A	02 D+B NUMBER:	10 NAME: N/A	11 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:	12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:	14 CITY:	15 STATE: / 16 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:		
01 NAME: N/A	02 D+B NUMBER:	10 NAME: N/A	11 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:	12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:	14 CITY:	15 STATE: / 16 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:		

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

ON-SITE INTERVIEW

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D069496248

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
HANNAH MARINE CORP.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
RT. 83 & 107TH ST.	

05 CITY	06 STATE	07 ZIP CODE
LEMONT	IL.	60439

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
"SEE LIST ATTACHED"		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
"SEE LIST ATTACHED"		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

ON-SITE INTERVIEW

ATTACHMENT I: OFF-SITE GENERATORS & TRANSPORTERS

1. AMERICAN COMMERCIAL BARGE LINE, INC.
2. DOW CHEMICAL CORP.
3. CHOTIN TRANSPORTATION CORP.
4. DRAVO MACHLING CORP.
5. DIAMION SHAMROCK CORP.
6. EXXON OIL CORP.
7. INGRAM BARGE LINE, INC.
8. MOBILE OIL CORP.
9. MISSISSIPPI VALLEY CORP.
10. NATIONAL MARINE SERVICE, INC
11. OHIO RIVER CO., INC.
12. ALAMO BARGE LINE, INC.
13. ALLIANCE MARINE CO., INC.
14. AMERICAN BARGE & TOWING, INC.
15. APEX OIL CO., INC.
16. CARGO CARERS, INC.
17. BIGANE VESSEL FUELING, INC.
18. B.F. GOODRICH, CORP.
19. BRANT TOWING CO., INC.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	0069496248

II. PAST RESPONSE ACTIVITIES

	02 DATE	03 AGENCY
01 ☐ A. WATER SUPPLY CLOSED No 04 DESCRIPTION		
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED No 04 DESCRIPTION		
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED No 04 DESCRIPTION		
01 ☐ D. SPILLED MATERIAL REMOVED No 04 DESCRIPTION		
01 ☐ E. CONTAMINATED SOIL REMOVED No 04 DESCRIPTION WASTE WATER PONDS FILLED IN 1978		MSD
01 ☐ F. WASTE REPACKAGED No 04 DESCRIPTION		
01 ☐ G. WASTE DISPOSED ELSEWHERE No 04 DESCRIPTION		
01 ☐ H. ON SITE BURIAL YES 04 DESCRIPTION SEE "E" ABOVE		
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A		
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A		
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A		
01 ☐ L. ENCAPSULATION 04 DESCRIPTION N/A		
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A		
01 ☐ N. CUTOFF WALLS No 04 DESCRIPTION		
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N/A		
01 ☐ P. CUTOFF TRENCHES/SUMP No 04 DESCRIPTION		
01 ☐ Q. SUBSURFACE CUTOFF WALL No 04 DESCRIPTION		

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D069496248

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED No — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED No — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED N/A — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA AND USEPA FILES - ON-SITE INTERVIEW

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D069496248

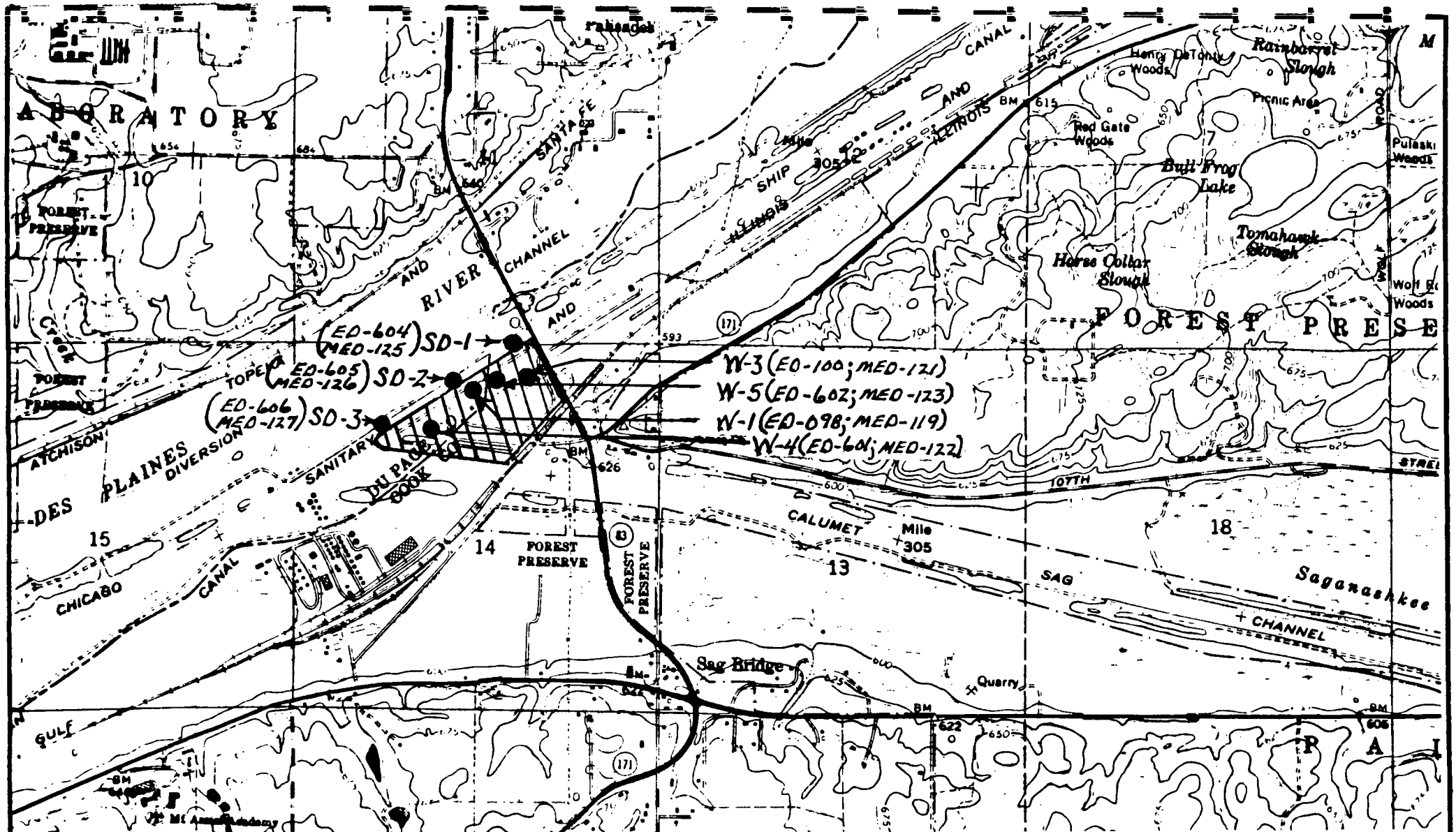
II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA AND USEPA FILES



ecology and environment, inc.
111 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

SCALE: 1" ≈ 2,000'	HANNAH MARINE	DRAWN BY P. HESS
DATE: 1-30-86		REVISED N/A
SAMPL LOCATION MAP	LEMONT, IL.	
R05-8303-01F	IL-0277	DRAWING NUMBER 1

FIELD PHOTOGRAPHY LOG SHEET

PAGE 1

DATE 5-8-85

TIME 1210 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable)
ED-098; MED-119 (W-1)
ED-099; MED-120 (W-2)

DESCRIPTION: SAMPLING POINT W-1 (ON-SITE PRODUCTION WELL) INSIDE BUILDING TO LEFT IN PHOTO (SAMPLE W-2 IS PRODUCTION WELL DUP.)

DATE 5-8-85

TIME 1250 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable)
ED-100; MED-121

DESCRIPTION: SAMPLING POINT W-3 (EAST GROUNDWATER SUMP)

FIELD PHOTOGRAPHY LOG SHEET

DATE 5-8-85

TIME 1240 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Clear, Sunny, Dry, (78°F)

SITE Hannah Marine

TDD# R05-8303-01F

PHOTOGRAPHED BY: Paul Hess

SAMPLE ID# (if applicable) ED-601; MED-122

DESCRIPTION: Sampling Point W-4 (West Groundwater Sump)

DATE 5-8-85

TIME 1220 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Clear, Sunny, Dry, (78°F)

SITE Hannah Marine

TDD# R05-8303-01F

PHOTOGRAPHED BY: Paul Hess

SAMPLE ID# (if applicable) N/A

DESCRIPTION: Wastewater Tank Storage Area Northeast of Office

FIELD PHOTOGRAPHY LOG SHEET

DATE 5-8-85

TIME 1215 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) ED-602; MED-123

DESCRIPTION: SAMPLING POINT W-5 (WASTEWATER FROM BARGE CLEAN-OUT) SAMPLE TAKEN FROM TANK ON LEFT

DATE 5-8-85

TIME 1217 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) N/A

DESCRIPTION: WASTWATER TANK STORAGE AREA WITH HOSES ON GROUND

FIELD PHOTOGRAPHY LOG SHEET

DATE 5-8-85

TIME 1415 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) ED-604; MED-125

DESCRIPTION: SAMPLING POINT SD-1 (SEDIMENT TAKEN FROM SHIP CANAL) SAMPLING POINT 18 FROM NORTHEAST SIDE OF SITE (UP-GRADIANT SAMPLE)

DATE 5-8-85

TIME 1435 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) ED-605; MED-126

DESCRIPTION: SAMPLING POINT SD-2 (CANAL SEDIMENT FROM BAY #6 AREA)

FIELD PHOTOGRAPHY LOG SHEET

DATE 5-8-85

TIME 1440 A.M. (P.M.)

DIRECTION: N NNE (NE) ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) NA

DESCRIPTION: VIEW N.E. OF BAY #6

DATE 5-8-85

TIME 1500 A.M. (P.M.)

DIRECTION: (N) NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) ED-606; MED-127

DESCRIPTION: SAMPLING POINT SD-3 (SEDIMENT FROM CANAL AT SW END OF SITE)

FIELD PHOTOGRAPHY LOG SHEET

DATE 5-8-85

TIME 1510 A.M. (P.M.)

DIRECTION: (N) NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) N/A

DESCRIPTION: RECREATION BOAT USEING SHIP CANAL

DATE 5-8-85

TIME 1320 A.M. (P.M.)

DIRECTION: N NNE (NE) ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) N/A

DESCRIPTION: SOLID WASTE DISCHARGED TO NE SIDE OF SITE (AREA WAS USED TO POND WASTEWATER FROM BARGE CLEAN-OUT)

FIELD PHOTOGRAPHY LOG SHEET

DATE 5-8-85

TIME 1325 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) N/A

DESCRIPTION: SOLID WASTE AREA N.E. ON-SITE (NOTE STAINS ON GROUND) AREA WAS SITE OF PONDED WASTE WATER FROM BARGES

DATE 5-8-85

TIME 1326 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER CLEAR, SUNNY, DRY, (78°F)

SITE HANNAH MARINE

TDD# R05-8303-01F

PHOTOGRAPHED BY: PAUL HESS

SAMPLE ID# (if applicable) N/A

DESCRIPTION: SAME AS ABOVE

SAMPLE RESULT TABLE - I

		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	mg/kg	ug/kg	ug/kg
	ITC	MED124	MED123	MED119	MED120	MED121	MED122	MED125	MED126	Med127
	OTC	ED603	ED602	ED098	ED099	ED100	ED601	ED604	ED605	ED606
	Sample	Blank	Waste Water	On-Site Well	Well Dup.	Sump East	Sump West	Canal East	Canal Bay #6	Canal West
COMPOUND		W-6	W-5	W-1	W-Z	W-3	W-4	SD-1	SD-Z	SD-3
chloromethane					7.3 J			118.7		
bromomethane					7.5 J	10	10			
vinyl chloride				33.9	31.4	2.5 J	296			
chloroethane					8.2 J	45.7	271			
methylene chloride		5.8B	B	B	B	B	B	B	B	B
acetone		98.J	B	B	B	B	B	B	B	B
carbon disulfide		84.9	B	B	B	B	B	B	B	B
1,1-dichloroethene					7.4	5.6J				
1,1-dichloroethane					9.2	460	1,360			
trans-1,2,-dichloroethene				15.4	18.9	189	1,080			
chloroform					7.5					
1,2-dichloroethane					7.0		40.2			
2-butanone					5.7 J			179J		
1,1,1-trichloroethane			444		7.5	1090	480			
carbon tetrachloride					B					
flourene			9.5J							
bromodichloromethane					6.6					
1,1,2,-2-tetrachloroethane					9.5					
1,2-dichloropropane					6.8					
trans-1,3-dichloropropene					5.7					
trichloroethene			27.4		7.7	2.7J				
dibromachloromethane					5.9					
1,2,2-trichloroethane					7.2					
benzene			1220	2.5 J	9.9	49.1	1470	33.6		
cis-1,3-dichloropropene					5.7					
bromoform					5.5					
2-hexanone					8.1 J					
4-methyl-2-pentanone			459J		10.5					
tetrachloroethene			8.2		9.4	2.8J				
toluene			5,210		8.1	59.8	1,770	172,264	1,510	32,705
chlorobenzene					8.1					
ethylbenzene			119		7.7	78.1	1.9J	126.5		16.0J
styrene			136,000		7.7				184	
total xylenes			358		8.0	780	770	146.1		38.0
2-methylnapthalene			103J							
phenol			670				14.1			
napthalene			127J			2.4J	18.4J			
benzyl alcohol			46.2							
4-methylphenol			396			3J	59.8	44,170	695	
2-methylphenol			206				81.0			
phenanthrene			25J				6.6 J	10816J	1170J	759J
anthracene									462J	
di-n-butylphthalate									1580J	
fluoranthene								2,767 J	2,840	2,418
benzidine										
pyrene			7.4J						2880J	
3,3'-dichlorobenzidine										
benzo(a)anthracene									897 J	
bis-2-ethylhexyl)phthlate					8.1J			11,979	5,700	13,207
chrysene								731J	1,010J	789J
di-n-octyl phthlate								18,814		
benzo(b&K)fluoranthene										
dibenzo(a,h)anthracene										
benzo(g,h,i)perylene									6.1J	
heptachlor								27.8		24.1
4,4'-DDE										

STATE Illinois SITE Hannah Marine Corp. TDD R05-8303-002 PAGE 1 OF , SET # 1

INTRODUCTION TO DATA TABLES

A SUMMARY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED, HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC INFORMATION IS PROVIDED IN THE ATTACHED DATA SHEETS.

I) REPORTING UNITS
- A) ORGANICS
  - 1) Water Samples - ug/l or ppb (parts per billion)
  - 2) Soils or Sediments - ug/kg or ppb (parts per billion)
- B) METALS
  - 1) Water Samples - ug/l or ppb
  - 2) Soils or sediments - mg/kg or ppm

II) DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A) ORGANICS

Footnote	Definition	Interpretation
UJ	Detection Limit (D.L.) is estimated because of a Quality Control (QC) protocol. D.L. is possibly above or below Contract Required Detection Limit (CRDL).	Compound was not detected
UB	Compound found in laboratory blank. No Value above CRDL.	Compound was not detected
UJB	Compound found in laboratory blank, but not detected in sample. CRDL is estimated because of a QC protocol.	Compound was not detected
B	Compound found in blank. Two interpretations are possible:	
	a) If sample value is equivalent to D.L. to 5x blank concentration	Compound value is semi-quantitative.
	b) If sample value is greater than 5x the blank concentration	Compound value is quantitative
JB	Compound found in blank, value is estimated because of QC protocol.	Compound value is semi-quantitative
R	Do Not Use Value. Major Violation of QC Protocol	Compound value is not usable.
C	Value adjusted for blank (an unacceptable procedure)	Compound value is semi-quantitative
J	Value is above CRDL and is an estimated value because of a QC protocol	Compound value is semi-quantitative
Q	No Analytical Result	Compound was not detected
N	Presumptive evidence for the presence of a compound as used for a Tentatively Identified Compound (TIC)	Compound value is semi-quantitative

B) METALS

FOOTNOTE	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Compound or element was not detected or value is semi-quantitative
s	Analysis by Method of Standard Additions (Look for a "+" Footnote)	Value is quantative
R	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semiquantitative
*	Duplicate value outside QC protocols which indicates a possible matrix problem	Value is semiquantitative
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value is biased
[ ]	Value is real, but is above instrument D.L. and below CRDL	Value may be quantitative or semiquantitative
UJ	D.L. is estimated because of a QC protocol. D.L. is possibly above or below CRDL.	Compound or element was not detected
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value is semiquantitative

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

M E M O R A N D U M

DATE: May 16, 1985
TO: File
FROM: Arlene Pratl
SUBJECT: Hannah Marine/R05-8303-01F/IL0277/
Lemont, IL/Case 4323 SAS 1674E

The following sampling paper work errors were noted:

(1) The site name was written "Havanah" Marine instead of the correct "Hannah" Marine on all paper work.

(2) On OTR ED605 the sampling and shipping dates were not given. These should have read 5-8-85. The sample type under sample description was also not indicated. "Solids" should have been checked.

AP:6X

recycled paper

Site Name / TDD#: Hannah Marine Corp FOT 305 OH
Case Number : 4323
Sampling Date: 5-8-85
Sampling Time: 1210
Sample/Station Location: W1 production well outside MSP

Organic Traffic Number E D 098
Inorganic Traffic Number ME D 119
High Hazard Traffic Number E

TAGS
5-041-249 →
5-041-258

Physical Description
At time of collection: clear

Physical Changes (if any)
From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):
Temp
pH 7.20
conduct

Sampling Date: 5-8-85
Sampling Time: 1210
Sample/Station Location: W2 dup of W1

Organic Traffic Number E D 099
Inorganic Traffic Number ME D 120
High Hazard Traffic Number E

5-041-259
5-041-260

Physical Description
At time of collection:

Physical Changes (if any)
From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):
Temp
pH 7.02

Site Name / TDD#: Howard Plating Corp 8303 01F

Case Number : 4523 5-041[redacted]-265

Sampling Date: 3-8-85 5-041[redacted]270

Sampling Time: 1245 - 1230

Sample/Station Location: W3 sump east

Organic Traffic Number E D 100

Inorganic Traffic Number ME D 12[redacted]

High Hazard Traffic Number E

Physical Description

At time of collection: yellow color

Physical Changes (if any)

From time of collection until shipment: - collection sump from tile drain - used SS bucket to remove water

Instrument Readings (i.e. - pH, conductivity...):

temp

pH - 6.93

Conduct

Sampling Date: 5-8-85 5-041[redacted]-271

Sampling Time: 1230 1235 5-041[redacted]276

Sample/Station Location: W4 sump west

Organic Traffic Number E D 601

Inorganic Traffic Number ME D 122

High Hazard Traffic Number E

Physical Description

At time of collection: oily sheen on surface light yellow - tan color

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

temp = 7.12

Conduct

Site Name / TDD#: Harvard Minerals Corp F3C3 OF

Case Number : 4223 5-041277

Sampling Date: 5-8-85 5-041282

Sampling Time: 1215

Sample/Station Location: W5 wastewater from large clearing pools

Organic Traffic Number E D 602

Inorganic Traffic Number ME D 123

High Hazard Traffic Number E

Physical Description

At time of collection: murky, dirty yellow colored Very high head pressure - had to fill bottles

Physical Changes (if any)

From time of collection until shipment: some oil in tap water first sample

Instrument Readings (i.e. - pH, conductivity...):

temp

PH 8.69

conduct

Sampling Date: 5-8-85

Sampling Time: 3:00

Sample/Station Location: W6 - Blank

Organic Traffic Number E D 603 5-041283

Inorganic Traffic Number ME D 124 5-041288

High Hazard Traffic Number E

Physical Description

At time of collection: clear

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

PH = 8.15

Site Name / TDD#: Navanah Marine Corp 8303-01F

Case Number : 4323

TAGS: 5-041284 - 5-041293

Sampling Date: 5-8-85

Sampling Time: 1410

Sample/Station Location: SD1 from canal east

Organic Traffic Number E D 604

Inorganic Traffic Number ME D 125

High Hazard Traffic Number E

Physical Description

At time of collection: black, mucky - worms in sample

Physical Changes (if any)

From time of collection until shipment: - bits dug by worms

Instrument Readings (i.e. - pH, conductivity...):

Sampling Date:

5-041294 - 5-041298

Sampling Time: 1425

Sample/Station Location: SD2 mud stream canal #6 Bay

Organic Traffic Number E D 605

Inorganic Traffic Number ME D 126

High Hazard Traffic Number E

Physical Description

At time of collection: black muck

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#: Hanna's Manure Corp 8303-05

Case Number : 4323

Sampling Date: 5-8-85

Sampling Time: 1455

5-041299-
5-041303

Sample/Station Location: SD3
West canal

Organic Traffic Number E D 106

Inorganic Traffic Number ME D 127

High Hazard Traffic Number E

Physical Description
At time of collection:

Physical Changes (if any)
From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

Sampling Date: 5-8-85

Sampling Time: 5

5-041304-
5-041308

Sample/Station Location: SD4 old Sliff Wick canal
not taken

Organic Traffic Number E D 107

Inorganic Traffic Number ME D 128

High Hazard Traffic Number E

→ Rock bottom
- no seds.

Physical Description
At time of collection:

Physical Changes (if any)
From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#: Hazardous Waste Corp 82031F

Case Number : 4323

Sampling Date:

Sampling Time:

Sample/Station Location: SD5

5-041309-
5-041313

Organic Traffic Number E D 608

Inorganic Traffic Number ME D 129

High Hazard Traffic Number E

Physical Description
At time of collection:

Physical Changes (if any)
From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

TAGS VOIDED → 5-041304 →
5-041318

Sampling Date:

Sampling Time:

Sample/Station Location: SD6

Organic Traffic Number E D 609

Inorganic Traffic Number ME D 130

High Hazard Traffic Number E

5-041314-
5-041318

Physical Description
At time of collection:

Physical Changes (if any)
From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

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Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: RQS-8303-01F

PROJECT NAME: HAVANAN MARINE SAS 16746 CASE 4323

SAMPLERS: (Signature) Arlene Brazil

LOW CONC

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Letter	Coll. Bottle	8oz Jar				REMARKS ITR#	OTR#	
W1	5-8-85	1210		✓	W1	2	1	1					MED 119	ED 098	
W2	5-8-85	1210		✓	W2	2	1	1					MED 120	ED 099	
W3	5-8-85	1245		✓	W3	2	1	1					MED 121	ED 100	
W4	5-8-85	1230		✓	W4	2	1	1					MED 122	ED 601	
W5	5-8-85	1315		✓	W5	2	1	1					MED 123	ED 602	
W6	5-8-85	1500		✓	W6	2	1	1					MED 124	ED 603	
SD1	5-8-85	1410		✓	SD1	2			2				MED 125	ED 604	
SD2	5-8-85	1425		✓	SD2	2			2				MED 126	ED 605	
SD3	5-8-85	1455		✓	SD3	2			2				MED 127	ED 606	
~~SD4~~	~~5-8-85~~	~~1600~~		✓	~~SD4~~ 5-8-85	~~2~~			~~2~~				~~MED 128~~	~~ED 607~~	
~~SD5~~	~~5-8-85~~			✓	~~SD5~~ 5-8-85	~~2~~			~~2~~				~~MED 129~~	~~ED 608~~	
~~SD6~~				✓	~~SD6~~ 5-8-85	~~2~~			~~2~~				~~MED 130~~	~~ED 609~~	
									→ lot # 64342082						
									→ lot # 34284102						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Arlene Brazil	5-8-85 1800	FEDERAL EXPRESS			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FEDERAL EXPRESS TO RMAL CUSTODY SEAL 37543 + 37544 AIRBILL 595 232274	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5- 8107

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Office of Enforcement

230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: ROS 8303-01F

PROJECT NAME: HAVANA MARINE CASE# 4323

SAMPLERS: (Signature) Arlene Grasl

LOW CONC

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8 oz	4 oz	8 oz VOA	120 ml VOA			OTR#	ITR#	REMARKS
W4	5-8-85	1230		✓	W4	4	2	2					ED601	MED122	[illegible]
W5	5-8-85	1215		✓	W5	4	2	2					ED602	MED123	[illegible]
W6	5-8-85	1500		✓	W6	4	2	2					ED603	MED124	[illegible]
SD1	5-8-85	1:10 PM		✓	SD1	3			1	2			ED604	MED125	[illegible]
SD2	5-8-85	1:25		✓	SD2	3			1	2			ED605	MED126	[illegible]
SD3	5-8-85	1:55		✓	SD3	3			1	2			ED606	MED127	[illegible]
~~SD4~~	~~5-8-85~~	~~1600~~		✓	~~SD4~~	~~3~~			~~1~~	~~2~~			~~ED607~~	~~MED128~~	[illegible]
~~SD5~~				✓	~~SD5~~	~~3~~			~~1~~	~~2~~			~~ED608~~	~~MED129~~	[illegible]
~~SD6~~				✓	~~SD6~~	~~3~~			~~1~~	~~2~~			~~ED609~~	~~MED130~~	[illegible]
~~SD4~~	~~5-8-85~~	~~1600~~		✓	~~SD4~~	~~3~~			~~1~~	~~2~~			~~Over lot # 45004072~~		
													lot # 44341052		
													lot # 64342082		
													lot # 85023182		
													lot # 15109022		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Arlene Grasl	5-8-85 1800	FEDERAL EXPRESS			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FEDERAL EXPRESS TO PEI CUSTODY SEAL #S 37547 + 37548 AIRBILL # 595 237311	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5- 8106

RONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: ROS 8303-01F

PROJECT NAME: HAVANA MARINE, IL 62640 — CASE # 4223

SAMPLERS: (Signature) [signature]

LOW CONC. WATER

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8 oz	40 ml VOA					REMARKS OTR#	REMARKS ITR#
W1	5-8-85	1210		✓	W1	8	4	4					CD098	MED119
W2	5-8-85	1210		✓	W2	4	2	2					CD099	MED120
W3	5-8-85	1245		✓	W3	4	2	2					CD100	MED121
		[illegible]												
		[illegible]												
		[illegible]												
		[illegible]												

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-8-85 1800	FEDERAL EXPRESS			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Remarks: SHIPPED FEDERAL EXPRESS TO PEI
CUSTODY SEAL 37545 + 37546
AIRBILL # 5952373 11

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5- 8105

BLANK - W6

85FH07R01

SAMPLE NUMBER
ED603

ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK033
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/26/85
DATE ANALYZED----------5/26/85
CONC/DIL FACTOR---------- .2
[illegible] 6
PERCENT MOISTURE---------
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE----------	10U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
4-83-9	BROMOMETHANE----------	10U	78-87-5	1,2-DICHLOROPROPANE------	5U
5-01-4	VINYL CHLORIDE----------	10U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5U
75-00-3	CHLOROETHANE----------	10U	79-01-6	TRICHLOROETHENE----------	5U
75-09-2	METHYLENE CHLORIDE-------	5.8B	124-48-1	DIBROMOCHLOROMETHANE-----	5U
7-64-1	ACETONE----------	9.8J	79-00-5	1,1,2-TRICHLOROETHANE----	5U
75-15-0	CARBON DISULFIDE---------	84.9 B	71-43-2	BENZENE----------	5U
75-35-4	1,1-DICHLOROETHENE-------	5U	10061-05-5	CIS-1,3-DICHLOROPROPENE--	5U
5-34-3	1,1-DICHLOROETHANE-------	5U	110-75-8	2-CHLOROETHYLVINYLETHER--	10U J
156-60-5	TRANS-1,2-DICHLOROETHENE-	5U	75-25-2	BROMOFORM----------	5U
67-66-3	CHLOROFORM----------	5U	591-78-6	2-HEXANONE----------	10U J
07-06-2	1,2-DICHLOROETHANE-------	5U	108-10-1	4-METHYL-2-PENTANONE-----	10U
8-93-3	2-BUTANONE----------	10U	127-18-4	TETRACHLOROETHENE--------	5U
71-55-6	1,1,1-TRICHLOROETHANE----	5U	108-88-3	TOLUENE----------	5U
56-23-5	CARBON TETRACHLORIDE-----	5UJ	108-90-7	CHLOROBENZENE----------	5U
08-05-4	VINYL ACETATE----------	10UJ	100-41-4	ETHYLBENZENE----------	5U
75-27-4	BROMODICHLOROMETHANE-----	5U	100-42-5	STYRENE----------	5U
				TOTAL XYLENES----------	5U

PSC 7-29-85

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY PSC 7-29-1

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED600
========

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/9/85
DATE ANALYZED----------5/16/85
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYLAMINE---	10UJ	83-32-9	ACENAPTHENE----------	10U
8-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50UJ
-53-3	ANILINE----------	10UJ	100-02-7	4-NITROPHENOL----------	50UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10UJ
5-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10UJ
1-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10UJ
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10UJ
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10UJ
-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10UJ
5-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50UJ
39638-32-9	BIS(2CHLOROISOPROPYLETHER	10UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	50UJ
16-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
21-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10UJ
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10UJ
2-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
3-59-1	ISOPHORONE----------	10UJ	85-01-8	PHENANTHRENE----------	10UJ
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10UJ
105-67-9	2,4-DIMETHYL PHENOL------	10UJ	84-74-2	DI-N-BUTYLPHTHALATE------	10UJ
-85-0	BENZOIC ACID----------	50UJ	206-44-0	FLUORANTHENE----------	10U
11-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10UJ
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10UJ
20-82-1	1,2.4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
-20-3	NAPTHALENE----------	10UJ	91-94-1	3,3'-DICHLOROBENZIDINE---	20UJ
106-47-8	4-CHLOROANILINE----------	10UJ	56-55-3	BENZO(A)ANTHRACENE-------	10UJ
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	85J
-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10UJ
91-57-6	2-METHYLNAPTHALENE-------	10UJ	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10UJ	205-99-2	BENZO(B)FLUORANTHENE-----	10U
8-06-2	2,4,6-TRICHLOROPHENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50UJ	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10UJ	193-39-5	INDENO(123-CD)PYRENE-----	10U
8-74-4	2-NITROANILINE----------	50UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	10U
31-11-3	DIMETHYL PHTHALATE-------	10UJ	191-24-2	BENZO(GHI)PERYLENE-------	10UJ
208-96-8	ACENAPHTHYLENE----------	10UJ			
99-09-2	3-NITROANILINE----------	50UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED603

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/10/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/L
319-84-6	ALPHA-BHC	.05U
319-85-7	BETA-BHC	.05U
319-86-8	DELTA-BHC	.05U
58-89-9	GAMMA-BHC(LINDANE)	.05U
76-44-8	HEPTACHLOR	.05U
309-00-2	ALDRIN	.05U
1024-57-3	HEPTACHLOR EPOXIDE	.05U
959-98-8	ENDOSULFAN I	.05U
60-57-1	DIELDRIN	.1U
72-55-9	4,4'-DDE	.1U
72-20-8	ENDRIN	.1U
33213-65-9	ENDOSULFAN II	.1U
72-54-8	4,4'-DDD	.1U
7421-93-4	ENDRIN ALDEHYDE	.1U
1031-07-8	ENDOSULFAN SULFATE	.1U
50-29-3	4,4'-DDT	.1U
72-43-5	METHOXYCHLOR	.5U
53494-70-5	ENDRIN KETONE	.1U
57-74-9	CHLORDANE	.5U
8001-35-2	TOXAPHENE	1U
12674-11-2	AROCHLOR-1016	.5U
11104-28-2	AROCHLOR-1221	.5U
11141-16-5	AROCHLOR-1232	.5U
53469-21-9	AROCHLOR-1242	.5U
12672-29-6	AROCHLOR-1248	.5U
11097-69-1	AROCHLOR-1254	1U
11096-82-5	AROCHLOR-1260	1U

JI=VOLUME OF EXTRACT INJECTED------	5UL
VS=VOLUME OF WATER EXTRACTED-------	1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------	G
JT=VOLUME OF TOTAL EXTRACT---------	10000UL

RECEIVED AUG 19 1985

Laboratory Name [illegible]

Case No #323

Sample Number ED 603

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	UNKNOWN	V	60	30
2.	ALKANE		87	60
3.	UNKNOWN		240	10
4.				
5.	Bis(2-Ethylhexyl)phthalate	B	373	200
6.	UNKNOWN		394	20
7.	"		445	80
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

RECEIVED AUG 19 1985

RECEIVED JUL 11 1985

U.S. EPA Contract Laboratory Program
Sample Management Office
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Sample No.
MB0131

Date 10 JUNE 85

INORGANIC ANALYSIS DATA SHEET W-6 (BLANK)

LAB NAME ARCHY MOUNTAIN & ANALYTICAL CASE NO. 4323
SDG NO. _____
LAB SAMPLE ID. NO. _____ EC REPORT NO. 9874

Blank Identification and Blank Type

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L

1.	ALUMINUM	[21]	P	13.	MANGANESE	200U	P
2.	ANTIMONY	24U	P	14.	MERCURY	2U	P
3.	ARSENIC	1u	F	15.	MOLYBDENUM	0.1/0u	CV
4.	BARIUM	12U	P	16.	NICKEL	5U	P
5.	BERYLLIUM	0.5U	P	17.	POTASSIUM	170U	P
6.	CADMIUM	3U	P	18.	SELENIUM	2u	F R
7.	CALCIUM	[770]	P	19.	SILVER	4U	P
8.	CHROMIUM	7U	P	20.	SODIUM	[3960]	P
9.	COBALT	7U	P	21.	THALLIUM	1u	F R
10.	COPPER	4U	P	22.	TIN	36U	P
11.	IRON	[32]	P	23.	VANADIUM	4U	P
12.	LEAD	5u	F R	24.	ZINC	22	P

Cyanide 25 Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager [signature]

W-6 (Process Waste Water)

85F407515

SAMPLE NUMBER EK032

1

ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK032
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/23/85
DATE ANALYZED----------5/23/85
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE----------	10U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
74-83-9	BROMOMETHANE----------	10U	78-87-5	1,2-DICHLOROPROPANE------	5U
75-01-4	VINYL CHLORIDE----------	10U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5U
75-00-3	CHLOROETHANE----------	10U	79-01-6	TRICHLOROETHENE----------	27.4 X
75-09-2	METHYLENE CHLORIDE-------	2300B	124-48-1	DIBROMOCHLOROMETHANE-----	5U
67-64-1	ACETONE----------	7540BJ	79-00-5	1,1,2-TRICHLOROETHANE----	5U
75-15-0	CARBON DISULFIDE---------	66.8	71-43-2	BENZENE----------	1220 X
75-35-4	1,1-DICHLOROETHENE-------	5U	10061-05-5	CIS-1,3-DICHLOROPROPENE--	5U
75-34-3	1,1-DICHLOROETHANE-------	5U	110-75-8	2-CHLOROETHYLVINYLETHER--	10U
156-60-5	TRANS-1,2-DICHLOROETHENE-	5U	75-25-2	BROMOFORM----------	5U
67-66-3	CHLOROFORM----------	5U	591-78-6	2-HEXANONE----------	10U
107-06-2	1,2-DICHLOROETHANE-------	5U	108-10-1	4-METHYL-2-PENTANONE-----	459 J
78-93-3	2-BUTANONE----------	10UJ	127-18-4	TETRACHLOROETHENE--------	8.2 X
71-55-6	1,1,1-TRICHLOROETHANE----	444 X	108-88-3	TOLUENE----------	5210 X
56-23-5	CARBON TETRACHLORIDE-----	5UJ	108-90-7	CHLOROBENZENE----------	5U
108-05-4	VINYL ACETATE----------	10U	100-41-4	ETHYLBENZENE----------	119 X
75-27-4	BROMODICHLOROMETHANE-----	5U	100-42-5	STYRENE----------	136000 X
				TOTAL XYLENES----------	250 X

BSC 7-29-85

DATA REPORT QUALIFIERS

VALUE — IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U — COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J — Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C — PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY BSC 7-29-85

B — ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

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Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
[illegible]

1 ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/9,5/17/85
DATE ANALYZED----------5/24/85
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYLAMINE---	10UJ	83-32-9	ACENAPTHENE----------	10U
108-95-2	PHENOL----------	670 X	51-28-5	2,4-DINITROPHENOL--------	50UJ
62-53-3	ANILINE----------	10U	100-02-7	4-NITROPHENOL----------	50UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10UJ
95-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10UJ
541-73-1	1,3-DICHLOROBENZENE------	10UJ	606-20-2	2,6-DINITROTOLUENE-------	10UJ
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10UJ
100-51-6	BENZYL ALCOHOL----------	46.2 X	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10UJ
95-50-1	1,2-DICHLOROBENZENE------	10UJ	86-73-7	FLUORENE----------	9.5J
95-48-7	2-METHYL PHENOL----------	206 X	100-01-6	4-NITROANILINE----------	50UJ
39638-32-9	BIS(2CHLOROISOPROPYLETHER	10UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	50UJ
106-44-5	4-METHYL PHENOL----------	396 X	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10UJ
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10UJ
98-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U	85-01-8	PHENANTHRENE----------	25 J
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10UJ
105-67-9	2,4-DIMETHYL PHENOL------	10UJ	84-74-2	DI-N-BUTYLPHTHALATE------	10UJ
65-85-0	BENZOIC ACID----------	50UJ	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10UJ
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	7.4J
120-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
91-20-3	NAPTHALENE----------	127 J X	91-94-1	3,3'-DICHLOROBENZIDINE---	20U
106-47-8	4-CHLOROANILINE----------	10UJ	56-55-3	BENZO(A)ANTHRACENE-------	10UJ
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	10U
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10UJ
91-57-6	2-METHYLNAPTHALENE-------	103 J X	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10UJ	205-99-2	BENZO(B)FLUORANTHENE-----	10UJ
88-06-2	2,4,6-TRICHLOROPHENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50UJ	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10UJ	193-39-5	INDENO(123-CD)PYRENE-----	10U
88-74-4	2-NITROANILINE----------	50UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	10UJ
131-11-3	DIMETHYL PHTHALATE-------	10UJ	191-24-2	BENZO(GHI)PERYLENE-------	10UJ
208-96-8	ACENAPHTHYLENE----------	10UJ			
99-09-2	3-NITROANILINE----------	50UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC
7-29-85

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Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED602

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/10/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/L
319-84-6	ALPHA-BHC----------	.05U
19-85-7	BETA-BHC----------	.05U
19-86-8	DELTA-BHC----------	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
6-44-8	HEPTACHLOR----------	.05U
09-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
0-57-1	DIELDRIN----------	.1U
72-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
3213-65-9	ENDOSULFAN II----------	.1U
2-54-8	4,4'-DDD----------	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
031-07-8	ENDOSULFAN SULFATE-------	.1U
0-29-3	4,4'-DDT----------	.1U
72-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
7-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
1104-28-2	AROCHLOR-1221----------	.5U
11141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
12672-29-6	AROCHLOR-1248----------	.5U
11097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

I=VOLUME OF EXTRACT INJECTED------	5UL
VS=VOLUME OF WATER EXTRACTED-------	1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------	G
T=VOLUME OF TOTAL EXTRACT---------	10000UL

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates

Case No: #323

Sample Number: ED602

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	None	V		
2.				
3.	UNKNOWN	B	511	900
4.	"		521	1000
5.	Alkyl Benzene		554	700
6.	UNKNOWN		614	800
7.	"		651	900
8.	Alkane		737	1000
9.	"		817	500
10.	"		892	800
11.	"		1027	600
12.				
13.				
14.				
15.				
16.				
17.				
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28.				
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30.				

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Page 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

Lab Sample No. 401103

Date 12 JUNE 95

INORGANIC ANALYSIS DATA SHEET W-5 (WASTE WATER FROM CLEANING PROCESS)

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO. 4323
SDW NO. 724
LAB SAMPLE ID. NO. - SDG REPORT NO. 5874

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L

1.	ALUMINUM	1150U	P	13.	MAGNESIUM	[33330]	P
2.	ANTIMONY	2300U	P	14.	MANGANESE	[3121]	P
3.	ARSENIC	E	F	15.	MERCURY	1.0u	CV
4.	BARIUM	600U	P	16.	NICKEL	250U	P
5.	BERYLLIUM	25U	P	17.	POTASSIUM	1490000	P
6.	CADMIUM	250U	P	18.	SELENIUM	E	F R
7.	CALCIUM	21800000	P	19.	SILVER	200U	P
8.	CHROMIUM	200U	P	20.	SODIUM	8710000	P
9.	COBALT	350U	P	21.	THALLIUM	E	F R
10.	COPPER	[1060] ✓	P	22.	TIN	1500U	P
11.	IRON	54700	P	23.	VANADIUM	500U	P
12.	LEAD	E	F R	24.	ZINC	[2571]	P

Cyanide NR Percent Solids (%) ____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and included on Cover Page, however.

Comments: DIL DILUTION ANALYSED FOR CONFIRMING TO HIGH CALCIUM CONCENTRATION. SCd

Lab Manager [signature]

W-1 (ON-SITE PRODUCTION WELL)

85FH07512 SAMPLE NUMBER ECORE

1 ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EN028
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/17/85
DATE ANALYZED----------5/17/85
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------
% MOISTURE (DECANTED)----

CAS NO.		UG/L		CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE----------	10U		79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
7 -83-9	BROMOMETHANE----------	10U		78-87-5	1,2-DICHLOROPROPANE------	5U
75-01-4	VINYL CHLORIDE----------	33.9	X	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5U
75-00-3	CHLOROETHANE----------	10U		79-01-6	TRICHLOROETHENE----------	5U
7 -09-2	METHYLENE CHLORIDE-------	3BJ		124-48-1	DIBROMOCHLOROMETHANE-----	5U
6-64-1	ACETONE----------	11.5 J		79-00-5	1,1,2-TRICHLOROETHANE----	5U
75-15-0	CARBON DISULFIDE---------	94.7 B		71-43-2	BENZENE----------	2.5J X
7 -35-4	1,1-DICHLOROETHENE-------	5U		10061-05-5	CIS-1,3-DICHLOROPROPENE--	5U
7 -34-3	1,1-DICHLOROETHANE-------	5U		110-75-8	2-CHLOROETHYLVINYLETHER--	10U
156-60-5	TRANS-1,2-DICHLOROETHENE-	15.4	X	75-25-2	BROMOFORM----------	5U
67-66-3	CHLOROFORM----------	5U		591-78-6	2-HEXANONE----------	10U
1 7-06-2	1,2-DICHLOROETHANE-------	5U		108-10-1	4-METHYL-2-PENTANONE-----	10U
78-93-3	2-BUTANONE----------	10U		127-18-4	TETRACHLOROETHENE--------	5U
71-55-6	1,1,1-TRICHLOROETHANE----	5U		108-88-3	TOLUENE----------	5U
5 -23-5	CARBON TETRACHLORIDE-----	5U		108-90-7	CHLOROBENZENE----------	5U
13-05-4	VINYL ACETATE----------	10U		100-41-4	ETHYLBENZENE----------	5U
75-27-4	BROMODICHLOROMETHANE-----	5U		100-42-5	STYRENE----------	5U
					TOTAL XYLENES----------	5U

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

Laboratory Name: FEI Associates, Inc.
Case No.: 4322

SAMPLE NUMBER
==========

Reextract

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/9/85 reported here
DATE ANALYZED----------5/24/85
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYLAMINE---	10U J	83-32-9	ACENAPTHENE----------	10U
08-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50U J
62-53-3	ANILINE----------	10U	100-02-7	4-NITROPHENOL----------	50U J
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10U J
5-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10U J
541-73-1	1,3-DICHLOROBENZENE------	10U J	606-20-2	2,6-DINITROTOLUENE-------	10U J
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10U J
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10U J
5-50-1	1,2-DICHLOROBENZENE------	10U J	86-73-7	FLUORENE----------	10U J
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50U J
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10U J	534-52-1	4,6DINITRO2METHYLPHENOL--	50U J
06-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10U J
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10U J
8-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U	85-01-8	PHENANTHRENE----------	10U J
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10U J
105-67-9	2,4-DIMETHYL PHENOL------	10U J	84-74-2	DI-N-BUTYLPHTHALATE------	10U J
5-85-0	BENZOIC ACID----------	50U J	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10U J
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10U J
20-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
91-20-3	NAPTHALENE----------	10U J	91-94-1	3,3'-DICHLOROBENZIDINE---	20U
106-47-8	4-CHLOROANILINE----------	10U J	56-55-3	BENZO(A)ANTHRACENE-------	10U J
7-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	10U
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10U J
91-57-6	2-METHYLNAPTHALENE-------	10U J	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10U J	205-99-2	BENZO(B)FLUORANTHENE-----	10U J
8-06-2	2,4,6-TRICHLOROPHENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50U J	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10U J	193-39-5	INDENO(123-CD)PYRENE----	10U
8-74-4	2-NITROANILINE----------	50U J	53-70-3	DIBENZ(A,H)ANTHRACENE----	10U J
131-11-3	DIMETHYL PHTHALATE-------	10U J	191-24-2	BENZO(GHI)PERYLENE-------	10U J
208-96-8	ACENAPHTHYLENE----------	10U J			
8-09-2	3-NITROANILINE----------	50U J			

PJC 7-29-85

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED098

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/10/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/L
319-84-6	ALPHA-BHC----------	.05U
19-85-7	BETA-BHC----------	.05U
19-86-8	DELTA-BHC----------	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
6-44-8	HEPTACHLOR----------	.05U
09-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
0-57-1	DIELDRIN----------	.1U
2-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
3213-65-9	ENDOSULFAN II----------	.1U
2-54-8	4,4'-DDD----------	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
031-07-8	ENDOSULFAN SULFATE-------	.1U
0-29-3	4,4'-DDT----------	.1U
2-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
7-74-9	CHLORDANE----------	.5U
001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
1104-28-2	AROCHLOR-1221----------	.5U
1141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
2672-29-6	AROCHLOR-1248----------	.5U
1097-69-1	AROCHLOR-1254----------	1U
1096-82-5	AROCHLOR-1260----------	1U

I=VOLUME OF EXTRACT INJECTED------ 5UL
S=VOLUME OF WATER EXTRACTED------- 1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------ G
T=VOLUME OF TOTAL EXTRACT--------- 10000UL

RECEIVED

Laboratory Name _____

Case No. 4323

Sample Number ED098F

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED AUG 05 1985

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	None	V		
2.				
3.	Alkyl Cyclohex Prod	B	360	100
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Form I

357 #C17312

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

CLP Sample No.
MED:19

Date 12 JUNE 85

INORGANIC ANALYSIS DATA SHEET W-1 (ON-SITE PRODUCTION WELL)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 4323
QC REPORT NO. E974

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L

1.	ALUMINUM	23U	P	13.	MAGNESIUM	136000	P
2.	ANTIMONY	46U	P	14.	MANGANESE	32	P
3.	ARSENIC	4U	F	15.	MERCURY	0.10U	CV
4.	BARIUM	[16]	P	16.	NICKEL	5U	P
5.	BERYLLIUM	0.5U	P	17.	POTASSIUM	5540	P
6.	CADMIUM	5U	P	18.	SELENIUM	5U	F R
7.	CALCIUM	290000	P	19.	SILVER	4U	P
8.	CHROMIUM	4U	P	20.	SODIUM	38900	P
9.	COBALT	7U	P	21.	THALLIUM	10U	F R
10.	COPPER	[8.1]	P	22.	TIN	36U	P
11.	IRON	2590	P	23.	VANDIUM	4U	P
12.	LEAD	5U	F R	24.	ZINC	51	P

Cyanide NR Percent Solids (%)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager

W-2 (ON-SITE PRODUCTION WELL DUP.)

FS

SAMPLE NUMBER EDC99

85FH07212

1

ORGANICS ANALYSIS DATA SHEET

PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK029
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/17/85
DATE ANALYZED----------5/17/85
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE----------	7.3J X	79-34-5	1,1,2,2-TETRACHLOROETHANE	9.5 X
1-83-9	BROMOMETHANE----------	7.5J X	78-87-5	1,2-DICHLOROPROPANE------	6.9 X
-01-4	VINYL CHLORIDE----------	31.4 X	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.7 X
75-00-3	CHLOROETHANE----------	8.2J X	79-01-6	TRICHLOROETHENE----------	7.7 X
-09-2	METHYLENE CHLORIDE-------	14.7B	124-48-1	DIBROMOCHLOROMETHANE-----	5.9 X
-64-1	ACETONE----------	15.5J B	79-00-5	1,1,2-TRICHLOROETHANE----	7.2 X
75-15-0	CARBON DISULFIDE---------	88.5 B	71-43-2	BENZENE----------	9.9 X
75-35-4	1,1-DICHLOROETHENE-------	7.4 X	10061-05-5	CIS-1,3-DICHLOROPROPENE--	5.7 X
-34-3	1,1-DICHLOROETHANE-------	9.2 X	110-75-8	2-CHLOROETHYLVINYLETHER--	10UJ B
156-60-5	TRANS-1,2-DICHLOROETHENE-	18.9 X	75-25-2	BROMOFORM----------	5.5 X
67-66-3	CHLOROFORM----------	7.5 X	591-78-6	2-HEXANONE----------	8.1J B
-06-2	1,2-DICHLOROETHANE-------	7 X	108-10-1	4-METHYL-2-PENTANONE-----	10.5 X
-93-3	2-BUTANONE----------	5.7J X	127-18-4	TETRACHLOROETHENE--------	9.4 X
71-55-6	1,1,1-TRICHLOROETHANE----	7.5 X	108-88-3	TOLUENE----------	8.1 X
-23-5	CARBON TETRACHLORIDE-----	7.3 X	108-90-7	CHLOROBENZENE----------	8.1 X
8-05-4	VINYL ACETATE----------	10U	100-41-4	ETHYLBENZENE----------	7.7 X
75-27-4	BROMODICHLOROMETHANE-----	6.6 X	100-42-5	STYRENE----------	7.7 X
				TOTAL XYLENES----------	8 X

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
E0399
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1

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/9/85
DATE ANALYZED----------5/16/85
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYLAMINE---	10UJ	83-32-9	ACENAPTHENE----------	10U
08-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50UJ
2-53-3	ANILINE----------	10UJ	100-02-7	4-NITROPHENOL----------	50UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10UJ
5-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10UJ
41-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10UJ
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10UJ
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10UJ
5-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLOORENE----------	10UJ
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50UJ
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	50UJ
06-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
21-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10UJ
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10UJ
8-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
8-59-1	ISOPHORONE----------	10UJ	85-01-8	PHENANTHRENE----------	10UJ
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10UJ
105-67-9	2,4-DIMETHYL PHENOL------	10UJ	84-74-2	DI-N-BUTYLPHTHALATE------	10UJ
5-85-0	BENZOIC ACID----------	50UJ	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10UJ
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10UJ
20-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
1-20-3	NAPTHALENE----------	10UJ	91-94-1	3,3'-DICHLOROBENZIDINE---	20UJ
106-47-8	4-CHLOROANILINE----------	10UJ	56-55-3	BENZO(A)ANTHRACENE-------	10UJ
7-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	8.1 J
9-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10UJ
91-57-6	2-METHYLNAPTHALENE-------	10UJ	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10UJ	205-99-2	BENZO(B)FLUORANTHENE-----	10U
8-06-2	2,4,6-TRICHLOROPHENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50UJ	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10UJ	193-39-5	INDENO(123-CD)PYRENE-----	10U
8-74-4	2-NITROANILINE----------	50UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	10U
31-11-3	DIMETHYL PHTHALATE-------	10UJ	191-24-2	BENZO(GHI)PERYLENE-------	10UJ
208-96-8	ACENAPHTHYLENE----------	10UJ			
9-09-2	3-NITROANILINE----------	50UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED099

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/10/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/L
319-84-6	ALPHA-BHC----------	.05U
19-85-7	BETA-BHC----------	.05U
19-86-8	DELTA-BHC----------	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
6-44-8	HEPTACHLOR----------	.05U
09-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
59-98-8	ENDOSULFAN I----------	.05U
0-57-1	DIELDRIN----------	.1U
2-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
3213-65-9	ENDOSULFAN II----------	.1U
2-54-8	4,4'-DDD----------	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
031-07-8	ENDOSULFAN SULFATE-------	.1U
0-29-3	4,4'-DDT----------	.1U
72-43-5	METHOXYCHLOR----------	.5U
3494-70-5	ENDRIN KETONE----------	.1U
7-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
1104-28-2	AROCHLOR-1221----------	.5U
141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
2672-29-6	AROCHLOR-1248----------	.5U
1097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

=VOLUME OF EXTRACT INJECTED------	5UL
S=VOLUME OF WATER EXTRACTED-------	1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------	G
=VOLUME OF TOTAL EXTRACT---------	10000UL

RECEIVED JUL 19 1985

Laboratory Name: [illegible] Associates

Case No: 4323

Sample Number: ED099

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	None	✓		
2.				
3.	Aldol Condens Prod	5	374	200
4.			960	10
5.	Alkyl Benzene.		534	10
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Form 1, Part P

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Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

85FH07212
EPA Sample No.
MED130

Date 12 JUNE 85

INORGANIC ANALYSIS DATA SHEET W-2 (Dup of W-1)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SDG NO. 734
LAB SAMPLE ID. NO. -

CASE NO. 4323
CC REPORT NO. 1574

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L

1.	ALUMINUM	23U	P	13.	MAGNESIUM	133000	P
2.	ANTIMONY	46U	P	14.	MANGANESE	32	P
3.	ARSENIC	4U	F	15.	MERCURY	0.10U	CV
4.	BARIUM	[17]	P	16.	NICKEL	5U	P
5.	BERYLLIUM	0.5U	P	17.	POTASSIUM	5340	P
6.	CADMIUM	5U	P	18.	SELENIUM	5U	F R
7.	CALCIUM	282000	P	19.	SILVER	4U	P
8.	CHROMIUM	4U	P	20.	SODIUM	38300	P
9.	COBALT	7U	P	21.	THALLIUM	10U	F R
10.	COPPER	[9.3]	P	22.	TIN	36U	P
11.	IRON	2470	P	23.	VANADIUM	4U	P
12.	LEAD	5U	F R	24.	ZINC	37	P

Cyanide NR Percent Solids 1%

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager Obrett

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ecology and environment

W-3 (GROUND WATER-SUMP EAST)

SAMPLE NUMBER EB100

1 ORGANICS ANALYSIS DATA SHEET 85FH07513

PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO----------EK030
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
GC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/17/85
DATE ANALYZED----------5/17/85
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------
% MOISTURE (DECANTED)----

CAS NO.		UG/L		CAS NUMBER		UG/L	
74-87-3	CHLOROMETHANE----------	10U		79-34-5	1,1,2,2-TETRACHLOROETHANE	5U	
4-83-9	BROMOMETHANE----------	10	X	78-87-5	1,2-DICHLOROPROPANE------	5U	
5-01-4	VINYL CHLORIDE----------	5.2J	X	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5U	
75-00-3	CHLOROETHANE----------	45.7	X	79-01-6	TRICHLOROETHENE----------	2.7J	X
5-09-2	METHYLENE CHLORIDE-------	6.6B		124-48-1	DIBROMOCHLOROMETHANE-----	5U	
7-64-1	ACETONE----------	10.1J		79-00-5	1,1,2-TRICHLOROETHANE----	5U	
75-15-0	CARBON DISULFIDE---------	54.7		71-43-2	BENZENE----------	49.1	X
75-35-4	1,1-DICHLOROETHENE-------	5.6J	X	10061-05-5	CIS-1,3-DICHLOROPROPENE--	5U	
5-34-3	1,1-DICHLOROETHANE-------	460	X	110-75-8	2-CHLOROETHYLVINYLETHER--	10UJ	
156-60-5	TRANS-1,2-DICHLOROETHENE-	189	X	75-25-2	BROMOFORM----------	5U	
67-66-3	CHLOROFORM----------	5U		591-78-6	2-HEXANONE----------	10U	
07-06-2	1,2-DICHLOROETHANE-------	5U		108-10-1	4-METHYL-2-PENTANONE-----	10U	
6-93-3	2-BUTANONE----------	10U		127-16-4	TETRACHLOROETHENE--------	2.8	X
71-55-6	1,1,1-TRICHLOROETHANE----	1090	X	108-88-3	TOLUENE----------	59.8	X
6-23-5	CARBON TETRACHLORIDE-----	5U		108-90-7	CHLOROBENZENE----------	5U	
08-05-4	VINYL ACETATE----------	10U		100-41-4	ETHYLBENZENE----------	78.1	X
75-27-4	BROMODICHLOROMETHANE-----	5U		100-42-5	STYRENE----------	5U	
					TOTAL XYLENES----------	780	X

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

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Laboratory Name: FEI Associates, Inc.
Case No.. 4333

SAMPLE NUMBER
ED100

1

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/9/85
DATE ANALYZED----------5/16/85
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYLAMINE---	10UJ	83-32-9	ACENAPTHENE----------	10U
08-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50UJ
2-53-3	ANILINE----------	10UJ	100-02-7	4-NITROPHENOL----------	50UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10UJ
5-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10UJ
41-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10UJ
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10UJ
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10UJ
5-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10UJ
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50UJ
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	50UJ
06-44-5	4-METHYL PHENOL----------	3J X	86-30-6	N-NITROSODIPHENYLAMINE (1)	10U
21-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10UJ
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10UJ
8-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
8-59-1	ISOPHORONE----------	10UJ	85-01-8	PHENANTHRENE----------	10UJ
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10UJ
105-67-9	2,4-DIMETHYL PHENOL------	10UJ	84-74-2	DI-N-BUTYLPHTHALATE------	10UJ
5-85-0	BENZOIC ACID----------	50UJ	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10UJ
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10UJ
20-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
1-20-3	NAPTHALENE----------	2.4J X	91-94-1	3,3'-DICHLOROBENZIDINE---	20UJ
106-47-8	4-CHLOROANILINE----------	10UJ	56-55-3	BENZO(A)ANTHRACENE-------	10UJ
7-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	10U
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10UJ
91-57-6	2-METHYLNAPTHALENE-------	10UJ	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10UJ	205-99-2	BENZO(B)FLUORANTHENE-----	10U
8-06-2	2,4,6-TRICHLOROPHENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50UJ	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10UJ	193-39-5	INDENO(123-CD)PYRENE-----	10U
8-74-4	2-NITROANILINE----------	50UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	10U
31-11-3	DIMETHYL PHTHALATE-------	10UJ	191-24-2	BENZO(GHI)PERYLENE-------	10UJ
208-96-8	ACENAPHTHYLENE----------	10UJ			
9-09-2	3-NITROANILINE----------	50UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED100

1 ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/10/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/L
319-84-6	ALPHA-BHC----------	.05U
19-85-7	BETA-BHC----------	.05U
19-86-8	DELTA-BHC----------	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
6-44-8	HEPTACHLOR----------	.05U
09-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
59-98-8	ENDOSULFAN I----------	.05U
0-57-1	DIELDRIN----------	.1U
2-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
3213-65-9	ENDOSULFAN II----------	.1U
2-54-8	4,4'-DDD----------	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
031-07-8	ENDOSULFAN SULFATE-------	.1U
0-29-3	4,4'-DDT----------	.1U
72-43-5	METHOXYCHLOR----------	.5U
3494-70-5	ENDRIN KETONE----------	.1U
7-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
1104-28-2	AROCHLOR-1221----------	.5U
1141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
2672-29-6	AROCHLOR-1248----------	.5U
1097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

I=VOLUME OF EXTRACT INJECTED------ 5UL
VS=VOLUME OF WATER EXTRACTED------- 1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------ G
T=VOLUME OF TOTAL EXTRACT--------- 10000UL

recycled paper

RECEIVED AUG 19 1985

Laboratory Name [illegible]

Case No. 4323

Sample Number ED100

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	None	V		
2.				
3.	Aldol Condens Prod	B	373	100
4.	Unknown		791	20
5.	"		1241	20
6.				
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Form I

RECEIVED JUL 11 1985

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MED:21

Date 12 JUNE 85

INORGANIC ANALYSIS DATA SHEET W-3 (Sump East)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SDN NO. 751
LAB SAMPLE ID. NO. -

CASE NO. 4323
CC REPORT NO. 5974

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L

1.	ALUMINUM	[35]	P	13.	MAGNESIUM	52300	P
2.	ANTIMONY	46U	P	14.	MANGANESE	439	P
3.	ARSENIC	10w	F	15.	MERCURY	0.10w	CV
4.	BARIUM	[47]	P	16.	NICKEL	[14]	P
5.	BERYLLIUM	0.5U	P	17.	POTASSIUM	[3330]	P
6.	CADMIUM	5U	P	18.	SELENIUM	20w	F R
7.	CALCIUM	186000	P	19.	SILVER	4U	P
8.	CHROMIUM	4U	P	20.	SODIUM	146000	P
9.	COBALT	7U	P	21.	THALLIUM	10w	F R
10.	COPPER	[6]	P	22.	TIN	36U	P
11.	IRON	16700	P	23.	VANADIUM	4U	P
12.	LEAD	5w	F R	24.	ZINC	4530 ✓	P

Cyanide NR Percent Solids (%)

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager [signature]

W-4 (GROUND WATER-SUMP WEST) 85FH07514

SAMPLE NUMBER
EB601
========

ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK031
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/23/85
DATE ANALYZED----------5/23/85
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------
% MOISTURE (DECANTED)----

CAS NO.		UG/L		CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE----------	10U		79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
74-83-9	BROMOMETHANE----------	10	X	78-87-5	1,2-DICHLOROPROPANE------	5U
75-01-4	VINYL CHLORIDE----------	296	X	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5U
75-00-3	CHLOROETHANE----------	271	X	79-01-6	TRICHLOROETHENE----------	5U
75-09-2	METHYLENE CHLORIDE-------	85.3B		124-48-1	DIBROMOCHLOROMETHANE-----	5U
67-64-1	ACETONE----------	54.4BJ		79-00-5	1,1,2-TRICHLOROETHANE----	5U
75-15-0	CARBON DISULFIDE---------	81.5 B		71-43-2	BENZENE----------	1470 X
75-35-4	1,1-DICHLOROETHENE-------	4.1J	X	10061-05-5	CIS-1,3-DICHLOROPROPENE--	5U
75-34-3	1,1-DICHLOROETHANE-------	1360	X	110-75-8	2-CHLOROETHYLVINYLETHER--	10UJ
156-60-5	TRANS-1,2-DICHLOROETHENE-	1080	X	75-25-2	BROMOFORM----------	5U
67-66-3	CHLOROFORM----------	5U		591-78-6	2-HEXANONE----------	10UJ
107-06-2	1,2-DICHLOROETHANE-------	40.2	X	108-10-1	4-METHYL-2-PENTANONE-----	10UJ
78-93-3	2-BUTANONE----------	10UJ	X	127-18-4	TETRACHLOROETHENE--------	5U
71-55-6	1,1,1-TRICHLOROETHANE----	480	X	108-88-3	TOLUENE----------	1770 X
56-23-5	CARBON TETRACHLORIDE-----	5UJ		108-90-7	CHLOROBENZENE----------	5U
108-05-4	VINYL ACETATE----------	10U		100-41-4	ETHYLBENZENE----------	1.9J X
75-27-4	BROMODICHLOROMETHANE-----	5U		100-42-5	STYRENE----------	5U
					TOTAL XYLENES----------	770 X

PJC 7-29-85

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RC 7-29-

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4322

SAMPLE NUMBER
E1401

1 ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/9/85
DATE ANALYZED----------5/16/85
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYLAMINE---	10U J	83-32-9	ACENAPTHENE----------	10U
108-95-2	PHENOL----------	14.1 X	51-28-5	2,4-DINITROPHENOL--------	50U J
62-53-3	ANILINE----------	10U J	100-02-7	4-NITROPHENOL----------	50U J
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10U J
95-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10U J
541-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10U J
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10U J
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10U J
95-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10U J
95-48-7	2-METHYL PHENOL----------	81 X	100-01-6	4-NITROANILINE----------	50U J
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10U J	534-52-1	4,6DINITRO2METHYLPHENOL--	50U J
106-44-5	4-METHYL PHENOL----------	59.8 X	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10U J
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10U J
98-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U J	85-01-8	PHENANTHRENE----------	6.6J
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10U J
105-67-9	2,4-DIMETHYL PHENOL------	11.2 J	84-74-2	DI-N-BUTYLPHTHALATE------	10U J
65-85-0	BENZOIC ACID----------	21J	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10U J
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10U J
120-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
91-20-3	NAPTHALENE----------	18.4 J	91-94-1	3,3'-DICHLOROBENZIDINE---	20U J
106-47-8	4-CHLOROANILINE----------	10U J	56-55-3	BENZO(A)ANTHRACENE-------	10U J
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	10U
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10U
91-57-6	2-METHYLNAPTHALENE-------	11 J	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10U J	205-99-2	BENZO(B)FLUORANTHENE-----	10U
88-06-2	2,4,6-TRICHLOROPHENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50U J	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10U J	193-39-5	INDENO(123-CD)PYRENE-----	10U
88-74-4	2-NITROANILINE----------	50U J	53-70-3	DIBENZ(A,H)ANTHRACENE----	10U
131-11-3	DIMETHYL PHTHALATE-------	10U J	191-24-2	BENZO(GHI)PERYLENE-------	10U J
208-96-8	ACENAPHTHYLENE----------	10U J			
99-09-2	3-NITROANILINE----------	50U J			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED601

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/10/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/L
319-84-6	ALPHA-BHC----------	.05U
319-85-7	BETA-BHC----------	.05U
319-86-8	DELTA-BHC----------	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
76-44-8	HEPTACHLOR----------	.05U
309-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
60-57-1	DIELDRIN----------	.1U
72-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
33213-65-9	ENDOSULFAN II----------	.1U
72-54-8	4,4'-DDD----------	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
1031-07-8	ENDOSULFAN SULFATE-------	.1U
50-29-3	4,4'-DDT----------	.1U
72-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
57-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
11104-28-2	AROCHLOR-1221----------	.5U
11141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
12672-29-6	AROCHLOR-1248----------	.5U
11097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

VI=VOLUME OF EXTRACT INJECTED------	5UL
VS=VOLUME OF WATER EXTRACTED-------	1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------	G
VT=VOLUME OF TOTAL EXTRACT---------	10000UL

RECEIVED AUG 19 1985

Laboratory Name PEI Associates

Case No. 4323

Sample Number ED601

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	UNKNOWN	V	591	50
2.				
3.	Aldehyde Cadmium Prod	B	378	100
4.	Pyridine Compd		400	2000
5.	Alkyl Benzene		525	50
6.	"		561	200
7.	Acid		798	200
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RECEIVED JUL 11 1985

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

85F40754
EPA Sample No.
MED102

Date 12 JUNE 85

INORGANIC ANALYSIS DATA SHEET W-4 (Sump West)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SDW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 4323
QC REPORT NO. 0374

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L

1.	ALUMINUM	[51]	P	13.	MAGNESIUM	35000	P
2.	ANTIMONY	46U	P	14.	MANGANESE	145	P
3.	ARSENIC	1w	F	15.	MERCURY	0.10w	CV
4.	BARIUM	[54]	P	16.	NICKEL	5U	P
5.	BERYLLIUM	0.5U	P	17.	POTASSIUM	3590	P
6.	CADMIUM	5U	P	18.	SELENIUM	20w	F R
7.	CALCIUM	120000	P	19.	SILVER	4U	P
8.	CHROMIUM	4U	P	20.	SODIUM	139000	P
9.	COBALT	7U	P	21.	THALLIUM	10w	F R
10.	COPPER	4U	P	22.	TIN	36U	P
11.	IRON	5493	P	23.	VANADIUM	4U	P
12.	LEAD	5w	F R	24.	ZINC	11700 ✓	P

Cyanide NR Percent Solids (%) ____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: ____

Lab Manager Abbott

SD-1 (Canal-East)

85FH07516

SAMPLE NUMBER
EC604

.72
3.53

ORGANICS ANALYSIS DATA SHEET

PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK034
SAMPLE MATRIX----------SOIL
DATA RELEASE AUTHORIZED:

CASE NO:----------4333
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/20/85
DATE ANALYZED----------5/20/85
CONC/DIL FACTOR---------- .24
PH---------- 6.00
PERCENT MOISTURE--------- 71.70
% MOISTURE (DECANTED)----

CAS NO.		UG/KG	CAS NUMBER		UG/KG
74-87-3	CHLOROMETHANE----------	118.73 ✓	79-34-5	1,1,2,2-TETRACHLOROETHANE	17.67UJ
74-83-9	BROMOMETHANE----------	35.34UJ	78-87-5	1,2-DICHLOROPROPANE------	17.67U
75-01-4	VINYL CHLORIDE----------	35.34U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	17.67U
75-00-3	CHLOROETHANE----------	35.34UJ	79-01-6	TRICHLOROETHENE----------	17.67U
75-09-2	METHYLENE CHLORIDE----------	862.19BJ	124-48-1	DIBROMOCHLOROMETHANE-----	17.67UJ
67-64-1	ACETONE----------	590.11BJ	79-00-5	1,1,2-TRICHLOROETHANE----	17.67UJ
75-15-0	CARBON DISULFIDE---------	17.67UJ	71-43-2	BENZENE----------	33.57 ✓
75-35-4	1,1-DICHLOROETHENE-------	17.67U	10061-05-5	CIS-1,3-DICHLOROPROPENE--	17.67UJ
75-34-3	1,1-DICHLOROETHANE-------	17.67UJ	110-75-8	2-CHLOROETHYLVINYLETHER--	35.34UJ
156-60-5	TRANS-1,2-DICHLOROETHENE-	17.67UJ	75-25-2	BROMOFORM----------	17.67UJ
67-66-3	CHLOROFORM----------	17.67U	591-78-6	2-HEXANONE----------	35.34UJ
107-06-2	1,2-DICHLOROETHANE-------	17.67U	108-10-1	4-METHYL-2-PENTANONE-----	35.34UJ
78-93-3	2-BUTANONE----------	179.15 J	127-18-4	TETRACHLOROETHENE--------	17.67U
71-55-6	1,1,1-TRICHLOROETHANE----	17.67UJ	108-88-3	TOLUENE----------	172264.0 ✓
56-23-5	CARBON TETRACHLORIDE-----	17.67UJ	108-90-7	CHLOROBENZENE----------	17.67U
108-05-4	VINYL ACETATE----------	35.34U	100-41-4	ETHYLBENZENE----------	126.50 ✓
75-27-4	BROMODICHLOROMETHANE-----	17.67U	100-42-5	STYRENE----------	17.67U
		PJC 7-29-85		TOTAL XYLENES----------	146.06 ✓

DATA REPORT QUALIFIERS

VALUE — IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U — COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J — Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C — PRESENCE CONFIRMED BY GC/MS PJC 7-29-85 PESTICIDES ONLY

B — ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4313

SAMPLE NUMBER
SD604

.717
3.5335699

ORGANICS ANALYSIS DATA SHEET
PAGE 2

MULTIPLY ALL DETECTION LIMITS BY 3

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/13/85
DATE ANALYZED----------5/24/85
CONC/DIL FACTOR---------- 90

CAS NO.		UG/KG	CAS NO.		UG/KG
62-75-9	N-NITROSODIMETHYLAMINE---	1166.08UJ	83-32-9	ACENAPTHENE----------	1166.08U
08-95-2	PHENOL----------	1166.08U	51-28-5	2,4-DINITROPHENOL--------	5653.71UJ
2-53-3	ANILINE----------	1166.08U	100-02-7	4-NITROPHENOL----------	5653.71UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	1166.08U	132-64-9	DIBENZOFURAN----------	1166.08UJ
95-57-8	2-CHLOROPHENOL----------	1166.08U	121-14-2	2,4-DINITROTOLUENE-------	1166.08UJ
41-73-1	1,3-DICHLOROBENZENE------	1166.08UJ	606-20-2	2,6-DINITROTOLUENE-------	1166.08UJ
106-46-7	1,4-DICHLOROBENZENE------	1166.08U	84-66-2	DIETHYLPHTHALATE---------	1166.08UJ
100-51-6	BENZYL ALCOHOL----------	1166.08U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	1166.08UJ
5-50-1	1,2-DICHLOROBENZENE------	1166.08UJ	86-73-7	FLUORENE----------	1166.08UJ
95-48-7	2-METHYL PHENOL----------	1166.08U	100-01-6	4-NITROANILINE----------	5653.71UJ
36938-32-9	BIS(2CHLOROISOPROPYLETHER	1166.08UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	5653.71UJ
06-44-5	4-METHYL PHENOL----------	44169.61 ✓	86-30-6	N-NITROSODIPHENYLAMINE(1)	1166.08U
21-64-7	NNITROSODIPROPYL AMINE---	1166.08U	101-55-3	4BROMPHENYLPHENYLETHER---	1166.08UJ
67-72-1	HEXACHLOROETHANE---------	1166.08U	118-74-1	HEXACHLOROBENZENE--------	1166.08UJ
98-95-3	NITROBENZENE----------	1166.08U	87-86-5	PENTACHLOROPHENOL--------	5653.71U
8-59-1	ISOPHORONE----------	1166.08U	85-01-8	PHENANTHRENE----------	1081.27J
88-75-5	2-NITROPHENOL----------	1166.08U	120-12-7	ANTHRACENE----------	1166.08UJ
105-67-9	2,4-DIMETHYL PHENOL------	1166.08UJ	84-74-2	DI-N-BUTYLPHTHALATE------	1166.08UJ
5-85-0	BENZOIC ACID----------	1166.08UJ	206-44-0	FLUORANTHENE----------	2766.79J
111-91-1	BIS2CHLORETHOXY METHANE--	1166.08U	92-87-5	BENZIDINE----------	5653.71UJ
120-83-2	2,4-DICHLOROPHENOL-------	1166.08U	129-00-0	PYRENE----------	1166.08UJ
20-82-1	1,2,4-TRICHLOROBENZENE---	1166.08U	85-68-7	BUTYLBENZYLPHTHALATE-----	1166.08U
1-20-3	NAPTHALENE----------	1166.08UJ	91-94-1	3,3'-DICHLOROBENZIDINE---	1166.08U
106-47-8	4-CHLOROANILINE----------	1166.08UJ	56-55-3	BENZO(A)ANTHRACENE-------	1166.08UJ
87-68-3	HEXACHLOROBUTADIENE------	1166.08U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	11978.82 ✓
59-50-7	4-CHLORO-3-METHYL PHENOL-	1166.08U	218-01-9	CHRYSENE----------	731.45J
91-57-6	2-METHYLNAPTHALENE-------	1166.08UJ	117-84-0	DI-N-OCTYL PHTHALATE-----	13816.25 ✓
77-47-4	HEXACHLOROCYCLOPENTADIENE	1166.08UJ	205-99-2	BENZO(B)FLUORANTHENE-----	1166.08UJ
8-06-2	2,4,6-TRICHLOROPHENOL----	1166.08U	207-08-9	BENZO(K)FLUORANTHENE-----	1166.08U
95-95-4	2,4,5-TRICHLOROPHENOL----	5653.71UJ	50-32-8	BENZO(A)PYRENE----------	1166.08U
91-58-7	2-CHLORONAPTHALENE-------	1166.08UJ	193-39-5	INDENO(123-CD)PYRENE-----	1166.08U
88-74-4	2-NITROANILINE----------	5653.71UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	1166.08UJ
131-11-3	DIMETHYL PHTHALATE-------	1166.08UJ	191-24-2	BENZO(GHI)PERYLENE-------	1166.08UJ
208-96-8	ACENAPHTHYLENE----------	1166.08UJ			
99-09-2	3-NITROANILINE----------	5653.71UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED604

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/13/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

AS NO.		UG/KG
319-84-6	ALPHA-BHC----------	8U
719-85-7	BETA-BHC----------	8U
119-86-8	DELTA-BHC----------	8U
58-89-9	GAMMA-BHC(LINDANE)-------	8U
76-44-8	HEPTACHLOR----------	8U
309-00-2	ALDRIN----------	8U
1024-57-3	HEPTACHLOR EPOXIDE-------	8U
959-98-8	ENDOSULFAN I----------	8U
0-57-1	DIELDRIN----------	16U
2-55-9	4,4'-DDE----------	27.8
72-20-8	ENDRIN----------	16U
3213-65-9	ENDOSULFAN II----------	16U
2-54-8	4,4'-DDD----------	16U
7421-93-4	ENDRIN ALDEHYDE----------	16U
1031-07-8	ENDOSULFAN SULFATE-------	16U
0-29-3	4,4'-DDT----------	16U
2-43-5	METHOXYCHLOR----------	80U
53494-70-5	ENDRIN KETONE----------	16U
7-74-9	CHLORDANE----------	80U
001-35-2	TOXAPHENE----------	160U
12674-11-2	AROCHLOR-1016----------	80U
11104-28-2	AROCHLOR-1221----------	80U
1141-16-5	AROCHLOR-1232----------	80U
53469-21-9	AROCHLOR-1242----------	80U
12672-29-6	AROCHLOR-1248----------	80U
1097-69-1	AROCHLOR-1254----------	160U
11096-82-5	AROCHLOR-1260----------	160U

I	=VOLUME OF EXTRACT INJECTED------	5UL
S	=VOLUME OF WATER EXTRACTED-------	ML
WS	=WEIGHT OF SAMPLE EXTRACTED------	8.5G
T	=VOLUME OF TOTAL EXTRACT---------	1000UL

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Laboratory Name: [illegible]

Case No: 4323

Sample Number: ED 604

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	None	✓		
2.				
3.	Aldol Condens Prod-	B	361	15000
4.	Acid		444	30000
5.	"		466	20000
6.	Ester		527	20000
7.	Alkane		1070	7000
8.	Acid		1131	5000
9.	Alcohol		1283	9000
10.	UNKNOWN		1311	7000
11.	"		1517	20000
12.				
13.				
14.				
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Form I

85FH07516

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MED125

Date 6-11-85

INORGANIC ANALYSIS DATA SHEET SD-1 (CANAL-EAST)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 4323
QC REPORT NO. 5876

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	11200	P *	13.	MAGNESIUM	24800	P
2.	ANTIMONY	92U	P	14.	MANGANESE	371	P *
3.	ARSENIC	[13]	F	15.	MERCURY	0.8	CV
4.	BARIUM	[323]	P	16.	NICKEL	140	P
5.	BERYLLIUM	1U	P	17.	POTASSIUM	[3070]	P
6.	CADMIUM	61	P *	18.	SELENIUM	10U J	F R
7.	CALCIUM	51200	P *	19.	SILVER	26	P
8.	CHROMIUM	588 J	P *R	20.	SODIUM	[5750]	P
9.	COBALT	14U	P	21.	THALLIUM	8U	F
10.	COPPER	544	P	22.	TIN	72U	P
11.	IRON	24000	P *	23.	VANDIUM	[25]	P
12.	LEAD	462	P	24.	ZINC	1850 J	P *R

Cyanide NR

Percent Solids (%) 25

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

RECEIVED JUN 20 1985

Lab Manager JW

SD-2 (Canal - Bay #6)

85FA01017

SAMPLE NUMBER
ED605

.50
2.02

ORGANICS ANALYSIS DATA SHEET

PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK035
SAMPLE MATRIX----------SOIL
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/20/85
DATE ANALYZED----------5/20/85
CONC/DIL FACTOR---------- .31
PH---------- 6.00
PERCENT MOISTURE--------- 50.40
% MOISTURE (DECANTED)----

CAS NO.		UG/KG	CAS NUMBER		UG/KG
74-87-3	CHLOROMETHANE----------	20.16U	79-34-5	1,1,2,2-TETRACHLOROETHANE	10.08UJ
74-83-9	BROMOMETHANE----------	20.16UJ	78-87-5	1,2-DICHLOROPROPANE------	10.08U
75-01-4	VINYL CHLORIDE----------	20.16U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	10.08U
75-00-3	CHLOROETHANE----------	20.16UJ	79-01-6	TRICHLOROETHENE----------	10.08U
75-09-2	METHYLENE CHLORIDE-------	0.6 JB	124-48-1	DIBROMOCHLOROMETHANE-----	10.08UJ
67-64-1	ACETONE----------	20.16UJ	79-00-5	1,1,2-TRICHLOROETHANE----	10.08UJ
75-15-0	CARBON DISULFIDE---------	10.08UJ	71-43-2	BENZENE----------	10.08U
75-35-4	1,1-DICHLOROETHENE-------	10.08U	10061-05-5	CIS-1,3-DICHLOROPROPENE--	10.08UJ
75-34-3	1,1-DICHLOROETHANE-------	10.08UJ	110-75-8	2-CHLOROETHYLVINYLETHER--	20.16UJ
156-60-5	TRANS-1,2-DICHLOROETHENE-	10.08UJ	75-25-2	BROMOFORM----------	10.08UJ
67-66-3	CHLOROFORM----------	10.08U	591-78-6	2-HEXANONE----------	20.16UJ
107-06-2	1,2-DICHLOROETHANE-------	10.08U	108-10-1	4-METHYL-2-PENTANONE-----	20.16UJ
78-93-3	2-BUTANONE----------	20.16UJ	127-18-4	TETRACHLOROETHENE--------	10.08U
71-55-6	1,1,1-TRICHLOROETHANE----	10.08UJ	108-88-3	TOLUENE----------	1510.00
56-23-5	CARBON TETRACHLORIDE-----	10.08UJ	108-90-7	CHLOROBENZENE----------	10.08U
108-05-4	VINYL ACETATE----------	20.16U	100-41-4	ETHYLBENZENE----------	10.08U
75-27-4	BROMODICHLOROMETHANE-----	10.08U PJC 7-29-85	100-42-5	STYRENE----------	184.00
				TOTAL XYLENES----------	10.08U

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PJC 7-29-8 PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

.504
2[illegible]0161290

SAMPLE NUMBER
ED605

MULTIPLY ALL DETECTION LIMITS BY 2

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/13/85
DATE ANALYZED----------5/24/85
CONC/DIL FACTOR---------- 66.4

CAS NO.		UG/KG	CAS NO.		UG/KG
62-75-9	N-NITROSODIMETHYLAMINE---	665.32UJ	83-32-9	ACENAPTHENE----------	665.32U
1[illegible]-95-2	PHENOL----------	665.32U	51-28-5	2,4-DINITROPHENOL--------	3225.81UJ
6[illegible]53-3	ANILINE----------	665.32U	100-02-7	4-NITROPHENOL----------	3225.81UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	665.32U	132-64-9	DIBENZOFURAN----------	665.32UJ
9[illegible]-57-8	2-CHLOROPHENOL----------	665.32U	121-14-2	2,4-DINITROTOLUENE-------	665.32UJ
5[illegible]-73-1	1,3-DICHLOROBENZENE------	665.32UJ	606-20-2	2,6-DINITROTOLUENE-------	665.32UJ
106-46-7	1,4-DICHLOROBENZENE------	665.32U	84-66-2	DIETHYLPHTHALATE---------	665.32UJ
100-51-6	BENZYL ALCOHOL----------	665.32U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	665.32UJ
9[illegible]-50-1	1,2-DICHLOROBENZENE------	665.32UJ	86-73-7	FLUORENE----------	665.32UJ
95[illegible]-48-7	2-METHYL PHENOL----------	665.32U	100-01-6	4-NITROANILINE----------	3225.81UJ
36938-32-9	BIS(2CHLOROISOPROPYLETHER	665.32UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	3225.81UJ
1[illegible]5-44-5	4-METHYL PHENOL----------	695.00	86-30-6	N-NITROSODIPHENYLAMINE(1)	665.32U
6[illegible]-64-7	NNITROSODIPROPYL AMINE---	665.32U	101-55-3	4BROMPHENYLPHENYLETHER---	665.32UJ
67-72-1	HEXACHLOROETHANE---------	665.32U	118-74-1	HEXACHLOROBENZENE--------	665.32UJ
9[illegible]-95-3	NITROBENZENE----------	665.32U	87-86-5	PENTACHLOROPHENOL--------	3225.81U
7[illegible]-59-1	ISOPHORONE----------	665.32U	85-01-8	PHENANTHRENE----------	1170.00 J
88-75-5	2-NITROPHENOL----------	665.32U	120-12-7	ANTHRACENE----------	462.00J
105-67-9	2,4-DIMETHYL PHENOL------	665.32UJ	84-74-2	DI-N-BUTYLPHTHALATE------	1580.00 J
6[illegible]-85-0	BENZOIC ACID----------	665.32UJ	206-44-0	FLUORANTHENE----------	2840.00
1[illegible]1-91-1	BIS2CHLORETHOXY METHANE--	665.32U	92-87-5	BENZIDINE----------	3225.81UJ
120-83-2	2,4-DICHLOROPHENOL-------	665.32U	129-00-0	PYRENE----------	2880.00 J
1[illegible]0-82-1	1,2,4-TRICHLOROBENZENE---	665.32U	85-68-7	BUTYLBENZYLPHTHALATE-----	665.32U
9[illegible]-20-3	NAPTHALENE----------	665.32UJ	91-94-1	3,3'-DICHLOROBENZIDINE---	665.32U
106-47-8	4-CHLOROANILINE----------	665.32UJ	56-55-3	BENZO(A)ANTHRACENE-------	897.00 J
[illegible]-68-3	HEXACHLOROBUTADIENE------	665.32U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	5700.00
[illegible]-50-7	4-CHLORO-3-METHYL PHENOL-	665.32U	218-01-9	CHRYSENE----------	1010.00 J
91-57-6	2-METHYLNAPTHALENE-------	665.32UJ	117-84-0	DI-N-OCTYL PHTHALATE-----	665.32U
7[illegible]-47-4	HEXACHLOROCYCLOPENTADIENE	665.32UJ	205-99-2	BENZO(B)FLUORANTHENE-----	665.32UJ
[illegible]-06-2	2,4,6-TRICHLOROPNENOL----	665.32U	207-08-9	BENZO(K)FLUORANTHENE-----	665.32U
9[illegible]-95-4	2,4,5-TRICHLOROPHENOL----	3225.81UJ	50-32-8	BENZO(A)PYRENE----------	665.32U
91-58-7	2-CHLORONAPTHALENE-------	665.32UJ	193-39-5	INDENO(123-CD)PYRENE-----	665.32U
[illegible]-74-4	2-NITROANILINE----------	3225.81UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	665.32UJ
[illegible]1-11-3	DIMETHYL PHTHALATE-------	665.32UJ	191-24-2	BENZO(GHI)PERYLENE-------	665.32UJ
208-96-8	ACENAPHTHYLENE----------	665.32UJ			
[illegible]-09-2	3-NITROANILINE----------	3225.81UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED605

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/13/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/KG
319-84-6	ALPHA-BHC----------	8U
19-85-7	BETA-BHC----------	8U
319-86-8	DELTA-BHC----------	8U
58-89-9	GAMMA-BHC(LINDANE)-------	8U
5-44-8	HEPTACHLOR----------	6.1J
09-00-2	ALDRIN----------	8U
1024-57-3	HEPTACHLOR EPOXIDE-------	8U
59-98-8	ENDOSULFAN I----------	8U
0-57-1	DIELDRIN----------	16U
72-55-9	4,4'-DDE----------	16U
72-20-8	ENDRIN----------	16U
3213-65-9	ENDOSULFAN II----------	16U
72-54-8	4,4'-DDD----------	16U
7421-93-4	ENDRIN ALDEHYDE----------	16U
031-07-8	ENDOSULFAN SULFATE-------	16U
0-29-3	4,4'-DDT----------	16U
72-43-5	METHOXYCHLOR----------	80U
3494-70-5	ENDRIN KETONE----------	16U
7-74-9	CHLORDANE----------	80U
8001-35-2	TOXAPHENE----------	160U
12674-11-2	AROCHLOR-1016----------	80U
1104-28-2	AROCHLOR-1221----------	80U
11141-16-5	AROCHLOR-1232----------	80U
53469-21-9	AROCHLOR-1242----------	80U
2672-29-6	AROCHLOR-1248----------	80U
1097-69-1	AROCHLOR-1254----------	160U
11096-82-5	AROCHLOR-1260----------	160U

VI=VOLUME OF EXTRACT INJECTED------	5UL
VS=VOLUME OF WATER EXTRACTED-------	ML
WS=WEIGHT OF SAMPLE EXTRACTED------	14.93G
VT=VOLUME OF TOTAL EXTRACT---------	1000UL

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates

Case No: 4323

Sample Number: ED 605

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Alkane	V	633	2000
2.				
3.	Aldol Condens Prod	B	361	20000
4.	Alkane		1099	3000
5.	Acid		1127	3000
6.	"		1245	60000
7.	"		1348	20000
8.	Unknown		2329	2000
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Form I

85F407517

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MED126

Date 6-11-85

INORGANIC ANALYSIS DATA SHEET SD-2 (Chrome - #6 Kiln)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 4323
QC REPORT NO. 5876

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	6580	P *	13.	MAGNESIUM	11300	P
2.	ANTIMONY	57U	P	14.	MANGANESE	163	P *
3.	ARSENIC	12.5U JP	F	15.	MERCURY	0.5	CV
4.	BARIUM	257	P	16.	NICKEL	80	P
5.	BERYLLIUM	[0.9]	P	17.	POTASSIUM	[1700]	P
6.	CADMIUM	23	P *	18.	SELENIUM	6.2UJ	F R
7.	CALCIUM	25500	P *	19.	SILVER	[9.2]	P
8.	CHROMIUM	271 J	P *R	20.	SODIUM	[4910]	P
9.	COBALT	8.8U	P	21.	THALLIUM	5U	F
10.	COPPER	228	P	22.	TIN	45U	P
11.	IRON	18400	P *	23.	VANDIUM	[14]	P
12.	LEAD	594	P	24.	ZINC	828 J	P *R

Cyanide NR

Percent Solids (%) 40

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

RECEIVED JUN 20 1985

Lab Manager jm

SD-3 (Canal-West)

SAMPLE NUMBER EDaTe
BFH07518

.76
4.22

ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------EK036
SAMPLE MATRIX----------SOIL
DATA RELEASE AUTHORIZED:

CASE NO:----------4323
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----5/9/85

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/20/85
DATE ANALYZED----------5/20/85
CONC/DIL FACTOR---------- .25
PH---------- 6.00
PERCENT MOISTURE--------- 76.30
% MOISTURE (DECANTED)----

CAS NO.		UG/KG	CAS NUMBER		UG/KG
74-87-3	CHLOROMETHANE----------	42.19U	79-34-5	1,1,2,2-TETRACHLOROETHANE	21.10UJ
74-83-9	BROMOMETHANE----------	42.19UJ	78-87-5	1,2-DICHLOROPROPANE------	21.10U
75-01-4	VINYL CHLORIDE----------	42.19U	10061-02-6	TRANS-1,3-DICHLOROPROPENE	21.10U
75-00-3	CHLOROETHANE----------	42.19UJ	79-01-6	TRICHLOROETHENE----------	21.10U
75-09-2	METHYLENE CHLORIDE----------	200.00BJ	124-48-1	DIBROMOCHLOROMETHANE-----	21.10UJ
67-64-1	ACETONE----------	42.19UJ	79-00-5	1,1,2-TRICHLOROETHANE----	21.10UJ
75-15-0	CARBON DISULFIDE---------	21.10UJ	71-43-2	BENZENE----------	21.10U
75-35-4	1,1-DICHLOROETHENE-------	21.10U	10061-05-5	CIS-1,3-DICHLOROPROPENE--	21.10UJ
75-34-3	1,1-DICHLOROETHANE-------	21.10UJ	110-75-8	2-CHLOROETHYLVINYLETHER--	42.19UJ
156-60-5	TRANS-1,2-DICHLOROETHENE-	21.10UJ	75-25-2	BROMOFORM----------	21.10UJ
67-66-3	CHLOROFORM----------	21.10U	591-78-6	2-HEXANONE----------	42.19UJ
107-06-2	1,2-DICHLOROETHANE-------	21.10U	108-10-1	4-METHYL-2-PENTANONE-----	42.19UJ
78-93-3	2-BUTANONE----------	42.19UJ	127-18-4	TETRACHLOROETHENE--------	21.10U
71-55-6	1,1,1-TRICHLOROETHANE----	21.10UJ	108-88-3	TOLUENE----------	32705.00
56-23-5	CARBON TETRACHLORIDE-----	21.10UJ	108-90-7	CHLOROBENZENE----------	21.10U
108-05-4	VINYL ACETATE----------	42.19U	100-41-4	ETHYLBENZENE----------	16.03J
75-27-4	BROMODICHLOROMETHANE-----	21.10U	100-42-5	STYRENE----------	21.10U
				TOTAL XYLENES----------	37.97

PJC 7-29-85

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J Indicates an estimated value. This flag is used when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg. 10J)

C PRESENCE CONFIRMED BY GC/MS PJC 7-29-8 PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4533

.763
.2194093

SAMPLE NUMBER
ED601

MULTIPLY ALL DETECTION LIMITS BY 2

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------5/13/85
DATE ANALYZED----------5/24/85
CONC/DIL FACTOR---------- 66.6

CAS NO.		UG/KG	CAS NO.		UG/KG
62-75-9	N-NITROSODIMETHYLAMINE---	1392.41UJ	83-32-9	ACENAPTHENE----------	1392.41U
8-95-2	PHENOL----------	1392.41U	51-28-5	2,4-DINITROPHENOL--------	6751.05UJ
-53-3	ANILINE----------	1392.41U	100-02-7	4-NITROPHENOL----------	6751.05UJ
111-44-4	BIS(2-CHLOROETHYL)ETHER--	1392.41U	132-64-9	DIBENZOFURAN----------	1392.41UJ
7-57-8	2-CHLOROPHENOL----------	1392.41U	121-14-2	2,4-DINITROTOLUENE-------	1392.41UJ
1-73-1	1,3-DICHLOROBENZENE------	1392.41UJ	606-20-2	2,6-DINITROTOLUENE-------	1392.41UJ
106-46-7	1,4-DICHLOROBENZENE------	1392.41U	84-66-2	DIETHYLPHTHALATE---------	1392.41UJ
100-51-6	BENZYL ALCOHOL----------	1392.41U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	1392.41UJ
-50-1	1,2-DICHLOROBENZENE------	1392.41UJ	86-73-7	FLUORENE----------	1392.41UJ
95-48-7	2-METHYL PHENOL----------	1392.41U	100-01-6	4-NITROANILINE----------	6751.05UJ
26938-32-9	BIS(2CHLOROISOPROPYLETHER	1392.41UJ	534-52-1	4,6DINITRO2METHYLPHENOL--	6751.05UJ
16-44-5	4-METHYL PHENOL----------	1392.41U	86-30-6	N-NITROSODIPHENYLAMINE(1)	1392.41U
1-64-7	NNITROSODIPROPYL AMINE---	1392.41U	101-55-3	4BROMPHENYLPHENYLETHER---	1392.41UJ
67-72-1	HEXACHLOROETHANE---------	1392.41U	118-74-1	HEXACHLOROBENZENE--------	1392.41UJ
3-95-3	NITROBENZENE----------	1392.41U	87-86-5	PENTACHLOROPHENOL--------	6751.05U
3-59-1	ISOPHORONE----------	1392.41U	85-01-8	PHENANTHRENE----------	759.49J
88-75-5	2-NITROPHENOL----------	1392.41U	120-12-7	ANTHRACENE----------	1392.41UJ
105-67-9	2,4-DIMETHYL PHENOL------	1392.41UJ	84-74-2	DI-N-BUTYLPHTHALATE------	869.23J
5-85-0	BENZOIC ACID----------	1392.41UJ	206-44-0	FLUORANTHENE----------	2417.72
111-91-1	BIS2CHLORETHOXY METHANE--	1392.41U	92-87-5	BENZIDINE----------	6751.05UJ
120-83-2	2,4-DICHLOROPHENOL-------	1392.41U	129-00-0	PYRENE----------	1392.41UJ
20-82-1	1,2,4-TRICHLOROBENZENE---	1392.41U	85-68-7	BUTYLBENZYLPHTHALATE-----	1392.41U
-20-3	NAPTHALENE----------	1392.41UJ	91-94-1	3,3'-DICHLOROBENZIDINE---	1392.41U
106-47-8	4-CHLOROANILINE----------	1392.41UJ	56-55-3	BENZO(A)ANTHRACENE-------	1392.41UJ
7-68-3	HEXACHLOROBUTADIENE------	1392.41U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	13206.75
7-50-7	4-CHLORO-3-METHYL PHENOL-	1392.41U	218-01-9	CHRYSENE----------	789.03J
91-57-6	2-METHYLNAPTHALENE-------	1392.41UJ	117-84-0	DI-N-OCTYL PHTHALATE-----	1392.41U
77-47-4	HEXACHLOROCYCLOPENTADIENE	1392.41UJ	205-99-2	BENZO(B)FLUORANTHENE-----	1392.41UJ
8-06-2	2,4,6-TRICHLOROPHENOL----	1392.41U	207-08-9	BENZO(K)FLUORANTHENE-----	1392.41U
95-95-4	2,4,5-TRICHLOROPHENOL----	6751.05UJ	50-32-8	BENZO(A)PYRENE----------	1392.41U
91-58-7	2-CHLORONAPTHALENE-------	1392.41UJ	193-39-5	INDENO(123-CD)PYRENE-----	1392.41U
8-74-4	2-NITROANILINE----------	6751.05UJ	53-70-3	DIBENZ(A,H)ANTHRACENE----	1392.41UJ
131-11-3	DIMETHYL PHTHALATE-------	1392.41UJ	191-24-2	BENZO(GHI)PERYLENE-------	1392.41UJ
208-96-8	ACENAPHTHYLENE----------	1392.41UJ			
99-09-2	3-NITROANILINE----------	6751.05UJ			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

PJC 7-29-85

PJC 7-29-85

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates, Inc.
Case No.: 4323

SAMPLE NUMBER
ED606

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------5/13/85
DATE ANALYZED----------6/3/85
CONC/DIL FACTOR----------NONE

CAS NO.		UG/KG
319-84-6	ALPHA-BHC----------	8U
319-85-7	BETA-BHC----------	8U
319-86-8	DELTA-BHC----------	8U
58-89-9	GAMMA-BHC(LINDANE)-------	8U
76-44-8	HEPTACHLOR----------	8U
309-00-2	ALDRIN----------	8U
1024-57-3	HEPTACHLOR EPOXIDE-------	8U
959-98-8	ENDOSULFAN I----------	8U
60-57-1	DIELDRIN----------	16U
72-55-9	4,4'-DDE----------	24.1
72-20-8	ENDRIN----------	16U
33213-65-9	ENDOSULFAN II----------	16U
72-54-8	4,4'-DDD----------	16U
7421-93-4	ENDRIN ALDEHYDE----------	16U
1031-07-8	ENDOSULFAN SULFATE-------	16U
50-29-3	4,4'-DDT----------	16U
72-43-5	METHOXYCHLOR----------	80U
53494-70-5	ENDRIN KETONE----------	16U
57-74-9	CHLORDANE----------	80U
8001-35-2	TOXAPHENE----------	160U
12674-11-2	AROCHLOR-1016----------	80U
11104-28-2	AROCHLOR-1221----------	80U
11141-16-5	AROCHLOR-1232----------	80U
53469-21-9	AROCHLOR-1242----------	80U
12672-29-6	AROCHLOR-1248----------	80U
11097-69-1	AROCHLOR-1254----------	160U
11096-82-5	AROCHLOR-1260----------	160U

VI=VOLUME OF EXTRACT INJECTED------	5UL
VS=VOLUME OF WATER EXTRACTED-------	ML
WS=WEIGHT OF SAMPLE EXTRACTED------	7.11G
VT=VOLUME OF TOTAL EXTRACT---------	1000UL

RECEIVED AUG 19 1985

Laboratory Name: PEI Associates

Case No: 4323

Sample Number: ED606

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

RECEIVED AUG 0 5 1985

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Ether Compound	V	106	30
2.	"		334	5
3.	Unknown		637	40
4.	"		217	100
5.				
6.	Aldol Condens Prod	B	361	10000
7.	Alkane		1094	5000
8.	"		1515	3000
9.	Acid		1243	25000
10.	"		1346	7000
11.				
12.				
13.				
14.				
15.				
16.				
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22.				
23.				
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25.				
26.				
27.				
28.				
29.				
30.				

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

85FH07518
EPA Sample No.
MED127

Date 6-11-85

INORGANIC ANALYSIS DATA SHEET SU-3 (CANAL WEST)

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 4323
QC REPORT NO. 5876

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	10400	P *	13.	MAGNESIUM	22800	P
2.	ANTIMONY	82U	P	14.	MANGANESE	279	P *
3.	ARSENIC	[9.6]	F	15.	MERCURY	1.2	CV
4.	BARIUM	[292]	P	16.	NICKEL	142	P
5.	BERYLLIUM	[1.1]	P	17.	POTASSIUM	[2950]	P
6.	CADMIUM	55	P *	18.	SELENIUM	8.9 UJ	F R
7.	CALCIUM	48100	P *	19.	SILVER	20	P
8.	CHROMIUM	495 J	P *R	20.	SODIUM	[5830]	P
9.	COBALT	13U	P	21.	THALLIUM	7.1U	F
10.	COPPER	439	P	22.	TIN	64U	P
11.	IRON	20300	P *	23.	VANDIUM	[22]	P
12.	LEAD	393	P	24.	ZINC	1740 J	P *R

Cyanide NR Percent Solids (%) 28

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: RECEIVED JUN 20 1985

Lab Manager JM

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415
International Specialists in the Environmental Sciences

Date Received for Review: 8/19/85 Date Review Completed: 8/22/85

To: Paul Hess

From: Cynthia Bachunas / ARIENE PRATT

Subject: Hannal Marine R05-8303-01 (All)

Sample Description: CASE # 4323 low water & soil organics - bottles copy

Project Data Status: complete

FIT Data Review Findings:

See attached CRL review & letter to previous data rec'd 8/6/85

Additional Comments:

these pg's can replace previously rec'd pg.

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663 9415
International Specialists in the Environmental Sciences

Date Received for Review: 8-5-85 Date Review Completed: 8-6-85

To: Paul Hess

From: Cynthia Bachunas / Cindy Pugh

Subject: Hannah Marine (Illinois)
(RS-8303-1F)

Sample Description: CASE 4323, SAS 1674E - Low Water and LOW SOIL ORGANICS

Project Data Status: COMPLETE (Pending final review)

FIT Data Review Findings:

Data acceptable with qualifications noted below and on attached review sheet. Field blank (ED603) contains Carbon Disulfide @ 84.9 ug/l. The sample (ED098) and duplicate (ED099) do not match up. Information must be obtained from the lab to determine if all VOA data is acceptable. See Tom Clyne for final review.

Additional Comments:

More Q.A. info. available in Rene Hix' file if needed.

Trans
7-30-85
W.M.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 7/30/85

SUBJECT: Review of Region V CLP Data
Received for Review on 6/10/85

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Francis Thomas

TO: Data User: fit

We have reviewed the data for the following case(s).

SITE NAME: Harmel Marine SMO Case No. 4323

EPA Data Set No. SF 2328 No. of Samples: 9 D.U./Activity Numbers 1905 1C48500

CRL No. 85FH07512 - 85FH07518

SMO Traffic No. ED098 - ED100; ED601 - ED606

CLP Laboratory: PEI Hrs. Required for Review: 7

Following are our findings.

1. Several volatile samples exceeded holding times due to problems with the tenax trap. ED601 and ED602 were six days late. Date received 5-10-85 Date analyzed 5-23-85. Sample ED603 was nine days late; Date analyzed 5-26-85. Positive results for these samples flagged as estimated.

2. Surrogates: Sample ED602 had low recovery for BN/Acs. The sample was re-extracted and rerun and still had low recovery. Matrix effect is assumed. Samples ED604, ED605 and ED606 had VOA surrogates outside test limits. Upon dilution and reanalysis, all surrogates were acceptable. The soil matrix spike, ED606, was biased high for BN/Acs.

The VOA methanol blank contained high levels of several compounds. methylene chloride 197ug/Kg, Acetone 1050ug/Kg, 2-Butanone 5580ug/Kg styrene 2920ug/Kg. This affects soil samples only.

Continued →

RECEIVED AUG 19 1985

Patrick J. Chaille
7-29-85

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

DATA QUALIFIERS

RECEIVED AUG 0 5 1985

Contractor: PEI

Case 4323

Below is a summary of the out of control audits and the possible effect on the data for this case:

5. VOA Initial and continuing calibrations. all SPCC and CCC compounds were OK except bromoform had an RF = .194 for the continuing calibration on 5-20-85. 2-chloroethylvinylether had an RF 2.05 for all calibrations. In the initial calibration, acetone had a %RSD = 54%. The continuing calibration on 5-20-85 had 18 HSL compounds with %D > 25%. The continuing calibration on 5-23-85 had 6 HSL compounds with %D > 25%. The continuing calibration on 5-26-85 had 4 HSL compounds with %D > 25%. The continuing calibration on 5-28-85 had 4 HSL compounds with %D > 25%.

6. The ~~VOA~~ initial and continuing calibrations are generally poor with between 27 and 31 HSL compounds having %D > 25%. All initial and continuing calibration outliers are flagged as estimated.

Reviewed by: Patrick J. Chinella

Phone: 353-2720

Date: 7-29-85

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

RECEIVED AUG 0 5 1985

CRL Data Set No. SF 2328 ERRIS No. _____

SMO Case No. 4323 Site Name: Hannah Marine

Name of Laboratory: PEI Data User: Sit

No. of Samples: 9 Date Samples Received: 6/10/85

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ✓ NO ___
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ___ NO ___
4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 9 Number of samples received: 9
7. Checked by: Nidia Feliciano Date: 6/10/85
8. Received by Contract Project Management Section: J Thomas Date: 6/11/85
9. Review Started: 7-25-85 Reviewer Signature: Patrick J. Chmielk
10. Total time spent on review: 7 HRS Date review completed: 7-29-85
11. Copied (xeroxed) by: Willie E. Giles Date: 7-30-85
12. Mailed to Data User by: _____ Date: _____

TO DATA USERS:

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCRL

13. Data received by: Cynthia Pugh Date: 8-5-85
14. Q.A. review received by: Cynthia Pugh Date: 8-5-85
15. Received by CRL - CPM Section for file by: _____

Data for ED098-100 + ED601-606 rec'd.. Date: _____

COMPLETE - But Better copies are needed. Please see missing data request

5F2328

1

June 7,1985

Mr. Roch Mongeon
USEPA Sample Management Office
300 North Lee St.
Alexandria, Va. 22314

Dear Roch:

Enclosed is the data package for the samples associated with case 4323, received by our laboratory on May 9,1985. The case consisted of 6 water and 3 soil samples, numbered ED098 through ED100, and ED601 through ED606.

Many problems were encountered in GC/MS of the samples. Massive dilutions were required in VOA analysis of the samples. Unknown compounds in the samples also caused breakdown of the Tenax traps, which required replacement. The BNA fraction of sample ED602 was re-extracted and re-analyzed due to poor surrogate recoveries. No improvement was seen. Dates of several of the VOA's are past the window required for analysis. This was caused by re-analyses required from trap breakdown caused by the samples. Please feel free to call if you have any further questions.

Sincerely:

H. William Jess
Organic Laboratory Supervisor
PEI Associates Inc.
Contract 68-01-7015

RECEIVED
JUN 10 1985
U.S. EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

RECEIVED AUG 19 1985

Case #4323

CASS NARRATIVE, PESTICIDES

I. Analysis Scheme: Screen on SP2100 col and confirm on SP2250/2401 column.

Primary Analysis Column: Col#179; SP2100 in V3700A

Quanitation Column: Col#185; SP2250/2401 in V3700B

Confirmation Column: Col#185; SP2250/2401 in V3700B

Notes:

II. Abbreviations

SA Sample Amount in µl
XF Multiplication factor (see calculation below)
IS Internal Standard
RT Retention Time
RRT Relative Retention Time
RF Response Factor
AU Area Units of Intergrated Peak(s)
BC Base Correction Code for Intergrated Peak(s)
DF Dilution Factor
C# Case Number
SMO# Sample Management Office Number

III. Analysis Notes

on V3700A run Column #179.

for Soil MS + MSD - large peak in Blank co-eluted with DDT in Sample - DDT concentration determined by following equation ~~Area Sample Pea~~

$$\frac{\text{Area Sample Peak (RT 13.63)} - \text{Area Blank Peak (RT 13.63)}}{\text{Ave Calibration factor for DDT}}$$

All samples met CRDL

RECEIVED AUG 19 1985

J.O. Jensen

Case: 4323

Contractor: PEI

TENTATIVELY IDENTIFIED COMPOUNDS
MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

RECEIVED AUG 1 8 1989

RE COMPLETED : : :

4-225

ecology and environment, inc.

223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415

International Specialists in the Environmental Sciences

Date Received for Review: 8/19/85 Date Review Completed: 8/22/85

To: Paul Kerr

From: Cynthia Bachunas / ARIENE PRATT

Subject: Hannah Marine R05-8363-010 (SLC)

Sample Description: CASE # 4223
ED 098 + 099 VOC

Project Data Status: complete

FIT Data Review Findings:

See attached checklists.

Additional Comments:

DATA QUALIFIERS

Contractor: PEI

Case 4323

Below is a summary of the out of control audits and the possible effect on the data for this case:

VOA FIELD DUPLICATE IS HIGALY CONTAMINATED

POSSIBLE SOURCE: CROSS CONTAMINATION FROM PURGE VIAL ON AUTOMATIC SAMPLER.

RECEIVED AUG 19 1985

Reviewed by: Patrick J. Chwalla

Phone: 353-2720

Date: 8-9-85

E CONTRACT: DATE: 1

2328 CASE # 4323 SITE NAME Hannah Marine LAB: PEI

	ORGANIC RAS							INORGANIC RAS				TCDD RAS		DIOXIN SAS		SAS									
SAMPLE NO #	VOA CONFS	VOA TIC	SV CONFS	SV TIC	PEST	REVIEW FORM		METALS	CN	REVIEW FORM		2,3,7,8 TCDD	REVIEW FORM	DIOXIN 4608	REVIEW FORM	NH3 + NO3	SO4	Cl	EP TOX METAL	2,4 D	2,4,5 T	SILVER	POLYCL	TDS	COMMENT
ED098																									*
ED099																									*

RECEIVED AUG 19 1985

1ST QUEST	DATE: 8-9-85	REPLY DATE:	COMMENT: * The Sample and duplicate do not match up. (ED098) (ED099)
2ND QUEST	DATE:	REPLY DATE:	COMMENT: * A re-review is necessary.
3RD QUEST	DATE:	REPLY DATE:	COMMENT:

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL 312 663 9415
International Specialists in the Environmental Sciences

Date Received for Review: 6/11/85 6/24/85 Date Review Completed: 7-11-85

To: Paul Hess

From: Cynthia Bachunas / Cindy Pugh

Subject: Hannah Marine (Illinois)
(R5-8303-1F)

Sample Description: CASE 4323 - Low Water + Soil Metals & Alkalinity

Project Data Status: Still awaiting Low Soil + Water Organics

FIT Data Review Findings: Data acceptable with qualifications noted below and on attached review sheet.
The field blank (MED124) contains 24 ug/l Al, 770 ug/l Ca, 45 ug/l Fe, 3340 ug/l Na, and 22 ug/l Zn. It also contains 6 mg/l total alkalinity. Use caution when using Al, Fe, Ca, Na, Zn, + alkalinity data.
A 22% difference exists between the sample (MED119) and duplicate (MED120) for Zn. Use this data with caution.

Additional Comments: Sample values within an order of magnitude of the value for a metal found in a blank are unusable.

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 7-9-85

SUBJECT: Review of Region V CLP Data
Received for Review on 6/24/85

RECEIVED JUL 11 1985

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Thakkar

TO: Data User: Jit

We have reviewed the data for the following case(s).

SITE NAME: Hannah Marine SMO Case No. 4323

EPA Data Set No. 5F23328 No. of Samples: 6 D.U./Activity Numbers YM51C48500

CRL No. 85FH07512 - 85FH07515

SMO Traffic No. MED119 - MED124

CLP Laboratory: RMAL Hrs. Required for Review: 4

Following are our findings.

Six low level H_2O samples were reviewed after analysis at RMAL. Three low soils, part of this case, were put up as a separate case and reviewed by J.F. Pals.

The analytes of Ca, K and Na for MED122 having concentrations >10xs their IDL, showed >10% difference (due to chemical interferences) from the values obtained at serial dilution. The data for these should be flagged "E". The LCS for As should be reported as 45 µg/l, not 50 µg/l. Error in averaging duplicate injections. This gives % R of 105. Extremely high concentration of Na (22,000 mg/l) in MED 123 caused interferences to read the primary analytes. Spike recovery could not be obtained for Cu, Pb, Se & Tl. Reason for "E" values on data sheet. Spike recovery < CRL for Pb, Se, + Tl in pre-digest spikes, also.

7-9-85 DM

(X) Data are acceptable for use.
( ) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Kaberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EASL-Las Vegas
Don Trees, CLP/Sample Management Office

Confidential Right [illegible]

DATA TRACKING - LOG I

RECEIVED JUL 11 1985

1. Data Set No. 5F-2328 LORIS No. _____

2. CLP Case No. 4323 Site Name: Shenandoah Manor

3. Name of Laboratory: RMAL Data User: [illegible]

4. No. of Samples: 6 Date Samples Received: 6/13/85

1. Have chain-of-custody records been received? YES ✓ NO ___

2. Have Traffic reports been received? YES ✓ NO ___

3. If no, are Traffic report numbers written on the chain-of-custody record? YES ✓ NO ___

4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___

6. Number of samples claimed: 6 Number of samples received: 6

7. Checked by: [illegible] Date: 6/24/85

8. Received by Contract Project Management Section: _____ Date: _____

9. Review Started: 7-8-85 Reviewer Signature: Dorothy May

10. Total time spent on review: 4 Date review completed: 7-9-85

11. Signed (Approved) by: [illegible] Date: 7-9-85

12. Mailed to Data User by: _____ Date: _____

13. DATA USERS:

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCPL

14. Data received by: [illegible] Date: 7-11-85

15. Q.A. review received by: [illegible] Date: 7-11-85

16. Forwarded by QAL - CPM Section for file by: _____

Data rec'd Complete Date: _____

DATA REVIEW SHEET

CASE # 4323
DATA SET # SF2328
LAB Q.C.# 5874
DATE: 7-9-85

SITE Hannah Marine
LAB RMAL
REVIEWED BY Dorothy May

MATRIX: H_2O
CONC. : Low

WATER SAMPLE SPK. MED 120
WATER SAMPLE DUP. MED 119
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

Metals:	CALIBRATION ICV	CCV	CCV	CCV	BLANKS ICB	PREP	PREP	ICP INTER. INT	FINAL	SPIKE WATER	SOIL	DUPLICATE WATER	SOIL	LCS WATER	SOIL
1. Aluminum															
2. Antimony															
3. Arsenic															
4. Barium															
5. Beryllium															
6. Cadmium															
7. Calcium															
8. Chromium															
9. Cobalt															
10. Copper															
11. Iron															
12. Lead										42%					
13. Magnesium															
14. Manganese															
15. Mercury															
16. Nickel															
17. Potassium															
18. Selenium										41%					
19. Silver															
20. Sodium															
21. Thallium										52%					
22. Vanadium															
23. Zinc															
24. Cyanide															
Other:															

Form III

RECEIVED JUL 11 1985

Q.C. Report No. 5074

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO. 4323

DATE 13 JUNE 85 UNITS ug/L

Matrix WATER

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2	
Metals:								
1. ALUMINUM	23U	23U				23U		
2. ANTIMONY	46U	46U				46U		
3. ARSENIC	4u	4u	4u	4u		4u		
4. BARIUM	12U	12U				12U		
5. BERYLLIUM	0.5U	0.5U				0.5U		
6. CADMIUM	5U	5U				5U		
7. CALCIUM	290U	290U				290U		
8. CHROMIUM	4U	4U				4U		
9. COBALT	7U	7U				7U		
10. COPPER	4U	4U				4U		
11. IRON	11U	11U				[23]		
12. LEAD	2u	2u	2u	2u		2u		F
13. MAGNESIUM	330U	330U				330U		
14. MANGANESE	3U	3U				3U		
15. MERCURY	0.10u	0.10u				0.10u		
16. NICKEL	5U	5U				5U		
17. POTASSIUM	470U	470U				470U		
18. SELENIUM	2u	2u	2u	2u		2u		
19. SILVER	4U	4U				4U		
20. SODIUM	880U	[935]				[2580]		
21. THALLIUM	4u	4u	4u	4u		4u		
22. TIN	36U	36U				36U		
23. VANADIUM	4U	4U				4U		
24. ZINC	2U	2U				[7.1]		
Other:								
Cyanide								

Form V

RECEIVED JUL 11 1985

G.C. Report No. 5214

SPIKE SAMPLE RECOVERY

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 4323
EPA Sample No. MSD120
Lab Sample ID No. -
Units ug/L

DATE 12 JUNE 85

MATRIX WATER

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R	
Metals:						
1. ALUMINUM	75-125	1940	23U	2000	97	
2. ANTIMONY	75-125	543	46U	500	109	
3. ARSENIC	75-125	20	4u	20	100	
4. BARIUM	75-125	1890	[17]	2000	94	
5. BERYLLIUM	75-125	51	0.5U	50	102	
6. CADMIUM	75-125	52	5U	50	104	
7. CALCIUM	75-125	372000	282000	100000	90	
8. CHROMIUM	75-125	199	4U	200	99	
9. COBALT	75-125	471	7U	500	94	
10. COPPER	75-125	268	[9.3]	250	103	
11. IRON	75-125	3270	2470	1000	80	
12. LEAD	75-125	8.3	5u	20	42	R
13. MAGNESIUM	75-125	178000	133000	50000	90	
14. MANGANESE	75-125	226	32	200	97	
15. MERCURY	75-125	1.12	0.10u	1.00	112	
16. NICKEL	75-125	388	5U	400	97	
17. POTASSIUM	75-125	54500	5540	50000	102	
18. SELENIUM	75-125	4.6	5u	10	46	R
19. SILVER	75-125	52	4U	50	104	
20. SODIUM	75-125	137000	38300	100000	99	
21. THALLIUM	75-125	26	10u	50	52	R
22. TIN	75-125	343	36U	400	86	
23. VANADIUM	75-125	506	4U	500	101	
24. ZINC	75-125	236	37	200	99	
Other:						
Cyanide	75-125					

* %R = [(SSR - SR)/SA] x 100

** - out of control

Comments:

Form VI

RECEIVED JUL 11 1985

Q.C. Report No. [illegible]

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. [illegible]
EPA Sample No. MF0119
Lab Sample ID No. -
Units ug/L

DATE 12 JUNE 85

Matrix WATER

Compound	Control Limit¹	Sample(S)	Duplicate(D)	RPD²
Metals:				
1. ALUMINUM		23U	23U	NC
2. ANTIMONY		46U	46U	NC
3. ARSENIC		4u	10u	NC
4. BARIUM		[16]	[17]	NC
5. BERYLLIUM		0.5U	0.5U	NC
6. CADMIUM		5U	5U	NC
7. CALCIUM		290000	267000	1
8. CHROMIUM		4U	4U	NC
9. COBALT		7U	7U	NC
10. COPPER		[8.1]	[7.1]	NC
11. IRON		2590	2570	0.78
12. LEAD		5u	5u	NC
13. MAGNESIUM		136000	133200	0.74
14. MANGANESE		32	32	0
15. MERCURY		0.10u	0.10u	NC
16. NICKEL		5U	5U	NC
17. POTASSIUM		5540	5690	2.7
18. SELENIUM		5u	5u	NC
19. SILVER		4U	4U	NC
20. SODIUM		38900	38600	0.77
21. THALLIUM		10u	10u	NC
22. TIN		36U	36U	NC
23. VANADIUM		4U	4U	NC
24. ZINC		54	51	5.7
Other:				
Cyanide				

¹ = Out of Control
¹ To be added at a later date.
² RPD = [|S-D|/((S+D)/2)] x 100
NC = Non calculable RPD due to value(s) less than CRDL

Form III

Q.C. Report No. [illegible]
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

RECEIVED JUL 11 1985

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 12 JUNE 85

CASE NO 4723
UNITS ug/L

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Instrument Detection Limits (IDL)-ug/l Furnace	Lab Control Sample True	Lab Control Sample Found	Lab Control Sample %R
Metals:						
1. ALUMINUM	200	23		500	513	103
2. ANTIMONY	60	46		500	535	107
3. ARSENIC	10		4	50 43	50	116
4. BARIUM	200	12		500	478	96
5. BERYLLIUM	5	0.3		100	99	99
6. CADMIUM	5	5		100	101	101
7. CALCIUM	5000	290		100000	104000	104
8. CHROMIUM	10	4		100	97	97
9. COBALT	50	7		100	102	102
10. COPPER	25	4		100	99	99
11. IRON	100	11		500	511	102
12. LEAD	5	23	2	186	170	91
13. MAGNESIUM	5000	330		100000	101000	101
14. MANGANESE	15	3		100	97	97
15. MERCURY	0.2		.10CV	1.00	0.88	88
16. NICKEL	40	5		100	99	99
17. POTASSIUM	5000	470		100000	98900	99
18. SELENIUM	5		2	50 58	60	103
19. SILVER	10	4		100	102	102
20. SODIUM	5000	880		100000	101000	101
21. THALLIUM	10		4	50 43	44	102
22. TIN	40	36		500	480	96
23. VANADIUM	50	4		100	99	99
24. ZINC	20	3		100	99	99
Other:						
Cyanide	10		10MS			

CV - Cold Vapor
MS - Manual Spectrophotometer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 7-9-85

SUBJECT: Review of Region V CLP Data
Received for Review on 6/11/85

RECEIVED JUL 11 1985

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Jay Thakkar

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Hannah Marine SMO Case No. 43235A51674E

EPA Data Set No. 5F 2328 No. of Samples: 9 D.U./Activity Numbers 1905 / C48500

CRL No. 85FH07512 - 85FH07518

SMO Traffic No. MED119 - MED127

CLP Laboratory: RMAL Hrs. Required for Review: 1

Following are our findings.

Six low level H_2O and three low soils were analyzed for pH and alkalinity. Contractor's results and quality of reporting show no problems.

7-9-85 DM

( ) Data are acceptable for use.
( ) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

ESD/Central Regional Laboratory

DATA TRACKING - FORM I

RECEIVED JUL 11 1985

CRL Data Set No. 5F 2328 EPRIS No. _____

SMO Case No. 4333 Site Name: Hannah Marine

Name of Laboratory: RMAL Data User: Fit

No. of Samples: 9 Date Samples Received: 6/10/85

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ___ NO ✓
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ✓ NO ___
4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 9 Number of samples received: 9
7. Checked by: Nilda Fabiano Date: 6/11/85
8. Received by Contract Project Management Section: JR Date: 6.11.85
9. Review Started: 7-9-85 Reviewer Signature: Dorothy May
10. Total time spent on review: 1 hr Date review completed: 7-9-85
11. Copied (xeroxed) by: Willie E. Davis Date: 7-9-85
12. Mailed to Data User by: _____ Date: _____

TO DATA USERS:

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCRL

13. Data received by: Cynthia Rich Date: 7-11-85
14. Q.A. review received by: Cynthia Rich Date: 7-11-85
15. Received by CRL - CPM Section for file by: _____

Date: _____

Data rec'd Complete

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818, Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

5F3328

RECEIVED JUL 11 1985

Date 6-6-85

COVER PAGE

INORGANIC ANALYSIS DATA PACKAGE

Lab Name: RMAL

Case No. 4323/1674E

APPROVED: Lab Manager JM

Q.C. Report No. 5877

Sample Numbers

EPA Sample No.	EPA Sample No.
MED 125	
MED 126	
MED 127	

RECEIVED
JUN 10 1985
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

PARAMETERS	METHOD No.	DETECTION LIMIT	SOURCE
ALKALINITY	310.1	5 MG/L	1
pH	150.1	0.01 UNITS	1

SOURCE: 1="METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA-EMSL, CINCINNATI. 2="OFFICIAL METHODS OF ANALYSIS OF THE ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS" METHODS MANUAL, 13TH EDITION (1980).

Footnotes: NR - not required by contract at this time.
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detecion limit, report the value in brackets (i.e., [10]).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

RECEIVED JUL 11 1985

BLANKS

ROCKY MOUNTAIN ANALYTICAL

CASE # 4323/1674E

DATE 6-6-85

QC # 5877

UNITS MG/L

PARAMETER	INITIAL CALIBRATION BLANK	PREP BLANK 1	PREP BLANK 2
pH	—	—	
TOTAL ALKALINITY	<5	—	

COMMENTS:

RECEIVED JUL 11 1985

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ROCKY MOUNTAIN ANALYTICAL

CASE # 4323/1674E

DATE 6-6-85

QC # 5877

UNITS MG/L

PARAMETER	INITIAL 1 CALIBRATION		CONTINUING 2 CALIBRATION			
	TRUE VALUE	% R	TRUE VALUE	% R	% R	% R
pH	9.1	100	9.1	100		
TOTAL ALKALINITY	155	103	155	104		

1 INITIAL CALIBRATION SOURCE ERA

2 CONTINUING CALIBRATION SOURCE BAKER

COMMENTS:

RECEIVED JUL 11 1985

DUPLICATES

ROCKY MOUNTAIN ANALYTICAL

DATE 6-6-85

CASE # 4323/1674E

QC # 5877

SAMPLE # MEA125

UNITS MG/L

MATRIX SOIL

PARAMETER	SAMPLE	DUPLICATE	% RPD
pH	7.27	7.37	1.4
TOTAL ALKALINITY	5050	4860	3.8

RECEIVED JUL 11 1985

SPIKES

ROCKY MOUNTAIN ANALYTICAL

DATE 6-6-85

CASE # 4323/1674E

QC # 5877

SAMPLE # MED125

UNITS MG/L

MATRIX SOIL

PARAMETER	SPIKE RESULT	SAMPLE RESULT	SPIKE ADDED	% RECOVERY
pH	—			
TOTAL ALKALINITY	11500	5050	5040	128

COMMENTS

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818, Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

RECEIVED JUL 11 1985

INORGANIC ANALYSIS DATA SHEET

RMA QC # 5877

MATRIX: SOIL

CASE # 4323/1674E

DATE: 6-6-85

SAMPLE NO	pH (units)	% SOLIDS	TOTAL ALKALINITY (mg/L)
MED125	7.3	20	25200
MED126	7.1	61	4200
MED127	7.1	23	13600

Comments: Results reported on a dry weight basis

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818, Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

RECEIVED JUL 11 1985

Date 6-6-85

COVER PAGE

INORGANIC ANALYSIS DATA PACKAGE

Lab Name: RMAL

Case No. 4323/1674E

APPROVED: Lab Manager

Q.C. Report No. 5875

Sample Numbers

EPA Sample No.	EPA Sample No.
MED 119	
MED 120	
MED 121	
MED 122	
MED 123	
MED 124	

RECEIVED
JUN 10 1985
U.S. EPA CENTRAL REGIONAL LAB.
CHICAGO, ILLINOIS 60605

PARAMETERS	METHOD NO.	DETECTION LIMIT	SOURCE
ALKALINITY	310.1	5 MG/L	1
pH	150.1	0.01 UNITS	1

SOURCE: 1="METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA-EMSL, CINCINNATI. 2="OFFICIAL METHODS OF ANALYSIS OF THE ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS" METHODS MANUAL, 13TH EDITION (1980).

Footnotes: NR - not required by contract at this time.
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detecion limit, report the value in brackets (i.e., [10]).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

BLANKS

RECEIVED JUL 11 1985

ROCKY MOUNTAIN ANALYTICAL

CASE # 4323/1674E

DATE 6-6-85

QC # 5875

UNITS MG/L

PARAMETER	INITIAL CALIBRATION BLANK	PREP BLANK 1	PREP BLANK 2
pH	— 7.00 JM 6/5	—	
TOTAL ALKALINITY	< 5	—	

COMMENTS:

RECEIVED JUL 11 1985

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ROCKY MOUNTAIN ANALYTICAL

CASE # 4323/1674E

DATE 6-6-85

QC # 5875

UNITS MG/L

PARAMETER	INITIAL 1 CALIBRATION		CONTINUING 2 CALIBRATION			
	TRUE VALUE	% R	TRUE VALUE	% R	% R	% R
pH	9.1	102	9.1	99		
TOTAL ALKALINITY	155	102	155	101		

1 INITIAL CALIBRATION SOURCE ERA

2 CONTINUING CALIBRATION SOURCE BAKER

COMMENTS:

RECEIVED JUL 11 1985

DUPLICATES

85FHC7512

ROCKY MOUNTAIN ANALYTICAL

DATE 6-6-85

CASE # 4323/1674E

QC # 5875

SAMPLE # MED 119

UNITS MG/L

MATRIX WATER

PARAMETER	SAMPLE	DUPLICATE	% RPD
pH	7.92	8.06	1.8
TOTAL ALKALINITY	370	387	4.5

RECEIVED JUL 11 1985

85FH07D12

SPIKES

ROCKY MOUNTAIN ANALYTICAL

DATE 6-6-85

CASE # 4323/1674E

QC # 5875

SAMPLE # MED120

UNITS MG/L

MATRIX WATER

PARAMETER	SPIKE RESULT	SAMPLE RESULT	SPIKE ADDED	% RECOVERY
pH	—			
TOTAL ALKALINITY	708	346	378	96

COMMENTS

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818, Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

RECEIVED JUL 11 1985

INORGANIC ANALYSIS DATA SHEET

Lab Name: RMAL

Case No. 4323/1674E

Q.C. Report No. 5875

Matrix: WATER

Elements Identified and Measured

SAMPLE NO.	pH (units)	TOTAL ALKALINITY (mg/l)
MED 119	7.9	370
MED 120	8.0	~~387~~ 346
MED 121	7.8	~~346~~ 445
MED 122	8.5	531
MED 123	8.3	377
MED 124	5.0	6

Comments:

RECEIVED JUL 11 1985

SPECIAL ANALYTICAL SERVICES
REVIEW DOCUMENT

A. Client Fit

B. Laboratory(s) RMAL

C. SAS Number 1674E

		Task Code(s)
D. Specific Request: Organics		
Inorganics	Alkalinity & pH	
Other		

		Protocol Code(s)
E. Analytical Methodologies: Organics		
Inorganics		
Other		

F. Methods Source Methods for Chem. Analysis of H_2O & Wastes (#310.1 & #150.1

G. Reviewer Name Dorothy M. Key

H. Reviewer Function or Title Chemist - Inorganics Reviewer

The purpose of this inquiry is to gain information and recommendations from the SAS Program Principals directly, in order to improve the methodology(ies), QA/QC requirements, or reporting formats for future similar Special Analytical Services. Therefore, please respond in a timely fashion to all questions and requests.

RECEIVED JUL 11 1985

SPECIAL ANALYTICAL SERVICES
CLIENT REVIEW INQUIRY

Please return this inquiry document to SMO after review of the data package for this Special Analytical Service.

A. General Methodologies

1. Did the referenced methodology(ies) or protocol provide technically useful information for this specific SAS request? If not, please explain.

Yes

2. Describe any changes in methodology or other technical improvements that you recommend in order to more adequately perform this specific SAS task.

None

RECEIVED JUN 11 1985

B. QC Requirements

1. Were the QC procedures adequate for determining the quality of the data for this specific SAS request? If not, describe any problems encountered with the QC information.

Yes

2. Describe any changes in the QC requirements that you recommend in order to more adequately perform this specific SAS task.

None

RECEIVED JUL 11 1985

C. Data Sheets and Report Format

1. Were the reporting deliverables clear and understandable? If not, please explain.

Yes

2. What changes in report or deliverable format do you recommend?

None

D. Other Comments

Enter here any comments or recommendations for items not covered above.

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415
International Specialists in the Environmental Sciences

Date Received for Review: 6/20/85 Date Review Completed: 6/21/85

To: Paul Hess

From: Cynthia Bachunas / ARIENE PRATT

Subject: HANNAH MARINE RO5-8303-01F (SLL)

Sample Description: CASE # 4323 low soil metals

Project Data Status: still awaiting organics & low water metals & alkalinity

FIT Data Review Findings:

see attached CRL review

Additional Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6-19-85

SUBJECT: Review of Region V CLP Data
Received for Review on 6-13-85

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Thakkar

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Hannah Marine SMO Case No. 4323

EPA Data Set No. SF 2328 No. of Samples: 3 D.U./Activity Numbers Y9051 C48500

CRL No. 85FH07516 — 85FH07518

SMO Traffic No. MED125, 126, 127

CLP Laboratory: RMAL Hrs. Required for Review: 1/2 hr.

Following are our findings.

This review covers 3 low concentration soil samples.
The spike recoveries for Cr (131%) and Zn (137%) were biased high.
The spike recovery for Se (60%) was biased low.
The duplicate precision was poor for the following elements:
Al (RPD=37%), Cr (26=RPD), Fe (RPD=26), Mn (RPD=25) and Zn (RPD=28).
(An EPA standard was not used for the initial calibration verifications.)
All other Q.C. audits are o.k.

RECEIVED JUN 20 1985

Jan Pels 6/19/85

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

EPA FORM 1320-6 (REV. 3-76)

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

CRL Data Set No. SF 2328 ERRIS No. _____

SMO Case No. 4323 Site Name: Hannah Marine

Name of Laboratory: RMAL Data User: FIT

No. of Samples: 3 Date Samples Received: 6-13-85

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ✓ NO ___
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ___ NO ___
4. If no, which Traffic report numbers are missing?

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 3 Number of samples received: 3
7. Checked by: Sylvia A. Griffin Date: 6-17-85
8. Received by Contract Project Management Section: _____ Date: _____
9. Review Started: 6/19/85 Reviewer Signature: Jan Pels
10. Total time spent on review: 1/2 hr Date review completed: 6/19/85
11. Copied (xeroxed) by: _____ Date: _____
12. Mailed to Data User by: _____ Date: _____

TO DATA USERS:

RECEIVED JUN 20 1985

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCRL

13. Data received by: Arlene Pavel Date: 6/20/85
14. Q.A. review received by: Arlene Pavel Date: 6/20/85
15. Received by CRL - CPM Section for file by: _____

Date: _____

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

SF 2328

Date 6-11-85

COVER PAGE
INORGANIC ANALYSIS DATA PACKAGE

Lab Name ROCKY MOUNTAIN ANALYTICAL
SOW No. 784

Case No. 4323
QC Report No. 5876

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MED125			
MED126			
MED127			
[MED999]			

RECEIVED
JUN 12 1985
U.S. EPA, CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Comments: 3 LOW SOILS TASK 1&2 ONLY
SERIAL DILUTION OF SAMPLE MED127 IDENTIFIED AS [MED999]

RECEIVED JUN 20 1985

ICP Interelement and background corrections applied? Yes X No ___.
If yes, corrections applied before X or after ___ generation of raw data.

Footnotes:

NR - not required by contract at this time
Form I:
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the method used with P (for ICP/Flame AA) or F (for furnace).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
E - Indicates a value estimated or not reported due to the presence of Interference. Explanatory note included on cover page.
S - Indicates value determined by Method of Standard Addition.
R - Indicates spike sample recovery is not within control limits.
* - Indicates duplicate analysis is not within control limits.
+ - Indicates the correlation coefficient for method of standard addition is Less than 0.995
CV - Indicates Cold Vapor
MS - Indicates Manual Spectrophotometric

J - estimate due to poor spike recovery or high bias
JP